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# Trade Tensions Between USA and China: International Marketing Perspective

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## Abstract

The U.S.-China trade relations that grew tremendously over the past decades, especially after China's accession to WTO in 2001, recently however seems to be deteriorating. The two largest economies in the world are observing trade war since 2018. U.S. has repeatedly expressed its dissatisfaction with the Chinese "unfair" trade policies and accusation of theft of U.S. intellectual property as well as forced technology transfer from the U.S. companies to Chinese entities that has resulted into a huge trade deficit for the U.S. Meanwhile, The U.S. has imposed tariffs on $250 billion worth of Chinese goods in an attempt to fix the trade deficit by putting pressure on China to liberalize its trade policies and has threatened with an addition $290 billion if negotiations are not reached. In retaliation, China has imposed tariffs on $110 billion worth of American goods, out-rightly criticizing the anti-globalization stance, unilateralism and protectionism practiced by Trump administration. This paper analyzes the effects of the ongoing trade tensions on both the countries, the international economy and other aspects.

**Keywords:** Trade war; Trade deficit; Intellectual property theft; Anti-globalization, Uni-lateralism; Protectionism; WTO

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## List of Abbreviations Used

| | |
|---|---|
| BEA | Bureau of Economic Analysis |
| BRI | Belt and Road Initiative |
| CIER | China Institute for Employment Research |
| CPC | Communist Party of China |
| FDI | Foreign Direct Investment |
| FER | Foreign Exchange Reserve |
| GDP | Gross Domestic Product |
| IMF | International Monetary Fund |
| IPR | Intellectual Property Rights |
| MFN | Most Favored Nation |
| NBS | National Bureau of Statistics |
| OECD | Organization for Economic Co-operation and Development |
| PRC | People's Republic of China |
| RMB | Renminbi [¥] |
| SOE | State Owned Enterprise |
| UN | United Nations |
| UNCTAD | United Nations Conference on Trade and Development |
| USCBC | United States-China Business Council |
| USDA | United States Department of Agriculture |
| USITC | United States International Trade Commission |
| USTR | United States Trade Representative |
| WTO | World Trade Organization |

# 1. Introduction

## 1.1 General Background

Trade relations between the U.S. and China have deteriorated since the beginning of 2017 and have now turned out to be a devastating trade war. President Trump, known for his hysterical and populist policies such as "America First," which turned out to be a hit among working-class Americans, was angry with the Sino-U.S trade relationships which he deemed as "unbalanced." According to global analysts, Trump's temperamental behavior further strained the ties between the U.S. and China, he had previously proposed a 45 percent tariff on Chinese imports into the U.S. even before he was elected president and accused China of currency manipulation.

There are three particular elements to the ongoing trade war which will be discussed here,

- 232 investigation
- 201 investigation
- 301 investigation

The U.S. launched the "232 investigation" of imported steel and aluminum products in April 2017 on the grounds of "national security threat." On May 2017. The "201 investigation" on imported crystalline silicon solar cells and components and large domestic washing machines was launched by the U.S. Trade Commission respectively. Trump authorized the launch of "301investigation" on China in August 2017 to investigate the laws, policies and practices related to technology transfer, intellectual property, and innovations in China. Trump agreed to impose protective tariffs on imported solar panels and washing machines in January 2018 (201 investigation), with China being a world leader in the manufacture of solar equipment hit the hardest. On March 8, 2018, Trump approved tariffs of 25% and 10 % respectively on imported steel and aluminum products (232 investigation) temporarily exempting many countries including its key trading partners other than China.

On 23 March 2018, the U.S. Trade Representative's report instructs the concerned authorities to impose a large-scale tariff of 25 percent on high-end manufacturing products imported from China and limit investments and mergers in the U.S. by Chinese companies.

Trade war has already arisen with the U.S. imposing tariffs on more than $250 billion worth of Chinese imports with an additional tariff threat on the remaining goods worth $290 billion due to a growing trade deficit ($419 billion as of 2018 )[1]. On the other hand, retaliatory measures taken by Chinese authorities have slammed tariffs on U.S. goods worth $110 billion. Economic czar Liu He of China and the U.S. Secretary of the Treasury Steven Mnuchin and the U.S. Trade Representative Robert Lighthizer have been trying to reach an agreement but to avail. On May 2018, Trump administration presented China with five demands: terminate subsidies to technology companies, stop stealing U.S. intellectual property (IP), cut tariffs on U.S. products by 2020, open Chinese market to more U.S. investments and reduce trade deficit by $200 by 2020.

President Trump met with Chinese President Xi Jinping at the G-20 Conference in December 2018, and Trump agreed to hold on to the tariff increase planned for January 2019. Trump gave a three-month period until March 1, 2019 to reach a potential trade and economic negotiation with China. Trump administration announced on February 27, 2019 that it would drop any threat of imposing additional tariffs. Recently on May 5, 2019, Trump administration announced a tariff hike on $200 billion worth of Chinese imports from 10% to 25 % effective from May 10, 2019 and the Chinese also retaliated with a tariff hike with same amount of levies.

## 1.2 Problem Formulation

The U.S.-China trade relationship has always been an important bilateral trade relationship that ranks first among these two top economic powerhouses in the global market in trading volume. In 2017, the volume of merchandise trade between the U.S. and China reached $636 billion, which, despite ongoing trade tensions between the two nations, increased

[1] U.S. and China Economic and Security Review Commission, 2018 Annual Report

further to $660 billion in 2018. China is America's largest trading partner, as well as America's largest import and third-largest export source, while the US is China's largest export source and its sixth-largest import source.[2] The fundamental reason behind putting trade restrictions on China is to largely to cut the humongous trade deficit between the two countries. As of 2017, the merchandise trade deficit between U.S. and China was $375 billion, it was the highest deficit to be reached between the two nations which supposedly compelled Trump administration to impose tariffs on a variety of Chinese imports from solar panels to miscellaneous manufactured commodities but the result was appalling, it further grew up to $419 billion in 2018. Although it would be appropriate to view the scenario objectively rather than blame one party and praising the other. The Chinese forced technology transfer of U.S. companies to Chinese entities, theft of U.S. intellectual property and business secrets, excessive role of the state government in trade activities can all be regarded as unfair but at the same time, United States' current policy of anti-globalization, protectionism and rising threat of populism can severely hamper the trade relations between the U.S. and China and ultimately can have a negative affect on the global economy.

From another dimension, this problem cannot be only viewed as an economic issue but geopolitical as well, with China substantially emerging as a top economic player and increasing its sphere of influence in all directions, also we need to assess what will be the possible consequence of the trade war on U.S., China and the international economy.

## 1.3 Goal of the Research

With the deteriorating U.S.-China trade relations and eventually the transformation of these trade tensions into a full fledged trade war, the principle objective of this research is to investigate, assess and evaluate the ongoing trade war between the world's two biggest economies with a backdrop of their trade relations since 1979 economic reforms of China, impact of the ongoing trade war on the U.S., impact of the ongoing trade war on the

[2] Office of the United States Trade Representative statistics

Chinese economy and finally the apparent effects of the U.S.-China trade war on the international economy.

Furthermore, we would investigate on what factors fueled the U.S.-China trade war, role of international institutions such as WTO to bring about a solution, certain countries that can be benefited from the ongoing trade war and the worst hit countries, also to answer if a global recession is looming on our heads as a possible consequence of the U.S.-China trade war.

## 1.4 Methodology

In order to ensure the reliability of the data, official governmental data-banks, such as the U.S. International Trade Commission DataWeb, the United States Census Bureau, the U.S. Bureau of Economic Analysis, the National Bureau of Statistics of China or China's Ministry of Commerce, Federal Reserve Bank, OECD, World Bank, UNTACD and USTR are being utilized. For many political decisions and academic publications, these extensive databases provide frequent updates and form the statistical basis. In addition to official statistics, certain qualitative sources are included in the analysis of economic interdependence, such as annual reports or academic journal articles, research paper by scholars. These are considered useful in shaping the line of argumentation as well as weight and prioritizing the aspects that play a major role in the analysis.

To get a deeper understanding of the entire scenario, international relations theories such as Hegemonic Stability, Neoliberalism and Neorealism are chosen and a theoretical application has also been made based on the three above mentioned theories.

We have also conducted a statistical research if Chinese trade imbalance with the U.S. is responsive to the changes in RMB exchange rate, we deployed the Pearson correlation coefficient technique that was used to achieve a correlation parameter between the Chinese Renminbi exchange rate and China's trade surplus with the U.S. and graphical representation of the correlation result has also been shown. We use monthly data ranging from 1987 to 2018 in this study. We divide the whole sample period into three:

the first period covers the prior-exchange rate unification years, which is the dual exchange rate system from 1987 to 1993, the second spans from 1994 to 2005 to reflect the impact of the dollar-peg policy, and finally the third sub-sample period ranges from 2006 to 2018 to allow for the effect of relinquishing the dollar-peg policy and adopting the market forces to determine the Renminbi exchange rate.

Pearson correlation coefficient is a measurement to detect a linear relationship or just to measure the strength of a linear association between two variables or two sets of data, to be precise these can be the variables x and variables y.

Statistically it has a cap of +1 and a floor of -1, where +1 means that these two variables are strongly correlated, 0 shows no correlation and -1 means that they are strongly negatively correlated. It is quite rare to get these values so we have certain guidelines which are as follows: ± 0.8 ~ 1.0 is significantly strong correlation, ± 0.6 ~ 0.8 is strong correlation, ± 0.4 ~ 0.6 is medium correlation, ± 0.2 ~ 0.4 is weak correlation and finally ± 0.0 ~ 0.2 is distinctively weak or no correlation.

Furthermore a hypothesis T-test and Fisher Z- test was conducted to draw further conclusions and to check the correlation between the Renminbi exchange rate and the Chinese trade surplus with the U.S for the three sample periods. (see appendix B)

# 2. Theoretical Framework

## 2.1 The Hegemonic Stability Theory

The Hegemonic Stability Theory is a theory of international relations that was first used by American scholar Keohane (Keohane 1980). In the year 1973, Kindleberger, an economics professor at the Massachusetts Institute of Technology (MIT) published the book, "World Economic Slumps from 1929 to 1939" (Kindleberger 1973). The central idea of the theory states that the stability of the international system needs a single dominant state to articulate and enforce the rules of interaction among most important members of the system. Since then, Krasner and Gilpin have contributed to the theory. In common, the hegemonic stability theory has the following arguments:

- The international system is more likely to remain stable when a single nation-state is the dominant (hegemon) world power or, in other words, the stability and prosperity of a particular liberal international economic order requires hegemony to be maintained (Kindleberger 1973). The so-called "hegemon,". There is a positive correlation between hegemony and the international economic order, the hegemonic theorists say. The economic order within the international system remains stable when the hegemonic power continues to have advantages over others. On the contrary, the international economic order becomes disruptive when the hegemonic power declines and eventually experiences a collapse with the hegemonic power decline. Hegemony therefore plays a major role in preserving the international economic order (Stephen Krasner 1978).
- By providing international public goods, the hegemony maintains the stability of the international economic order. In the open market economy, too, there are public goods or collective goods. It does not reduce the number of such products for other potential consumers when individuals or others consume such goods. For this, some examples may be roads, sidewalks, rail, lighthouse etc. There are also public goods for a free and open international economy (Ferroni, Mody 2002): rules formulated by international economic organizations such as a free and open trade system based on the principle of treatment by

the most favored nation; stable international currencies that can support everyone profiting from business activities.

- Ultimately, the hegemonic power will decline. The ultimate hegemony development trend is that hegemony will always decline. This argument was presented from various aspects by Gilpin. The is from the market mechanism aspect, hegemony is based on overwhelming advantages over other countries in economics, science and technology, military etc.
- The power transition will occur after the decline in hegemon power. Organski inherited the realistic paradigm of Hans Morgenthau and pointed out that the fundamental goal of a country (A.F.K.Organski1958) is to pursue the power defined as national interest in anarchic international society. A country can only use its own strength to influence other countries ' behavior so that power can be given to itself. Influence other countries ' behaviors so that they can give power to themselves.

## 2.2 Neorealism

First mentioned by Kenneth Waltz in his 1979 book “The Theory of International Politics”. The central idea of neorealism, sometimes referred to as structural realism is that, power is the most important factor in international relations. Neorealism depicts the characteristics of international system as a whole and explains how these characteristics affect the behavior of individual states.

Neorealism has few key assumptions. First, the major players in the international system are territorially organized entities, such as states and city-states (Waltz 1979). Other actors like multinational corporations or international organizations must all work in inter-state relations. Second, anarchy characterizes the international system, which is the primary force in shaping states ' motivations and actions (Waltz 1979; Burchill 2001). Neorealism supporters claim that anarchy makes conflict and war inevitable. In anarchy, there is no effective authority above the state capable of ensuring compliance with agreements and standards. As a result, the international system is a system of "self-help," with states trying

to maximize their national interests by fighting for power to gain national security. The mechanism for fighting for power is the balance of power, states do it in two ways, either by acquiring greater economic or military power over others or by building strong alliances (Burchill; Linklater 2001). Waltz and Mearsheimer state that "in international politics, overwhelming power is repelling and leading others to struggle against it." But the major weakness of the theory of neorealism is that it only emphasizes the importance of the role of structure in the international system as a key determinant of state behavior, without taking into account its domestic character. It can also be divided into two defensive and offensive parts.

Waltz's "defensive realism"

There is a crucial differentiation between "defensive" and "offensive" within neorealism. The discrepancies between the two strands concern the question of whether motive states are "maximizers" of power or security. Waltz is not only a predominant neorealist, but also the major representative for defensive realism, arguing that when the situation becomes critical, the main interests of states are security rather than power (Waltz 1990). Thus, states are seen as maximizers of security in defensive realism. Without security, the state's survival can not be guaranteed, and without guaranteed survival, states can not fully seek goods such as tranquility, profit, and power (Waltz 1979).

Mearscheimer's "offensive realism"

Mearscheimer (2001) introduced a new realistic strand in his work "The Tragedy of Great Power Politics." "Offensive realism" by Mearscheimer combines classical realistic concepts with neorealist hypotheses. Offensive realism is in line with the classical realistic assumption of maximizing power. Mearsheimer points out that the main strategies for gaining power are the concepts of blackmail and war (Mearsheimer 2001). In short, he stresses, because this is the optimal way to maximize their security, the international system forces great powers to maximize their relative power. This means that survival requires aggressive behavior "(Mearsheimer, 2001, p. 21).

## 2.3 Neoliberalism

Neoliberalism shares some of the same point of views on international society with neorealism. Both agree that the international system is anarchic. However, the differences between the two are reflected in how neoliberalists disapprove of some of the neorealism's claims and emphasis on new factors. Some of the most prominent works in the field of neoliberalism that provides a rich understanding of the international system are "After Hegemony: Cooperation and Discord of World Political Economy" (Keohane 1984) and "Power and Independence" (keohane and Nye 2001).

Neo-liberalism includes four proposals. First, states not only engage in conflict, but also cooperate (Keohane, 1984). Second, in international relations, states are the main actors. However, the importance of the roles played in the world arena by non-state actors (e.g. international institutions, multinationals, NGOs, etc.) can not be ignored (Burchill, S. & Linklater, A. eds., 2001). Third, states are interdependent with absolute gains (Burchill, S. & Linklater, A. eds., 2001; Keohane and Nye, 2001). Fourthly, anarchy does not mean "no administration," but "no government." (Burchill, S. & Linklater, A. published in 2001). The liberalist theory emphasizes not only states as major actors, but also international institutions, with the help of international institutions that promote the flow of information between nation states, cooperation in the international system between sovereign states is possible even with anarchy as the organizing principle. Usually this cooperation includes ' low policies' such as economic relationships and social affairs. In addition, international institutions are helping to reduce distrust among nation states as they promote the ability of states to monitor one another (Keohane, 1989). National states can thus ensure that another state adheres to standards or that agreements and cooperation are sound (Keohane, 1989). Nevertheless, while established cooperation between nation states may emphasize' low economic and social policy,' liberal institutionalists do not extinguish the possibility of using military power or war, or, as Keohane and Nye (1989) stress:' military power is still important in world politics.' The theory of greater nation-state cooperation, and thus the

emphasis of' low politics' as compared to' high politics,' as argued in the next part, is interlinked with the concept of (complex) interdependence of Keohane and Nye in politics.

## 2.4 Theoretical Application

The Sino-U.S. trade relations from the point of view of above mentioned theories can be demonstrated in the following way:

◆The Unites States was once the hegemony that established and maintained the international economic order. It grew in more and more powerful until the end of 20th century when its hegemonic position began shaking.

◆America's relative gains against China are declining, while China is attempting to take over the leadership of the US in the international system. Be it the GDP growth rate, rapid infrastructure development, engagement in international exporting activities or the huge trade deficit, China has seen a very steady up rise and growing by leaps and bounds if we compare it against the U.S. so the U.S. has the right to be cautious against China.

◆Moreover, China increasingly engaging in projects like Belt and Road Initiative (BRI) and Made in China 2025 (initiated in 2015) is creating an emergency like situation for the United States as Beijing intends to increase its political, economic and military presence within its region and on the global stage. Made in China 2025 reiterates China's long-standing indigenous innovation and import substitution goals. Whereas, by financing and building infrastructure around the world, BRI aims to expand Chinese influence with a focus on Asia, the Middle East, Africa, and Europe.

◆The trade war between US and China that has been going on since 2018 with both the parties putting combined sanctions on goods is very crucial for both the countries, from one point of view, it can be seen as a declining hegemon trying to contain a potential hegemon or a declining hegemon trying to employ a combination of defensive and offensive realism in order to maximize its security and also to avoid power transition at the same time.

# 3. US-China Trade Relations Analysis

## 3.1 Historical Overview

### 3.1.1 American-Sino Relationship

Since the formation of People's Republic of China (PRC) in 1949, the relationship between the U.S. and China had been one of fluctuating nature. The United States' diplomatic recognition of Taiwan along with its strong presence of American military power in the East Asia caused particular tensions with China in the 1950s and 1960s. In the Korea War, the two were also opponents. These disputes resulted in a distant and hostile relationship. Furthermore the diplomatic and trade relations between U.S. and China hit rock bottom during the Cold War, the difference in ideology and national security interests severely affected the bilateral trade between these two nations. Following the China-Soviet border conflicts in the late 1960s and the end of the Vietnam War in 1968, both China and the U.S. began to realize the potential benefits of normalizing bilateral relationship which was facilitated by the ice breaking visit of U.S. President Nixon to China in 1972 that ended the legal barriers of trade with China. The diplomatic and economic ties grew in the 1970s and 1980s. After the China's 1979 market-oriented economic reform, the U.S. granted China the "Most Favored Nation" (MFN) status in January 1980. The MFN is a status of treatment granted by one country to another so that the recipient of this status enjoys advantages of low tariff rates or high import quotas. This title also ended the Smoot-Hawley Act that stipulated high tariff rates on imports from China since 1930. In 1986, the US soon became China's second-biggest importer and China's third-biggest partner. When the PRC became a member of the WTO in 2001 and evolved into a global economic power, these political tensions gradually changed into economic disputes. Since then, the American government has continuously expressed its concerns on the overvalued Chinese national currency, the trade imbalance, and its protectionist policies.

### 3.1.2 Rise of China

Before 1979 economic reforms, China had a centrally planned economy that was heavily controlled by the Communist Party of China (CPC). In order to assist rapid industrialization, the state government undertook large-scale capital investments during the 1960s and 1970s. In the late 1970's, China shifted towards more of a market driven approach, also known as the gaige kaifang ('reform and opening policies'). This outward oriented approach together with the inflow of FDI (Foreign direct Investment) lead to instantaneous increase in China's exports and over the 1980s and 1990s, PRC progressively engaged itself in the global economy and emerged as one of the top players in international trade scenario. It subsequently privatized many state-owned enterprises (SOEs) and joined the International Monetary Fund (IMF) and World Bank (WB). In 2001, China became a member of the World Trade Organization (WTO). Herewith, it agreed upon international regulations on imports and exports, intellectual property, and trade remedies.

The 2000s can also be characterized as a period in which China began to advocate multilateralism and international trade as an instrument for achieving international peace and stability. By 2010, China rose to number two, next only to the US. Today, it is the world's largest manufacturer, merchandise exporter, and holder of foreign exchange reserves. China which is currently the second-largest economy after the US, though some analysts predict that it could become the largest within the next five to ten years. We now can summarize the factors that lead to the rise of China- the Chinese government's economic reform measures, privatization and incorporation of SOEs and massive inflow of FDI.

## 3.2 US-China Status Quo Trade Relationship Overview

### 3.2.1 Bilateral Merchandise and Service Trade

Trade between the U.S. and China grew tremendously following the restoration of diplomatic relations between the two countries in January 1979, the signing of a bilateral trade agreement in July 1979 and the provision of mutual treatment of the most favored nation (MFN) in 1980. Shortly after the Chinese economic and trade reforms, total U.S.-China trade (exports plus imports) amounted to about $4 billion, while China ranked the 24th largest trading partner of the United States. In 2017, the total merchandise trade between the U.S. and China was $636 billion, making China the largest trading partner of the United States. (figure 1)

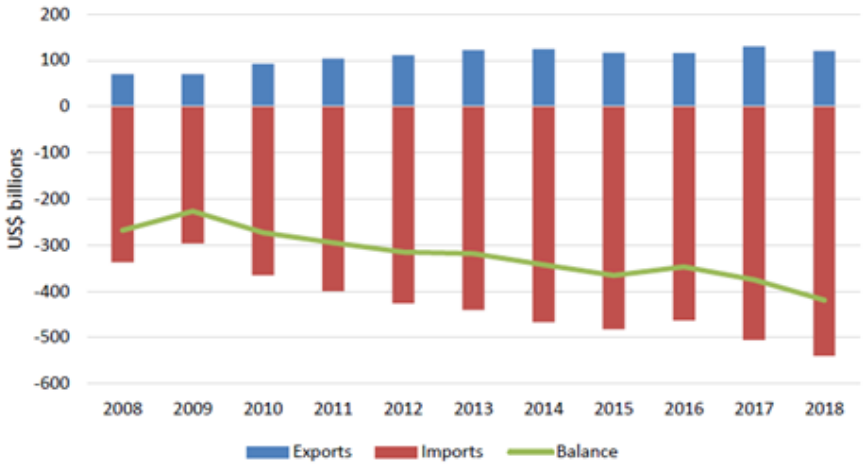



Figure 1: Annual Goods Trade with China, 2008—2018
Source: U.S. Census Bureau, Trade in Goods with China, March 6, 2019. https://www.census.gov/foreigntrade

U.S Merchandise Exports to China

The U.S. merchandise exports to China in 2017 were $115.6 billion, it grew 12.8% from the last year. China was the third-largest U.S. merchandise export market after Canada and Mexico . China was the second-largest U.S. agricultural export market in 2017, at $19.6

billion, 63% of which composed of soybeans. The top merchandise U.S. exports to China in 2017 were[3]: (table 1)

- Aerospace products (mainly civilian aircrafts and parts)
- Oil seeds and grains (mainly soybeans)
- Motor vehicles
- Semiconductors and electronic components
- Waste and scrap

($ in millions and percentage change)

| NAIC Code | Products | 2016 | 2017 | Change 2016-2017 |
|---|---|---|---|---|
| 3364 | AEROSPACE PRODUCTS & PARTS | 14,578 | 16,273 | 11.6% |
| 1111 | OILSEEDS & GRAINS | 15,524 | 13,724 | -11.6% |
| 3361 | MOTOR VEHICLES | 8,317 | 10,071 | 21.1% |
| 3344 | SEMICONDUCTORS & OTHER ELECTRONIC COMPONENTS | 6,686 | 6,887 | 3.0% |
| 2111 | OIL & GAS | 1,448 | 6,856 | 373.3% |
| 9100 | WASTE AND SCRAP | 5,182 | 5,625 | 8.5% |
| 3345 | NAVIGATIONAL/MEASURING/MEDICAL/CONTROL INSTRUMENTS | 5,466 | 5,582 | 2.1% |
| 3251 | BASIC CHEMICALS | 4,595 | 4,897 | 6.6% |
| 3252 | RESIN, SYN RUBBER, ARTF & SYN FIBERS/FIL | 3,577 | 4,123 | 15.3% |
| 3254 | PHARMACEUTICALS & MEDICINES | 2,818 | 3,401 | 20.7% |
| **Total** | | **115,602** | **130,370** | **12.8%** |

Table 1: Major U.S. Exports to China in 2017
Source: USITC DataWeb.

From 2002 to 2017, U.S. exports to China increased by 491 percent, which was the fastest growth rate among the top 10 U.S. export markets in 2017. (figure 2)

Many trade analysts argue that in the future China could be a much larger market for U.S. exports. China is one of the fastest growing economies in the world, China's goals of upgrading its infrastructure, rebalancing the economy, upgrading industries, boosting the services sector, and enhancing the social security network could generate significant new demand for foreign goods and services. Economic growth has significantly enhanced Chinese citizens ' purchasing power, particularly those living in urban areas along China's

[3] Wayne M. Morrison (2018), Congressional Research Service, China-U.S. Trade Issues

east coast. Moreover, China's large foreign reserves (at $3.1 trillion as of May 2018) and its enormous population (at $1.39 billion) make it a potentially huge market.

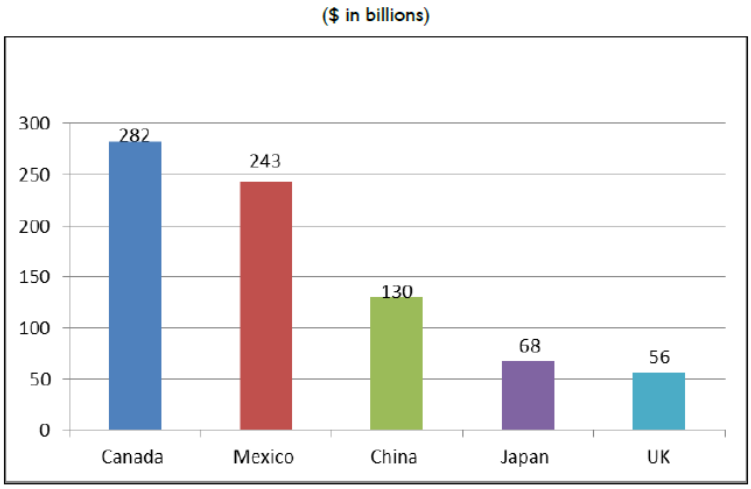



Figure 2: Top 5 US merchandise export market in 2017
Source: USITC DataWeb.

U.S. Merchandise Imports from China

China was the largest source of U.S. merchandise imports in 2017, at $506 billion, it grew 9.3% over the last year. China has been the largest source of U.S. imports ever since 2007 till date. (figure 3) The top U.S merchandise imports from China in 2017 were[4]: (table 2)

- Communications equipment
- Computer equipment
- Miscellaneous manufactured commodities (such as toys and games)
- Apparel
- Semiconductors and other electronic components

[4] Congressional Research Service (2018), China- U.S. Trade Issues

($ in millions and percentage change)

| NAIC Code | Products | 2016 | 2017 | Percent Change 2016-2017 |
|---|---|---|---|---|
| 3342 | COMMUNICATIONS EQUIPMENT | 65,674 | 77,957 | 18.7% |
| 3341 | COMPUTER EQUIPMENT | 52,180 | 58,609 | 12.3% |
| 3399 | MISCELLANEOUS MANUFACTURED COMMODITIES | 34,408 | 36,497 | 6.1% |
| 3152 | APPAREL | 25,483 | 24,559 | -3.6% |
| 3344 | SEMICONDUCTORS & OTHER ELECTRONIC COMPONENTS | 18,903 | 23,158 | 22.5% |
| 3371 | HOUSEHOLD & INSTITUTIONAL FURN & KITCHEN CABINETS | 16,535 | 18,222 | 10.2% |
| 3352 | HOUSEHOLD APPLIANCES AND MISC MACHINES | 14,062 | 14,494 | 3.1% |
| 3162 | FOOTWEAR | 14,620 | 14,074 | -3.7% |
| 3261 | PLASTICS PRODUCTS | 12,319 | 13,771 | 11.8% |
| 3363 | MOTOR VEHICLE PARTS | 13,117 | 13,533 | 3.2% |
| **Total** | | **462,618** | **505,597** | **9.3%** |

Table 2: Major U.S. merchandise imports from China in 2017
Source: USITC DataWeb.

China has also been the fourth largest source of $4.5 billion in agricultural imports.

Nearly all imports from China during the 1980s and 1990s were low-priced, labor-intensive products such as toys and games, consumer electronics, footwear, textiles and apparel. However, the share of U.S. imports from China that are considered "advanced technology products" (ATP) has been steadily increasing over the past few years.

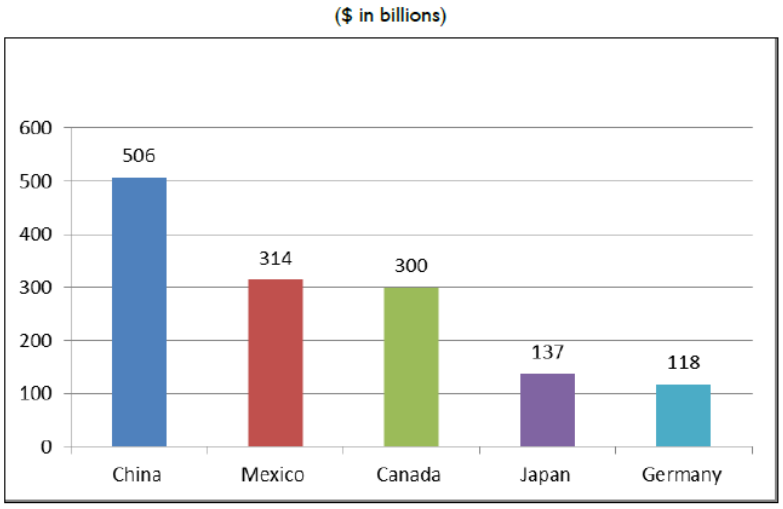



Figure 3: Top 5 Sources of U.S. Merchandise Imports in 2017
Source: USITC DataWeb

Trade in Services

China is a major U.S. service-sector trading partner. In 2017, China was $75 billion in the 4th largest trading partner, $57.6 billion in the 3rd largest export services market and $17.4 billion in the 8th largest source of service imports. . The U.S. ran a $40.2 billion trade surplus with China, the largest service surplus of any U.S. trading partner, according to Bureau of Economic Analysis data. (figure 4)

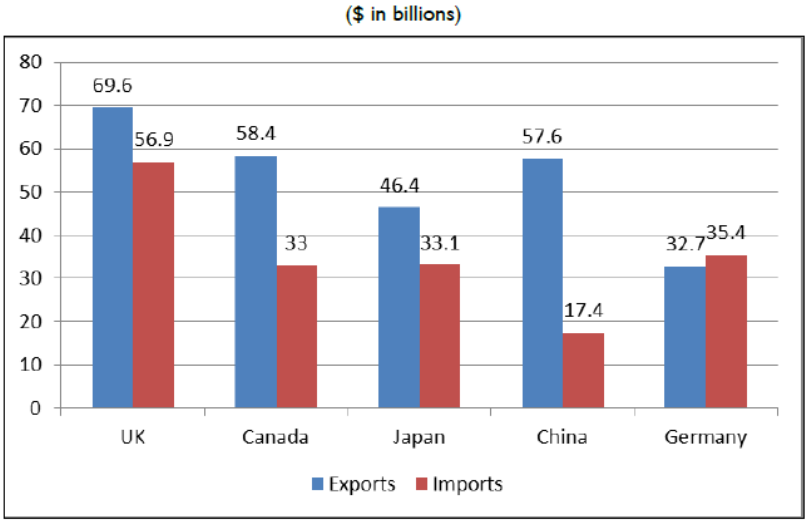



Figure 4: Major U.S. services trading partners in 2017
Source: BEA.

## 3.2.2 Bilateral Investment Ties

Investment plays an enormous and growing role in the commercial ties between the U.S. and China. Investment by China in U.S. assets can be widely divided into the following categories:

- Holdings of U.S. securities
- Foreign direct investment (FDI)
- Non-bond investments

The Department of the Treasury defines U.S. foreign holdings securities as "U.S. securities owned by foreign residents (including banks and other institutions), except where the owner has a direct investment relationship with the U.S. issuer of the securities." China's

holdings of U.S. public and private securities are substantial and by far the largest Chinese investment category in the U.S. These are U.S. securities. Treasury securities, U.S. government agency (like Freddie Mac and Fannie Mae) securities, corporate securities, and equity (like stocks). As of June 2017, China's public and private securities investment amounted to $1.54 trillion (table 3), making it the fourth largest holder after Japan, the Cayman Islands and the United Kingdom.[5]

| | 2002 | 2004 | 2006 | 2008 | 2010 | 2012 | 2014 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|
| China's holdings ($ billions) | 118 | 223 | 397 | 727 | 1,160 | 1,203 | 1,244 | 1,058 | 1,185 |
| China's holdings as a percentage of total foreign holdings | 9.6% | 12.1% | 18.9% | 23.6% | 26.1% | 23.0% | 21.7% | 17.6% | 18.7% |

Table3: China's Holdings of U.S. Treasury Securities: 2002-2017
Source: U.S. Department of the Treasury

Despite to the large volume of trade between the two countries, the level of foreign direct investment (FDI) between China and the United States is relatively low. At the end of 2016, on a historical-cost basis, the stock of Chinese FDI in the United States was $27.5 billion (up 63.7 percent over the previous year), making China the 16th largest overall source of the United States. FDI until 2016. Whereas the stock of U.S. FDI in China (i.e., the book value) amounted to $92.5 billion (up 9.4 percent year-on-year), making China the 12th largest.

While China is one of the top FDI recipients in the world, China's central government imposes numerous restrictions on the level and types of FDI permitted in China. China imposes ownership barriers on almost 100 industries, according to the U.S.-China Business Council (USCBC).

[5] Ibid

### 3.2.3 Bilateral Trade Disputes and Growing Trade Deficit

The USTR presented an overview of broad areas of concern that remain ambiguous in the U.S.-China trade relations, including investment restrictions, barriers to market access, lack of IP enforcement, data transfer and cybersecurity restrictions, government subsidies and excess capacity, and industrial policies supporting indigenous innovation (such as Made in China 2025)

- Extensive network of industrial policies (including widespread use of trade and investment barriers, financial support, and indigenous innovation policies) aimed at promoting and protecting domestic sectors and firms, particularly SOEs, deemed critical by the government to the future economic growth of the country
- Failure to adequately protect U.S. Intellectual Property Rights (IPR) and (allegedly) widespread government-driven cyber-theft of U.S. trade secrets to assist Chinese companies
- Mixed record of fulfillment of WTO obligations
- Government backed financial policies promoting high savings (but reducing private consumption), encouraging high levels of fixed investment (which contributes to overcapacity in many industries), and a managed exchange rate policy which distorts trade flows.

According to the United States Economic Analysis Bureau, in 2017, the U.S. IP holders were paid $128.4 billion ($ 8.8 billion paid by the Chinese) by foreign entities to use their IPR and $42.2 billion to use telecommunications, computers and information services. China tops the list of U.S. IP infringement list. When China joined the WTO in 2001, as part of the cost of doing business in China, it agreed that foreign firms would not be pressured by government entities to transfer technology to a Chinese partner. However many U.S. companies argue, that this is a common practice in China. Chinese officials allegedly press on foreign firms to transfer technology through oral communications (e.g. as

a condition for investing in China) to avoid putting such requirements in writing to avoid accusations of breach of WTO rules.

Furthermore, indigenous innovation programs such as Made in China 2025 have been having many negative speculations across the globe since its inception in 2015. According to the United States Chamber of Commerce, the aim of Made in China 2025 is to leverage the state's power to change the competitive dynamics of global markets in industries that are central to economic competitiveness but the real intention isn't clear yet, The United States is suspicious of such act by China just to gain more control over the international trade.

The U.S. Merchandise Trade Deficit with China

The size of the U.S. merchandise trade deficit with China, which increased phenomenally from $10 billion in 1990 to $367 billion in 2015, is a major concern among some U.S. policymakers. In 2016, the deficit fell to $347 billion, but then again steeply increased in 2017 to $375 billion which again climbed up to a whooping $419 billion in 2018. The U.S. merchandise trade deficit with China has been significantly greater over the past few years than with any other U.S. trading partner. (refer to figure 1)

Lately some analysts and President Trump himself contended that the large U.S. merchandise trade deficit with China indicates that the trade relationship is somehow unbalanced, unfair and damaging to the U.S. economy. Others argue that such deficits are largely a consequence of shifts in global production and emergence of extensive and complex supply chains where China is often the end point of assembly for export-oriented multinational firms that source goods from a number of different countries.

### 3.2.4 Role of WTO Amid Trade War

The United States built the rules-based international trading system from the ashes of World War II with the cooperation of Western Europe and other countries, establishing the GATT (General Agreement on Tariffs and Trade) in 1947 and transforming it into the WTO (World Trade Organization) in 1995 was one of the historic achievements of international

economic policy cooperation. After decades of trade since the economic liberalization of the Chinese market in 1979, U.S. finally paved the way for China to join WTO. However, following China's WTO accession in 2001, the United States and other countries began challenging Beijing's policies in significant numbers through formal dispute settlement. Thus, persuading China to transform its controlled economy to a market economy, Roughly 20 percent of all disputes brought to the WTO between 2006 and 2018 were filed against China, and the United States was involved in most as a complaining country. While China benefits from WTO protection for its exports of goods, it has been criticized for failing to uphold WTO rules requiring enforcement of trademarks and patents and for subsidizing selected domestic sectors.

On several occasions, the United States has used the WTO dispute settlement mechanism to address the alleged failure of China to fulfill its WTO commitments. To date, 23 dispute settlement cases have been brought against China (or 55% of the total number of cases brought against China by all WTO members by July 2018)

On the other hand, tariffs on Chinese products under Section 232 (steel and aluminum) and Section 301 (IPR), another important case brought by China in the WTO involves the continued treatment by the United States of China as a non-market economy to calculate and impose anti-dumping measures. China argues that the terms of its 2001 WTO accession agreement required all WTO members to treat it as a market economy by December 2017, while the United States argues that China must first prove to be a market economy before it can gain that status.

The WTO is already facing an existential threat, the two world's biggest economies are flouting the international trading rules set up by the WTO. This international organization was initially brought into life by US and its allies in the Europe but after Trump criticized the WTO for being unfair to the U.S. the sanctity of the organization is at stake and if a mediation is not done by the WTO amidst the trade tensions between U.S. and China then it'll be difficult to maintain the international trade system.

# 4. U.S.-CHINA TRADE CONFLICT'S IMPACT ON

## 4.1 U.S.

### 4.1.1 Agriculture Sector Hit Hard

The U.S. agriculture sector was the primary target of China's retaliatory tariffs of 25 percent on about 95 percent of the total U.S. agricultural exports to China launched in July 2018. China is the second-biggest export market for U.S. agricultural products just behind Canada, so it's no surprise that China imposed duties on a wide range of U.S. agricultural products including soybean, pork, sorghum, wheat, corn, cotton to name a few. The agricultural sector in the U.S. is struggling hard in the wake of trade war between the two largest economies, the American agricultural economy which has already been in a slump for over a decade, observed further slump when profits from U.S. farms reached a 12 year low in 2018. (Bakst, 2018)

China is the world's largest soybean consumer, guzzling up about 65% of all trade of the commodity.[6] The Chinese bought nearly $12 billion or 57 percent of all U.S. exports of the crop in 2017 but due to 25 percent tariffs on U.S. soybeans (figure 5), Chinese importers canceled their contracts with U.S. farmers throughout 2018 and shifted to other import sources such as Brazil. Prices for crops such as soybean and corn are down under a worldwide glut in farm commodities. Farmers are having a hard time to make profit in selling their products in domestic and foreign markets, attributing to the tariff wars and U.S. trade disputes with countries such as China. The extent of impact also depends on whether U.S. soybean farmers would be able to find new markets for selling their products because China consumes so much soybean which it uses primarily to feed its livestock, implying that it is unlikely to eliminate U.S. producers entirely. (Durisin, 2018) (Mason, 2018)

[6] U.S.-China Economic and Security Review Commission, Monthly Bulletin May and August 2018

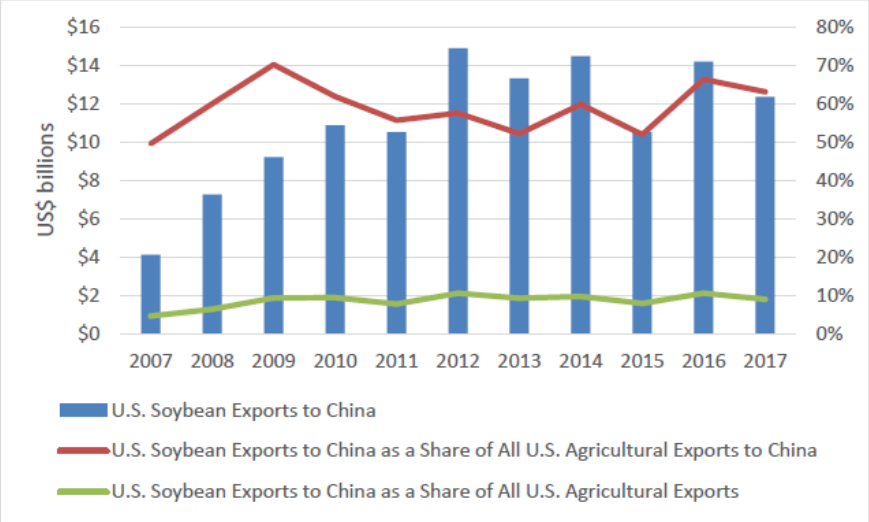



Figure 5: U.S. Soybean Exports to China, 2007–2017
Source: U.S. Department of Agriculture Foreign Agricultural Service, Data Analytics

The pork industry, already tariffed well before the trade war began, is one more causality in the U.S. agricultural sector in the midst of the trade war. U.S. pork is now subject to tariffs as high as 70% after successive rounds of tariffs. Chinese pork sales represent 10 percent of total U.S. exports. One out of four pigs raised in the U.S. are sold overseas and China is the world's largest pork consumer. On the other hand, China already produces 97% of the pork it consumes, so replacing domestic and foreign production with U.S. pork imports should be fairly easy. (figure 6) While many U.S. pork producers might be able to find new markets for their products but that won't be the case for offal, pig parts such as organs and entrails. Chinese consumers consider offal a delicacy whereas it is used as an input for pet food in the U.S. The tariffs have already eroded exports of pig parts to China. The consequence of a prolonged trade war could be severe for U.S. agricultural producers. (Polansek, 2018)

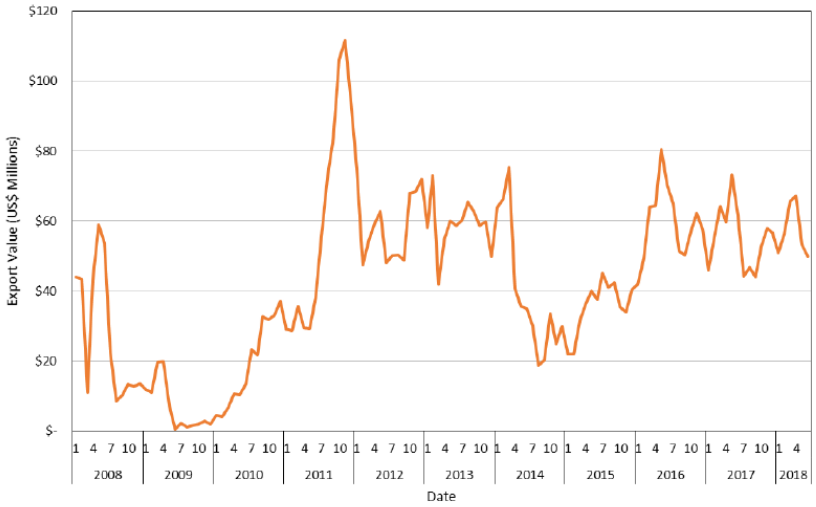



Figure 6: Monthly U.S. Pork Exports to China, January 2008–June 2018

Source: United States Department of Agriculture, Foreign Agricultural Service, Global Agricultural Trade

The U.S. farmers have recently filed for bankruptcy due to the U.S. agricultural crisis triggered by the trade war with China. In 2018, the 7th Circuit Court of Appeals handled twice as many farmers' bankruptcy files as in 2008. Bankruptcy filing in the 8th Circuit increased almost as much, and bankruptcy filings increased by 56 percent on the 10th Circuit. In 2017, nearly half of all U.S. farm products accounted for the states concerned by these three circuits. The U.S. Agriculture Department (USDA) estimated that the average American household lost $1,548 in 2018. Trump administration announced a relief package for its farmers that were severely affected by the U.S.-China tariff war, the USDA offered $12 billion aid. (Campbell, 2018)

However the silver lining  among this chaos was the G20 meeting in December 2018, after Trump and Xi Jinping declared a trade truce of not imposing any new tariffs for the time being. China resumed to purchase the U.S. agricultural products with a not yet agreed but a substantial amount of purchase.

### 4.1.2 Wall Street Earnings Fall

The Dow Jones Industrial Average dropped 5.6 percent last year in 2018, the S&P 500 dropped 6.2 percent and the NASDAQ dropped 4 percent. 2018 was indeed the worst stock year since the global financial crisis of 2008, and it was only the second year that Dow and S&P 500 fell in the last decade. (figure 7) In particular, December was a terrible month: the S&P 500 fell by 9% and the Dow fell by 8.7% the worst December since 1931. The Dow was down by 350 points or more six times in a seven-day streak. (Levisohn, 2019) For the index, the 2018 Christmas Eve was the worst ever. In December 2018 alone, the S&P 500 fluctuated up or down more than 1 percent nine times, compared to eight times throughout 2017. It has moved throughout the year as much as 64 times. 2018 will certainly be remembered for its extreme volatility. Investors feared the stock market slowdown attributing to the U.S. trade war with China, geopolitical tensions and a possible government shutdown. (Joyner, 2019)

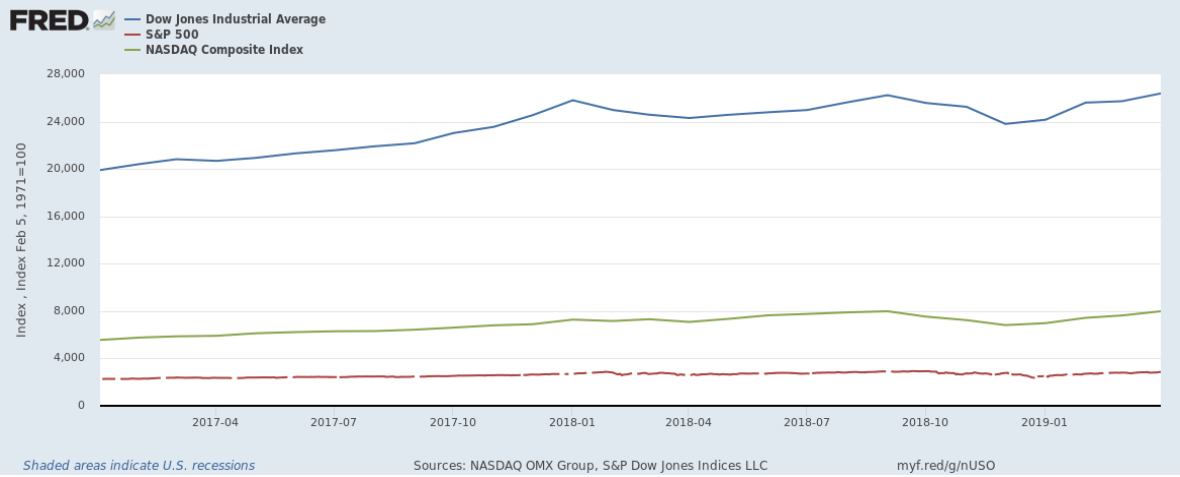



Figure 7: Monthly Dow Jones Industrial Average, S&P 500 and NASDAQ composite,2017–2018
Source: Federal Reserve Bank of St. Louis

When we talk about the January 2019 openings, the corporate earnings season kicked off strangely, U.S. stocks dropped as a decline in China's exports rekindled worries about global economic slowdown and prompted investor caution. (Lee, 2019) The data showed that in December 2018 China's exports fell the most unexpectedly in two years and also contracting imports. The drop pointed to the Wall Street's further weakening and the

world's second-largest economy as well due to faltering global demand. The Dow Jones Industrial Average <.DJI> dropped 86.11 points or 0.36% to 23.909.84, the S&P 500 <.SPX> dropped 13.65 points or 0.53%, and the NASDAQ Composite <.IXIC> dropped 65.56 points or 0.94% to 6.905.92. According to IBES (Institutional Brokers' Estimate System) data from Refinitiv, analysts now estimate that S&P 500 earnings will grow by 14.3 percent year-over-year for the fourth quarter, while they forecast a 20.1 percent jump in October. When it cut its revenue forecast in January 2019, Apple Inc. < AAPL.O > pointed to a slowing demand in China. PG&E Corp shares < PCG.N > plunged 52.4 percent after the U.S. power utility announced that it was all set to file for all its businesses bankruptcy in Chapter 11.

Following the crucial meeting in December last year, the Federal Reserve decided to keep interest rates steady and stated that in 2019, there will be no more hikes. The Fed now holds from 2.25 percent to 2.5 percent of its benchmark fund rate. The rate is used in most adjustable consumer debt, such as credit cards and home equity loans, as a key determinant of interest. The Fed also lowered GDP growth and inflation expectations as well as a higher bump in the unemployment rate outlook in months ahead.

### 4.1.3 Import-export and Consumer Sentiment Both Dropped

Trade flows between China and the United States are rapidly contracting as a direct consequence of the trade war between the U.S. and China, which is bringing a lot of chaos in the international flow of goods. (figure 8)

Chinese imports of US products dropped down 41.1 per cent from a year earlier to US$9.2 billion in the beginning of 2019 which was the lowest since February 2016, according to data released by the Chinese customs authority. On the other hand, in January 2019, Chinese exports to the US dropped slightly, down 2.4% to US$36.5 billion.[7] The decline in US-China trade led to a 20.7% decline in total Chinese exports in February 2019, China imported 19.9% less from the US last month and exported 14.1% less US goods, suggesting

[7] United States Census Bureau

that the US-China trade war was biting. In February 2019, China's exports crashed by 20.7 %, the largest drop in three years, driven by a large decline in trade with the United States. The total decline in exports was much higher than expected, possibly providing the first evidence of the impact on Chinese goods of US tariffs.

In January 2019, China's politically sensitive trade deficit dropped 6.4 percent to $34.5 billion. The goods trade deficit in January decreased from $7.8 billion to $83.8 billion when adjusted for inflation. The drop in the so-called real-goods trade deficit could see economists bumping their estimates of growth in the first quarter of their very low gross domestic product.


Figure 8: Quarterly Trade with China, Q1 2017 – Q1 2019
Source: U.S. Census Bureau, Trade in Goods with China, May 9, 2019.

Consumer sentiment dropped to its rock-bottom level since before the U.S. presidential election in 2016 amid growing concerns over U.S. economic growth, according to data released Friday. The University of Michigan consumer sentiment index fell to 90.7 in January 2019- its lowest since October 2016 from 98.3 in December 2018, preliminary data showed. Economists polled by Refinitiv expected the index to fall to 96.4. The loss was due to a host of issues including the partial government shutdown, the impact of tariff war with China, instabilities in financial markets, the global slowdown, and the lack of clarity about monetary policies. (Imbert, 2019) (Yeung, 2019)

In addition to the direct economic impact on the economy from these different issues, the indirect effect meant that half of all consumers believed these incidents would have a negative impact on Trump's caliber to focus on economic growth and this would in turn prove to be fatal for him in the 2020 presidential elections.

### 4.1.4 U.S. Companies in China Feeling the Pain

American companies in China have been warned of a "paradigm shift" and have been facing A lot of difficulties since the two countries engaged in a full fledged tariff war. According to the AmCham survey of hundreds of companies, American companies in China are being severely affected by tariffs in the widening trade war, prompting US business lobbies behind the poll to urge the Trump administration to reconsider its approach. More than 60 percent of U.S. companies polled stated the U.S. tariffs had already affected their business operations, while China's tariffs on U.S. goods had a similar percentage that had an effect on business. Companies reported that the tariffs exerted pressure on profits, reduced demand for their products, and increased production costs. Approximately three out of four companies surveyed said duties on additional Chinese goods worth $200 billion would further hurt business, and nearly 70 percent said additional Chinese retaliatory tariffs would be bad for business.[8]

As the tariff war between the U.S. and China began to show its effect, America's leading multinational technology company saw its sales shrink in mainland China. Apple's 2018 holiday quarter saw revenue generation of $13.2 billion in Greater China, down from almost $18 billion in the same period of the previous year. During the first quarter of 2019, Apple's iPhone sales in China fell by 30 %, according to Canalys ' new shipment estimates. During the quarter, Apple shipped an estimated 6.5 million iPhones, marking its worst two-year decline. It shipped fewer smartphones in the country than Xiaomi, Vivo, Oppo, and Huawei Chinese vendors, coming in as China's number five brand. In the first quarter of

[8] American Chamber of Commerce in China

2019, Apple held only 7.4 percent market share in China, down from 10.2 percent in the quarter of the year. While Apple has not blamed the trade war as the sole reason for its poor performance in China, the company has cited strong competition from local mobile giants, reduced battery replacement prices, and China's economic slowdown along with the tariff war that has just made things tough for the American tech giant. (Dong, 2019)

American car manufacturers like Ford also feel the pain, Ford's fourth-quarter and full-year 2018 results make it clear how poor the performance of the car manufacturer was in China. Ford's Asia Pacific region, driven largely by results from China, recorded a 12% decline over the full year driven by a 33% decline in wholesale volume. On the other hand, companies such as Toyota benefit from such situation and improve their market share. The U.S.-China trade war and particularly the duties imposed by Chinese authorities on imported automobiles are actually proving to be catastrophic and the slowdown in the Chinese economy is just being growing steadily. Meanwhile, electric cars have a great future in China so the American company, Tesla is planning to establish its production facility in China hoping for increase in sales by reducing the cost of its electric car range.

## 4.2 China

### 4.2.1 GDP Growth Rate Slowed Down

In 2018, China's gross domestic product (GDP) grew at 6.6 %, its slowest annual rate since 1990. (figure 9) Although the trade war with the U.S. didn't have a direct impact on the Chinese GDP but it certainly accelerated the process of Chinese economic slowdown by adding worries to its already unbalanced economy. Beijing's crackdown on debt fueled corporate spending splurge combined with the ongoing trade conflict with the U.S. took a toll on Chinese companies and consumers. Subdued domestic demand has already cost a lot of Chinese their jobs and a looming threat of a long term trade war with the U.S. has just made things worse for the Chinese economy's further attempts to recover. (Barrett, 2019)

So far the U.S. has slapped tariffs on a massive $250 billion worth of Chinese merchandise and the Chinese economy started to cripple down in the mid-2018 when the trade war was at full swing. For the first and second quarters of 2018, China's officially reported GDP grew at 6.8 % and 6.7 % year-on-year respectively. In the third quarter of 2018, it further decreased to 6.5 % year-on-year. Lastly, it cooled down to 6.4 % year-on-year, in the fourth quarter of 2018, succumbing to the faltering domestic demand and bruising U.S. tariffs.[9]

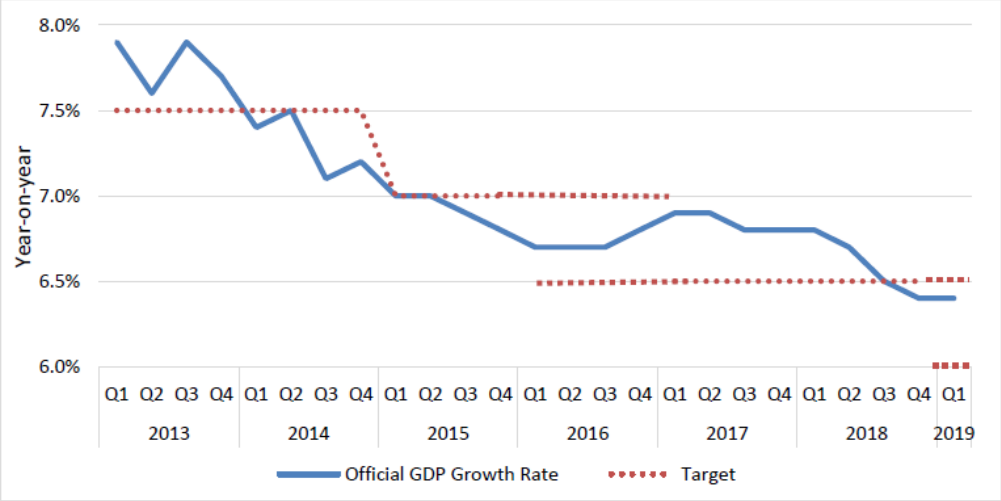



Figure 9: China's Official GDP Growth, 2013–Q1 2019 (year-on-year)
Source: China's National Bureau of Statistics via CEIC database.

The slowdown in China's GDP is a consequence of a series of Chinese government actions and the escalating trade war in 2018. First, the ongoing deleveraging campaign by the Chinese government weighed on domestic demand and increased the corporate borrowing cost. China has long relied on infrastructure investments in the past to boost its economic growth and bank credit has always played a crucial role in lifting up China's economy and the government has given preferential credits to certain industries. The Bank for International Settlements estimated China's credit gap- a measure of short term versus long term credit creation at 30 % in March 2016 and this is three times higher than what the bank deems as a cause for concern. The Chinese authorities now face a dilemma, whether to

[9] U.S. China Economic and Security Review Commission, Monthly Bulletin, February 2019

engage in deleveraging activities or focus on GDP growth related activities. Second, China's export growth and overall economic growth were hampered by the intensifying trade conflict with the U.S. China saw the steepest fall in three years in February 2019 when China's total exports plunged 20.7 percent that was a direct effect of the trade war with the United States. Given the fact that the Chinese economy is heavily dependent on its exports worldwide, this was the biggest blow to the Chinese economy in the wake of U.S.-China trade tensions.

The Chinese authorities have also lowered its target for economic growth in 2019 for 6 to 6.5%, down from a hard target of 6.5 % adopted over the past few years. Last year, the IMF projected a target economic growth of 6.2 % for China, which increased in 2019 by 0.1 % to 6.3 %, showing confidence in the Chinese authorities to curb their financial crisis, while the global economy is expected to grow at a rate of 3.3 % without further growth.

### 4.2.2 Factory Activity Shrank

The Purchasing Managers' Index (PMI) has always been a traditional economic indicator of Chinese manufacturing industry's health. Unofficial estimates by the Chinese financial media firm Caixin found that China's manufacturing PMI declined from May 51.1 to 51 in June 2018, as Chinese companies faced rising input prices and a decline in export orders in the face of a growing trade dispute with the US. It further fell to 50 in September 2018 and eventually Caixin China's Purchasing Managers' Index (PMI) of manufacturing, dropped from 50.2 in November 2018 to 49.7 in December 2018[10], as new orders- both domestic and international began to shrank tremendously. Now there exists a golden rule among the analysis of PMI index, anything under 50 indicates a serious problematic situation for the country's manufacturing sector and this was lowest level China got itself. (figure 10)

[10] U.S. China Economic-Security Review, Monthly Bulletin, January 2019

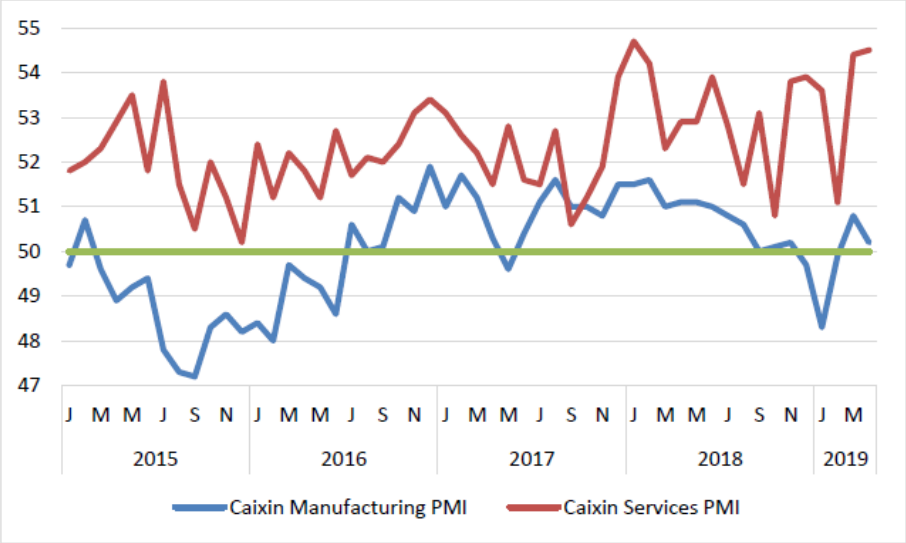



Figure 10: Caixin Services and Manufacturing PMIs, 2015–Q1 2019
Source: Caixin and IHS Markit, "Caixin China General Manufacturing PMI," Markit Economics, April 30, 2019. https://www.markiteconomics.com/Public/Home/PressRelease/26c51700cb5f4224bda8595676615fdb

The official Purchasing Managers' Index (PMI) according to National Bureau of Statistics (NBS) also fell to 49.4 in December 2018, below the 50-point level that separates growth from contraction and it was the first contraction since July 2016. A PMI sub-index on overall factory output prices fell to 43.3 in December from 46.4, signaling earnings erosion. The official Purchasing Manager's Index (PMI) fell to 49.2 in February 2019 which was the weakest reading since February 2016. (Tan, 2019)

The sluggish findings are likely to strengthen the view that the world's second-largest economy is going through an economic slump after last year's growth has cooled down to almost 30 years.. In addition to a range of initiatives this year, China is expected to launch more economic support measures in 2019. A prolonged downturn in the factory sector, which is key to jobs, can spark further tensions for the Chinese economy. This was all in turn the effect of the intensifying trade war with the United States. The dropping consumer demand, anxious consumer sentiments due to uncertainty prevailing in the market, all contributed to the weakening of China's factory activities. China's factory activity contraction pointed out the fact that Trump's tariff war is kicking in. On the other hand,

U.S.-China trade frictions are already disrupting global supply chains, fueling concerns of a bigger blow this year to world trade, investment and shaky financial markets if negotiations aren't reached. (Woo, 2018)

### 4.2.3 Chinese Firms Cut Jobs and Move Overseas

One of the many dire consequences of the nearly year-long trade war between the world's two largest economies was the fact that putting up trade restrictions in the forms of tariffs worth billions is having an ill effect on both countries, and China seems to suffer a lot. China is the largest producer of goods and relies primarily on exports, and the escalating trade war has hurt its economy so that tariffs increase the cost of Chinese export goods, orders are cancelled, new orders fall. The feeling of the consumer as a whole is declining. Therefore, as a form of cost reduction, many Chinese firms are reducing their workforce or moving overseas.

Small businesses are increasingly struggling with shrinking foreign orders because of US tariffs, a depreciating yuan that raises the cost of imported materials and rising domestic energy, tax, rent, and labor costs. According to industry analysts, the number of lay-offs at small and medium-sized manufacturing companies, technology start-ups and financial organizations increased in percentage terms to a double-digit rate in 2018. Many Chinese manufacturing facilities are moving out of China, most of which are setting up businesses in South East Asia, especially Vietnam and other countries. Increasing numbers of Chinese textile and clothing suppliers are establishing factories in Vietnam and Cambodia because overseas customers are placing orders only from factories in these countries, rather than from China. For decades, China's official unemployment rate has ranged from 4% to 5%, although many domestic and international analysts believe that government data do not accurately reflect the worsening unemployment situation as official statistics do not take into account unregistered unemployed and surplus workers in rural areas. (Huifeng, 2018)

According to the index of the CIER (China Institute for Employment Research) aimed at monitoring changes in the labor market in China, this year employment in small and medium-sized firms has fallen far, with the decline accelerating in the second quarter. A CIER index score of more than one indicates that the labor market is improving while the labor market is deteriorating with an index below one. The CIER index fell from 0.85 in the first quarter to 0.79 in the second for small businesses (20 to 499 employees), indicating accelerating lay-offs. The index for medium-sized enterprises (500 to 9,999 employees) fell from 1.01 to 0.97, indicating that workers were also starting to be cut.

### 4.2.4 Drop in Exports and Weak Imports

China's exports dropped the most unexpectedly in two years in December 2018, whilst imports also contracted, stipulating further weakness in the world's second-biggest economy in 2019[11] and deteriorating international demand as a direct result of the trade tensions with the United States. (Chen, 2019) Chinese exports fell unexpectedly from a year earlier by 4.4 percent in December, with demand weakening in most of its major markets. Imports also experienced a shock drop, falling 7.6 percent since July 2016 in their largest decline. Export growth was expected by analysts to slow to 3% with imports rising to 5%. Net exports in the first three quarters of last year had already been a drag on China's economic growth, after giving it a boost in 2017. Asian shares and U.S. stock market futures fell as the surprisingly weak Chinese data added to fears of weaker corporate profits and investment, while the Yuan currency gave up some early gains. The same trend continued in 2019, China's exports fell most in February in three years, while imports fell for a third straight month, pointing to further economic slowdown and stirring talk of a "trade recession." Exports fell by 20.7% in February 2019, the largest decline since February 2016, according to customs data. (figure 8)

[11] World Bank

For a long time, China's large trade surplus with the United States has been a sore point with Washington, requiring Beijing to take steps to reduce the $419 billion deficit with the U.S. Meanwhile, Washington imposed tariffs on Chinese goods on hundreds of billions of dollars last year ($250 billion to be precise) and threatened further action if Beijing does not change its practices on issues ranging from industrial subsidies to intellectual property. China has been retaliating with its own tariffs ($110 billion to be precise). China's exports to the U.S. declined by 3.5% in December 2018, while its U.S. imports declined by 35.8% a month. In 2018, China's global total exports rose by 9.9 %, its strongest performance in seven years, while imports rose by 15.8 %. However, for much of 2018, Beijing's export data was surprisingly resilient to tariffs, possibly because companies ramped up shipments before heavier and more stringent U.S. duties came into effect.

# 5. U.S.-China Trade War's Impact on International Economy

## 5.1 Signs of Stress

Growth in all major advanced economies except Britain and most emerging ones was observed in 2017. Global trade was on the rise and America was booming; China's deflation slide was over, even the Eurozone was thriving. But for the global economy in 2018, that was not the case. The stock markets collapsed, global supply chains were disrupted, customer sentiments fell, factory activity shrank and unemployment threats steadily increased as the two largest economies locked their horns in the biggest tariff battle the world had ever seen, the United States and China slapped a total of $360 billion on each other until last year, and that certainly brought a grave threat to the international economy. Global growth is projected to soften over the medium term at 3.7 percent for 2018–19, 0.2 percentage point below the April 2018 World Economic Outlook (WEO) projection. Global financial conditions are expected to tighten as monetary policy normalizes; trade measures implemented since April will weigh on activity in 2019 and beyond; US fiscal policy will remove momentum from 2020; and China will slow, reflecting weaker credit growth and rising barriers to trade. Marked slowdowns in working-age, population growth and lackluster productivity advances in advanced economies will hold back potential output gains in the medium term. Medium-term prospects are mixed across emerging markets and developing economies. Projections continue to be favorable for emerging Asia and emerging Europe, excluding Turkey, but are timid for Latin America, the Middle East and sub-Saharan Africa, where, despite the ongoing recovery, the medium-term outlook for commodity exporters remains generally undermined, requiring further economic diversification and fiscal adjustment. (Team T. , 2019)

The economic slowdown will have a greater impact on the developed countries, whose exports will rise by 2.1% in 2019 and 2.5% in 2020. By contrast, exports from developing countries will increase to 3.4% in 2019 and 3.7% in 2020, mostly due to demand from China, India and Brazil. However, in 2019, Latin American exports will only grow by 0.7%

and by 2020 by 1%. Increasing trade tensions and the associated increase in political uncertainty could dent business and financial market sentiment, trigger volatility on the financial market, and slow investment and trade. Higher trade barriers would interfere with global supply chains and slow the spread of new technologies, ultimately diminishing global productivity and welfare. More restrictions on imports would also make tradable consumer goods less affordable, disproportionately harming low-income households.

## 5.2 Fall in Asian Stock Market

Asian share markets fell dramatically in October 2018 after Wall Street suffered its worst drubbing in eight months, a wealth conflagration that threatened business confidence and investment worldwide. It also raised the stakes for U.S. inflation figures due later Thursday as a high result would only boost the Federal Reserve's speculation of more aggressive rate hikes. Dealers were not able to find a single trigger for the scare, but a combination of factors. Within 18 months, MSCI's broadest Asia-Pacific share index outside Japan shed 2.7 percent at its lowest. Japan's Nikkei dropped 3.4 percent, the steepest daily decline since March 2018, while the wider TOPIX lost market value of around $195 billion. Since late 2014, Shanghai shares have reached their lowest, while China's blue chips have slipped 3 %. Shanghai's stock benchmark closed 2018 as the world's worst performer for a second year, dropping 24.6 percent over 12 months as an unprecedented trade war between China and the United States weighed on the Chinese economy and crippled corporate earnings. The city's key stock index closed at 2,493.90 a year, while the benchmark on the smaller Shenzhen stock exchange fell 33.2 percent over the year. During the year, the two exchanges' combined capitalization fell by US$ 2.4 trillion to 43.3 trillion yuan (US$ 6.3 trillion), overtaken by Tokyo as the largest equity market in Asia. (Huang, 2019)

Japan's Nikkei 225 fell 2.01 percent in March 2019 to close at 21,025.56, as Fast Retailing, Softbank and Fanuc all declined shares of index heavyweights. At 1,572.44, the Topix also slipped 1.82 percent to complete its trading week. Over in South Korea, as automaker

Hyundai Motor saw its stock drop 4.38 percent, the Kospi shed 1.31 to close at 2.137.44 percent. Asian stocks declined from nearly eight-month highs in April 2019. The Shanghai Composite Index fell by 1.6 %, Hong Kong's Hang Seng fell by 0.8 %, and the SZSE Component Index fell by more than 2.5 %. The looming threat of a global slowdown has left the Asian stock market in a state of slump, as well as the entire international stock market system. If the trade war continues then further deterioration in the Asian and global market system is expected. (Kageyama, 2019) (Ponczek, 2018)

## 5.3 German Economy in Slump

According to the Ifo Institute for Economic Research based in Munich, Europe's largest economy cooled significantly in 2018 due to global economic turbulence. Economic output increased in price-adjusted terms by 1.5 percent in 2018, following a 2.2 percent increase in the 2017 boom year. The Brexit negotiation, the US-led tariff war, falling demand in China, and the Italian budget plans have all had a profound impact on the growth of the German economy. Data show the export powerhouse in the final month of the year faced continued pressure. In December, a key gage of business feeling produced by the Ifo Institute continued to weaken. As their business expectations turned negative for the first time since May 2016, manufacturers scaled back production plans.[12]

A recession in Germany would be a major setback for investors who were unnerved by this year's prospect of weaker economic growth in the US and China. Carmakers like Volkswagen (VLKAF) in Germany were hurt by weaker sales in China. A weaker German economy, combined with slower global growth and the escalating China-U.S. trade war, causes problems across Europe. The slowdown could create a major problem for the European Central Bank, which in December 2018 completed an enormous stimulus program and planned to start an interest rate hike later in 2019. A slowing global economy

[12] World Bank and IMF

and trade disputes triggered by the president Trump have hit many of the country's traditionally export-focused big business hard. (Carrel, 2019)

Morale is depressed by slowing demand in China, the Eurozone and emerging markets for German goods. In addition, the government is worried that technological innovation and foreign companies' acquisition of German industrial know-how could erode the manufacturing base on which much of its wealth is built. With German growth stalling, the European Central Bank is likely to postpone plans for normalizing policies, economists say, and is more likely to provide additional incentives rather than further scaling them back. Indeed, in five years, 2018 was Germany's weakest annual growth rate. Growth is projected to shrink further to 1% in 2019, and by 2023 the country is facing a budget shortfall of around EUR 25 billion.

## 5.4 Italian economic slowdown

For the third time in a decade, Italy officially fell back into economic recession. Data published by the Italian National Statistics Institute (ISTAT) showed that the Eurozone's third-largest economy slipped into recession in the last half of 2018, shrinking by 0.2 percent of its GDP over the last three months of the year. The third quarter of 2018 has already shown a decline of 0.1 percent and, according to a common definition, two-quarters in a row of a declining economy is synonymous with recession. Moreover, the Italian economy's worrying performance is likely to tense the confrontation between Rome and Brussels even more and ultimately bring turbulence within the euro zone.[13]

The data is also particularly worrying as it marks the exception of Italy in an environment where the common trend is quite different. Even though the growth rate of 2018 has been the slowest recorded since 2014, the other Eurozone members' economies are expanding despite everything. According to Eurostat, the EU Statistics Agency, the Eurozone grew by 1.8 percent on average last year, a significantly lower result than the 2.3 percent of 2017,

[13] Ibid

but still a result that highlights the gap between a developing context and the Italian case. An Italian recession and weak growth across Europe could force the European Central Bank to rule out this year's interest rate hikes which it plans to do so somewhere in 2019.A time of political unpredictability, economic instability and social anxiety was the second half of 2018. (Balmer, 2019) This scene is part of a retreating economy, a red flag for the Eurozone as a whole, and finally for Italians. The Italian Prime minister Giuseppe Conte denounced the trade war between China and the United States for the decline. Surely, if negotiation aren't done between U.S. and China, that too if not soon, then it can cause serious trouble for the Italian as well as the European economy in general.

## 5.5 US Allies in The Far East (Japan, South Korea, Taiwan) At Huge Risk

The economy of Japan, which shrank in the third quarter, is expected to grow more slowly in 2019 than previously thought. Japan's GDP for 2018 fell from 1.9% in 2017 to 0.7%[14] , although a slight year-end recovery failed to offset a steady decline in external demand. After a 2.6% decline in Q3 after domestic demand countered the damaging effects of their falling external demand as private spending grew by 0.6% QoQ, the country's 4Q 2018 GDP rebounded 1.4% YoY. Also, exports bounced back 0.9% from a 1.4% slip in Q3. The position of Japan in the global supply chain makes it vulnerable to higher tariffs on Chinese exports bound to the U.S. Manufacturers in China are using Japanese parts and equipment to make smartphones and computers, and Japanese factories in China are also shipping goods to the US. Japan has felt the U.S.-China trade war's indirect impact because it produces equipment and supplies used by Chinese semiconductor, mobile phone and other products manufacturers. (Staff, 2019)

For more than two years, South Korea posted its largest export decline in 2018, Analysts warned that the escalating tariff war between the U.S. and China as well as U.S. protectionist policies by President Trump threatened Asia's fourth-largest economy's growth engine. South Korean exporters are heavily dependent on China and the US. If an

[14] Ibid

all-out trade war break continues for a long time, it will be one of the hardest hit economies in the world. According to the Korea International Trade Association (KITA), China and the United States accounted for 24.8% and 11.9% of South Korea's total exports in 2018. According to a KITA report, In the worst-case scenario of a full-blown trade war, South Korean exports would drop by 6.4 per cent – an estimated loss of US$36.7 billion. The prolonged U.S.-China trade battle could eventually hurt Taiwan, particularly in the sectors of electronic components and machine tools. Taiwan is unlikely to escape unhurt from the trade war being a small and open economy. Taiwanese contract electronics manufacturers produce components for and assemble many of the world's tech gadgets in China, everything from mobile devices and computers to data-center and networking equipment. Much of it is considered "Made in China" and subject to the tariffs. The Apple supply chain, dominated by Taiwanese tech hardware manufacturers with production facilities in China, is of particular concern to Taiwan. This threat is looming over Taiwanese suppliers who are already facing grave market conditions and falling smartphone sales in mainland china. (Team, 2019)

# 6. Unexpected Winners Of Us-China Trade War

## 6.1 Europe

According to the study by the United Nations Conference on Trade and Development (UNCTD), the European Union is set to be the biggest winner of the trade war that has been fought between the United States and China since last year. The United Nations estimated that European businesses are presumably to capture approximately US$ 70 billion in trade, that is about US$ 50 billion in Chinese exports and US$ 20 billion in US exports–which has traditionally passed between the two largest economies in the world. Countries that are likely to take advantage from the ongoing trade conflict are those that are more competitive and are able to replace US and Chinese firms economically, and Europe is definitely the top contender for that. (Bray, 2019)

For example, one might see increased exports of European agriculture to China as they replace products that were once sourced from the US. The rising export opportunities in the US could benefit European companies producing consumer goods. But the trade war also offers a much bigger opportunity for Europe. Beijing is set to be more open to building new allies under U.S. pressure. As market access has become more difficult, European investment in China has been falling for years. Europe must ensure that Beijing treats its domestic companies on an equal footing. It must also insist on removing unfair subsidies from state-owned banks and other state-owned firms. Of course, China will not change its economic model fundamentally. But there is reason to believe that it is willing to make certain concessions. European leaders must also work with Beijing to address domestic concerns. Since China has found it harder to invest in the U.S., it has shifted its investment efforts to Europe, particularly in cutting-edge technology. The Europe in this way can persuade China to transform itself into a full fledged market economies which in turn would benefit the European businesses. Amid the U.S.-China trade war, there is also a scope for diplomatic advantage to be gained to formulate a unified strategic position and explore the opportunity. Contrarily, the inevitable impact of trade disputes on the still fragile global

economy is a common concern. An economic downturn often goes hand in hand with disturbances in commodity prices, financial markets, and currencies, all of which will have significant impacts on developing countries. (Jiji, 2019)

## 6.2 Canada

Canada is expected to capture $20 billion in trade as a result of the trade war, according to the United Nations Conference on Trade and Development (UNCTD). According to a new report by Canadian Farm Credit, Canada's ratification of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and efforts by China to reduce its dependence on American suppliers all seem to be a good sign for Canada's agriculture sector. New opportunities could emerge out of the current trade conflict between U.S. and China which has also engulfed Canadian agricultural producers, even as volatile price swings "dampen" exports in the short term.

U.S. and China have so far traded $360 billion in tit-for-tat tariffs, with Chinese tariffs targeting specific U.S. commodities including soybeans and pork. In retaliation for U.S. tariffs on steel and aluminum imports, Mexico also imposed tariffs on American pork and other commodities. Canadian producers have been caught in the crossfire as the web of duties diverts traditional trade flows. Indeed, Canadian prices of hog and soybean — linked to a U.S. benchmark— fell in tandem with those in the U.S. Meanwhile, the trade war between China and the U.S. might offer Canadian producers some opportunities to step into the Asian economic powerhouse as suppliers. China is seeking to reduce its reliance on the US as a supplier and has already significantly increased its Canadian purchases. Canada's soybean shipments to China, the world's largest purchaser, increased in January 2019 to a record 1.23 million metric tons, more than four times a year earlier and up from just over 800,000 tons in December 2018, according to data from the General Customs Administration. Clearly, the U.S. crop tariff appears to be the direct reason behind rising Canadian imports. Over the past two years, Canadian commodity exports to China have jumped by about 60 %. In the U.S. trade war in China, Canada saw a huge boom. By

comparison, U.S. exports have dropped across almost every commodity sector since the tariff war of the U.S. and China. There is plenty of opportunity for Canada to expand into these markets, but there exists some concerns regarding the uncertainty of the Chinese economy and a threat of a global slowdown. (Powell, 2018)

## 6.3 Mexico

The Trump administration's trade war with China has proven to be a windfall gain for a particular country that he continuously berates. Mexico has seen huge gains in U.S. shipments in categories where tariffs have hit competing Chinese goods, from poster boards to air conditioner parts. In all, Mexico's U.S. imports of goods rose 10 percent last year to nearly $350 billion, the fastest increase in seven years. That helped to increase America's trade deficit with Mexico to over $80 billion by 15 percent. In the meantime, China's shipment growth slowed by about one-third. Mexico's bonanza highlights the difficulty of trying to win a trade war in which businesses can shift production or find new sources to avoid tariffs. Consider Fuling Global Inc., a Chinese plastic utensil manufacturer that developed a lucrative business for U.S. restaurants to make paper cups and straws. But with tariffs on Chinese imports worth $250 billion, including paper products, President Trump upended all that. So the company found an alternative, opening a $4 million factory in Monterrey, Mexico, to start shipping millions of paper straws across the border in the near future The trade war also made the U.S. more dependent on Mexico's products, which were already the largest source of vegetables such as cauliflower, carrots, and onions. In one strong example, peeled Chinese garlic cloves sank by nearly a quarter after receiving tariffs, while Mexican exports rose by 54 %. Even Mexico's small businesses benefited. After the U.S. put 10 percent tariffs on silk yarn, one of China's iconic exports, Mexico's U.S. shipments jumped from basically nothing, just $5,500 in 2017, to last year's $1,6 million. China's imports of crocheted and knitted fabrics dropped by about $3 million, almost the exact amount of Mexican imports increased. (Townsend, 2019)

Trump's tariffs targeted the auto supply chain in particular, which had already expanded in Mexico and continued to gain from Trump's policies. One example: U.S. imports of Mexican gasoline-powered passenger vehicles jumped 17 percent to $32.6 billion, while shipments from China, Germany, and Canada all fell. Mexico's gain is evident across a diverse span of sectors but a prolonged tariff war between the world's biggest economies would produce more fatalities than winner and would have a negative impact on the world economy in general.

## 6.4 Others (Vietnam, Brazil, India)

The US-China trade conflict has pushed businesses out of China and into Vietnam. By shifting production overseas to countries like Vietnam, a growing number of Chinese companies are escaping the tariffs of President Donald Trump. Vietnam has picked up some business from its northern neighbor. While outsourcing to Vietnam is nothing new–last year, according to government statistics, the country received US$ 35.88 billion in foreign direct investment (FDI)–Chinese firms increasingly cite the trade war as an incentive to move south. Its popularity as a production center is reflected in the country's solid growth of 6.6% in 2018 (according to IMF). Other attractions points to the population of 90 million and a growing middle class. In the year 2019, it is expected to grow by 30 percent, adding over 1 million. There is plenty over the next few years to support Vietnamese growth. Vietnam can be a major beneficiary as companies move out of Korea, Japan, Singapore or China. It's about to sign a big trade deal with the EU. This should open up the markets gradually. (Jegarajah, 2018) (Zhou, 2019)

The global grain business is being reorganized by a escalating trade war between the United States and China. Beijing in 2018 imposed levies on U.S. agricultural products in response to Trump administration tariffs on Chinese goods. Among them was a tariff of 25 per cent on soybeans, the most valuable export from the U.S. farm. Growers in the United States. Instead, it turns to Brazil, which has ridden the Chinese demand wave into a global agricultural powerhouse for two decades. Compared to the same period a year ago, Brazilian

soybean exports to the Asian country jumped 22 percent by value between January and September. Not only do Brazilian producers sell more grain, their soy collects $2.83 more per bushel than US beans, up from a premium of just $0.60 a year ago, thanks to increased Chinese purchases. Trump trade policies give Brazil, the most formidable agricultural competitor for the United States, precious market share, money and momentum. Like their counterparts in the U.S., farmers in Brazil produce far more grain than they need at home. Foreign clients are responsible for the agricultural boom in the country. Nearly 80% of soy exports from Brazil are now heading to China. Things are going upwards especially for the Brazilian agro- producers but the looming threat of a Global slowdown plus fear of a drop in demand in China can be a spoiler. (Cosgrove, 2019) (Spring, 2018)

According to a recent report from the United Nations Conference on Trade and Development (UNCTAD), India will emerge as one of the largest gainers of the US-China trade war, with potential export increases of up to $10 billion or 3.5 percent of its exports.

In the midst of sanctions worth $360 billion between the two largest economies, India should be an obvious choice for U.S. suppliers producing mineral, chemical and related products; capital goods such as machinery, mechanical and electrical equipment; and vehicles and aircraft as industrial activity is increasing in India. India could also present opportunities for U.S. soymeal suppliers with a huge livestock base. India can increase its exports to the United States of agricultural goods, leather, rubber goods, base metal and machinery, textiles and chemicals, including pharmaceuticals. Large multinational firms have expressed confidence in India's manufacturing potential, but if India wants to optimize its manufacturing sector through new investments and technologies, it becomes essentially important for the government to offer a soft and hard infrastructure that allows international firms to start their operations without delay. Apple has confirmed that it will start assembling its top-end iPhones in India in 2019 through Foxconn's Indian local unit. (Geneva, 2019) (Phartiyal, December )

# 7. Conclusion: Possibly Heading Towards A Global Recession

## 7.1. International Monetary Fund and World Bank

While global growth remained close to high post-crisis levels in 2018, global expansion is diminishing at a rate somewhat faster than expected. This update of the WEO project global growth at 3.5 percent in 2019 and 3.6 percent in 2020, 0.2 and 0.1 percentage point below last year's October projections. (Gopinath, 2019)Economic activity accelerated in nearly every region of the world until 2017. Much has changed a year later. The escalation of trade tensions between the US and China, the need for credit tightening in China, macroeconomic stress in Argentina and Turkey, disruptions to the auto sector in Germany, and financial tightening along with monetary policy normalization in the larger advanced economies all contributed to a significantly diminished global expansion, particularly in the second half of 2018.

With this weakness expected to continue in the first half of 2019, World Economic Outlook (WEO) is planning a slowdown in growth for 70% of the world economy in 2019. Global growth in 2018 has slowed to 3.6% and is projected to decline further to 3.3% in 2019. The January projection's downward revision of growth of 0.2 percentage points for 2019 is also broad-based. It reflects negative revisions for several major economies, including the European Union, Latin America, U.S., the United Kingdom, Canada, and Australia.

In Britain's indecision on how to leave the EU, one potential blunder lies. Despite coming deadlines, Britain has not decided how during the exit process it will attempt to shield its economy. The new forecast of the IMF assumes an orderly "Brexit," but the Fund said a chaotic process might shave off global growth in 2019 by more than 0.2 percentage point.

At the end of 2018, stock markets had a tough ride. At the beginning of the year, many recorded strong gains that were more than reversed. Overall, it has been the worst year since the financial crisis for global markets (and many individual markets).

Lower share prices can be a warning sign of huge economic problems ahead and sometimes even a recession. But then again, falling share prices is not a reliable recession indicator. (Gopinath, 2019)

The World Bank warns of rising risks to the world economy, or what it calls "darkening skies." The Bank's global economy forecast is 2.9% for 2019 and 2.8% in 2020. The projected slowdown is focused on rich countries, especially the US, although according to the Bank's forecasts it will continue to expand faster than either the Eurozone or Japan. On the other contrary, growth in emerging markets and developing economies is likely to pick up some pace despite China's continued cooling down, a process that started at the beginning of the decade. China's growth is expected to be 6 percent by 2021, which is still pretty strong, but it is a marked gear shift for an economy that expanded by an average of 10 percent annually from 1980 to 2010.International trade is already weakening, and one of the major risks is the conflict over trade, particularly between the US and China. These are the world's two largest national economies. The Bank has calculated that the new tariffs-trade taxes-imposed last year affect 2.5 percent of global trade, and it would be double that if the further tariffs discussed were implemented. Financial markets are a risk as well. There have been increased chances of disorderly developments. If interest rates in the US are rising again, or if the dollar is gaining sharply, it could have an impact on developing and emerging economies. In the Bank's analysis, Brexit comes up as a potential risk to countries that are particularly dependent on selling to Europe. If the UK's exit takes place without agreement, there is a chance that both the UK and the EU will suffer significant economic damage, which could affect countries in Eastern Europe and North Africa that are closely integrated with Europe. (Walker, 2019)

## 7.2 Nomura Report

The stock market is expected to bounce back in 2019, but a different story could be in 2020. Nomura strategist Naka Matsuzawa's assessment to clients in a note issued on December last year already warned about the looming threat of an economic downturn.

According to the Nomura Report, the global economy is already on an irreversible path to an economic downturn but an immediate economic plunge isn't expected, the global economy would be recovering temporarily and them succumbing to the pressure of the economic slowdown that is indeed strengthen by the more than a year long trade war between the largest economies, Brexit dilemma, credit expansion in China, grave threat of U.S. interest rate hike or a sharp increase in U.S. $, all contributing to the downturn in near future.

According to the report, Brexit or Italy's budget issues won't boost the next downturn much. Even high levels of debt on U.S. corporations are not an immediate threat because these levels of debt are in line with past economic peaks. Also, it argues that next downturn could be caused by debt in China and emerging markets. The extent to which the government of China responds to this through stimulus and other measures is likely to determine the magnitude of the next global economic downturn. But all of the above mentioned factors would be a contributing factor for the next economic downturn that can be expected somewhere in 2020.

A further argument is put in place by the Nomura Report is that a credit cycle typically lasts 10 years. Since the financial crisis happened about ten years ago, we are nearing the end of the current cycle. Historically, a single cycle is a decade long. The beginning is marked by the end of a crisis / a cyclical decline, and ends when credit contracts and the economy enter a recession. The global economy today is heading towards a plateau and then a downturn within what Nomura Report refers as "credit expansion/last stage." (Ungarino, 2018)

## 7.3 Global markets worst hit since 2008

The traditional early New Year's Eve 2018 closing of the FTSE (Financial Times Stock Exchange) 100 saw it end the year at 6,728.13 points down 12 percent. Similar losses faced large European and Asian markets in 2018, while major US indexes saw their worst performance since the financial crisis of 2008. The Dow Jones finished the year down 5.6%, the wider S&P 500 dropped 6.2% and the tech-heavy Nasdaq dropped 3.9%. Trade woes in the US-China and slower global growth are among the issues attributable to poor performance. Analysts also cited as contributing factors US political uncertainty and interest rate rises.

As 2018 came to an end, the US was still having a grave threat of government shutdown caused by the determination of President Donald Trump to secure funding for a Mexican border wall to tackle illegal immigration. Mr. Trump has also jolted investors regularly throughout the year by escalating his tariff battle with China on tit-for-tat trade. Both sides agreed earlier in December last year to suspend new tariffs to permit talks. The president was also at odds with the Federal Reserve, the central bank, as to whether interest rates should be raised. But then again, there was a tariff rate hike in May and things again got from bad to worse. Although historically significant, the fall in the U.S. stock market was smaller in scale than elsewhere, possibly in part due to the economic stimulus provided by the $1.5 trillion Tax Cuts and Jobs Act of the Trump administration passed in December 2017. Hong Kong's Hang Seng closed nearly 14 percent down on the year in Asia on Monday, while the Nikkei dropped nearly 15 percent. Negotiations seems impossible so far as both the parties are actively engaged in this year long trade war and that is having a very negative effect on the health of global economy. (Plummer, 2018)

## Appendix A: U.S.-China Trade War Timeline

●January 22, 2018: On imported Chinese solar panels and washing machines, President Trump imposed tariffs and quotas. (China is a world leader in the manufacture of solar equipment and the World Trade Organization ruled that the United States had no case to raise the tariff. China lodged a complaint with the WTO in August 2018).

●March 8, 2018: Trump asked China to develop a plan to cut the US trade deficit of $375 billion by $100 billion. The idea is pleasing to China. Part of the economic reform plan for China is to reduce its export dependence. But it warns that there is not much that it can do, as the deficit is fueled by high U.S. demand for Chinese low-cost goods.

●March 22, 2018: The ante was upped by Trump administration. It announced that it would levy tariffs on Chinese imports of $60 billion. The administration also said it would limit transfers of U.S. technology to Chinese firms. China responded by announcing U.S. fruit, pork, recycled aluminum and steel pipes tariffs at $3 billion.

●March 26, 2018: Trump administration began to negotiate quietly with officials of Chinese trade. Three requests were focused on the administration. It wants China to lower its tariffs on U.S. cars. It wants more U.S. semiconductors imported from China. American firms also want greater access to the financial sector of China.

●April 3, 2018: Trump administration announced that Chinese imported electronics, aerospace, and machinery could impose tariffs on $50 billion. Hours later, China retaliated. It announced tariffs of 25 percent on U.S. exports to China of $50 billion. These will also not immediately come into effect. 106 products were strategically targeted by China's tariffs. Two other US exports were also penalized by China: sorghum and Boeing aircraft. Shortly afterward, China canceled all U.S. soybean import contracts.

●April 6, 2018: Trump said he could impose tariffs on more Chinese imports of $100 billion. It would only cover one-third of China's U.S. imports. If China retaliates, all U.S. exports to China would be subject to tariffs.

●May 29, 2018: Trump administration said a final list of products to receive tariffs would be announced by June 15. It will target China's first $50 billion in imports. It would announce investment restrictions on Chinese U.S. technology acquisition by June 30.

●July 6, 2018: Trump's tariffs came into effect for Chinese imports worth $34 billion. China raised a tariff of 40% on U.S. cars. It might threaten American-made car exports that employ thousands of workers in the South.

China also levied U.S. agricultural exports tariffs. With excess produce and livestock, farmers could be stuck. Trump announced on July 24, 2018 that he would offer US farmers $12 billion in subsidies.

●July 10, 2018: Trump administration announced that a further $200 billion of Chinese imports could be subject to 10 percent tariffs. They came into force in mid-September 2018, weeks before the mid-term elections of 2018. The U.S. also threatened to increase tariffs on a variety of consumer goods, including fish, luggage, tires, handbags, furniture, apparel, and mattresses by 25 percent after January 1, 2019.

By adding tariffs to US exports at $60 billion, China threatened to retaliate. Trump threatened to add tariffs in response until all Chinese imports of $500 billion were affected.

●August 2, 2018: The administration announced a tariff of 25% on Chinese goods worth $16 billion. It came into effect on 23 August. It applies to industrial machinery such as tractors, plastic tubes and chemicals. In response, China announced a tariff of 25 percent for U.S. goods worth $16 billion, including cars and coals.

●December 1, 2018: At the G-20 Conference, President Trump met Chinese President Xi Jinping. Trump agreed to halt tariff increases scheduled to take place in January. His administration will negotiate a 142-issue agreement. These include intellectual property protection, technology protection and cybersecurity protection. They will also cover currency, agriculture, and energy topics. Negotiators had tariff increases until March 1 before Trump moved forward. The Trump administration announced on February 27, 2019 that it dropped any threat to impose this tariff.

●May 5, 2019: President Trump said that the previous 10% tariff levied on Chinese goods worth $200 billion will be raised to 25% on 10 May 2019.With notification by USTR, the Federal Register published a 10-25% duty amendment for Chinese goods covered by the September 2018 action on 9 May.

●May 13, 2019: China announces tariff hikes on US products, it will increase tariffs on US$60 billion worth of US goods from June 1, 2019, in response to the tariff increases imposed by the US on May 10.

# Appendix B: Correlation Between RMB Exchange and U.S. Trade Deficit with China

## Introduction

Over the past few decades, China's groundbreaking economic reforms have successfully transformed the country from a poor, closed nation into not just a major trading nation, but also a world-leading manufacturing center. (See 1998 Lardy; 1996 Naughton). The Chinese economy's exponential pace certainly creates opportunities for many, but at the same time it also causes a lot of trade disputes with its major trading partners, from which the U.S. tops the list. Over the past few years, the exchange rate issue of the Renminbi (RMB) has been at the center of an ongoing debate on the growing global trade imbalance, particularly with the US. The U.S. and its allies have repeatedly voiced concern over the serious undervaluing of China's national currency. Some analysts also indicate that to reflect its true value, RMB needs to rise by as much as 40 percent. (See Zhang and Pan, 2004; Goldstein and Lardy, 2009; Chang and Shao, 2004). On the other hand, some analysts argue that China's own interest will be served by further revaluation of RMB. In 2001, China surpassed Japan as the largest contributor to the U.S. trade deficit and has steadily increased since then. During the 2008 global financial crisis, the U.S. recorded a massive trade deficit of $816 billion, of which China alone accounted for 33 percent, rising to 45 percent in 2009 and falling to 36 percent in 2010, and considering the latest statistics, China alone contributed a trade deficit of $375 billion to the U.S. in 2017, representing about 46 percent of the total U.S. deficit. In recent years, the U.S. Treasury Department has urged China to adopt procedures that will enable RMB to increase its value. The U.S. has criticized China for gaining unfair trade advantage and seriously undermining the U.S. manufacturing sector by undervaluing RMB. President Trump was the main critic of China's monetary policy when, even before coming to power, he accused China of being a "currency manipulator."

Recent studies have been carried out on the Chinese currency's equilibrium exchange rate, with most studies reporting an average undervaluation of 19 to 45 percent for the Chinese currency measured either by the real effective exchange rate (REER) or by the real bilateral exchange rate against the U.S. dollar. (Williamson and Cline, 2008). Some analysts have recommended that RMB be appreciated from its 2008 level for at least 25 percent to reduce the share of its trade surplus over GDP by half and 45 percent to remove the surplus completely. Cordon (2009) believes, on the contrary, that exchange rate regimes are not really related to global trade imbalances. Trade balances are linked to all kinds of exchange rate regimes as a matter of fact. Mac Kinnon (2010) argues that forcing China to appreciate its currency under financial globalization is neither necessary nor beneficial to lower the trade surplus. Over the past few decades, particularly since 1994, China has ventured to reform its exchange rate regime towards a unified floating exchange regime based on the market. Indeed, the year 1994 was a turning point and marked a major change in the exchange rate policy of China. China's dual exchange rate system was abandoned and China unified the exchange rates that were still in use before 1994, devaluing the official rate by 50 percent to 8.7 RMB per US dollar, a rate that was quite close to the black market. The official RMB rate against the U.S. dollar was maintained very stable between 1994 and 2005 (Zhang, 1997, 1999), Lardy (1992), Roberts and Tyers (2001) and Goldstein and Lardy (2009). The RMB has since risen 25 percent nominally against the U.S. dollar between 2005 and 2011. RMB has grown by 9.4 percent against the U.S. dollar over the past few years, This study will thus contribute to the ongoing question of whether or not China's RMB exchange rate actually affects its trade balance, focusing primarily on the US trade deficit with China.

Formulas used

Pearson correlation coefficient

$$r = \frac{\sum(x-\bar{x})(y-\bar{y})}{\sqrt{\sum(x-\bar{x})^2\sum(y-\bar{y})^2}}$$

Statistically it has a cap of +1 and a floor of -1, where +1 means that these two variables are strongly correlated, 0 shows no correlation and -1 means that they are strongly negatively correlated

Hypothesis T-Test for the Population Correlation Coefficient

Step 1: Define null and alternative hypothesis

Null hypothesis H0: $\rho = 0$

Alternative hypothesis HA: $\rho \neq 0$

Step 2: State significance ($\alpha = 0.05$)

Step 3: Construct test statistic

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

where r is the sample correlation coefficient and n is the sample size

Step 4: Calculate critical value (using t-distribution table)

Step 5: result and conclusion

(If the absolute test statistic is greater than the critical value then you got to reject the null hypothesis)

Hypothesis Z-test for two correlations

ρ is the population correlation coefficient and r is the value calculated from a sample. The testing procedure is as follows. H0 is the null hypothesis that $\rho 1 = \rho 2$. HA represents the alternative hypothesis that $\rho 1 \neq \rho 2$

There is a simple transformation of r, however, that gets around this problem, and allows us to test whether $\rho = \rho 0$ for some value of $\rho 0 \neq 0$.

For any r define the Fisher transformation of r as follows:

$$r' = \frac{1}{2}\ln\frac{1+r}{1-r} = (\ln(1+r) - \ln(1-r))/2$$

Suppose r1 and r2 are as in the theorem where r1 and r2 are based on independent samples and further suppose that ρ1 = ρ2. If z is defined as follows, then z ~ N(0, 1).

$$z = \frac{r_1' - r_2'}{s}$$

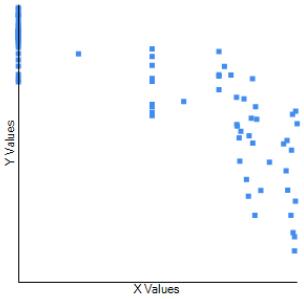
Where

$$s = \sqrt{\frac{1}{n_1 - 3} + \frac{1}{n_2 - 3}}$$

In the majority of analyses, an alpha of 0.05 is used as the cutoff for significance. If the p-value is less than 0.05, we reject the null hypothesis that there's no difference between the means and conclude that a significant difference does exist.

## Result and concluding remarks

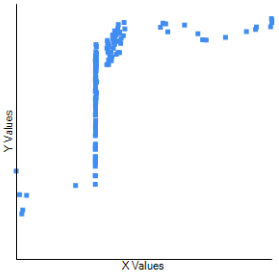
For the period 1987 to 1993




X values are the RMB exchange rate and Y values are the U.S. trade deficit

As the Pearson correlation reaches – 0.8422, meaning that RMB exchange rate have significantly negative correlation with the Chinese trade imbalance with the U.S. The main finding here is that during the period 1987 to 1993, that is prior to the Chinese RMB exchange rate reforms, the higher was the RMB exchange rate against U.S. dollar, the lower was the Chinese trade surplus with U.S. or simply the trade deficit was lower. But it didn't have a significant impact really because that were the growing stage of U.S.-China trade relationship and they didn't do as much trade of merchandise before as they do in the 21st century.

For the period 1994 to 2005

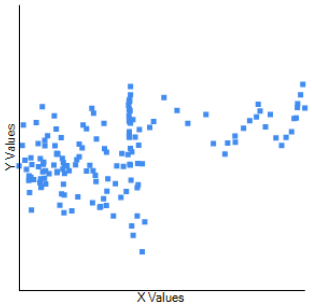



X values are the RMB exchange rate and Y values are the U.S. trade deficit

The result here was that the Pearson correlation appeared to be + 0.592 which denotes that there is a positive but moderately weak

correlation between the RMB exchange rate and U.S. trade deficit with China. This period marked the RMB exchange rate reforms when particularly the Chinese state abandoned the dual exchange rate regime and unified them all plus depreciated its currency by half, also adopted a dollar peg policy. Again due to the weak correlation, no significant relationship can be observed in here.

For the period 2006 to 2018




X values are the RMB exchange rate and Y values are the U.S. trade deficit

The findings of the period 2006 and 2018 gives us the Pearson correlation to be + 0.4538, yet again it seems like the previous case where there was a weak positive correlation between the RMB exchange rate and China's trade imbalance with the U.S. Hence, a solid correlationship cannot be established even during the present period as there exists a weak association between the RMB exchange rate and growing U.S. trade deficit with China despite of the Chinese state giving up the dollar peg policy it used till 2005 Furthermore, the main conclusion is that there is a very limited effect of China's RMB exchange rate on its trade imbalance with the U.S. The main determining factors appear to be world demand for low price products and its trade performance over the past few decades fueled by decades long economic reforms undertaken. Nevertheless an important remark here is that keeping a low value of RMB exchange rate is an important tool that gives China competitive advantage over other countries which in turn has reflected in its export capacity. In addition, an undervaluation in RMB exchange rate provides a stimulus for investment in China, that is the reason why major western companies, especially from the U.S. and EU are relocating their business to Chinese territory, implying increase in employment opportunities in China but the case is just the opposite in their home countries. Hence President Trump isn't altogether correct that Chinese RMB exchange affects the trade between U.S. and China.

Hypothesis T-Test for the Population Correlation Coefficient

1. 1987 -1993

**r or sample correlation= - 0.8422**

The following needs to be tested:

H0: $\rho = 0$ and HA: $\rho \neq 0$

where $\rho$ corresponds to the population correlation.

The sample size $n$=84, so then the number of degrees of freedom is $df = n - 2 = 84 - 2 = 82$

**t= = -14.144**

The corresponding critical correlation value $rc$ for a significance level of $\alpha$=0.05, for a two-tailed test is using t-distribution table is:

**$rc$=0.215**

We observe that in this case, the null hypothesis H0: $\rho = 0$ is rejected if $|t| > rc$=0.215.

Based on the sample correlation, we have that $|t| = |-14.144| = 14.144 > rc$=0.215, from which is concluded that the **null hypothesis is rejected**.

2. 1994- 2005

**r or sample correlation= 0.592**

The following needs to be tested:

H0: $\rho = 0$ and HA: $\rho \neq 0$

where $\rho$ corresponds to the population correlation.

The sample size $n$=144, so then the number of degrees of freedom is $df = n - 2 = 144 - 2 = 142$

**t= = 8.691**

The corresponding critical correlation value $rc$ for a significance level of $\alpha$=0.05, for a two-tailed test using t-distribution is:

**$rc$=0.164**

We observe that in this case, the null hypothesis H0: $\rho = 0$ is rejected if $|t| > rc$=0.164

Based on the sample correlation, we have that $|t|= |8.691|=8.691>rc=0.164$, from which is concluded that the **null hypothesis is rejected**.

3. 2006-2018

**r or sample correlation= 0.4538**

The following needs to be tested:

H0: $\rho = 0$ and HA: $\rho \neq 0$

where $\rho$ corresponds to the population correlation.

The sample size $n=156$, so then the number of degrees of freedom is $df=n-2=156-2=154$

**t= = 6.319**

The corresponding critical correlation value *rc* for a significance level of $\alpha=0.05$, for a two-tailed test using t-distribution table is:

***rc*=0.157**

We observe that in this case, the null hypothesis H0: $\rho = 0$ is rejected if $|t|>rc=0.157$.

Based on the sample correlation, we have that $|t|= |6.319|=6.319>rc=0.157$, from which is concluded that the **null hypothesis is rejected.**

Hypothesis Z-test for two correlations

Between 1987-1993 and 1994-2005

H0 is the null hypothesis that $\rho1= \rho2$. HA represents the alternative hypothesis that $\rho1 \neq \rho2$

r1= 0.8422 r2= -0.592

n1= 84 n2= 144

r'1 = FISHER(*r1*) = FISHER(0.8422) = 1.2286

r'2 = FISHER(*r2*) = FISHER(- 0.592) = - 0.6806

$$z = \frac{r_1' - r_2'}{s}$$

1.2286 – (-0.6806) / 0.1392 = 13.7155

**z= 13.7155**

so the level of significance or α=0.05 and now we compute the P value,

The P-value is <0.00001, the result is significant at P < 0.05, **H0 is rejected**, therefore we conclude that ρ1 ≠ ρ2. This means that during the two periods when the Chinese monetary policies were changed, it was significantly reflected in the correlation between the two periods' samples, between the dual exchange rate regime and dollar peg policy.

Between 1994-2005 and 2005-2018

H0 is the null hypothesis that ρ1= ρ2. HA represents the alternative hypothesis that ρ1 ≠ ρ2

r1= -0.592 r2= -0.4538

n1= 144 n2= 156

r'1 = FISHER(*r1*) = FISHER(-0.592) = -0.6806

r'2 = FISHER(*r2*) = FISHER(- 0.4538) = - 0.4894

$$z = \frac{r_1' - r_2'}{s}$$

-0.6806 – (-0.4894) / 0.1166 = -1.6397

**z= -1.6397**

so the level of significance or α=0.05 and now we compute the P value, The P-value is 0.1010, the result is significant at P < 0.05,**H0 is rejected**, therefore we conclude that ρ1 ≠ ρ2 This means that during the two periods when the Chinese monetary policies were changed, it was significantly in the correlation between the two periods' samples but not that strongly, between the dollar peg policy and when the dollar peg policy was abandoned and market forces were used to determine the RMB rate of exchange.

Between 1987-1993 and 2006-2018

H0 is the null hypothesis that ρ1= ρ2. HA represents the alternative hypothesis that ρ1 ≠ ρ2

r1= 0.8422 r2= -0.4538

n1= 84 n2= 156

r'1 = FISHER(*r1*) = FISHER(0.8422) = 1.2286

r'2 = FISHER(*r2*) = FISHER(- 0.4538) = - 0.4894

$$z = \frac{r_1' - r_2'}{s}$$

1.2286 – (-0.4894) / 0.1371 = 12.5309

**z= 12.5309**

so the level of significance or $\alpha$=0.05 and now we compute the P value, The P-value is <0.00001, the result is significant at P < 0.05, **H0 is rejected**, therefore we conclude that $\rho 1 \neq \rho 2$. This means that during the two periods when the Chinese monetary policies were changed, it was significantly reflected in the correlation between the two periods' samples, between the dual exchange rate regime and when dollar peg policy was abandoned and market forces were used to determine the RMB exchange rate.

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