

The US-China Economic Relationship

A CRUCIAL PARTNERSHIP
AT A CRITICAL JUNCTURE

JANUARY 2021



OXFORD
ECONOMICS



THE US-CHINA BUSINESS COUNCIL
美中贸易全国委员会

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USCBC's mission is to expand the US-China commercial relationship to the benefit of its membership and, more broadly, the US economy. It favors constructive, results-oriented engagement with China to eliminate trade and investment barriers and develop a rules-based commercial environment that is predictable and transparent to all parties.

January 2021

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FOREWORD

The trade relationship between the United States and China has changed significantly since the US-China Business Council (USCBC) last commissioned research on the topic from Oxford Economics in 2017.

As tension has increased across all dimensions of the bilateral relationship, trade and investment relations have also deteriorated markedly. Tariffs and counter-tariffs have been imposed. Today, despite the phase one agreement, tariffs remain at an unprecedented level. Lines between the commercial and national security domains have become increasingly blurred.

With President-elect Joe Biden taking office mere days after this report's release, it is imperative to acknowledge the benefits that trade with China has brought—and continues to bring—to the US economy, American global competitiveness, and job creation.

Efforts to build on the phase one agreement and negotiate arrangements that remove China's market access barriers and roll back tariffs will bring ample benefits to American farmers, workers, and ranchers.

USCBC is pleased to offer the following research to the US government and business stakeholders. This report highlights the benefits of reducing trade barriers so that American firms can compete fully, freely, and fairly in the rapidly growing Chinese market.

Crafting a more nuanced and effective trade policy toward China will be an essential pillar for managing the world's most important relationship in the coming years. A more principled and pragmatic trade policy will also contribute to American prosperity for many years to come.

Sincerely,

A handwritten signature in black ink, appearing to read "Craig Allen", with a long horizontal line extending to the right.

Craig B. Allen

President

US-China Business Council

EXECUTIVE SUMMARY

1.2 million
jobs

Number of jobs in the US
linked to exports to China
as of 2019

245,000
jobs

Peak number of jobs lost
as a result of the trade
war

145,000
jobs

Additional jobs that would
be created by 2025 as a
result of lowering tariffs

732,000
jobs

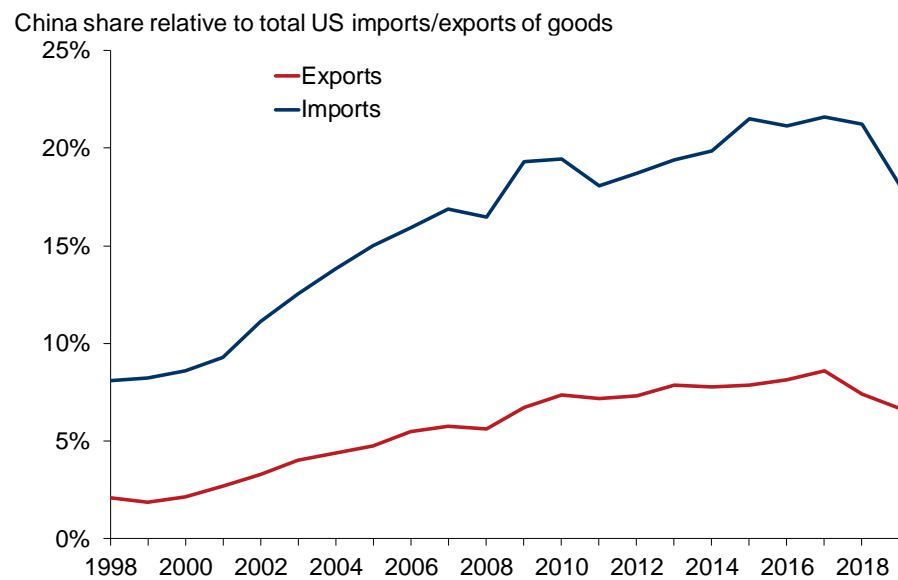
Peak number of jobs lost
as a result of trade war
escalation

- The US has benefited from trade and investment flows with China.** The combination of bilateral trade, investment, and supply chain integration has supported economic growth, consumer choice, and job creation. In 2019, exports to China supported 1.2 million jobs in the US and as of 2018, 197,000 people in the US were directly employed by Chinese multinational firms. US companies invested \$105 billion in China in 2019, and the profits from these investments and the contribution they make to the competitiveness of US businesses help support the US economy through R&D, domestic investment, and dividend payments. With China forecast to drive around one-third of global growth over the next decade, maintaining market access to China is increasingly essential for US businesses' global success.
- The trade war with China hurt the US economy and failed to achieve major policy goals outlined by the Trump administration.** Rather than benefiting the economy, it has reduced US economic growth and employment, resulting in an estimated peak loss of 245,000 jobs. Tariff rates remain at a multi-decade high despite both countries reaching a phase one trade agreement in early 2020. While the agreement made important progress on longstanding trade barriers in agriculture, financial services, and intellectual property protection, it failed to address a range of administration concerns over Chinese state-owned enterprise disciplines, distorting subsidies, data and cybersecurity, and other areas of market access. While the trade deficit with China did narrow in 2019, this was offset by an increased trade deficit with the rest of the world, leaving the overall US trade deficit broadly unchanged.
- Scaling back tariffs would likely benefit the US economy and create jobs.** Even a moderate rollback in tariffs could increase economic growth and stimulate employment growth. Under our trade war de-escalation scenario, where both governments gradually scale back average tariff rates to around 12% (compared with around 19% now), the US economy produces an additional \$160 billion in real GDP over the next five years and employs an additional 145,000 people by 2025. US household income would be \$460 higher per household as result of increased employment and incomes as well as lower prices.
- Escalating trade tensions and significant decoupling with China would hurt the US economy further and reduce employment.** Our trade war escalation and decoupling scenario sees the US economy produce \$1.6 trillion less in real GDP terms over the next five years and results in 732,000 fewer jobs in 2022 and 320,000 fewer jobs in 2025. In addition to a significant near-term shock to economic output, long-term effects would permanently lower GDP, reflecting lower economic productivity. By the end of 2025, US households will have lost an estimated \$6,400 in real income.

1. INTRODUCTION

Following China’s accession to the World Trade Organization (WTO) in 2001 and its broader integration into the global economy, the US significantly increased economic ties with China. US trade ties with China peaked in 2017, with the share of US goods exports going to China reaching 8.6%, and the share of goods imports reaching 21.6%. However, over the last two years, the US-China trade war has caused bilateral trade flows to decline, threatening to reduce the benefits this trade generates to the US economy.

Fig. 1: US trade ties with China



The US has benefited from increased economic integration with China. Even after a recent decline in bilateral trade, the US exported \$106 billion in goods and \$57 billion in services to China in 2019.

But the story goes much deeper than just exports to China: American families and consumers have benefited from cheaper imported goods from China. Businesses have benefited from cost-effective inputs that have boosted their competitiveness, while globally integrated supply chains have improved efficiency and lowered production costs for US firms. This has enabled US businesses to grow and create jobs in the US.

China has also invested directly in the US, creating jobs and income for American households. Moreover, US-based multinationals have invested directly in China, allowing them to reinvest profits from their China operations. The success of US companies in China will be essential for US global competitiveness going forward, as China is projected to drive around a third of global growth over the next decade. Profits made by US companies through investing in China can also benefit the

American economy as a whole through dividends, R&D spending, and increased domestic investment.

Nevertheless, many Americans feel threatened by China. Cheaper imports have displaced some workers in the manufacturing sector and China's state capitalist economic model has raised concerns about whether it adheres to the same rules in international markets. Policymakers are also increasingly focused on the potential national security concerns of economic and technology integration.

With the US economy in such a vulnerable position as a result of the COVID-19 pandemic, this report explores the trade concerns that many Americans have about China, and serves as a timely reminder of the meaningful GDP and employment gains the US can obtain from a more open economic relationship with China. Our research also serves as a warning of the economic harm to come if the trade war were to escalate further.

2. TRADE AND INVESTMENT WITH CHINA SUPPORTS US GROWTH AND EMPLOYMENT

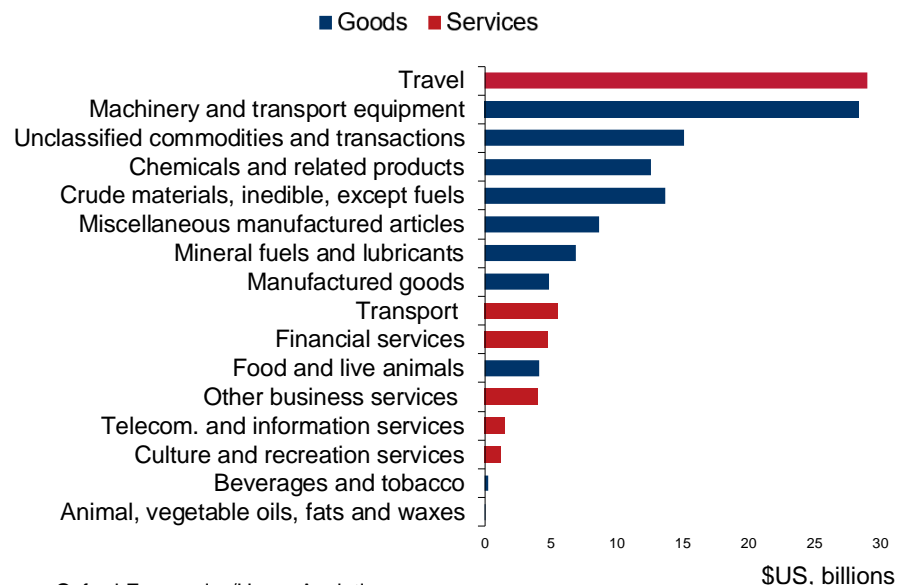
China's economy has expanded significantly over the past three decades, with its share of global GDP rising from less than 3% in 1990 to 17% today. This rapid pace of economic growth is set to continue, with GDP growth in China forecast to average 4.5% per annum over the next 10 years, accounting for around a third of global GDP growth.¹

There are five main channels through which the US benefits from integration with China and these are explored below.

2.1 EXPORTS TO CHINA

In 2019, the US exported \$106 billion in goods and \$57 billion in services to China. Looking back to 2017—before the majority of tariffs were implemented as a result of the trade war—the US exported \$130 billion worth of goods to China. These exports are diverse and support the manufacturing, travel and tourism, and business and financial services sectors.

Fig. 2: US exports to China by category (2019)



Source : Oxford Economics/Haver Analytics

\$163 billion

The US exported \$106 billion worth of goods and \$57 billion worth of services to China in 2019



¹ Based on Oxford Economics forecasts, at market exchange rates.

Exports to China supported an estimated 1.2 million jobs in the US in 2019.² This reflects not just the direct impact of the jobs created by exporting sectors, but also jobs created in other sectors that support export-producing firms throughout US supply chains.

2.2 IMPORTS FROM CHINA

Lower-cost imports from China benefit US businesses and households. In 2019, the US imported \$452 billion worth of goods from China, equivalent to 18% of total goods imports. Concerns have risen over the impact of imported manufactured goods from China on US manufacturing employment in sectors where those products compete. However, China has a comparative advantage in the production of low-cost manufactured goods, and reshoring this production to the US would lead to a significant increase in US consumer prices and a decrease in household real incomes. Indeed, econometric studies have found that as a result of imported goods from China, the US consumer price index was around 2% lower from 2000–2007 than it otherwise would have been.³ This is due not only to direct imports of finished consumer products, but also intermediate goods imported from China, which lower domestic manufacturing costs.

While the impact of Chinese imports on US manufacturing jobs has also been highly visible given their geographic concentration in the US,⁴ overall gains to US real incomes from trade with China have outweighed these losses. Research suggests the impact of lower prices and increased employment in sectors that benefit from cheaper inputs from China outweighs the impact of reduced employment in manufacturing sectors competing with Chinese imports.⁵

Furthermore, research indicates that increased automation is a much larger driver of the fall in manufacturing employment than the effects of trade with China. Automation will continue to reduce the demand for low-skilled manufacturing employment over the coming years, and Oxford Economics estimates as many as 20 million additional manufacturing jobs worldwide could be displaced due to robotization by 2030.⁶ Trade restrictions will not help reverse this trend; in fact, as we show in Section 3 of this report, protectionism has actually hurt the US manufacturing sector.

² Based on the output-to-employment multipliers estimated by IMPLAN, linked to export product by category.

³ See Jaravel and Sager, *What are the Price Effects of Trade? Evidence from the U.S. and Implications for Quantitative Trade Models* (2019, Washington: Board of Governors of the Federal Reserve System).

⁴ See Autor et.al, *The China Shock: Learning from Labor-Market Adjustment to Large Changes in Trade* (2016, Annual Review of Economics).

⁵ Caliendo et.al, *Trade and Labor Market Dynamics: General Equilibrium Analysis of the China Trade Shock* (2019, Econometrica).

⁶ <https://www.oxfordeconomics.com/recent-releases/how-robots-change-the-world>

2.3 US FIRMS INVEST DIRECTLY IN CHINA

US investment in China generates income for US businesses and grants firms access to the world's fastest-growing consumer market. While it is important to address areas where China continues to restrict US market access, it must also be noted that China has opened its economy significantly to US investment since its accession to the WTO. US direct investment in China increased to \$105 billion in 2019 from \$11 billion in 2000, and US multinational firms based in China earned \$40 billion in net income in 2018 according to the US Bureau of Economic Analysis (BEA).⁷

Profits made by US companies through investing in China can also benefit the American economy as a whole, through dividends, domestic investment, and R&D spending. BEA data indicates that US multinational firms in China invested \$26.2 billion in R&D expenditure over 2009–2018, equivalent to 12% of the net income earned by US businesses in China over that period. Multinational corporations that invest abroad are also more likely to invest at home. One study found that a 10% increase in foreign direct investment by US multinational firms abroad can be associated with 2.2% increase in investment in the US, refuting the idea that foreign investment comes at the expense of domestic investment in the US.⁸

US multinational investment in China can also benefit domestic productivity. Econometric evidence suggests that US multinational investment abroad increases the productivity of those firms' suppliers in the US, as it allows for productivity-enhancing knowledge transfers of multinational corporations' suppliers.⁹

Economic decoupling with China would jeopardize market access to the world's fastest-growing consumer market and put US businesses at a comparative disadvantage in the global marketplace, as multinational firms in Europe and other economies continue to invest into China.

2.4 CHINESE FIRMS INVEST DIRECTLY INTO THE US

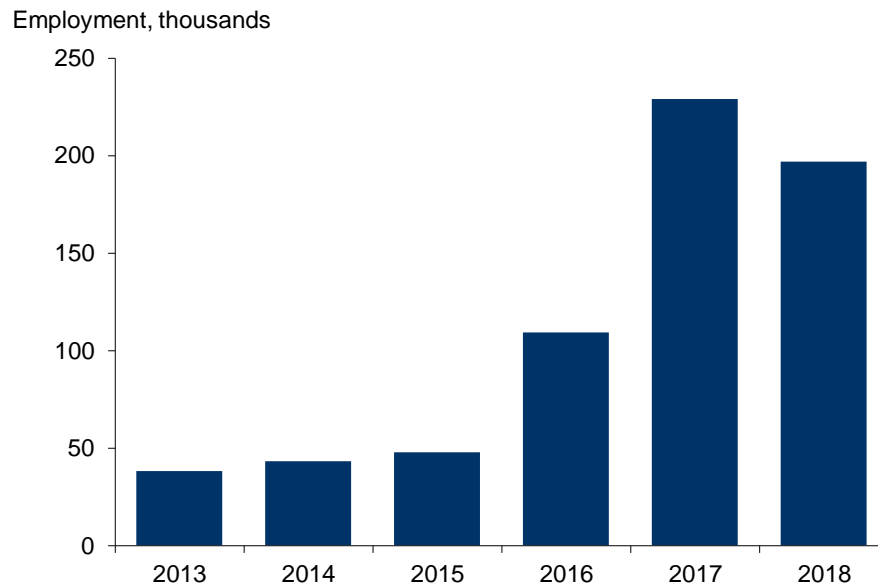
In 2019, the total stock of Chinese direct investment in the US was \$59 billion, 1.3% of the total stock of foreign investment in the US. This investment supports jobs in the US, both from direct employment and activities that support jobs in other sectors. According to the BEA, Chinese multinational firms employed 229,000 people in the US in 2017, although this dropped to 197,000 people in 2018 as both the US and China tightened restrictions on investment.

⁷ <https://www.bea.gov/data/intl-trade-investment>

⁸ See Desai et.al.: *Foreign Direct Investment and Domestic Economic Activity* (2005, NBER working paper No. w11717)

⁹ See Tang, Jitao; Altshuler, Rosanne: *The spillover effect of outward foreign direct investment on home countries: Evidence from the United States* (2015, Rutgers University, Department of Economics, Working Paper, No. 2015-01)

Fig. 3: Employment in the US by Chinese multinational firms



Source : Oxford Economics/BEA

2.5 TRADE WITH CHINA INCREASES US PRODUCTIVITY

Trade and foreign direct investment between the US and China have direct tangible benefits for the US, such as export revenues, profits, and employment, as well as lower prices. But fundamentally, the key long-term benefit to economic ties with China comes from gains in total factor productivity (TFP), the efficiency with which inputs such as capital and labor are used to produce goods and services. These gains from trade (and FDI) result from increased competition, comparative advantage in the production of certain goods and services, and supply chain efficiency, which reduces production costs. There is widespread consensus among economists that productivity is the most important driver of long-term growth, and as our previous study in 2017 found, US productivity has improved as a result of trade and investment flows with China.^{10, 11}

¹⁰ Frankel and Romer, *Does Trade cause growth?* (1999, American Economic Review) found that an increase in trade exposure of 1 percent increases income by 0.5 percent.

¹¹ <https://www.uschina.org/sites/default/files/OE%20US%20Jobs%20and%20China%20Trade%20Report.pdf>

3. RISING TENSIONS

3.1 CONCERNS OVER TRADE WITH CHINA

The impacts of trade with China have generated increased debate in recent years, especially given the impact of Chinese imports on manufacturing employment. In particular, debate has centered on concerns that China does not adhere to commonly accepted rules in international markets given its unique economic model which combines market forces with strong state interventionism.

In August 2017, the Office of the United States Trade Representative (USTR) initiated an investigation into China's acts, policies, and practices related to technology transfer, intellectual property, and innovation under Section 301 of the Trade Act of 1974, the findings of which sowed the seeds of the trade war with China.

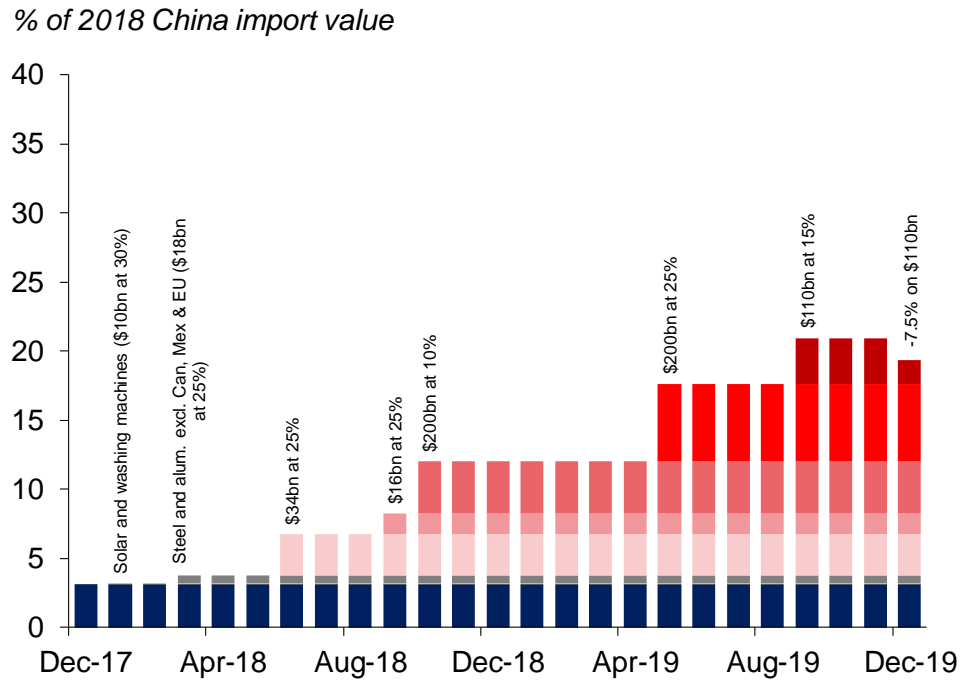
3.2 INCREASING TARIFFS AND ECONOMIC TENSIONS

Tensions escalated rapidly in early 2018, with the US imposing 30% anti-dumping duties on all solar panels and washing machines, including Chinese products. That was followed by 25% tariffs on global steel and aluminum imports, which were justified on national security grounds and significantly impacted imports from China. Thereafter, USTR began imposing wide-ranging tariffs on Chinese imports based on its Section 301 investigation. The summer of 2018 saw 25% tariffs imposed on \$50 billion of machinery imports, followed by 10% tariffs imposed on \$250 billion of industrial supplies in October 2018. Duties on those goods were then raised to 25% in May 2019, before 15% tariffs were imposed on another \$110 billion of consumer-focused imports in September 2019. China responded in kind with equivalent tariffs on US goods, focused on vehicles, agricultural produce, oil and natural gas, and capital equipment.

According to the Peterson Institute for International Economics, by end-2019, the effective (trade-weighted) tariff on US imports from China stood at 21%, compared to 3.1% at the beginning of 2018. The effective tariff on Chinese imported goods from the US stood at 20.9% compared with 8% at the beginning of 2018.¹²

¹² <https://www.piie.com/research/piie-charts/us-china-trade-war-tariffs-date-chart>

Fig. 4: Timeline of US tariff actions on imports from China



Source : Oxford Economics/Peterson Institute for International Economics

3.3 THE TRADE WAR'S IMPACT ON JOBS AND ECONOMIC GROWTH

While it is still too early to complete a final accounting of the full impact of the trade war, initial evidence already demonstrates it has damaged the US economy. A wide range of academic and industry studies have found the trade war to have lowered US GDP growth, welfare, and employment. Estimated costs to the US economy range from \$6.9–7.2 billion by the end of 2018, and one study found that the trade war cost US firms \$1.7 trillion in market capitalization and will reduce investment growth by 1.9 percentage points in 2020.^{13, 14, 15}

The immediate and highly visible effects of tariffs on the economy have been weaker trade flows to and from China, with each round of tariff increases leading to declines in bilateral imports and exports. US exports to China fell 18% from 2017 to 2019; while imports fell by 11% over the same period. The combination of higher tariffs, reduced trade flows, and heightened tensions damaged the US economy, firms, and households via a number of channels:

- **Consumer prices:** Increased tariffs have raised consumer prices on both imported products and domestic products, given the increase in prices of intermediate goods. Contrary to claims from the Trump administration that

¹³ Fajgelbaum et.al, *The Return to Protectionism* (2020, The Quarterly Journal of Economics)

¹⁴ Amiti et.al, *The Impact of the 2018 Trade War on U.S. Prices and Welfare* (2019, NBER working paper 25672)

¹⁵ Amiti et.al, *The Effect of the U.S.-China Trade War on U.S. Investment* (2020, NBER working paper 27114)

the cost of tariffs would fall on Chinese exporting firms, most evidence suggests that US consumers have paid the price of tariff increases.¹⁶ This has squeezed real incomes and consumer demand.

- **Delayed and canceled investments:** Increased tariffs have escalated uncertainty around trade policy, which has caused businesses to delay or cancel investment plans.¹⁷ In August 2019, the Federal Reserve’s Global Economic Policy Uncertainty Index reached its highest level since the Global Financial Crisis.
- **Household wealth:** Financial markets saw a significantly negative impact upon tariff announcements, which affected household wealth and therefore consumer demand, as well as investor confidence.
- **Company competitiveness:** Finally, supply chain disruption from the trade war led to higher input costs for firms, as many intermediate goods are imported from China, hurting competitiveness and profit margins.¹⁹

Considering each of these channels, Oxford Economics estimates the cost of the trade war to be around 0.5% of US GDP over 2018–2019, equivalent to \$108 billion (in 2020 prices). Weaker GDP growth also has implications for jobs and household income. At its peak, the trade war cost the US economy an estimated 245,000 jobs and on a cumulative basis, real household income was \$88 billion lower over 2018–2019 (in 2020 prices), or around \$675 per household.

3.4 SECTORS THAT WERE HIGHLY EXPOSED TO THE TRADE WAR

3.4.1 Agriculture

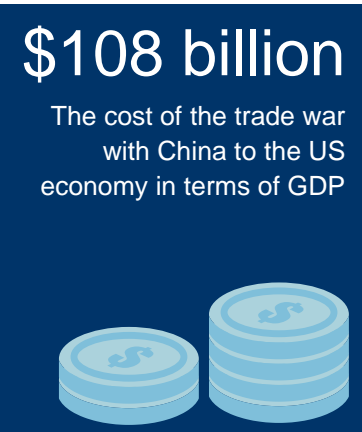
The US agricultural sector saw the earliest and sharpest effects in terms of reduced export flows to China as a result of retaliatory measures. In 2017, prior to the increase in tariffs, the US exported \$19.5 billion worth of agricultural produce to China. Following retaliatory tariffs and reduced administrative purchases, agricultural exports to China fell to just \$9.1 billion in 2018—a decline of 53%. This raw decline underestimates the true impact on the agricultural sector, as it fails to account for other factors such as weather and global commodity prices. Econometric studies, which control for other external factors, have found that the full impact on US agricultural exports to China as a result of retaliatory tariffs was an estimated 71% decline on average.²⁰

¹⁶ Amiti et.al (2019) found that “the full incidence of the tariff falls on domestic [US] consumers, with a reduction in U.S. real income of \$1.4 billion per month by the end of 2018.

¹⁷ See Dario et.al (2019) who find an empirical relationship between trade policy uncertainty and business investment over the course of the trade war.

¹⁹ See Handley, Kamal and Monarch (2019) who show that firms with exposure to imported intermediate goods where new import tariffs were imposed performed relatively worse in terms of export growth.

²⁰ See Grant et.al, *The 2018–2019 Trade Conflict: A One Year Assessment and Impacts on U.S. Agricultural Exports* (2019, Choices, Quarter 4)

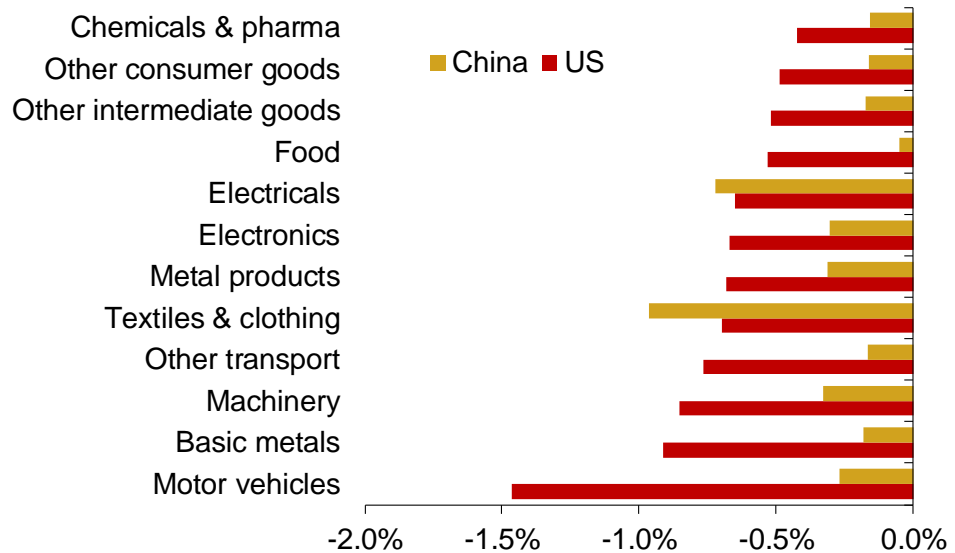


3.4.2 Manufacturing

The trade war harmed US manufacturing given its supply chain linkages, both directly with China and within the US. The revisions to Oxford Economics' manufacturing sector forecasts (which include the effects of input-output linkages across sectors) directly following the September 2019 tariff hikes show that the sectors most directly exposed to supply chain linkages with China, such as motor vehicles, machinery, and electronics were the most likely to be affected, but all manufacturing sector production forecasts have been downgraded as a result of tariffs.²¹

Fig. 5: Estimated impact of September 2019 tariffs on US manufacturing

% difference in manufacturing GVA in 2020, relative to previous (non-tariff) baseline following Sep 2019 tariff hikes. Ranked by impact on the US.



Source : Oxford Economics

Econometric evidence suggests that tariffs have also been harmful to manufacturing employment. A study by the Federal Reserve found that sectors with a higher degree of exposure to retaliatory tariffs and supply chain linkages with China were more likely to reduce employment as a result of tariffs, as any marginal benefits from protection to domestic manufacturing were more than offset by the effect of retaliatory tariffs and supply chain disruption raising input costs.²²

²¹ Production is measured as the gross value added (GVA) of each sector in that time period, the production value of output minus the value of intermediate consumption.

²² Flaaen and Pierce, *Disentangling the Effects of the 2018-2019 Tariffs on a Globally Connected U.S. Manufacturing Sector* (2019, Washington: Board of Governors of the Federal Reserve System).

3.4.3 Energy

The US energy sector found itself increasingly exposed to the trade war as a result of retaliatory actions by China, with China applying a 5% tariff on imports of US oil and 25% tariff on imports of liquified natural gas (LNG).²³ In dollar terms, exports of petroleum (including petroleum products) and natural gas (including LNG) to China declined 47% and 90%, respectively, in 2019. This nearly reduced US LNG exports to China to zero despite its increase in energy demand. The US Energy Information Administration estimated that China's demand for oil increased by 4.5% in 2019 and Oxford Economics estimates that natural gas demand in China increased 9.4% in 2019.

The long-term strategic effects on the industry may be more significant. China currently represents 14% of global oil demand and 7% of global natural gas demand, which are forecast to increase to 15% and 9%, respectively, by 2030. The phase one trade deal pushed an extensive increase in purchases of US energy products by China, but China failed to meet its 2020 targets and tariffs remain in place. Unless addressed, this will remain an impediment to the US energy sector's access to China, the world's largest energy consumer.

3.5 RAISING TARIFFS FAILED TO ACHIEVE STATED POLICY GOALS

The trade war has done little to address concerns over unfair trade practices by China or restore US manufacturing employment—on the contrary, it has been harmful to the sector.

In January of 2020, the US and Chinese administrations reached an accord that became known as the “phase one” agreement, making significant progress in addressing longstanding agricultural trade barriers, improving intellectual property protection, and liberalizing financial services. China also committed to import \$200 billion in US goods and services over two years on top of 2017 levels.

However, while both sides made minor tariff reductions following the agreement, the phase one deal left effective tariff rates at a multi-decade high. Moreover, the agreement failed to address a number of significant issues such as the role of Chinese state-owned enterprises and the impact of government subsidies on markets in which the US competes, as well as restrictive Chinese policies on data and cybersecurity. China has also fallen well short of its import targets set out under the agreement (in part due to the shock of COVID-19): US goods exports to China as of November 2020 had only reached 52% of the 2020 target.²⁴

Another stated goal of the Trump administration was to reduce the US trade deficit with China. However, there is no evidence that China's unfair trade practices highlighted by the US administration are a significant driver of the deficit. While the trade deficit with China did, in fact, narrow in 2019 to \$346 billion, compared with \$419 billion the previous year, this was offset by an increased trade deficit with the

²³ Tariffs on US imports of LNG were originally set at 10% in September 2018 and raised to 25% in June 2019.

²⁴ <https://www.piie.com/research/piie-charts/us-china-phase-one-tracker-chinas-purchases-us-goods>

rest of the world, leaving the overall US trade deficit broadly unchanged. This is because the US trade deficit (both with China and overall) reflects a set of broader macroeconomic trends, such as loose fiscal policy and the role of the US dollar in international markets as the global reserve currency, and not the trade practices of a specific country.²⁵

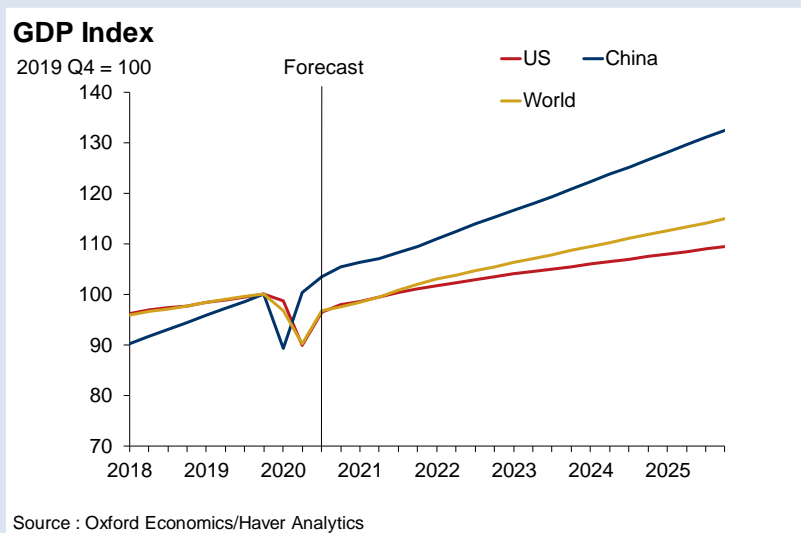
²⁵ Reinbold and Wen, *Understanding the Roots of the U.S. Trade Deficit* (2018, Federal Reserve Bank of St. Louis)

COVID-19 and US-China relations

The COVID-19 pandemic led to the sharpest global recession in post-war history. As a result of social distancing measures, forced business closures, and other emergency efforts to prevent the spread of the virus, US GDP declined 10.1% over the first two quarters of 2020. China also experienced its first contraction in economic output in year-on-year terms since its transition to a market economy, with GDP declining 6.8% year-on-year in the first quarter of 2020.

China has rebounded relatively rapidly, largely due to its successful containment of the virus. Chinese GDP returned to pre-COVID-19 levels in the second quarter of 2020 (The peak impacts of the virus struck the Chinese economy around one quarter earlier than the US). The US economy has begun to rebound, but the recovery will be gradual and uneven across sectors, with measurable scarring to the economy in the long term.

Fig. 6: US, China and world GDP forecast



The global pandemic and recession will have significant consequences for economic policy and global trade for years to come. Many have begun to question whether supply chain linkages with China and other developing Asian countries are beneficial following the initial spillovers to the US economy from lockdowns in the region. However, recent research from Oxford Economics for the Consumer Technology Association (CTA), based on interviews with US-based executives, shows little appetite for reshoring supply chains as a result of the pandemic's immediate disruptions. While the pandemic may lead to greater supplier diversification, those suppliers are likely to remain in China or other emerging Asian economies. Advanced economies may look to diversify or reshore production capacity for a narrow subset of critical goods, but significant decoupling from China would increase input costs for US firms significantly and cut off US firms from the world's fastest-growing consumer market.

4. ALTERNATIVE PATHS FOR US-CHINA RELATIONS

US policymakers on both sides of the political spectrum are skeptical of economic ties with China, as is the American public: surveys from the Pew Research Center indicate 73% of Americans have an unfavorable opinion of China.²⁶ High tariff barriers are set to stay in place, and it remains uncertain how trade policy will evolve under the incoming Biden administration. The policy actions taken over the next four years may well shape relations—and the economic health of both countries—for decades to come.

We have modeled two alternative scenarios around future US-China trade and economic relations: one in which tariffs and trade tensions are partially scaled back and another in which they are escalated. We compare both to a baseline scenario that assumes a continuation of status quo trade policy.

We quantify these results using the Oxford Global Economic Model (GEM) in conjunction with the Global Analysis and Trade Project (GTAP) model. More details on these models and the scenario calibration can be found in the appendix.

4.1 TRADE WAR DE-ESCALATION SCENARIO

While President-elect Joe Biden has publicly criticized the Trump administration's use of tariffs and is unlikely to significantly expand them, he has also said that he would not immediately remove them.²⁷ One possibility is that the Biden administration will negotiate with China to gradually roll back tariffs over the next four years. We model a version of this scenario here.

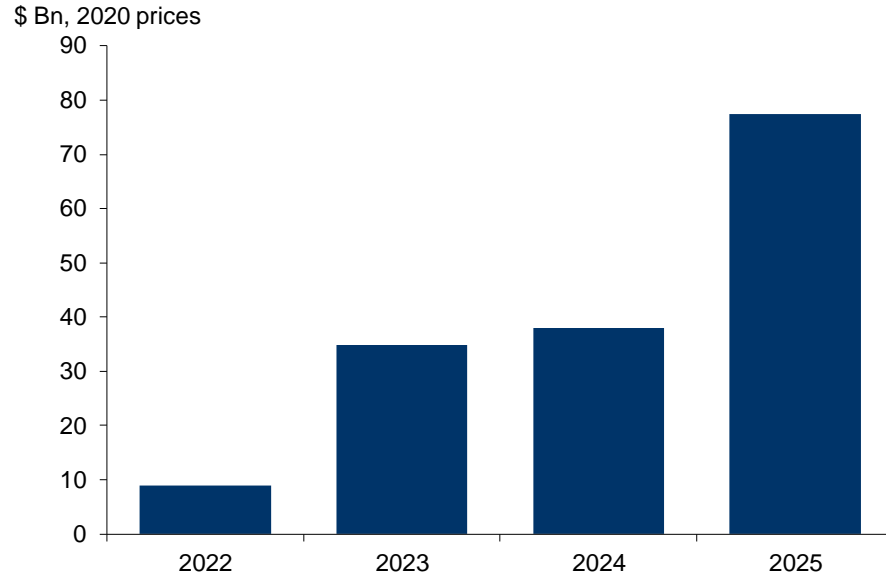
As an initial step, we assume that the US and Chinese administrations make some moderate progress on reducing tariffs around six months into Biden's presidency, and agree to a 7.5% reduction in tariffs on \$112 billion worth of imports in the third quarter of 2021. Following further successful negotiations over the next two years, we then assume a further 12.5% reduction in tariffs on \$250 billion worth of imports from China in late 2022, with China lowering tariffs on US imports in equal measure. This returns the effective tariff rate on all goods imports from China (and on US goods exported to China) to around 12%, similar to the levels of early 2019, midway through the trade war.

Although the effects are gradual (in line with our assumptions), the result is a significant and permanent boost to US real GDP, equivalent to \$78 billion (in 2020 prices) by 2025. On a cumulative basis, US real GDP is \$160 billion higher over the next five years.

²⁶ https://www.pewresearch.org/global/2020/10/06/unfavorable-views-of-china-reach-historic-highs-in-many-countries/pg_2020-10-06_global-views-china_0-01/

²⁷ <https://www.nytimes.com/2020/12/02/opinion/biden-interview-mcconnell-china-iran.html>

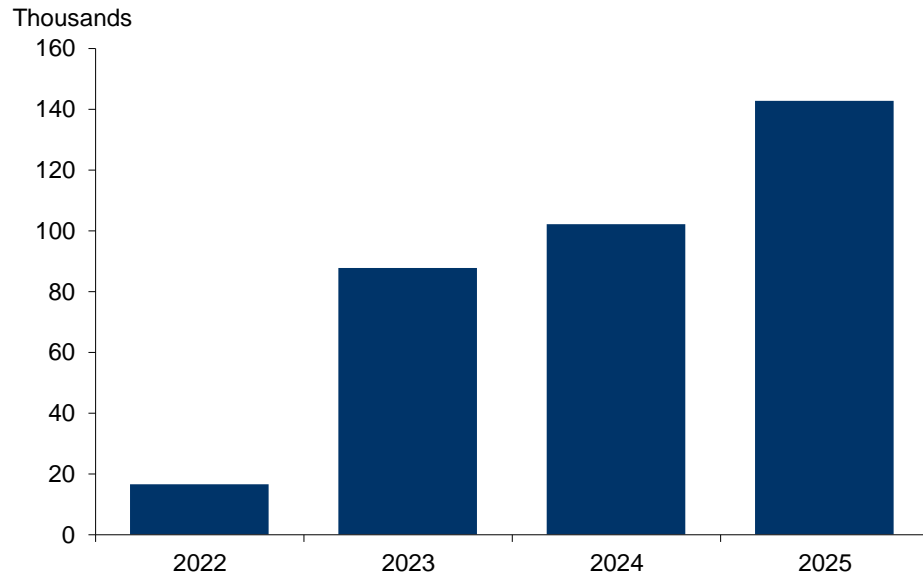
Fig. 7: GDP impact under trade war de-escalation scenario



Source : Oxford Economics/Haver Analytics

One of the key channels is stronger business investment, which would see a \$49 billion increase by 2025, complementing increased exports as a result of lower trade barriers and stronger consumption due to the increase in incomes and wealth.

Fig. 8: Employment impact under of trade war de-escalation



Source : Oxford Economics/Haver Analytics

145,000 jobs

Rolling back tariffs, even moderately, would create 145,000 additional jobs in the US economy by 2025

As a result, the US economy creates 145,000 more jobs by 2025 and US real household income is \$60 billion higher on cumulative basis (in 2020 prices), equivalent to around \$460 per household.

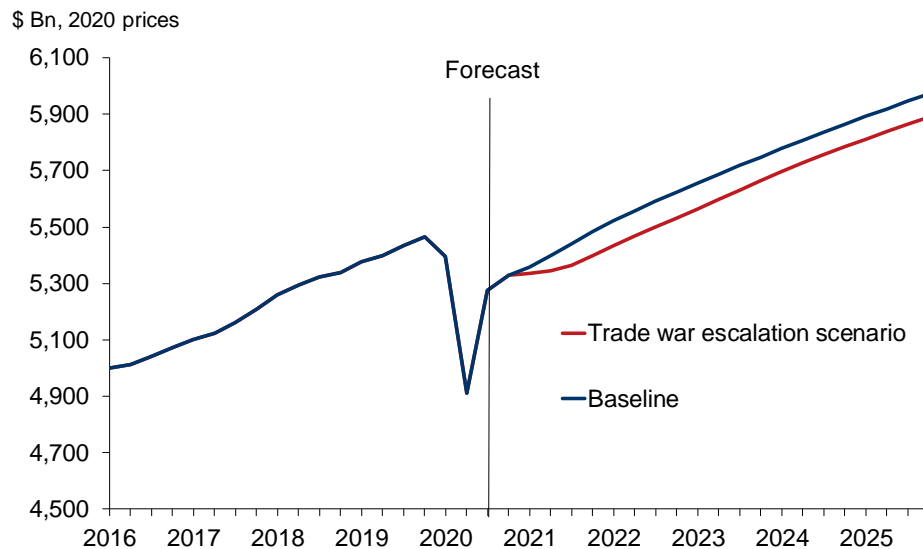
4.2 TRADE WAR ESCALATION SCENARIO

In this scenario, we assume an increase in trade tensions on multiple fronts. In the short term, the US imposes a tariff of 45% on all goods imports from China, with full retaliation. This is the highest publicly stated tariff threat on Chinese imports by President Trump. Over the longer term, decoupling measures that push the US and Chinese economies further apart are implemented by both countries, reflected in a shock to total factor productivity (TFP), as both countries are less able to leverage each other's comparative advantages. These measures could take the form of export controls, investment and financial market restrictions, or discriminatory regulations.

Risks to further tariff increases may have subsided considerably under incoming President Joe Biden, but the long-term risks surrounding decoupling remain prominent, especially in the high-tech sector. Even without the initial shock from tariffs, the long-term effect on productivity and corresponding economic impacts would be similar if other non-tariff policies were used to reduce trade and investment flows with China.

The results from our modeling, which combine the direct effects of trade flows, as well as the impacts on financial markets, business confidence, input costs, and economic productivity, show that US GDP would be significantly weaker over the next five years as a result of these policies.

Fig. 9: US GDP, baseline and trade war escalation scenario

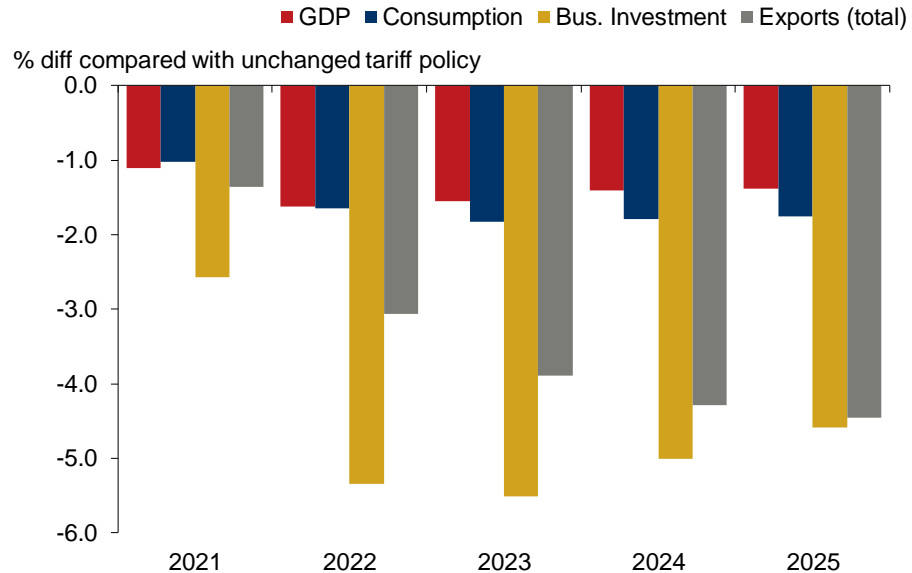


Source : Oxford Economics/Haver Analytics

In 2022, the US economy is 1.6% smaller relative to the baseline scenario, equivalent to \$362 billion (in 2020 prices). In the long term, US GDP is 1.4% smaller than the baseline scenario, equivalent to \$328 billion, reflecting weaker investment and productivity growth. On a cumulative basis, US GDP is \$1.6 trillion lower over the next five years in real terms.

In the near term, the sharpest reaction is to business investment, which declines as a result of financial market stress and policy uncertainty leading to a shock to investor confidence. Consumer spending, the largest component of US GDP, is also weaker relative to baseline as result of higher prices, lower confidence, and a decline in household income and wealth (resulting from the shock to equity prices).

Fig. 10: Breakdown of the decline in US GDP (demand components) due to trade war escalation



Source : Oxford Economics/Haver Analytics

In the long term, when the initial effects of the demand disruption have passed and the economy has returned to equilibrium (albeit at a lower long-run level), 70% of the decline in GDP can be attributed to the productivity effects of decoupling, with 30% attributed to reduced capital accumulation as a result of weaker business investment.²⁸

As a result of weaker growth, fewer jobs are created, with a peak impact of 732,000 fewer jobs created in 2022. The long-term reduction in employment is smaller, with 320,000 fewer jobs compared to the baseline in 2025. On a cumulative basis, household real disposable income is \$826 billion lower than in the baseline, equivalent to around \$6,400 per household.

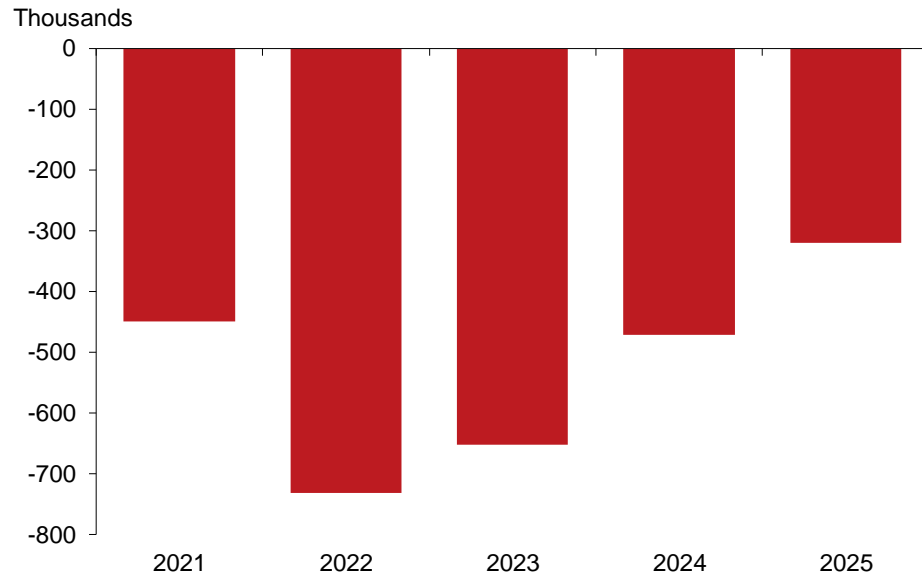
732,000 jobs

Further trade war escalation and decoupling would cost the US economy 732,000 jobs in 2022 and 320,000 jobs in 2025



²⁸ In the long term, output in the GEM is modeled using a Cobb-Douglas production function, where supply side factors determine the equilibrium level of production. See technical appendix for further details.

Fig. 11: Employment impact under trade war escalation



Source : Oxford Economics/Haver Analytics

THE RISING THREAT OF NON-TARIFF BARRIERS

Unlike tariffs, which apply a direct tax on imported goods as they enter at the border, non-tariff barriers (NTBs) affect trade and investment flows either through technical barriers (regulations and restrictions placed on foreign goods and services) or non-technical measures such as import quotas and outright bans of imports/exports in certain sectors to other countries (or to firms affiliated with that country). NTBs operate in a different way than tariffs and can have different short-term implications. A tariff is essentially a form of taxation and generally affects import prices more rapidly, but over the long term, the effect on the macroeconomy of raising NTBs is equally damaging. Reduced trade and investment flows with China and other nations will ultimately lead to higher input costs, reduced technology-sharing, and overall lower total factor productivity. In fact, some studies have found that NTBs have more of an effect on total factor productivity than tariffs.²⁹

In the context of the US-China trade war, national security and trade policies have become intertwined. US export controls such as the “Entity List” impose direct restrictions on US exports in certain sectors and on doing business with certain firms. Military goods and high-technology sectors such as aerospace and semiconductors have been hit with the heaviest restrictions. At the same time, China has just updated its export control regime and has threatened to include companies that cut off supply on an “Unreliable Entities List.” While both countries may have legitimate security concerns, the overly broad application of export controls is damaging to US business. Chinese supply chains linked to semiconductors have begun to shift away from the US, damaging US industry and threatening its long-term strategic position in global markets.³⁰

The US has also escalated its scrutiny of inbound Chinese investment by granting increased powers to the Committee on Foreign Investment in the United States (CFIUS). This has made it more difficult for Chinese firms to invest directly into the US as more investments have failed to meet approval and even more companies stop considering the US as a possible destination for investment. Direct inbound investment from China (first year direct investment expenditures) fell to \$585 million in 2019, 98% lower than in 2016. China has also begun to revise its system of national security reviews for foreign investment, releasing new measures in December 2020 that outline broad investment-screening authorities.

More recently, Congress has initiated measures to eventually delist Chinese companies from US stock exchanges unless they come into compliance with US accounting transparency requirements. While pushing Chinese firms to meet the same accounting standards as others listed on US stock exchanges is a worthwhile priority, delisting firms outright will threaten Chinese investment in the US. Continued restrictions on the accessibility of US technology and Chinese investment in the US could encourage China to retaliate by further raising restrictions on US investment in China, which would threaten US competitiveness. Likewise, a push to reduce supply chain integration would increase production costs in the long term.

²⁹ Abdurrohman et. al, *Does Trade Policy Explain Total Factor Productivity Differences Across Countries?* (2012, Journey of Economic Theory)

³⁰ <https://www.ft.com/content/7913e2ad-78b9-4d32-874b-f63980a15d26>

5. CONCLUSION

The analysis presented throughout this report shows that the US enjoys many benefits from its trade and economic ties to China and that tariffs and other restrictive measures imposed by the Trump administration come with an economic cost. While the phase one agreement made some progress in addressing areas of concern around trade with China, such as removing agricultural trade barriers, improving intellectual property protection, and liberalizing financial services, the tariff and non-tariff actions taken that preceded the deal have cost American jobs and income and hurt American businesses. Furthermore, the phase one agreement did not address concerns around Chinese policies on data and cybersecurity or the impact of Chinese state subsidies and state-owned enterprises in markets where US firms compete.

In addition to showing that tariffs raised so far have been harmful to the US economy, our forward-looking scenario analysis shows that scaling back tariffs would benefit US employment and household incomes. On the other hand, if economic tensions were to increase further, it would harm the American economy and reduce employment.

Fig. 12: Summary of key findings

	US GDP (cumulative impact, in constant prices)	Employment (peak impact)
2017-2019 trade war	\$108 billion lower over 2018-2019	245,000 fewer jobs
Trade war de-escalation scenario	\$160 billion higher over 2021-2025	145,000 additional jobs
Trade war escalation scenario	\$1.6 trillion lower over 2021-2025	732,000 fewer jobs

The US-China commercial relationship is at an important inflection point. Uncertainty clouds the horizon, as the incoming Biden administration works to formulate a new trade policy. But there are some indications of a changing stance. “We need to be able to build the very best in the United States and sell the very best around the world,” president-Elect Biden wrote in Foreign Affairs in early 2020.³¹ “That means taking down trade barriers that penalize Americans and resisting a dangerous global slide toward protectionism.” Policymakers would be wise to heed that advice and work toward rebuilding the strong bonds that exist between the US and China, to the benefit of both economies and the world.



We need to be able to build the very best in the United States and sell the very best around the world. That means taking down trade barriers that penalize Americans and resisting a dangerous global slide toward protectionism.



President-elect Joe Biden

³¹ <https://www.foreignaffairs.com/articles/united-states/2020-01-23/why-america-must-lead-again>

APPENDIX: THE GLOBAL ECONOMIC MODEL AND THE GTAP MODEL

The Global Economic Model

The Global Economic Model (GEM) is a fully integrated macroeconomic model of the world economy developed by Oxford Economics, including 80 countries and several regional economic blocs. The model uses time series equations based on the error correction model (ECM) format, which captures long-term equilibrium relationships between variables, but also enhances short-term forecasting power through a dynamic section of each equation. In general, the model is Keynesian in the short run, but Monetarist in equilibrium. This means that short-term shocks to demand generate economic cycles, and these can be influenced by fiscal and monetary policy, but over the long-term, supply-side factors (such as the size of the labor force, the capital stock and productivity) determine the level of output.

The GTAP Model

The Global Trade Analysis Project (GTAP) model, which is produced by the Center for Global Trade Analysis in Purdue University's Department of Agricultural Economics, is made up of a global database (140 economies/regions and up to 57 sectors) describing bilateral trade patterns, production, consumption, and the intermediate use of commodities and services, as well as a multi-region, multi-sector computable general equilibrium (CGE) model.

Scenario modeling

The scenarios presented in this report were generated using both models. The effects of tariffs on trade flows and prices was first determined using the GTAP model, which is better suited to understanding the static (equilibrium) effects of changes in tariff barriers on trade flows and prices. The Oxford GEM in contrast is better suited at capturing how macroeconomic variables interact in a dynamic setting, including the feedback loops between the real economy, financial markets and policy. The final results reflect the interaction of the results from the GTAP model being inserted into the GEM (along with other shocks to financial market stress and total factor productivity) to produce time series results for the US, China, and the rest of the world economy.

Fig. 13: Trade war de-escalation: Detailed scenario assumptions

Assumption	Model calibration	Impact
Gradual reduction in tariff barriers.	7.5% reduction on \$112 bn worth of imports from China in the third quarter of 2021 followed by a further 12.5% reduction in tariffs on \$250 bn worth of imports from China in 2022 Q4.	Gradual increase in imports and exports in both US and China. Reduction in import prices and non-labor input costs.
Reduced investor uncertainty around US trade policy.	Private sector business investment and equity prices increase gradually over the course of 2022-2025	Increase in business investment and consumption. Higher investment increases capital stock and hence long term level of GDP.
US-China economic relations are put on a constructive footing and restrictions on technology sharing are eased.	0.4% increase in long term US TFP, calibrated off of increase in trade share in GDP. China assumed to be able to maintain 2.3% TFP growth.	Increased productivity leads to permanently higher economic output.

Fig. 14: Trade war escalation: Detailed scenario assumptions

Assumption	Model calibration	Impact
Short term		
Increase in tariff barriers.	45% tariff imposed on all imported goods from China, with full retaliation from China onto imported goods from the US.	Decline in trade flows (imports and exports) for US and China. Increase in import prices and input costs reduce real income and hence consumption.
Negative reaction in US and global financial markets.	15% peak to trough decline in US equity prices. 13% decline in global equity prices.	Reduced household wealth and shock to business and consumer confidence.
Near term US\$ appreciation as a result of global financial market volatility and increased risk off sentiment. Corresponding depreciation of the RMB.	The US dollar appreciates 3% on a trade weighted basis in 2021. RMB depreciates 6% in early 2021.	Reduction in US competitiveness, further weighing on exports in the near term.
Long term		
Gradual increase in non-tariff barriers and technological decoupling.	The long term importance of investment and technological interaction between China and North America falls by 75% compared to 2019, and by 40% between China and other developed countries in Europe and Asia.	Reduction in bilateral investment, global supply chain integration and technology sharing weighs on long term output as a result of weaker Total Factor Productivity.
Shock to Total Factor Productivity (TFP) in US and China as a result of reduced bi-lateral trade.	1% reduction in long term level of US TFP relative to baseline. 0.9 p.p. reduction in long term TFP growth in China.	Permanent reduction in long term level of US GDP. Permanently weaker long term growth in China.



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