



# IMPACT OF THE US-CHINA TRADE WAR ON TECH INDUSTRIES

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## ABSTRACT

The US-China trade war has had a significant impact on the tech industries of both countries. This conflict has led to the imposition of tariffs, restrictions on technology transfer, and the blacklisting of companies. As a result, companies have been forced to adjust their supply chains, seek alternative markets, and invest in research and development to mitigate the effects of the trade war. In this context, this article explores the impact of the US-China trade war on tech industries, including semiconductors, telecommunications, and e-commerce.

## KEYWORD

US-China trade war, tariffs, technology transfer, blacklisting, supply chains, alternative markets, research and development, semiconductors, telecommunications, e-commerce.

## THE CAUSE OF THE US CHINA TRADE WAR

Held the belief that trade deficits were inherently bad and China was to be blamed. Trade deficits are surely not a good indicator of the state of the economy, but the

U.S. trade deficits were largely driven by soaring U.S. federal budget deficits, which have little to do with China. The irony is that three years after Trump's tariffs were initiated to fix the U.S. trade deficit, bilateral trade between the United States and China has now rebounded to all-time highs, China's trade surplus has increased, and the U.S. deficit has become worse off. Trump has echoed popular but misguided sentiments.

There were allegations by the US on Beijing of intellectual property theft and forced transfer of technology. In its complaint, the United States alleged that China's policies on technology transfer prevent foreign patent holders from enforcing their patent rights in China or negotiating licensing contracts on market-based terms. For example, the United States asserted that China's regulations — that give a Chinese party to a joint-venture agreement the right to continue to use technology transferred under the agreement after its expiration — violate the national treatment obligation of TRIPS article 3 (by giving enhanced rights to the Chinese party) and the right of foreign patent ownersto enforce their own patent rights stipulated by TRIPS article 28.

The exacerbation of the US-China bilateral relations in 2018 was the culmination of the fore-mentioned events. When the world's largest economy and the world's second largest economy lock horns, it's not only a battle of economic might, it runs much deeper than that. It's a battle for global dominance, it's a battle for strategic control and it's the east facing the west.

A trade war for which the world is paying a price, billions of dollars being lost hampering the global GDP. But how did we come to this? Where did it all begin?

China has been a trade surplus economy, recording higher number year on year. This could be attributed to series of economic reforms. However, the role of the communist regime of the country cannot be ignored. There are credible concerns that China's protectionist policies treat foreign firms unfairly, there's a lack of market access. For example, the requirement of foreign firms to form Joint Ventures with Chinese firms as a pre-requisite for market entry in select sectors; the China's use of subsidies, the U.S. questions subsidies for China's fishing industry and the activity of so-called government guidance funds, which seek to foster domestic innovation in different industries from advanced engineering and robotics to biotechnology and clean energy.

Cut to 2016, there has been a major shift in the political landscape of the USA. The country witnesses the rise of right-wing nationalism culminating with Donald Trump winning the 2016 presidential elections. The Trump administration

## THE OVERALL IMPACT

Before the end of 2019, both the US and PRC had imposed 20 percent import tariffs on more than 60 percent of bilateral merchandise trade turnover, resulting in a reduction of global GDP growth in 2019 by an average of 0.5 percentage points. As described by Heather Long at the Washington Post, "U.S. economic growth slowed, business investment froze, and companies didn't hire as many people. Across the nation, a lot of farmers went bankrupt, and the manufacturing and freight transportation sectors have hit lows not seen since the last recession. Trump's actions amounted to one of the largest tax increases in years."

The biggest losers were the Automobile sector, the Food and Agricultural business and the Technological industry. These sectors bore the brunt of the trade war majorly. American automakers sell most of their products in the Chinese market. In 2018, the Chinese government raised tariffs from 15% to 40% for all automobiles entering its market from the US. It should be kept in mind that the Asian nation has a thriving automobile sector that can satisfy the local market. China is the fourth largest agricultural export market for the US. Total exports of agricultural products to China totaled \$9.3 billion in 2018, according to the Office of the United States Trade Representative. Traditionally, China has been the largest importer of U.S. soybeans, with \$3.1 billion worth bought in 2018. With Chinese officials imposing an added tariff on U.S. soybeans, American soybean farmers were put in a bind, with huge stockpiles of product that they couldn't sell.

The impact of the trade war transcended industries with the end consumer paying higher prices for the products and manufacturers losing out on revenues. Given the inter-connectedness and globalized nature of the businesses and their value chain, it is impossible for an industry to remain isolated from the ripples of significant happenings in other industries.

## IMPACT ON THE US TECH INDUSTRY

The tech industry has been a major contributor to the overall trade deficit of US, which led to all the sanctions imposed by US, to reduce the deficit. There has been different speculations and regular debate regarding if the tariff was correct. A group of people say that the US evaluates the import value as the overall

value of the product imported from China and not the value added, hence the increase in deficits. Consumer electronics such as smartphones, personal computers, and TVs alone accounted for around \$130 billion of the 2018 trade gap in goods of \$419 billion, which the US administration wanted to halve.

Approximately 70% of total combined imports of consumer electronics such as phones, TV, laptops as well as parts needed to manufacture the materials, are imported from China.

The ongoing US-China trade or tech war had been having huge impact on the US tech industries. Originally launched with the idea to protect the US economy and industries since US claimed that China was copying and stealing the IP and technology breakthroughs of US for its own benefit, the final effect did not come out as expected.

Both IP and digital services, including as cloud storage, content streaming, and e-commerce, are areas where US firms may benefit from increased access to Chinese domestic markets, resulting in a big increase in US exports and a decrease in the trade imbalance overall.

According to Pat Gelsinger, CEO of data center software business VMware, the computing sector is being "disentangled" into distinct US-centric and China-centric supply chains. He goes on to say that it's not simply about developing new methods to service the US and Chinese markets. Rather, it reflects opposing networks of global economic influence: whether clients in Europe, Latin America, or Africa have been lured into the orbit of US or Chinese tech suppliers will eventually determine how much technology is sold to them.

We move towards some examples:

As the two countries aim to decouple their economies, the battle has exacerbated a technical arms race between them, putting American firms like Micron at danger. China has accelerated attempts to create its own semiconductors, driverless vehicles, artificial intelligence, and other technology in order to minimize its reliance on American components. These initiatives, along with the Trump administration's goal to limit American tech exports to China, may end up hurting the same firms promised to safeguard.

American companies had to accept lower profit margins, reduce pay and the negative effects of lost job opportunities for American employees, postponed possible wage increases or expansions, and raised costs for American consumers and businesses were some of the ill effects of the tariff.

Cisco's sales to Chinese telecoms companies have been declining for years, but now the country's large state-owned corporations have shut the door in its face. "We haven't been invited to bid, and we aren't even permitted to participate," says the group. A rise in import taxes to 25% has already begun to hurt for data center technology vendors like Cisco.

The identification of Huawei as a national security threat caused great concerns among American IT companies. It led to certain situations that are counterproductive to their goals and creativity.

Huawei had been a key customer for major American tech companies as it has developed. Every year, the Shenzhen behemoth spends \$11 billion in memory chips, semiconductors, peripherals, and software licenses.

The chip manufacturers in the United States are also worried that due to the trade wars they will have reduced access to the Chinese markets, as China also retaliated with tariffs and counter measures. This reduced access will lead to smaller market size and a loss in sales. Thus, there will be less revenue and therefore less money at disposal to spend on research and development, making it difficult for the US companies to maintain their leadership in the global semiconductor chip industry.

The telecom industry will be severely affected as the restriction on China made wireless and internet equipment will lead to slower penetration and expansion in rural American Markets. This delay in internet access will impact overall growth of the economy.

However, another group of people say that the US manufacturers would not have to compete with cheap Chinese semiconductors or other technology products thus allowing them to spend more on Research and Development.

## **IMPACT ON THE CHINESE TECH INDUSTRY**

China is the largest primary assembler of imported components and materials and then provide final products.

According to Gavin Parry, managing director of financial services company Parry Global Group, U.S. IT companies operating in China are already under pressure to relocate their manufacturing operations back to the United States and generate more employment for the local economy. According to him, if such a change occurs, China would most certainly lose jobs.

The biggest casualty till now has been China's one of the most successful companies which has been global, "Huawei Technologies". Due to the restrictions by the United States, most of its supply chain has been cut off in US as well as some other countries where the US has lobbied to restrict Huawei and other Chinese companies and has been successful in its attempt to a certain extent. Huawei's customer service and telecom equipment businesses have been the most affected. Huawei for instance claims that it spends more than USD 11 Million on US parts, which now will be quite difficult to procure.

Due to these restrictions, China is vying for different ways. The Chinese tech industry is now focusing on Taiwanese talent and its industrial ecosystem and trying to steal it, to meet China's requirements in an inexpensive and easy manner. The impact has not been as severe as US expected as China has been focusing on increasing its supply chain network and customer base in other parts of the world. Moreover, the Chinese government is showering resources in order to make Chinese firms self-reliant in chip manufacture and technology and most of the resources or components for which it was depended on US. The failure of US to pressurize China by lobbying with other countries to put up similar restrictions, led to far less than severe effect on Chinese tech industry.

Advanced tech is important, and the fact is undisputed. This tech war is revolving around semi-conductors which are key inputs for the technological innovations acting as key disruptors. Currently, US is the leader in ICs, while China is trying its best to reach that position. The process of producing these ICs is extremely complex and globalized. It mainly operates through 3 stages

## **THE DILEMMA**

Prima facie, it is confusing to see the US imposing sanctions on China despite the fact that it gains directly through the existing division of labour at the international level. Two primary factors could account for this. The real wages of US workers have come to a standstill, and inequality in the US has risen manifold since the 1970s. This led to the growth of anti-globalization sentiments in the US amongst the common masses. In fact, Donald Trump cashed on this sentiment which led to his popularity through trade restrictions, increased infrastructure spending, supporting manufacturing domestically, and making the country's international exposure weaker. These are contrary to capitalists who make substantial money out of globalized production systems. Secondly, US capitalists want to protect their position and avoid competition in core activities. Beijing is often accused of creating industrial overcapacity, which affects prices globally, and enables China to expand its global market share at the cost of other firms operating in China who are

inherently at a disadvantage due to the special privileges available to domestic companies in China. Industrial upgradation in China threatens the competitive position of US capitalists and the profit margins enjoyed by them. In fact, blocking Huawei that was emerging as the leader in global 5G tech highlighted the inherent insecurities these capitalists feel.

On one hand, China's foray into the technological sector has threatened the superiority enjoyed by capitalists out of international division of labour and will further make US hegemony weaker. On the other hand, it is important for the Chinese economy to grow in order to account for the surging demands for capital as well as labour.

Another debate brewing is, who is the bigger loser out of these tensions- China or the US? According to Gavin Parry from Parry Global Group, the answer is – probably China. This is because most US firms were already under stress from the erstwhile President Donald Trump to move their manufacturing bases back from China to the US to create employment. To take the example of Apple, it sources parts of its devices from multiple companies across countries, but eventually assembles them all in China, by firms like Taiwan's Foxconn. If Apple and Foxconn did shift back to the US, it would create job losses for millions of people in China.

## POTENTIAL CONSEQUENCES

The tech war between the two nations is bound to have economic consequences on account of the strong interdependence between the two nations. For example, leading Chinese ICT companies listed on US stock markets had annual revenues of almost \$500bn and a market cap of \$1.3trillion.

In fact, the laws passed by this administration recently have created very stringent norms for all Chinese companies listed on the US stock exchange, more so, on the tech firms, thereby leading to a few of them possibly dropping out of the exchange. The consequences of this would be vast- the 300 Chinese companies that were listed having sales and market cap worth ten times the volume of bilateral trades and to the FAANGs.

The FDI flows bilaterally between the two countries have almost halved- from \$37bn a year before the tech war. This has been a lot more impactful in the ICT sector, in which, direct investment in the US by China has almost been nil since 2018.

This tech war has the power to weaken or threaten the developments in the overall technological governance across nations, and at the global level. The past-paced development in technological sectors, the innovations have the capability for economic and political disruption and hence, require international governance standards and laws to be in place in order to minimize disruption. But, this becomes increasingly difficult when the two leading technological nations of the world are at the crossfires, engaging in a self-destructing cold war. The global progress, will in fact, be hurt and even slowed due to lack of cooperation on the part of these nations.

## CONCLUSION

The US-China trade war, over the past three years, has played a significant role in transforming the trading environment, which was earlier fairly open and bilateral, to a rather protectionist one. The Biden administration has kept in place, most of the tariff and non-tariff barriers imposed by the Trump administration. In fact, incentives to diversify trade partners and focus on "Make America Great Again" through localization have become more intense post the supply chain disruptions caused by Covid-19.

Continuing trade tensions between the giants will have significant impact on the rest of the world. While we can intuitively say that the trade war has had an overall positive impact on the third-world or developing economies through greater opportunities, the interlinkages through Global Value chains complicate matters.

This trade war has shifted S\$ 61.1 billion in net exports from China to the other economies. Because of export asymmetries between the two nations, there have been larger opportunities to other economies due to imposition of tariffs by the US, than a vice-versa. Mexico, Canada, Germany, etc. are the top beneficiaries in this scenario. Eventually, continuing trade tensions between these economies will inflict a downward pressure on international trade, also stimulation diversification of supply chains at the same time.

## THE WAY FORWARD

It is now important to moderate these tensions which have escalated into a self-defeating cold war with no clear winners. The initiative for something like this could come from Europe, since Republicans and Democrats in the US are united in their approach towards China. Although both Europe and the US may have similar objectives in their dealings with China, it is Europe that is more integrated with China with respect to investments and trades. As a result, this competitive aspect offers more potential for a mutually beneficial relationship. Furthermore, Europe is neither under burden of power politics, nor is it relying on tech advantages like the US, thereby making them more accepting of compromises.

The US should focus on economic and political instabilities within the country rather than pointing the finger at China in order to safeguard its moral and technological interests. Criticizing China and calling its trade practices and authoritarian regime “unfair” will not achieve its purpose. Instead, it must strengthen its ties with European and Asian partners and bolster its own economic competitiveness.

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