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U.S.-CHINA TRADE WAR
PHASE ONE AGREEMENT AND SELF-ENFORCING CONTRACTS

by

Hameedullah Hassani
B.A. May 2019, American University of Afghanistan, Afghanistan

A Thesis Submitted to the Faculty of
Old Dominion University in Partial Fulfillment of the
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ABSTRACT

U.S.-CHINA TRADE WAR PHASE ONE AGREEMENT AND SELF-ENFORCING CONTRACTS

Hameedullah Hassani
Old Dominion University, 2023
Director: Dr. Jesse Richman

Sino-American bilateral trade relations have increased significantly in the past four decades since China started its economic reforms in 1978. The bilateral expansion in trade has been accompanied by increased complexity and tensions, which emerged in the form of a trade war during the President Trump administration. After a series of tit-for-tat tariff increases, in an attempt to address concerns through negotiations, both sides reached a Phase One agreement. However, the commitments made in the agreement were not delivered. In my thesis, I use the “self-enforcing contracts” theory to analyze the status of Phase One deal. The examination indicates that the agreement lacks components of self-enforcing contracts, providing players with other profitable strategies. The thesis digs deep into the causes of the U.S.-China trade imbalance as one of the main drivers of the trade war. It concludes that addressing the U.S. trade deficit with China needs structural policy changes and cannot be solved through arbitrary trade expansion commitments made in the Phase One agreement.

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CHAPTER I

INTRODUCTION

Sino-American trade is remarkable in many aspects. China is the third biggest destination for U.S. exports and the top source of its imports. U.S. companies doing business with China take advantage of its lower production and assembly cost, enhancing their competitive advantage. American citizens also greatly benefit from U.S. trade with China in the form of cheaper goods and products (China-US Trade Issues, 2018).

With the expansion of bilateral economic cooperation and China's rapid economic growth in the past four decades, U.S.-China trade relations entered a new phase of cooperation and competition. The increasing United States trade deficit with China led to the U.S.'s pursuit of protectionist policies, which resulted in a trade war between the two countries. This was accompanied by the U.S.'s accusations of China's unfair trade practices and possible efforts to undermine her status globally (Liu & Woo, 2018).

After months of intensified bilateral trade tensions, the Phase One agreement was signed on 15th January 2020 to stop further escalation in trade confrontation. Looking back three years after its completion, the agreement's implementation was not a success. The centerpiece of the agreement was China's voluntary expansion of its imports from the U.S. by US\$200 billion in the years 2020 and 2021. The Trump administration wanted to address U.S. concerns about the trade imbalance with China through the agreement. However, China did not fulfill its commitments. Its import of U.S. goods increased only slightly compared to expectations based on the agreement.

In the absence of a credible third-party enforcer, it was essential for the agreement to be self-enforcing for its successful implementation. However, as will be shown in this thesis, the

Phase One agreement lacked the components of a self-enforcing agreement, resulting in the parties' deviation from its terms and failure in its implementation.

In the thesis, I argue that lowering the U.S. trade deficit with China needs measures beyond a simple bilateral trade agreement. The United States has to address the root causes of its overall trade deficit. The U.S. has a trade imbalance with most of its trade partners, which is mainly due to its low saving rates and high investment and expenditure. The imbalance with China stands out among others, which, to a great extent, is associated with differences in trade data reported by two courtiers, China's comparative advantage in labor-intensive manufacturing, currency manipulation, and the U.S. restriction of export of high-tech products to China, as well as China's high savings and low expenditure.

To dig deep into these issues and examine the status of the Phase One agreement, the rest of this thesis is divided as follows. The following sections in this chapter dig deep into the leading causes of the trade war and its background, including a timeline of events. It then provides a brief overview of the Phase One agreement and highlights important issues incorporated in the agreement. Chapter 2 looks at the literature that has used game theoretic tools to examine trade war. Chapter 3 explores the concept of contract enforcement and self-enforcing contracts and applies it to the Phase One agreement afterward. Chapter 4 investigates the root causes of the U.S. trade deficit and why it is huge with China. Finally, conclusion wraps up the thesis.

TRADE WAR

Three main concerns have been the driver of the U.S. trade war towards China, which in return, provoked China's retaliatory tit-for-tat measures: 1, the persistent trade imbalances in the bilateral trade between the two countries, which adversely affected the U.S. job market; 2, the failure of China in intellectual property protection and unfair industrial policies; 3, a potential

Chinese effort in undermining U.S. international standing and its national security (Liu & Woo, 2008).

U.S.-CHINA TRADE IMBALANCE

The United States' trade deficit with China is considered one of the main motives for the emergence of the trade war. This is well reflected in a tweet by former president Donald Trump on April 4, 2018, saying that "[the United States has] a Trade Deficit of \$500 Billion a year, with Intellectual Property Theft of another \$300 Billion. We cannot let this continue!". The trade deficit, or negative trade balance, occurs when a country imports more than it exports to its trading partner within a period. U.S. imports have increasingly become higher than its exports to China in the past four decades.

United States' main export to China include products from five main sectors: agriculture, transportation, computer and electronics, chemical, and machinery. While agricultural products are the top export items, vehicle and aircraft products are on the rise. The top U.S. export items are as follows: Soybeans, civilian aircraft, cotton, copper materials, passenger vehicles, aluminum materials, electronic integrated circuits, corn, and coal (Bade, 2013).

China is the biggest supplier of manufactured goods for the U.S. In 2020, machinery and electric machinery, toys and sports products, furniture, miscellaneous, metals, textiles, and plastic/robbber were among the top U.S. import categories from China. Meanwhile, China has been the seventh supplier of agricultural products to the U.S., with main items including fruits and vegetables, food preparations, dog and cat food, and juices (Burke, 2021).

As visualized in Figure 1, the U.S. trade deficit with China has been increasing with the expansion of trade. It was only US\$6 million in 1985 but reached its peak in 2018 with more than US\$400 billion.

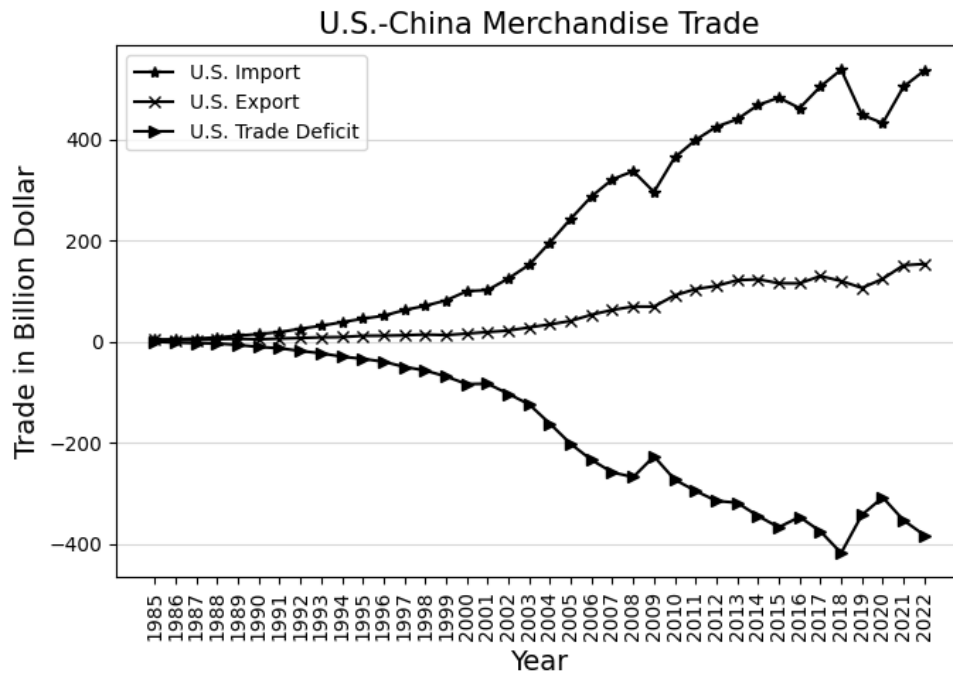


Figure 1: U.S.-China Bilateral Merchandise Goods Trade Volume
 Source: Created by author using US Census Bureau, Trade in Goods

This chronic imbalance in trade has had repercussions for the American job market. Scott & Mokhiber's (2020) findings show that the deficit in the bilateral trade has been accompanied by job losses in the U.S. They associate 3.7 million job losses in the States between 2001 and 2018 with the deficit, with 1.7 million of them being after the Great Recession of 2008. Among them, 700,000 happened during Trump's presidency despite anti-China rhetoric. Geographically, the impact has been distributed in all the states, with ten being hit hard. California, Texas, New York, Illinois, and Florida are the most affected states. Almost three-quarters of the job losses (around 2.8 million) have been concentrated in manufacturing. The impact in the computer and electronic industry is mainly higher than in other industries, accounting for 36.2% of job losses (1,340,600 million).

CONCERNS OVER CHINA'S UNFAIR TRADE PRACTICES

The issue of Chinese unfair industrial policies and Intellectual Property Rights (IPR) violation is another bone of contention contributing to the emergence of the trade war. The intellectual property of high-tech innovations is one of the main drivers of U.S. economic growth that gives it a comparative advantage and contributes to U.S. employment, higher wages, export, and productivity. Industries such as "aerospace, automotive, computer, consumer electronics, pharmaceutical, and semiconductor" are especially dependent on intellectual property protection (Akhtar & Fergusson, 2014, p.6).

Lack of protection of intellectual property (IP) rights and infringement is a threat to the U.S.'s IP-dependent industries. Many American firms consider it as one of the main challenges of doing business with China. This is coupled with the Chinese government's pressure on U.S. firms to share their technology and intellectual property with their partners from China. While China has improvements in its measure to protect IP, it has remained at an unacceptable rate for U.S. firms. Hence, the loss incurred in U.S. trade with China due to intellectual property piracy and infringements remain high, considered to be around \$50 Billion annually (China-US Trade Issues, 2018).

The violation of an intellectual property right can take place in many forms. First, patent and copyright infringement - when a third person utilizes a patent invention without the owner's permission, patent infringement occurs. Copyright infringement is the reproduction and redistribution of one's work without his/her authorization. Second, piracy - which is copying and distributing a work or product online without the owner's permission, or it can be registering and using a foreign brand trademark in another country. Third, counterfeiting - this form of IP violation occurs when trademarked and branded goods are copied and produced like the original product to deceive customers. Such fake products can be sold as premium products with

substantial adverse effects on the brand and original products (China-US Trade Issues, 2018; Akhtar & Fergusson, 2014).

The consequence of IPR violation for the U.S. economy has been enormous. In 2012, the U.S. Department of Homeland Security (DHS) seized about 22,848 counterfeited and infringed goods worth US\$ 1,26 billion. That is more than two times of around 8000 counterfeited goods in 2005, which is indicative of increasing IPR violations and also U.S. concern in this regard. This is coupled with online and digital IPR violations in a single year. Of all the seized items with the charges of infringement, more than 72% of them originated from China. U.S. economy faced billions of dollars in losses due to different forms of IPR violations with adverse impacts on the U.S. job markets, too (Akhtar & Fergusson, 2014).

Besides IPR problems, domestic industries' promotion through import restrictions and subsidies for domestic companies is another area of concern for the U.S. in trading with China. The country has the leverage of a vast market that few other countries may have. It has been tempting for advanced tech companies from the developed economies to enter this huge market. However, entering China's market has not been straightforward. The CCP's government has made entrance to its market conditional on either partnering with a local company in Joint Venture (JV) or building a local production facility. This way, high-tech companies are forced to transfer their technology one way or the other to China. Eventually, new local companies equipped with the technology of their foreign partners would emerge as rivals in the industries (China-US Trade Issues, 2018; Liu & Woo, 2018).

WTO policies allow developing countries to utilize subsidies and tariffs to promote domestic infant industries and sectors. Despite four decades of rapid development, China still uses these two tools for developing domestic industries. This has created discomfort among developed countries. Some giant tech companies emerged in China only after the ban on similar

foreign companies. This can be exemplified well by China's ban on Google, Twitter, WhatsApp, PayPal, and eBay, which resulted in the emergence of Chinese Baidu, Weibo, WeChat, Taobao, and Alibaba (Liu & Woo, 2018).

UNDERMINING U.S. INTERNATIONAL STANDING

The trade war is also rooted in the United States' concern about possible Chinese efforts to undermine its global standing and challenge its hegemony. China, under Xi Jinping, is signaling ambitions of an emerging world power. The signals range from China's increased military build-up to tech and waterway dominance. China is planning to have a world-class military by 2049, with the completion of a century since the founding of the People's Republic of China (PRC). In one of its recent reports, Pentagon shared its concern about China's military expansion and rapid increase in its nuclear weapons. China had around 200 nuclear weapons in 2020 and is expected to have around 400 now and could reach around 1500 by 2030. This is accompanied by China's increasing strength in naval and aerial forces (Mizokami, 2022).

China's influence and claims in the sea are on the rise too. It has increasingly been trying to establish its sovereignty in the South China Sea. The claims of land in the region comes with an increase in the construction of ports and military establishments. This has caused a dispute with regional countries and concern for international stakeholders. Hence, this has led to an increase in U.S.'s military and naval activities in the region (Center for Preventive Action, 2022).

China's ambition to achieve global dominance in technology and trade is another area of concern for the west. The U.S. sees such ambitions by China as a strategic threat. Notable initiatives for this purpose are Belt and Road Initiative (BRI) and Made in China 2025 (MC-25). BRI, also known as the New Silk Road, was launched in 2013 by Xi Jinping as a mega infrastructure project to increase connectivity and cooperation among states. The project is seen

by many in Washington as part of China's strategy to undermine and challenge U.S. global standing and trade and commerce (McBride & Noach, 2021).

Made in China-25 was introduced in 2015 to pave the way for China to become the world's leading power in high-tech industries by the year 2025. The areas covered under the initiative include industries such as: "artificial intelligence, robotics, advanced micro-chips, new energy vehicles, aviation and space travel, autonomous driving systems, solar cells, machine tools, biopharmaceuticals, medical devices, telecom devices, and electronic sensors" (Liu & Woo, 2018, p.332). Through MC-25, Xi's government intends to reach self-reliance (defined as 70%) in high-tech industries and materials needed for their production and to seek global dominance in the tech industry by the 100th anniversary of the establishment of the PRC. This is a significant step in China's efforts to transition the country's traditional economy of labor-intensive low-valued added production to an economy based on advanced technology and enhanced productivity (Liu & Woo, 2018, p.332).

Some of the tools China uses to achieve its ambition for MC-25 include aligning goals; PRC, through official and unofficial means, has been persuading companies both from the public and private sectors to frame their goals and targets in line with the MC-35 aims. Subsidies, the government also provides different financial incentives such as low interest and low tax for the firms as support for the program. In addition, creating synergy among state-owned enterprises (SOEs) as well as transferring technology through investing and acquiring foreign firms are other tactics (McBride & Chatzky, 2019).

HISTORY OF U.S.-CHINA TRADE CONFRONTATION

U.S.-China trade relation has experienced significant changes and shifts in their contemporary history. In the early 20th century, U.S. exports to China were oil, cotton, and metal, while its main imports were silk and tea. WWI disrupted this limited economic

cooperation. After the war in the 1920s and 1930s, the two countries had better economic cooperation. Bilateral trade increased, with the U.S. exporting machinery and consumer goods to China. Also, American companies were among the leading investors in Chinese infrastructure industries, such as railroads, factories, and power plants (Cohen, 2010; UPI Archives, 1984).

From WWII up to the 1970s, bilateral trade was impacted by political tensions and strains. After the rise of the Communist Party to power in 1949 in China and the Korean War, hostility was dominant in bilateral relations. Western countries did not recognize the Chinese Communist Party (CCP) 's rule over China, favoring the legitimacy of the nationalist government of Taiwan. The U.S. imposed an embargo and sanctions on China and banned the export of strategic and technological products in an effort to limit trade and investment with the country (Asia for Educators, n.d.).

In the 1960s, the U.S. tried to ease trade restrictions on China in its effort due to Cold War incentives. Limited trade began in the area of medicine and agriculture. However, engagement with China still was not a priority as the U.S. was concentrated with the Vietnam war. Meanwhile, China was going through the Cultural Revolution of Mao Zedong. The decade of the 1970s is characterized as a turning point in U.S.-China relations after decades of tensions and strain. Normalization of relations started between the two countries after President Richard Nixon's trip to Beijing, where he had a meeting with Mao Zedong, CCP's leader.

Consequently, the U.S. removed the embargo leading to an expansion of imports and exports. By the late 1970s, China had become one of the U.S.'s leading trading partners in Asia. The Chinese 1979 economic reforms paved the way for a significant increase in China's trade with the world and the U.S. (UPI Archives, 1984; Asia for Educators, n.d.).

Despite political tensions over the issue of Taiwan and human right violation in China, U.S. trade with China expanded enormously in the 1980s due to the liberalization of the Chinese

economy. The creation of Special Economic Zones (SEZs), which made investing in China very attractive for U.S. companies, has played an essential role in increasing trade. The expansion of trade continued in the 1990s and 2000s. The U.S. considered China a massive market for its exports and a supplier of cheap goods and inexpensive labor. This led to the reliance of the U.S. on China as the source of manufactured products, as well as China's reliance on the U.S. market for its export (Cohen, 2010).

China's accession to World Trade Organization (WTO) in 2001 paved the way for its fast integration into the world economy and resulted in a surge in trade between U.S. and China. However, the imbalanced increase in bilateral trade led to a contentious relationship between the two countries. Between 2006 and 2017, the U.S. formally registered 20 disputes in WTO against China, while it only brought 16 disputes against all other WTO members to the organization. Meanwhile, because China did not have market-economy status as a WTO member, the U.S. has used some extent of discretion in its trade relations with China. This was due to China not being among the most favored nations (MFN) (Bown, 2021).

However, this has changed in 2017, when China was given the market economy status by World Trade Organization. U.S. had to trade with China like other countries with MFN status. This resulted in United States' criticism as it restricted U.S.'s discretion to pursue protectionist policies towards Chinese exports and companies. When President Trump came to power, the trade confrontation severed. Initially, it started with the restrictions on Chinese companies' investments in America's tech sector, increasing export control and enlarging the list of dual-use products that are banned from exporting to China.

Also, Trump asked his administration to investigate whether the import of specific items such as steel, aluminum, solar panels, and washing machines can threaten U.S. national security and adversely affect respective industries within the States. Previously, an investigation under

Section 301 was called during the Obama administration due to China's policies of subsidy and investment in green technology. Then, the issue was resolved through World Trade Organization. The Trump administration investigation allowed him to act without domestic restrictions in dealing with China. Consequently, he signed the "Presidential Memorandum Targeting China's Economic Aggression," which resulted in new tariff measures on steel and aluminum and started the trade war (Kapustina et al., 2020; Bekkers & Schroeter, 2020; Kapustina et al., 2020). Table 1 outlines key events of the trade war. Please refer to Appendix 1 for a detailed timeline.

Table 1: U.S.-China Trade Timeline

| Date | Event | |
|-----------|--|---|
| 2017 | March 31 | President Trump asks for a review of the U.S. trade deficit and new tariff measures to combat anti-dumping and anti-subsidy cases. |
| | Aug 18 | United States to look into China's unfair practices in technology transfer and intellectual property theft. |
| 2018 | Jan 22 | The U.S. announces new tariffs on solar panels (25%) and washing machines (10%) for all supplying countries, including China. |
| | March 1 | New tariffs of 25% on steel and 10% on aluminum was announced by Washington D.C. – not just China |
| | April 3 | The U.S. announces plans for a tariff rate of 25% on 1334 Chinese products (List 1) worth \$50 billion. |
| | April 4 | China introduced a plan for new 25% tariffs on about \$50 billion of U.S. goods (106 products) |
| | August 7 | The U.S. announces the implementation of 25% tariffs on a modified version of List 2 (worth around \$16 billion). China takes a similar measure: %25 tariff on \$16 billion U.S. products. Both to be effective starting August 23 rd . |
| | September 17 | A finalized version of List 3 was announced to go into effect starting September 24 with an initial rate of 10% to be increased to 25% by January 1, 2019 on \$200 billion Chinese products included in List 3. |
| | December 2 | Two sides agreed on pausing further escalation in tariffs for 90 days. Both sides will not introduce new tariffs, and the U.S. won't increase the 10% to 25% rate on List 3, as was planned. China commits to increasing its import of U.S. agricultural and energy products. |
| 2019 | January - April | Multiple rounds of trade talks |
| | May 10 | After President Trump announced on May 5 th , the U.S. increased the 10% tariff on List 3 to 25%. The plan to impose 25% tariff on remaining Chinese products was publicized. This escalation is deemed to be due to Chinese intentions to strike a deal but backslide on commitments. |
| | May 13 | China retaliates with plans to impose new tariff levels on \$60 billion worth of U.S. goods to become effective on Jun 1. |
| | August 1 | Trump announces new 10% tariffs on remaining Chinese exports to the U.S. worth \$300 billion after two days of trade talks ended with no achievement. |
| | August 6 | U.S. accuses China of manipulating its currency to gain an advantage in international trade after the yuan decreased to 7 against USD. |
| | August 23 | China introduced new tariff measures: 5% and 10% on more than 5078 U.S. products valued at \$75 billion to be imposed on September 1 and December 15. Meanwhile, higher tariffs on the U.S. auto sector will be reimposed starting December 15. |
| | January 15 | "Phase One" agreement was signed. |
| | February 7 | China decreases the tariffs by 50% on U.S. products worth \$75 billion. |
| | February 17 | China excludes 696 U.S. products from additional duties. |
| | Aug - Sep | While keeping tariff levels imposed by the Trump administration, the Biden team put effort into strengthening ties with U.S. allies. |
| October 4 | The U.S. calls on China to uphold commitments made in the phase one agreement. | |

The Sino-American trade war has had negative consequences for both countries. The bilateral trade has declined sharply, and consumers had to carry the burden by paying high prices. Only in the first half of 2019, the China's export to the U.S. subject to new tariffs decreased by 25%, about \$35 billion worth of goods (UNCTAD, 2019). Overall, the trade of goods in almost all sectors has felt the burden of confrontation to some extent. Chinese export of metals, machinery, and electrical products was the most hit by the trade war, while U.S. export of agricultural products and transport vehicles was significantly affected. Inside China, with the exception of agricultural products, almost all other industrial productions have experienced a decline. The GDP of both countries contracted, USA by -1.3% and China -1.1% (Itakura, 2020).

In addition, the trade war entailed trade diversion to other countries. As found by (Bekkers & Schroeter, 2020), U.S. import of Chinese goods decreased by about US\$35 billion in the first half of 2019. On the other hand, during the same period, U.S. imports from other countries increased by about US\$21 billion. Specifically, the increase in imports from the following countries is noteworthy: Mexico (US\$ 6.8 billion) in technology, motor, and electric devices; the European Union (US\$ 6 billion) in transportation and machinery equipment; Taiwan (US\$4.5 billion) and Vietnam (US\$2.8 billion) in technology and electric tools.

China and USA could sign the Phase One agreement in an attempt to solve issues through the negotiations. It included issues of concern for both sides, including "intellectual property protection, technology transfer, trade in food and agricultural products, some new market access in China for financial services and exchange rates and transparency," as well as mechanisms for the dispute resolution to ensure the commitment to the agreement (Bown, 2021).

PHASE ONE AGREEMENT

Signed on 15th January 2020 and became effective 14th February, the "Economic and Trade Agreement Between the United States of America and the People's Republic of China: Phase One" constitutes a preamble and the following six chapters.

Intellectual property – both sides highlight the importance of ensuring intellectual property (IP) protection, with China committing to establish a "comprehensive legal system of intellectual property protection and enforcement." The chapter includes sections on confidentiality and secrecy of information related to trading and business, the IP of pharmaceutical products, patents, preventing piracy and counterfeiting in online businesses, "geographical Indications," ending the production of pirated and counterfeit goods, protection of trademarks, ensuring legal enforcement of IP violations cases, and strengthening bilateral cooperation for IP protection.

Major commitments associated with China are as follows: expanding the scope of trade secret misappropriation, providing evidence by the accused party to prove its non-engagement in misappropriation in case of a claim with concrete support, considering misappropriation claims as urgent situations, facilitating the judicial process for initiating criminal enforcement, enlarging the scope of illegal acts considered as trade secret misappropriation, requiring the government offices to limit their information sharing requests, protecting the right of pharmaceutical intellectual property, facilitating patent granting, combating piracy and e-commerce infringement.

While China made plenty of commitments for IP protection, the U.S.'s commitments in most sections of the chapter are limited to one sentence "the United States affirms that it is studying additional means to combat the sale of counterfeit or pirated goods."

Technology Transfer – this chapter emphasizes the voluntary transfer of technology and considers the forced transfer of technology a significant concern in the trade between two

countries. Major issues addressed in the chapter include the removal of policies that contribute to the forced transfer of technology, such as joint venture requirements and administrative and licensing requirements. It has also been emphasized that transparency and fairness must be ensured in implementing laws and regulations.

Some specific commitments in the chapter include issues such as: providing open and free access to foreign firms and legal persons without pressuring for the transfer of technology, emphasizing market-based terms and conditions for the transfer of technology, not supporting firm's activities in foreign countries for the purpose technology acquisition, easing administrative and licensing requirements without forcing firms to take measures that contribute to the transfer of technology, ensuring impartiality, fairness and transparency in judicial issues for the firms of the other party.

Trade in Food and Agricultural Products – the chapter focuses on agricultural cooperation between U.S. and China. Agriculture is identified as one of the main pillars of bilateral trade. Both sides agreed to have technical consultation on the issues of mutual interest, improve scientific cooperation, increase interaction and exchange between two countries' government authorities and private sectors from different areas, share information on agricultural issues, and create a platform for further cooperation. The chapter includes 27 annexes where specific commitments are discussed.

In the chapter, the U.S. tries to circumvent the variety of barriers put in place by China's bureaucracy in import of foreign agricultural products. China makes commitments to follow international norms and standards in their decision-making and make sure a smooth import of U.S. goods.

Financial Services – each party commits to addressing the outlined financial services concern of the other in their respective markets. Trade in service is considered to have significant

expansion potential. Both sides emphasized the importance of treatment without discrimination of the other party while ensuring fairness and effectiveness of their participation. Major areas of financial services included in the agreement are banking, credit rating, e-payment, financial and fund management, securities, and insurance services.

Macroeconomic policies and exchange rate issues – both sides made commitments to respect the national policies and standard norms, as well as refraining from currency manipulation and devaluation for competition purposes. Critical issues of concern in the chapter are following International Monetary Fund (IMF) policies for the conduct of exchange rates, avoiding exchange rate and monetary system manipulation, and transparency in financial practices.

Bilateral Trade Expansion – in the last chapter of the agreement, both sides committed to increase their bilateral trade, especially Chinese import of U.S. goods and products. Based on the agreement, China had to import more than \$200 billion worth of manufactured, agricultural, and energy products than the 2017 baseline. Having 2017 as a baseline would help to avoid the impact of tariff increases in 2018 and 2019 in measuring the bilateral trade between two countries in a normal scenario. To ensure transparency in exchange rate issues, parties agreed to publicize their monthly data for exchange reasons. Table 2 details the expansion target for each category of bilateral trade.

Table 2: U.S. Export Expansion to China Based on Categories Under Phase One Deal

Source: Economic and Trade Agreement between the United States and China

| Product Category | Voluntary Import Expansion | | |
|-----------------------|---------------------------------------|--------------|------------|
| | Expansion on the top of 2017 baseline | | |
| | First year | Second year | Total |
| Manufactured products | 32.9 | 44.8 | 77.7 |
| Agricultural Sector | 12.5 | 19.5 | 32 |
| Energy | 18.5 | 33.9 | 52.4 |
| Services | 12.8 | 25.1 | 37.9 |
| Total | 76.7 | 123.3 | 200 |

NO ROLLBACK ON TARIFF LEVELS

It is important to note that although the phase one deal halted tariff increases, it did not normalize tariff rates to their previous levels prior to the trade war. The only exception was the lowering of the last round of tariff increase by half. Before the completion of the agreement, China's Ministry of Commerce spokesman reported a potential discussion on the rollback of tariff rates after signing the phase one deal. However, President Trump's tweet the following day rejected the possibility of a complete rollback stating, "China would like to get somewhat of a rollback, not a complete rollback because they know I will not do it." (Wong & Koty A.,2020). As shown in Figure 2 below, the tariff levels between China and USA remained much higher than each country's duties to the rest of the world.

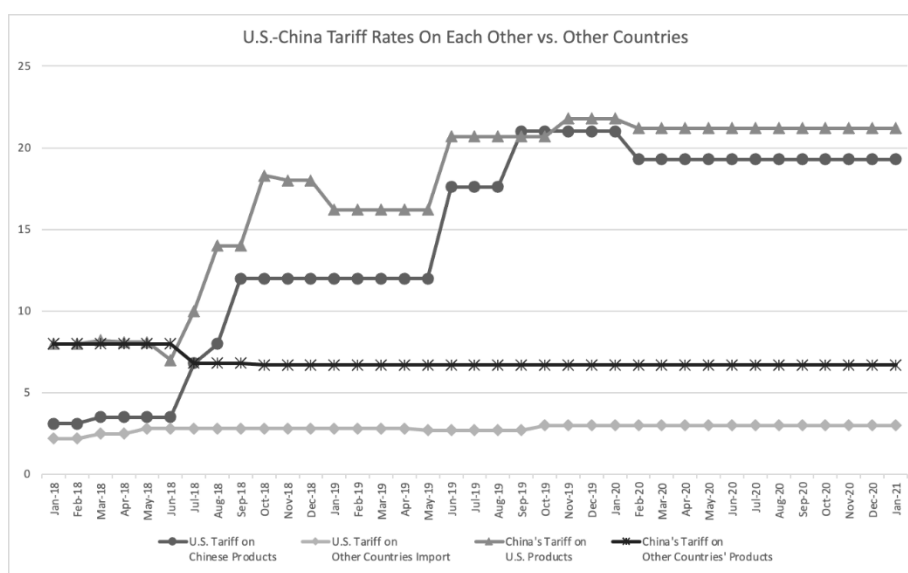


Figure 2: U.S.-China Tariff Rates on Each Other vs. Other Countries

Source: Constructed by author using PIIE (2020) Figure 1 (close approximation)

THREE YEARS AFTER PHASE ONE

More than three years have passed since signing the agreement, which expired on December 31, 2021. Although not officially agreed upon, the spirit was to continue cooperation through a "phase two" deal after the successful implementation of phase one. However, despite the expiration of the phase one agreement, cooperation did not extend to a second deal, mainly due to the failure to enforce the first one. The successful implementation of the agreement was questioned by many experts from the start.

Quantifying uniformly the progress in all the commitments made in Phase One agreement is unlikely, given the nature of each chapter. Considering that the main goal of the agreement was to reduce the U.S. trade deficit, looking at trade data and changes in the bilateral trade balance, which is mainly focused on chapter six of the agreement, can be revealing about the overall success of the agreement. Before examining bilateral trade data, I provide a chapter-by-chapter assessment of the agreement below using Reade's (2020) analysis.

Intellectual Property – despite China's meticulous commitments in order to improve its IPR protection, it is hard to track the progress of implementation and policy changes. Given the significant role of manufacturing companies in China in the export of goods to other countries that involve IPR violation, one cannot be optimistic about success in ensuring IPR protection in the short term.

Technology Transfer – like IPR, not opting for forced transfer of technology is another promise of China that is hard to be hopeful for, given China's growth in technology relied on such tools. Although formally it may be banned by the government, the advantage that it entails could entice companies to informally pursue such behaviors.

Trade in Food and Agricultural Products – U.S. negotiation team did a good job of mitigating the effect of Chinese barriers in the import of U.S. agricultural products. But it would only be applicable to the list of products included in the agreement. The chapter's commitment would not lead to fundamental changes in China's policy towards trade in agriculture.

Financial Services – many of the financial sections included in the chapter emphasize the trends towards a market economy that were already undertaken by the Chinese government. The leadership in China considers it crucial to improve its financial system by opening its economy to foreign competition. In general, the commitments made could contribute towards a healthy bilateral trade relationship.

Macroeconomic policies and exchange rate issues – this part of the agreement, in most parts, overlaps with the established principles and China's prior commitments, such as its commitments in G-20 to not opt for currency manipulation to gain a competitive advantage. Some experts believe that China came to the conclusion that RMB devaluation would have a long-term adverse effect on its economy; hence, it has been trying to avoid it.



Figure 3: U.S. China Merchandise Trade vs Phase One Deal Commitment
Source: Created by author using data from US Census Bureau

Bilateral Trade Expansion – the arbitrary and unrealistic promises by China to import more U.S. goods did not reflect principles of free trade based on the market economy. Rather, it seemed like a managed trade that could contribute to the disruption of international free trade.

China failed to deliver on its commitments. Its import from the U.S. remained slightly above the 2017 baseline levels. As shown in Figure 3, there is a huge gap between the expected import and the actual level of imports.

China fell behind the expected import level based on the agreement for 2020 and 2021. Figure 4 visualizes this discrepancy for both years. The failure in the implementation of the agreement reveals the enforcement problem of the contract. In the following sections, I delve into game theory's contract enforcement tool to examine the enforcement problem of phase one agreement.

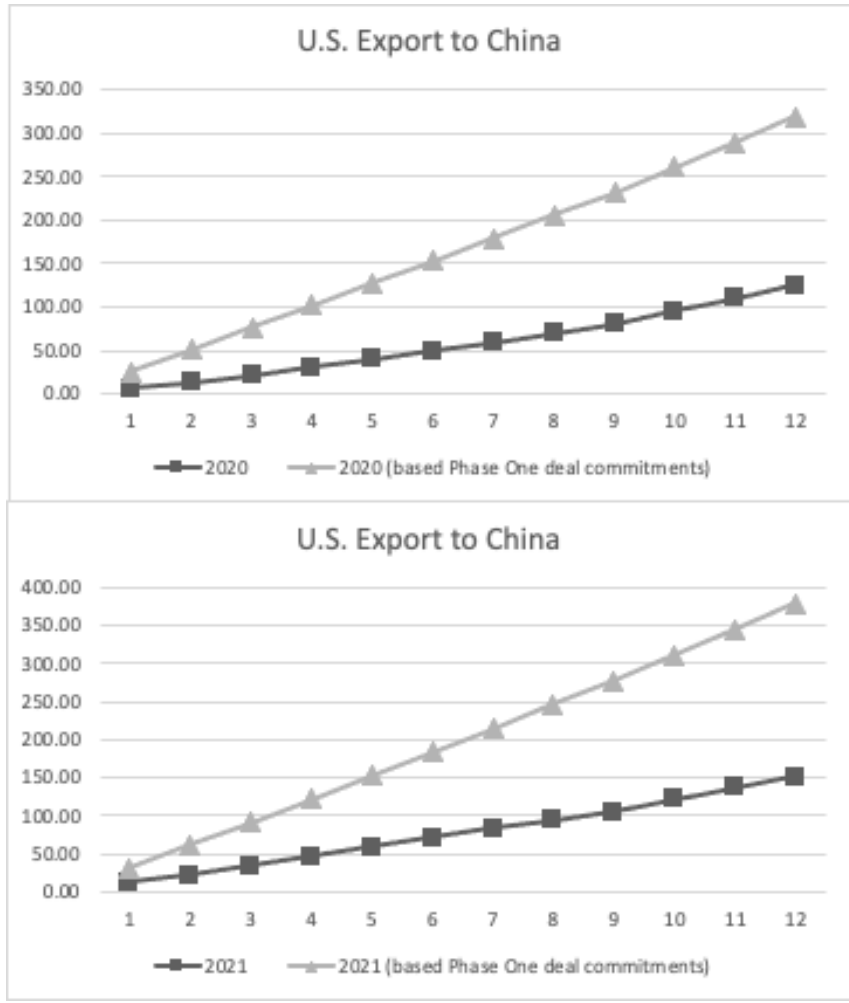


Figure 4: U.S. China Merchandise Trade vs Phase One Deal Commitment
Source: Created by author using data from US Census Bureau

CHAPTER II

LITERATURE REVIEW

Cooperation and confrontation among states and superpowers are at the heart of many great scholarly works in international relations. Keohane (1984), among other factors, emphasizes on the importance of implementation of agreements in the emergence of cooperation between states. He believed that the implementation of an agreement by a party depend on the implementation incentives of the other party and the mechanism for detection and punishment of violation. This is reinforced by Axelrod & Keohane (1985), in which the authors rationalize that states can cooperate when they have mutual benefits. It can be facilitated through repeated interaction between parties by the evolvement of trust and reciprocity.

Axelrod (1984) uses game theory to examine how cooperation can be achieved between self-interested parties. Focusing on the prisoner's dilemma, he argues that repeated interactions between parties can lead to the development of cooperative behavior, which, combined with the use of a tit-for-tat strategy, could entail cooperation between states in the absence of an international institution.

With rising political and economic tensions between U.S. and China, scholars have used different approaches to examine the two countries' conflict and confrontation. This includes utilizing game theoretical models in examining the strategic setting of the trade war and its future. Ghoneim & Reda (2008) tried to examine the strategies of the U.S. and China using a backward induction approach. They concluded that China's best strategy would be to have a softer response to U.S. pressure. This would be despite China's strength to cope with the pressure in the form of its trade surplus. Yin & Hamilton (2018) used the prisoners' dilemma and chicken game modules to propose the optimal strategies of the U.S. and China in two scenarios of a tariff

war and selective protectionism. Mao et al. (2019) did not find pure strategy Nash Equilibrium in their incomplete information game in the U.S.-China trade war. They consider the political mindsets of America first and the notion of a super country and second country as the base for their conclusion.

Zhang & Chang (2020), capitalizing on the expected utility theory, analyzed the Sino-American trade war. They examine it both in perfect information and incomplete information settings and mathematically find out that with the increase in the possibility of winning the war comes a decrease in the net gain due to the cost associated with winning. Also, they conclude that China's best move is to maintain the status quo while U.S.'s high payoff is associated with less aggressiveness towards China. Patke (2021), by conducting a numerical sensitivity analysis, examines the trade war through a sequential game theoretic model. The finding suggests that it is in China's best interest to prevent a trade war and enjoy the benefits of the status quo. For the U.S. to proceed with trade, high growth in GDP is essential.

To add to this body of literature, I use the theory of contract enforcement from game theory to examine the status of the Phase One deal that stopped the further escalation in tariffs between China and the U.S.

CONTRACT ENFORCEMENT

A contract "is an agreement about behavior that is intended to be enforced." Mainly, contracts have two stages: the contracting phase, where parties negotiate on a course of actions, and the implementing or enforcing phase, where the agreed-upon actions should be implemented (Watson, 2002). Keohane (1984) points out three approaches that can contribute to the enforcement of contracts. First, reputation; contracting parties tend to comply when they think other parties also comply, and non-compliance would entail punishment. Reputation can be strengthened by ensuring transparency, accountability, and credibility in the agreement's

implementation. Second, reciprocity, the ability of contracting parties to reciprocate a contract violation, is crucial in contract enforcement. Third, external-party enforcement, such a mechanism requires the existence of a neutral third-party body that ensures the enforcement of the contract through monitoring, verification, dispute resolution, and punishing deviations.

Generally, the enforcement of contracts happens in two ways. First, external enforcement – when a third party is involved in ensuring the implementation of the agreement, which could be WTO in case of international trade agreements. Second, self-enforcement – when parties to the contract have individual incentives to comply with elements of the contract (Watson, 2002).

EXTERNAL ENFORCEMENT

One approach that ensures a contract's implementation is the presence of external enforcement mechanisms. External enforcement can usually happen in the form of a coercive third party whose interest is not at stake and has the ability to impose sanctions in case one party chooses to deviate (Scott & Stephan, 2004). In private contracts between individuals and firms, states have such a role and authority to make sure parties to the contract deliver on their commitments in the contract.

In trade contracts between states, such an external body could be World Trade Organization (WTO). The institution was established to serve three main purposes: first, to provide a regulated platform for states to discuss and negotiate their trade-related issues; second, to ensure every member is treated fairly without any discrimination; third, to serve as a trade dispute settlement mechanism to prevent the emergence of a trade war between countries (Adekola, 2019).

WTO aims to prevent trade confrontation between its member states to avoid disruption in global trade and encourages multilateral approaches for addressing concerns. Article 23 (sections 1 & 2) of Dispute Settlement Understanding (DSU) of WTO prohibits its members from taking

unilateral measures in case of "impairment and nullification" of their rights. The agreement encourages member states to resort to dispute settlement mechanisms and procedures within the organization to address their concerns (Adekola, 2019).

However, WTO proved to be ineffective in managing the U.S.-China trade confrontation. The tit-for-tat tariffs measures taken by China and U.S. have not been consistent with the WTO's multilateral procedures and mechanisms. This is partly due to the ineffectiveness of WTO's role in resolving such disputes. First, it has a time-consuming slow consensus-based decision-making process. In one case, it took the organization six years to decide on one of the filed disputes between the U.S. and China. Second, WTO's dispute settlement mechanism does not stop the accused party's inconsistent behavior; hence, one party needs to suffer during the process.

The authority of WTO in enforcing the phase one deal was further undermined by President Trump's disinterest in the organization and China's effort to increase its influence which created a kind of competitive environment within the organization (Yin & Hamilton, 2018). Hence, given that WTO could not be a credible third-party enforcer in the agreement between U.S. and China, any contract between these two countries should have been self-enforcing for its successful implementation.

SELF-ENFORCING CONTRACTS

Contrary to external-enforcement contracts, an agreement does not require a third-party arbiter to be self-enforcing. Contracts are self-enforcing "as long as each party believes itself to be better off by continuing the agreement than it would be by ending it." (Telser, 1980, p.27). There is no external body in self-enforcing agreements to determine if the violation of the agreement has been an accident or based on the violator's interest calculations. Therefore, parties to the contract are considered rational actors seeking to maximize their interests. They analyze whether their immediate gains from violating the contract would be more than implementing it.

(Telser, 1980; Watson, 2002; Bagwell, 2009). Also, since most contractual agreements are intentionally designed to be incomplete to avoid the cost of implementing every contingency in an explicit contract, the self-enforcement mechanism is essential for preventing parties of the contract from taking advantage of unspecified scenarios (Klein, 1985).

In general, like other types of contracts, self-enforcing contracts can take place in two situations. First, when parties to the contract agree on the exchange of services and goods. Second, members of the contract agree to a cooperative venture. In any situation, for the agreement to be self-enforcing, it should ensure that the long-term gains of the parties outweigh their immediate benefits from the contract's breach. Such a contract has three main characteristics: 1, each party decides for its own the profitability of abiding by the terms of the contract; 2, parties would only stick to the commitment in the contract if they are better off doing that; 3, there is no third entity in self-enforcing contract to oversee its implementation and make sure parties are implementing the agreement, and penalize the violator. Hence, in case one party of the agreement choose to disregard its commitments to the contract, the only option for the second party would be contract termination (Telser, 1980).

Klein (1985) uses the "quasi-rent stream" concept to illustrate the notion of self-enforcing agreements. A contract can be within the range of self-enforcing when the "quasi-rent stream" outweighs the immediate gains from the breach of the contract. "The quasi-rent stream consists of the returns on transactor-specific investments that will be lost upon termination of an agreement that entails increased costs of purchasing or supplying services in the marketplace after the breach is communicated to others" (p.595). Therefore, self-enforcing agreements make sure compliance by threat of termination of the contract. As parties enter the contract with the promise of greater future gains than immediate benefits, they tend to abide by the terms of the contract. Hence, such a contract would be within the self-enforcing range (Klein, 1985).

Yarbrough & Yarbrough (1986) highlight the importance of self-enforcing agreements in promoting free trade by addressing the enforcement problem in international trade. They provide a different interpretation of dominant trends such as “reciprocity, bilateralism, retaliation, and regulatory standards,” contrary to the dominant thinking, which saw them as steps towards more protectionism from free international trade. The authors believe that in the absence and the cost associated with the external enforcing mechanisms, self-enforcing agreements decrease the chances for opportunistic behaviors and lead to establishing trade agreements that might otherwise be impossible. Hence, the retaliatory and reciprocal characteristics of self-enforcing agreements are emphasized to deal with noncompliance and violation of trade agreements.

Bagwell (2009) highlights the importance of self-enforcing contracts in trade agreements between countries for setting tariffs. A weak binding trade agreement on tariffs that has self-enforcing status is shown to be more beneficial than a strong binding agreement whose implementation is challenged by domestic political pressures. Scott & Stephan (2004) highlight the capacity of parties for retaliation as an important notion in self-enforcing contracts in case of opportunistic behavior by another party. Parties entering into a self-enforcing contract are aware of each other’s weaknesses and strengths. Hence, both parties have the ability to retaliate against opportunistic behaviors to inflict high costs on the violator. However, retaliation and threats lose their efficacy if promised gains for one of the parties who chose noncompliance are not significant.

The self-enforcing agreement is also considered by Eichner & Pethig (2015), McEvoy & Stranlund (2009), Osmani & Tol (2010), Bond (2009), Conconi & Perroni (2003), Finus & Al Khourdajie (2018), Sokolovskyi (2017), Carbone, Helm, & Rutherford (2004).

MODEL: SELF-ENFORCING CONTRACTS

To model self-enforcing agreements, let's consider a two-player game with strategies of (A), where players fulfill the commitments made in the contract and strategy (D), which indicates the deviation of a player from the terms of the agreement.

Table 3: Self-enforcing Contracts Model

| | A | D |
|---|--------|--------|
| A | k1, k2 | n1, m2 |
| D | m1, n2 | 0, 0 |

In order for agreements to be self-enforcing, both players need to play AA, meaning both sides of the agreement deliver on their commitments. Such a strategy would also make them better off than deviation from the agreement. Hence, a self-enforcing contract should meet the following conditions in the above model:

$$k1 + k2 > n1 + m2, k1 + k2 > m1 + n2, k1 + k2 > 0$$

That means in such a scenario, the strategy profile AA needs to be the Nash Equilibrium of the game.

$$k1 \geq m1 \text{ and } k2 \geq m2$$

In other words, when the strategy of abiding by the terms of the contract by one party is the best response to the same strategy of the other player, we have an agreement that is self-enforcing. It is in the best interest of both players to continue implementing the contract than breaking it.

CHAPTER III

PHASE ONE AGREEMENT AND SELF-ENFORCING CONTRACTS

As explained in previous sections, there was not a credible external body with authority to ensure enforcement of the deal. Hence, the Phase One agreement needed to be self-enforcing for its successful implementation. Such an agreement would have ensured that both the United States and China did not have a profitable deviation from the terms of the agreement. Both countries should have been better off and had greater payoffs upholding the agreement than deviating from it. In light of the above discussions on contract enforcement, I examine the status of Phase One agreement in this section.

To that end, I use a normal form game with both China and the U.S. playing in a strategic environment where actions by one actor influence the strategy another player choose. In such a scenario, both China and U.S. have two strategies of either abiding (A) by the terms of the contract or deviating (D) from it. China's expectation of strategies that the U.S. would play affects its own choices and vice versa.

To define strategies for each player, it is important to reiterate that the U.S. concern about the trade imbalance with China was the main driver of the trade war, signing phase one agreement, and getting China make purchase commitments. Hence, I use China's purchase commitment as a metric to evaluate the extent of success in the agreement implementation. It somehow encompasses the commitments in other chapters too. To a high extent, other chapters are also meant to increase U.S. export to China by removing barriers and facilitating easier access in China to U.S. companies.

With that in mind, I define the strategies of each player for the purpose of this thesis as the following:

Available strategies for both players:

A – abiding by the terms of the agreement

D – deviating from the agreed terms

U.S. strategies' interpretation:

A – No further escalations in tariff (turn to the non-tariff barrier as tools of competition)

D – Pursuing protectionist policies through tariff increases, no tariff rollback

China's strategies' interpretation:

A – Increasing its import from US by \$200 billion

D – Business as usual

The strategy each player chooses and their associated payoffs depend on player's expectation of the strategies that other players might play. An important factor influencing both parties' expectations and payoffs is the U.S. domestic politics. Therefore, as the negotiation of the agreement and its implementation extended to two administrations in the U.S., it is vital that any examination of the implementation of the Phase One deal needs to be considered in both scenarios.

U.S. ELECTIONS AND PHASE ONE AGREEMENT ENFORCEMENT

United States' presidential elections occurred on November 3, 2020, within the first year of Phase One deal implementation. The election and its outcome had consequences on both sides' strategy choices. In the U.S. side, President Trump had tough anti-China narrative in his first campaign as well as during his time at the White House. He wanted to have an achievement against China to show U.S. voters that he had delivered on his promises and also to use it in his campaign for the upcoming election. This can be seen in his comments about the Phase One

agreement emphasizing the prospect of U.S export increase to China by US\$ 200 billion in two years, instead of giving numbers per year.

China, too, had an eye on U.S. presidential election outcome. Through Phase One deal, Beijing wanted to have a break in tariff increases, hoping for a change in the White House and softer anti-China stance from a different administration.

Therefore, taking into account the role of U.S. domestic politics in the implementation of the phase one agreement, I assess its dynamics, both the way it developed during President Biden's administration and the way it could have come to light in a second term of President Trump in office.

BIDEN ADMINISTRATION

Given the optimism of China about a Democrat President and Joe Biden's less anti-China rhetoric than President Trump, payoffs associated with four possible scenarios in the implementation of the Phase One deal in the Biden Administration could be as the following:

1, (U.S. -A, China - A) – the first scenario is that both countries stick to their commitments made in the agreement. It would give the U.S. its best outcome as it ensures the successful implementation of the agreement. China would have imported an additional \$200 billion in goods from the U.S. This would provide the U.S. with its payoff of (4). However, the best outcome for the U.S. could not be translated as China's best outcome too. While the agreement stopped the further escalation in tariff increases between the two countries, something China wanted the most, the arbitrary nature of import expansion prevented China from gaining its highest payoff, which would be the normalization of trade based on market principles. Therefore, I assign (2) as China's gain in this scenario, her second-best payoff.

2, (U.S.-D, China - A) – However, if the U.S. chose to deviate from the contract, given China observing it, U.S.'s best payoffs would not be guaranteed. Considering the

interconnectedness and interdependencies of trade between the two countries, any further protectionist policies and escalation of tariffs would equally harm the U.S. market as much as China. Hence, in this case, the U.S. would get its second-best outcome with a payoff of (3). While increasing its export to China, U.S. protectionist policy may disrupt the normal flow of world trade. In such a scenario, China would receive its worst outcome of (-4). This would harm China's economy and slow its growth.

3, (U.S. -A, China - D) – On the other hand, given that the U.S. does not resume any further protectionism policies in its trade with China and maintain current trade relation, China would receive its highest payoff of (3) by deviating from the agreement. In such a situation, China would not have to arbitrarily expand its imports of U.S. goods by \$200 billion. Such a situation would give the U.S. its third-best payoff of (2).

4, (U.S.-D, China - D) – However, in case both countries deviate from the agreement, it would again bring an unpredictable situation where the continuation of the trade war is a possible scenario but not a must. That is because of the interconnectedness of both countries' economies. In this scenario, the existence of the agreement is questioned, and its implementation would be a failure.

Table 4: Phase One Agreement Enforcement Model – Biden Administration

| | | <i>China</i> | |
|------|---|--------------|------|
| | | A | D |
| U.S. | A | 4, 2 | 2, 3 |
| | D | 3, -4 | 0, 0 |

Considering the payoffs and strategies available for each player, both sides would try to opt for their best response, given the other side's strategy. Taking into account the best responses, the strategy profile (AD) would emerge as the Nash Equilibrium of the model. This means that China had a profitable deviation. Unlike self-enforcing agreements where abiding by the terms of the contract is Nash Equilibrium, the Nash Equilibrium in the above game for the Phase One agreement is (AD), meaning the contract is breached. Therefore, the Phase One agreement under the Biden administration does not meet the requirement of a self-enforcing agreement.

Also, despite the non-self-enforcing status of the agreement, one approach that could lead to enforcement of the agreement would have been the existence of a credible threat in the Biden Administration to make China deliver on its commitments in a repeated game. However, Biden Administration lacked such a measure to make China comply with the agreement.

WHAT IF DONALD TRUMP WAS PRESIDENT

As Donald Trump's personality and his anti-China rhetoric influenced his administration's China policy, could phase one be a self-enforcing contract if Donald Trump was president? Both during his presidential campaign for the 2016 election and during his time at the White House, Donald Trump had assertive and strong anti-China rhetoric. Initially, his criticisms were focused on trade and the economy as he was continuously accusing China of stealing U.S. citizens' jobs and "ripping off" the U.S. He also blamed China for the eruption of Covid19 and had strong criticism of China's human rights violation. Hence, considering his personality, a hypothetical second term of Donald Trump's presidency would entail different payoffs:

1, (U.S. -A, China - A) – for the A.A. strategy, the payoff under President Trump would be similar to the Biden administration. The U.S. would get a payoff of (4) by increasing its export to China and maintaining high tariff levels. China would also get a payoff of (2) by stopping tariff

increases through the agreement and its implementation. This would not be the outcome that China would wish for.

2, (U.S.-D, China - A) – the DA strategy profile would lead to the same payoff in both administrations, (3) for the U.S. and (-4) for China. Regardless of who is in office, it is unlikely that the U.S. would play this strategy having another strategy that would ensure a higher payoff.

3, (U.S. -A, China - D) – with President Trump in office, the worst outcome for the U.S. would have been an A.D. strategy where the U.S. observe the agreement while China deviates. This is the lowest payoff (0) that the U.S. would get, as that would mean a failure in the battle of narratives and also a failure to make sure China delivers on its commitments. Such a strategy could ensure China's highest payoff of (3).

4, (U.S.-D, China - D) – from a D.D. strategy profile, the Trump administration would get a higher payoff of (1) than China (0). That could be translated to the resumption of tariff increases and/or the Trump administration's new measure to compete with China.

Table 5: Phase One Agreement Enforcement Model – Trump Administration

| China | A | D |
|-------|-------|------|
| U.S. | 4, 2 | 0, 3 |
| A | | |
| D | 3, -4 | 1, 0 |

Similar to the Biden administration, Phase One would not have been self-enforcing under the Trump administration. However, the Nash Equilibrium strategy profile would not be the same. As can be seen in Table 4, the strategy profile (DD) would be the Nash Equilibrium.

There could also be the possibility of another scenario under President Trump. While Nash Equilibrium would be DD, China could be incentivized to cooperate, fearing a trigger strategy by the United States under Trump in a repeated game. That is a situation when deviation by one party would lead to a permanent deviation and punishment by another side.

China's payoff from playing AA would be:

$$2 + 2\delta + 2\delta^2 + 2\delta^3 + 2\delta^4 + 2\delta^5 \dots \rightarrow \frac{2}{1-\delta}$$

China's payoff from playing AD would be 3 forever:

$$3 + 0\delta + 0\delta^2 + 0\delta^3 + 0\delta^4 + 0\delta^5 \dots \rightarrow 3 + \frac{0\delta}{1-\delta}$$

China would prefer to play AA if $\frac{2}{1-\delta} > 3 + \frac{0\delta}{1-\delta}$

$$\frac{2}{1-\delta} > 3 \rightarrow 2 > 3 - 3\delta \rightarrow \delta > \frac{1}{3}$$

Hence, contrary to Biden Administration, cooperation could have happened under the Trump administration if China had been patient and cared about the future with $\delta > 1/3$.

ROLE OF COVID19 IN FAILURE OF PHASE ONE AGREEMENT

An alternative explanation for the failure of the agreement could be the eruption of Covid19 pandemic coinciding with the implementation stage of the Phase One deal. Originating in December 2019 in Wuhan, China, the coronavirus spread all over the world in the following months. This has resulted in a lockdown among countries and disrupted international trade and supply chains.

Covid19 is considered to have the worst rapid impact on world trade and production since World War II. As can be seen in Figure 5, the pandemic's impact on the flow and production of goods is comparable to the impact of the financial crisis of 2008.



Figure 5. Volume of World Trade and Industrial Production (2000-2022)

Source: Created by author using World Trade Monitor

The Global economy had a downward trend in the first quarter of 2020. However, it started to pick up in the second quarter. The sudden eruption of the pandemic was a shock to world trade which led to a sharp decline in the world economy. The rebound from the shock has also been quick, which resulted in the emergence V-shape trend in the global economy, as can be seen in Figure 6.

To understand whether U.S. trade with China has followed a similar pattern, I looked at how the pandemic has impacted U.S. trade with its four other leading trade partners (Europe Union, Japan, India, and South Korea). The result would be help to draw insights into the impact of Covid19 on U.S.-China trade and Phase One deal implementation.

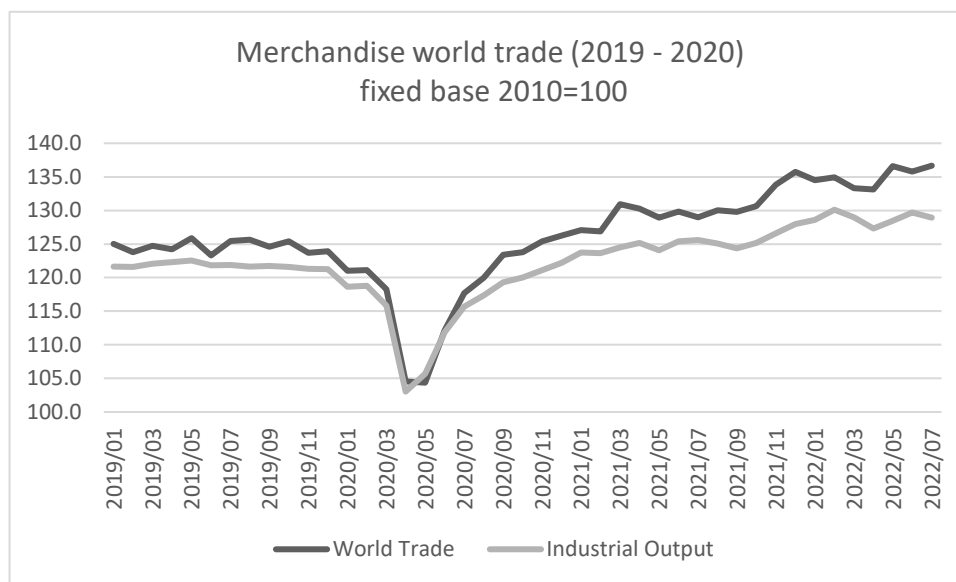


Figure 6. Volume of World Trade and Industrial Production (2019-2022)

Source: Created by author World Trade Monitor

As visualized in Figure 7 below, although to different degrees, the covid19 impact can be seen in early 2020 in all cases. However, it seems that in late 2020 and 2021, with covid19 becoming the new normal, the trade between countries has also normalized to pre-pandemic levels or even more in some cases such as South Korea and India.

Hence, the implication of this examination for the case of U.S.-China trade would be that while covid19 could have impacted China's ability to fulfill its purchase commitment in the phase one agreement in the first half of 2020. However, it cannot be accounted for China's failure to meet the import target in late 2020 and 2021. This can especially be highlighted about 2021, which included the majority of the Chinese purchase commitment. While there is no

mention of the Covid19 in the agreement, both sides reaffirmed their commitments to the promises made in Phase One as the pandemic spread.

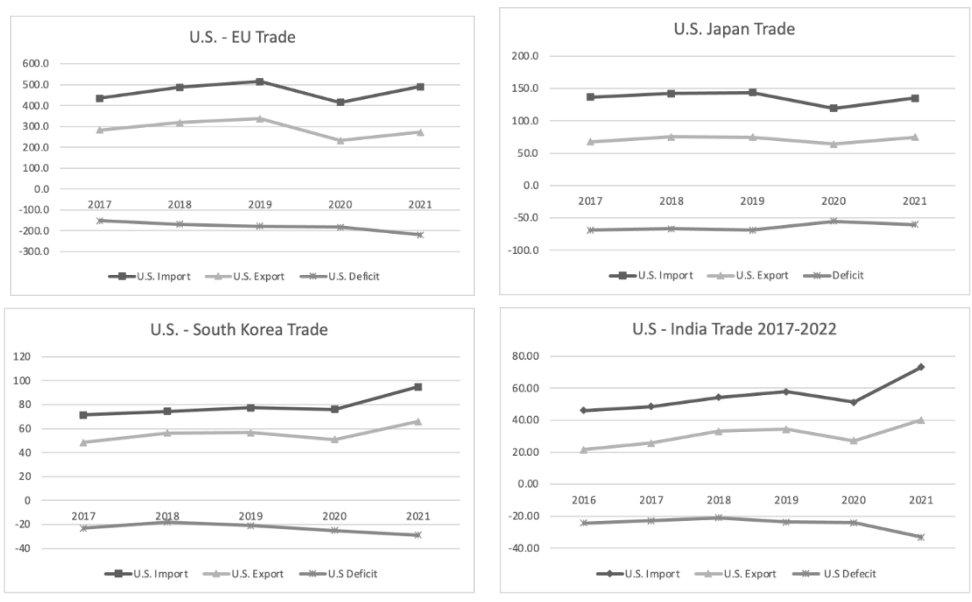


Figure 7: U.S. Merchandise Trade Balance with EU, South Korea, India and Japan
Source: Created by author using US Census Bureau, Trade in Goods

CHAPTER IV

MOVING FORWARD: ADDRESSING U.S.-CHINA TRADE IMBALANCE

Both escalation in tariff rates and its pause through the Phase One agreement were mainly meant to address the U.S. trade deficit with China. By increasing export to China by USD\$200 billion in two years, coupled with maintaining the high tariff on nearly 70% of imports from China, President Trump's administration hoped to reduce the imbalance in the bilateral trade with China.

However, the commitments made in the Phase One agreement were not delivered, and the U.S. trade deficit with China remained around the same levels as the 2017 baseline. While the trade deficit in 2017 was 375.2 billion, it remained about 353.5 billion in 2021, with the only difference of 21.7 billion.

The little impact of the Phase One agreement on the U.S. trade deficit with China leaves a puzzle about whether another agreement (perhaps a phase two) with better terms and possibly self-enforcing status can lower the U.S. trade deficit with China. To unravel this issue, it is crucial to understand the root causes of the U.S. trade imbalance with China. This would help to assess the possibility of lowering the U.S. trade deficit with bilateral trade agreements.

U.S. OVERALL TRADE BALANCE

Before delving into the specific case of the U.S. and China, it is essential to note that the U.S. has a trade deficit with most of its trade partners. U.S. overall trade deficit for 2022 reached US\$948.1 billion, an increase of US\$103 billion from 2021. China, Mexico, Japan, Germany, and Vietnam are among the top countries that the U.S. run the highest trade deficit with.

This overall deficit in U.S. trade with most of its economic partners is mainly due to the macroeconomic forces of the U.S. economy. Below equation governs the overall U.S. trade deficit by national accounting identity.

$$(X - Im) = (S - I) + (T - G)$$

X = exports

Im = imports

S = national saving

I = investment

T = Govt. revenues

G = govt. expenditures

In the U.S., national saving is lower than investment, and government revenue is lower than its expenditure. With such a situation, a deficit in U.S. trade would be inevitable.

U.S. LOW SAVINGS RATE

The U.S. domestic savings as a percent of GDP is very low comparing to the world average. Figure 9 shows Gross Domestic Savings as a percent of GDP for U.S. and selected other countries along the world average. U.S.'s overall savings trend since 1985 has been downward. The U.S.'s low saving rate is indicative of over-spending both by the American people and the government. As domestic production is not able to have enough supply for demand, an increase in imports would be inevitable. This has contributed to a widening deficit in U.S. trade (Woo, 2008).

Feldstein (2017) argues that it is the American saving and investment decision that leads to its trade deficit with other countries, not the import barrier and economic policies by other countries. When a country's saving is more than its investments, it will lead to the export of the remaining output. As he puts it, "reducing the U.S. trade deficit requires Americans to save more

or invest less. On their own, policies that open other countries' markets to U.S. products or close U.S. markets to foreign products will not change the overall trade balance" (Feldstein, 2017).

The U.S. trade deficit and funds for huge consumptions have been enabled by the lends coming from outside of the U.S. in the form of investments in U.S. stocks, bonds, real estate, or other investment areas. If these foreign investment declines, it could lead to a decrease in the price of assets and an increase in interest rates. Hence, a rise in the interest rate would result in a decline in domestic investment and domestic savings. As a result, the U.S. trade deficit would decline. However, this would require the U.S. to bring structural changes to its economy (Feldstein, 2017).

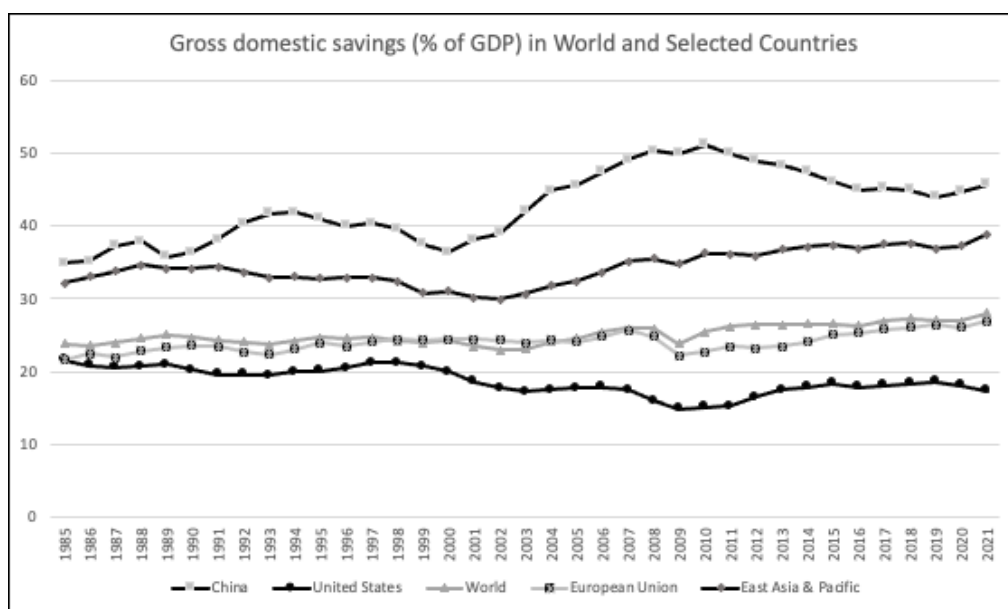


Figure 8: Gross Domestic Savings (% of GDP) in World and Selected Countries
Source: created by author using World Development Indicator Data

This spending behavior by the U.S. government and people is the main reason for U.S.'s chronic deficit with China and other countries. "The large U.S. consumption and investment that

helps produce the trade deficit is funded inside the USA not by taxes or private savings but by dis-saving by both government and households" (Liew, 2010).

USD AS RESERVE CURRENCY

The de facto status of the United States dollar as the world reserve currency affects its trade balance with other countries. From 1980 until 1914, gold was the international reserve, hence, the determiner of the exchange rate between countries. Therefore, the currency rate of each country was linked to the price of gold. Under the gold standard, the price-specie flow mechanism would eliminate trade imbalances as countries had to pay with gold for their imports. With the decline of gold in the country, the price of commodities would also decrease. This would push domestic production and export. Similarly, countries were able to balance their trades through “expenditure-changing and expenditure-switching” under the Bretton Woods system, which was effective from 1945 to 1973. In this internal monetary system, “all currencies had fixed exchange rates set against the U.S. dollar and an unvarying dollar price of gold.” (Yue & Zhang, 2013)

Starting from 1973, the floating exchange rate system has been adapted as the international monetary system, where the value of one currency compared to another is determined by the forces of supply and demand in foreign exchange markets. Due to economic and military dominance of U.S., dollar has played the role of international currency and reserve. This has allowed the United States to maintain a trade deficit for the past four decades by printing money to fund its over-spending without the obligation to have balanced trade like in the previous systems (Yue & Zhang, 2013).

WHY THE DEFICIT WITH CHINA IS HUGE?

Unlike other countries, the U.S.-China trade imbalance is enormous. From the US\$891.3 billion overall U.S. trade deficit in 2018, China accounted for US\$419.2 billion. That is around

48% of the U.S. trade deficit in 2018. There are many factors that contributed to this huge imbalance that I explore in the following sections.

OVERESTIMATION AND MEASUREMENT DIFFERENCES

The existence of the U.S. trade deficit with China in the past four decades is undeniable. Data from both countries and international organizations attest to this. However, there is a discrepancy when it comes to the extent of the deficit. Figure 10 below compares the Sino-American trade balance using data both from U.S. and Chinese sides from 2001 to 2018. There has been a constant difference in the numbers used by the two countries. U.S. data shows a higher difference in trade deficit than Chinese data. The U.S. figures show a rise of 4x in the U.S. trade deficit, increasing from \$83.2 billion in 2001 to \$419.16 billion in 2018. However, based on Chinese official data, the U.S. deficit from \$28 billion to \$295 billion, an increase of more than 10x.

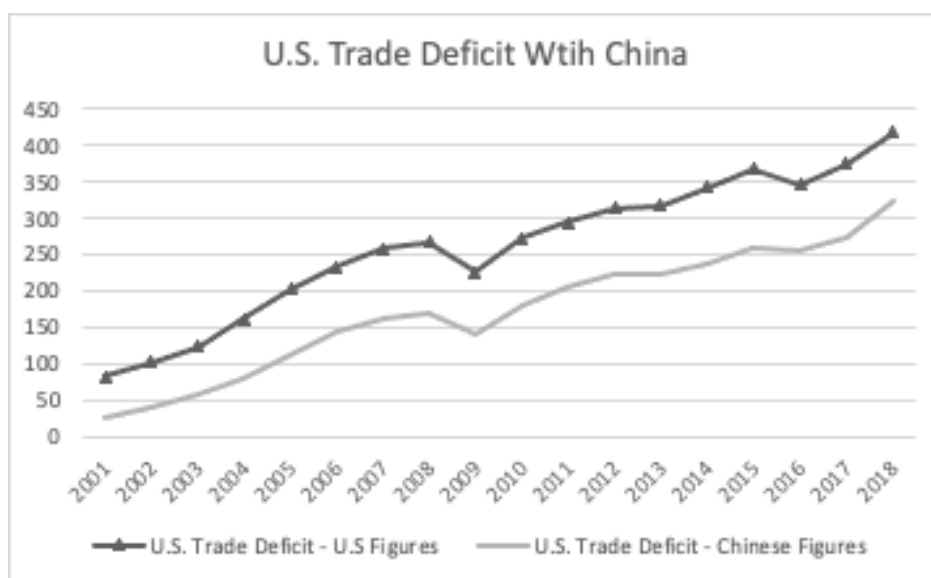


Figure 9: U.S.-China Trade Balance Based on U.S. and China's Official Data
Source: created by author using data from Martin (2019)

One reason for the difference in trade data between U.S. and Chinese sides is the treatment of re-exports from Hong Kong. Re-export can take place when goods coming to Hong Kong are sold to buyers who then sell and ship them to another country. Although import and export processing take place, the origin of commodities remains the same, as no value would be added in the process. How both countries reflect direct and indirect trade in their data affects the extent of the bilateral deficit. While China's behavior with Hong Kong's re-export is not clear, the assumption is that the Chinese data only reflect direct import and export. However, the U.S. side tracks the origin of products from both direct and indirect imports. Hence, Chinese goods imported from Hong Kong are calculated as imports from China. On the contrary, the U.S. considers only direct export to China in bilateral trade, not re-exports through Hong Kong (Fung & Lau, 2003).

The amount of indirect export and import through Hong Kong can significantly impact the deficit. In 2002, based on Fung and Lau's (2003) findings, indirect export to China through Hong Kong were more than one-quarter of U.S. official export data, about \$ 6.2bn. Similarly, Chinese export to the U.S. would have been twice if the Hong Kong re-export of \$34.3 billion were considered.

Besides Hong Kong's re-export, the approach of calculating export and import data also affects the level of the trade deficit. Traditionally, data have been calculated based on the whole value of the traded items. It was a credible approach when most steps of production were taken by the producing firm itself. However, with increased globalization, firms do the different stages of production-chain in different countries to take advantage of each country's comparative advantage. Hence, numerous experts think the traditional calculation of trade data does not take into account value added by each country. In most of China's export to the U.S., only the

assembling stage of the production chain happen in China. The rest takes place in other countries (Wang, 2020).

Sposi and Koech (2013) found out that if values added by each country were considered, the average U.S.-China trade deficit would have been lower by more than one quarter in the first decade of the 21st century. This is in consistent with the findings of Lin and Wang (2018), which show a decrease in the value added by China from 87% in 1980 to 63% in 2009. Hence, if the contribution of other countries in the production of goods sent to the U.S. from China is considered, the Sino-American trade deficit would not reach its levels reflected in the traditional calculation of trade data. This is well reflected in the U.S. import of iPhones form China. Around 11.3 million iPhones were imported into the U.S. from China, with an average of \$179 per iPhone, which contributed about \$1.9 billion to the U.S.- China trade deficit. However, only a small fraction of the import value is added in China, which is \$6.5 per unit. If only the value added by China is taken into account, iPhone import would be responsible for a \$73.5 millions of deficit (Xing & Detert, 2010).

LABOR-INTENSIVE MANUFACTURING DISPLACEMENT

The extent of the U.S.-China trade deficit is also affected by the shifts in comparative advantages of east Asian countries. Lin and Wang (2018) examined the U.S. trade deficit with East Asia, which are the main sources of goods that require intensive labor in their manufacturing because of their related comparative advantages. Hence, East Asian countries are the major contributor of the overall U.S. trade imbalance. Despite the dramatic increase in the U.S. trade deficit with China, the overall U.S. trade deficit with East Asian countries has decreased after the 1990s (around 37% by 2016). They conclude that this implies that the increased U.S. trade imbalance with China did not have a significant impact on the U.S. overall

trade deficit with East Asia, and the increase in the Sino-American imbalance is due to the relocation of production activities and comparative advantages in East Asia.

China may have the same pattern as other countries in East Asia in its growth. When the U.S. started capital-intensive production, this led to an increase in labor costs and lowered profitability of labor-intensive production. Then, Japan became the main provider of labor-intensive products. After years of growth and Japan's entrance into capital-intensive production, after 1980, Asian Tigers replace Japan as the main source of production of labor-intensive goods. Asian Tigers followed U.S. and Japan in focusing on capital-intensive production, leaving room for China to provide labor-intensive production. Hence, China is playing the same role other East Asian countries had in the U.S. trade balance with the region (Reinbold & Wen, 2018).

Hence, China is not to be blamed for the current negative deficit. With rising wages in China and the relocation of resources to other countries that would provide labor-intensive manufacturing capabilities, it is expected that the U.S. trade deficit with China would decrease. Signs of this transition can be seen in many companies' steps to pull out their production from China due to trade war consequences. Based on Telford (2019), a large number of big companies are planning to move their production facility to other countries in East Asia. These include companies such as Apple, Google, Nintendo, and Dell.

CHINA'S CURRENCY MANIPULATION

Countries' international trade is significantly impacted by the value of their currency against foreign currencies. China is accused of devaluing the Chinese Yuan (CNY), aka renminbi (RMB), in order to increase its exports and gain unfair trade advantages. For example, when Yuan is strong, it increases the purchasing power of the Chinese. But it would make Chinese products export expensive for other countries, hence, leading to potential lower export. On the other hand, a weak CNY would mean that Chinese products are cheaper for foreigners to buy,

which contribute to export. Likewise, a devalued CNY would buy few goods from other countries entailing lower imports (Swanson, 2019). Figure 11 below visualizes the changes in Yuan with straight parts indicating currency manipulation.



Figure 10: Yuan Exchange Rate Against USD

Source: created by author using Federal Reserve Economic Data

Before 1994, China had been using a "dual exchange rate system": a fixed rate that was used by the government and a swap system that was regulated by the market. However, between 1994 and 2005, China pursued a "pegging policy" for its currency and kept the RMB exchange rate against USD at a constant rate of 8.28. The central bank was able to keep the rate relatively fixed by selling and buying the dollar and dollar-based assets. This policy prevented sudden huge changes in the exchange rate and relatively stabilized foreign trade (Congressional Research Service, 2013).

In mid-2005, China changed its course, moving towards a float exchange rate system. Unlike a fixed exchange system, in a float system, market forces determine the fluctuation of a

currency. Then China followed a managed floating system till 2008, in which only a daily fluctuation of 0.3% - 0.5% was allowed. This led to around 20% appreciation of the Yuan by mid-2008. The government again intervened to manipulate the RMB and maintain its value at 6.83 from 2008 to 2010 to curb the impact of the worldwide economic slowdown. Then, China allowed the fluctuation of the RMB in 2010, which led to a 10.7% of RMB appreciation by mid-2013 (from 6.83 to 6.17). A prominent example of Chinese currency manipulation occurred on Aug 11, 2015, when the People's Bank of China devalued the Yuan leading to the lowest one-day value loss since 1995. It was argued that the change would bring the currency value into market-based fluctuation levels (Wei, 2015; Congressional Research Service, 2013).

Hence, the manipulation of the Yuan by China is undeniable, and it has contributed to the enormous trade imbalance between U.S. and China. While Chinese' currency manipulation is over-emphasized and politicized in Washington D.C., some scholars question its role significant in bilateral trade imbalance. Ikenson (2010) shows that despite the appreciation of the Yuan between 2005 and 2008, the U.S. trade deficit with China also increased. This is indicative of no significant impact of the Yuan exchange rate on the two countries' bilateral balance. This is in line with the observation of Yue & Zhang (2013) regarding the relationship between the trade deficit and the Chinese currency exchange rate. They found out that despite an increase in the value of the Yuan, the imbalance in U.S. trade with China also increased.

Despite the controversies around the causality of the Yuan exchange rate on the two countries' trade imbalance, it contributes to widening the gap in the balance by making Chinese goods appealing and cheaper than other countries. This is evident in the findings of Bahmani-Oskooee & Wang (2006), Xu (2008), and Moghaddam & Duan (2017).

U.S. RESTRICTION OF HIGH-TECH EXPORTS TO CHINA

As discussed above, the chronic U.S. trade deficit with China and East Asia is partly due to the comparative advantage of the region in terms of the production of labor-intensive goods. The U.S., on the other hand, has a comparative advantage in the high-tech industries. However, the U.S. has a restriction on the export of high-tech dual-use goods to China. Based on the Export Control Reform Act of 2018, the U.S. president is able to restrict the export of goods which leads to national security concerns. In 1997, Entity List (EL) was created for the purpose of controlling goods used in weapons of mass destruction. EL has significantly expanded in the following years to include limitations on exports of goods on the basis of national security concerns. In 2018, certain Chinese firms were added to EL, and trade in high-tech dual-use products was limited (Congressional Research Services, 2020).

Recently, Biden Administration has taken measures to restrict the "export of sensitive technology" to the People's Republic of China (PRC), specifically with respect to advanced computing, supercomputing, and semiconductor capabilities" (Mancuso, 2022). Such restrictions on China do not allow the United States to use its comparative advantage to increase its exports. These limitations entail losses for the U.S. economy and higher costs for China (Chunmei & Wenyi, 2016).

CHINA'S DEVELOPMENT MODEL

China's rapid economic growth has been accompanied by an increase in the country's Gross Domestic Savings. After the 1960s, China's national savings have been above 20% of its GDP. It remained between 35% – 40% since the 1980s till its accession to WTO in 2001. The national saving reached its peak in the years 2008-2010 with savings roughly 52% of GDP. Since then, it has remained at an average of 46% of the GDP (Zhang et al., 2018). Please refer to Figure 9 for comparison of China's domestic savings with selected countries.

Similar to savings, there is a considerable discrepancy between China and the world in consumption rates too. Private consumption in the country is about 38% of the GDP, much lower than the world average of 60%. The IMF report reflects on the level of consumption in China, noting that "with GDP per capita in PPP terms being similar to Brazil's, consumption per capita in China is only comparable to Nigeria." Chinese consumption rate would be more than twice its current level had its people's spending been like that of Brazilians (Zhang et al., 2018).

Many scholars argue that this model of China's development contributed to the country's trade surplus with other countries, especially U.S. Such economic behavior by Chinese people, government, and firms allows for the investment of savings.

CHAPTER V

CONCLUSION

In this thesis, I argued that the Phase One agreement, which was signed between China and the United States to halt tariff increases and address the bilateral concerns through negotiations, is not a self-enforcing contract. Therefore, it faced an enforcement problem, and its implementation was a failure. Phase One deal seems to be a biased agreement in which China made unrealistic commitments to expand its import of U.S. goods based on arbitrary numbers contrary to the basic economic principles of supply and demand. China was only able to fulfill around 10% of the US\$200 billion purchase commitments in the agreement.

Unlike self-enforcing agreements, the Phase One deal gave China a higher payoff for deviation. The United States, under President Biden, also lacked credible retaliatory measures to make sure China delivered on its commitments. China's deviation could be expected from the start, and the Trump administration had concerns early on during negotiations. Despite that, parties had incentives to go ahead with the conclusion of the agreement. For China, the trade war was a shock to its long-term growth and disrupted its international trade. Through the agreement, Beijing wanted to have a breathing break. In the U.S., as the presidential election was approaching, Donald Trump wanted to have an achievement against China for its campaign.

The overall aim of the agreement was to help curb the U.S. trade deficit with China. However, as I have elaborated in this thesis, the U.S. trade deficit cannot be addressed through managed bilateral agreements. Instead, the real causes need to be addressed. The U.S. trade imbalance has its roots in its macroeconomic issues, such as low savings and high consumption in the U.S., as well as the status of USD as the de facto world reserve currency. The imbalance is worse with China because of the latter's comparative advantage in manufacturing of labor-

intensive goods, high savings, low consumption, currency manipulation, and U.S. export restriction of high-tech products to China. The extent of imbalance also differs based on each country's data.

A potential area for further research would be considering the impact of emerging political issues on the bilateral trade balance. Especially the rising political tensions between China and the U.S. over the issues of Taiwan. Would these tensions lead to a change in U.S.-China bilateral trade balance? Can the U.S.'s measures to reduce over-reliance on Taiwan Semiconductor Manufacturing Company and enhance its domestic semiconductor manufacturing capability contribute to its lower trade deficit?

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APPENDIX

DETAILED TIMELINE OF EVENTS IN U.S.-CHINA TRADE WAR

| Date | Event |
|-------------|---|
| 2017 | President Trump asks for a review of U.S. trade deficit and new tariff measures to combat anti-dumping and anti-subsidy cases |
| March 31 | |
| April 6 & 7 | Agreement made in the first meeting between two countries' presidents for 100 days of trade discussion |
| July 19 | Parties could not reach to an agreement during the talks for measure to be taken to address U.S. trade deficit |
| Aug 18 | United States to look into China's unfair practices in technology transfer and intellectual property theft |
| 2018 | U.S. announces new tariffs on solar panel (25%) and washing machine (10%) for all supplying countries including China. |
| Jan 22 | |
| March 1 | U.S. announces new tariffs of 25% on steel and 10% on aluminum – not just China |
| April 2 | China implements new tariff rates - between 15% - 25% - on 128 American products including airplanes and soybeans, worth around \$3 billions. |
| April 3 | U.S. announces plan for a tariff rate of 25% on 1334 Chinese products (List 1), worth \$50 billion. |
| April 4 | China introduced plans of a new 25% tariffs on about \$50 billion of U.S. goods (106 products) |
| April 16 | U.S. companies were prohibited in cooperating with ZTE after Departments of Commerce announced ZTE's violation of U.S. sanctions. |
| April 17 | New anti-dumping measure by China: 178.6% on U.S. export of sorghum to China |
| May 2-7 | Trade talks between two countries ended with no conclusion, with U.S. demanding China to bilateral trade gap by \$200 billion. |
| May 13 | Trump tweets promising to help ZTE |
| May 18 | China announces to put an end to sorghum tariffs during the talks |
| May 20 | After China reportedly agreed to increase its import from U.S., two sides agreed to pause trade war |

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| May 29 | Truce ended and U.S. restored tariff plans |
| Jun 4-5 | U.S. and China engage in trade talks in Beijing for two days. |
| Jun 7 | U.S. came to an agreement with ZTE that will end the pause in companies' business activities in U.S. |
| Jun 15 | U.S. announces implementation of 25% tariff on 818 Chinese products included in List 1 (initially 1334 products) starting July 6, as well as plan for considering new tariffs on List 2 constituting around 284 products worth \$16 billion. |
| Jun 16 | Retaliatory measures by China: extended the initial application of 25% tariff from 196 products to 545 products (worth US\$34 billion) becoming effective July 6. Plans for 25% tariffs on additional 114 products (List 2) worth US\$16 billion were announced. |
| July 6 | U.S. started collecting 25% tariffs on 818 Chinese products valued US\$ 34 billion included in List1. China started collecting new levies too. |
| July 10 | U.S. reveal its plan of 10% tariffs on 6000 Chinese commodities (List 3) with a value of \$200 billion. |
| August 2 | The initial 10% tariffs on List 3 to be increased to 25% based on President Trump's order. |
| August 3 | China retaliates by considering 5% - 25% tariffs on 5207 U.S. products valued around \$60 billion. |
| August 7 | U.S. announces implementation of 25% tariffs on a modified version of List 2 (worth around \$16 billions). China takes similar measure: %25 tariffs on \$16 billion U.S. products. Both to be effective starting August 23 rd . |
| August 22-23 | U.S. and China representatives talks ended with no outcome |
| August 23 | Both countries started implementing 23% tariffs on goods worth around \$16 billions of each other. |
| September 7 | Prior to implementation of tariffs on goods included on List 3, Trump warns to increase tariffs on another \$267 billion Chinese products. This would bring the tariffs increases all together up to \$517 billion worth of Chinese goods, which would be more than \$505 U.S. import from China in 2017. |
| September 17 | A finalized version of List 3 announced to go into effect starting September 24 with initial rate of 10% to be increased to 25% by January 1, 2019 on \$200 billion Chinese products included in List 3. |

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| September 18 | China reveals plan to impose on \$60 billion worth of U.S. goods after September 24, 2018. |
| September 22 | Before U.S. implements new tariffs on List 3 products worth \$200 billion, China cancels trade talks that were to take place between two countries representatives. |
| September 24 | U.S. started imposing new 10% tariffs on Chinese goods valued \$200 billion (List 3). The total amount of Chinese goods subject to new tariffs rates would reach to \$250 billions. China also started collecting 10% tariffs on \$60 billions of U.S. goods, the total reaching to \$110 billions. |
| November 9 | Resumption of trade talks between two countries representatives. |
| December 2 | Two sides reached to agreement on pausing further escalation in tariffs for 90 days. Both sides will not introduce new tariffs and U.S. won't increase the 10% to 25% rate on List 3, as was planned. China commits to increase its import of U.S. agricultural and energy products. |
| December 14 | China agrees to normalize tariffs on U.S. autos and auto parts, from recently increased 25% to its standard 15% on all foreign autos. China also resumes purchasing soybeans from U.S. that were stopped at July 2018. |
| 2019 | |
| January 6 - 9 | Representatives of both countries met in Beijing for trade talks, with 90-days halt in tariff escalation ending in March 1 st . The talks were mainly focused in trade imbalance and structural issue in the bilateral trade (non-tariff barriers, IP protection and transfer of technology). |
| January 30-31 | Another round of talks take place in Washington D.C., where China agreed to buy 5 million ton of U.S. soybeans. |
| February | Two other rounds of talks were hold between two countries in Beijing (Feb 11-15) and U.S. (Feb 21-24). Presidents of both countries met with negotiators of the other as a sign of goodwill. |
| March - April | Occasional trade talks, totaling 11 rounds before new tensions arose. |
| May 10 | After President Trump announced in May 5 th , U.S. increased the 10% tariff on (List 3) to 25%. The plan to impose 25% on remaining Chinese products in publicized. This escalation is deemed to be due to Chinese intentions to strike a deal, but backslide on commitments. |

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| May 13 | China retaliates with plans to impose new tariffs levels on \$60 billion worth of U.S. goods to become effective on Jun 1 st . |
| May 16 | U.S. banned selling technological products to Chinese Huawei company. |
| May 31 | In response, China reveals plans to create its own list of unreliable U.S. companies. |
| Jun 1 | New tariffs levels (10% - 25%) became effective on U.S. products worth \$60 billions. |
| Jun 18 | Presidents of both countries agreed to revive trade talks. |
| Jun 29 | President Trump accepts to not to impose new tariffs and ease restriction on Huawei company. |
| August 1 | Trump announces new 10% tariffs on remaining Chinese exports to U.S. worth \$300 billion after 2 days trade talk ended with no achievement. |
| August 6 | U.S. accuses China of manipulating its currency to gain advantage in international trade after yuan decreased to 7 against USD. |
| August 13 | U.S. publicizes its intention to postpone imposing 10% tariffs on some of the \$300 billion worth of Chinese products to till Dec 15. |
| August 23 | China introduces new tariff measures: 5% and 10% on more than 5078 U.S. products valued \$75 billion to be imposed in September 1 and December 15. Meanwhile, higher tariffs on U.S. auto sector will be reimposed starting December 15. |
| September 1 | Recently announced tariffs became effective: US collects new tariffs on \$125 billion Chinese products, and China began applying additional tariffs on \$75 billion of U.S. goods. |
| September 11 | China excludes 16 types of U.S. goods from new tariffs. U.S. postponed the expected tariff increase on Chinese goods valued \$250 billion from 1 st October to 15 th October as sign of goodwill and to respect the 70 th Anniversary of People's Republic of China. Other exemptions were announced by both countries during September. |
| October 11 | After two days of trade talks, White House announced the agreement on "phase one" deal that would have to be finalized in the following weeks. Meanwhile, the President |

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| | | Trump announced another delay in increase of tariffs. The delay was on increase of tariffs from 25% to 30% on \$250 billions of Chinese exports. |
| | November 7 | China's Ministry of Commerce announce an agreement in principle by two sides on a roll back tariffs in phases after "phase one" deal is signed. |
| | December 13 | China and U.S. announced that a "phase one" trade deal was reached. U.S. agreed to reduce tariffs that were announced on September 1 (from 15% to 7.5%) and will not go on with scheduled tariffs increase on 15 December on US\$ 160 billion worth of Chinese goods. |
| | January 13 | U.S. remove China's label as currency manipulator two days prior to signing the agreement. |
| | January 15 | "Phase One" agreement was signed. Refer to Phase Agreement section for details of the agreement. |
| | February 7 | China decreases the tariffs by 50% on U.S. products worth \$75 billion. |
| | February 17 | China excludes 696 U.S. products from additional duties. |
| | May 8 | As covid19 was rapidly increasing, both U.S. and China reaffirmed their commitments to the terms of the agreement and deliver in a timely manner. |
| | August 15 | Almost six months from the signing of the agreement, China has not been successful in delving the "phase one" deal purchase commitment, with a purchase of less 25% of the target. |
| | August 25 | Two countries representatives hold trade talks where they reiterated their support and commitment for the successful implementation of "phase one" deal. |
| | September 26 | U.S. limits trade with China's SMIC (Semiconductor Manufacturing International Corporation) due to military use of traded items. No major decision was expected from China as U.S. presidential election was approaching. |
| | | U.S. prohibited Americans' investment in companies affiliated with China's military. |
| | December 31 | Only 58% of phase one trade deal purchase commitments by China were achieved leading experts to call the agreement as a "failure". |
| 2020 | January 13 | As approaching end of its presidency term, President Trump prohibited import of tomato and cotton products from Xinxiang region because of forced labor issue. |

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| January 20 | President Biden is in White House with no sign of reversing the tariffs but indication of reviewing the phase one agreement. Trump administrations leadership sanctioned by China. |
| February 22 | China addresses new U.S. administration to remove Trump administrations' limitations. |
| May 18-19 | Trade talks take place between two countries, first after Biden took office. |
| May-June | Trade talks continue between representatives of two countries. New measures were announced by U.S. to tackle unfair actions by U.S. trade partners including China. |
| July 16 | With suppression going on in Hong Kong, 7 officials from China were sanctioned by U.S. |
| Aug - Sep | While keeping tariff levels imposed by Trump administration, Biden team put effort in strengthening ties with U.S. allies. |
| October 4 | U.S. calls on China to uphold to commitments made in the agreement. |

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