



WORKING PAPER

Update: Across-the-Board Tariffs on China with Retaliation and Federal Spending Create Over 1 Million Jobs in Five Years

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Summary

Two months ago we published a [study](#) describing the results of our economic modeling of the effects of a permanent, across-the-board 25 percent tariff on all US imports from China. We found that after five years, the tariff would lead to an increase in US GDP of \$125 billion and the creation of an additional 721,000 US jobs. The tariff would stimulate the US economy through two channels: first, the relocation of US-bound production from China to other nations would lead to a reduction in the average cost of imports because many alternative production locations, such as those in Southeast Asia, today have lower costs of production than China; and secondly, because a portion of the production in China relocated to the US, would directly stimulate the US economy.

We now add several refinements to the model. Specifically, we introduce the effects of Chinese retaliation with tariffs on US exports to China; we add the effects of the US Department of Agriculture's (USDA) programs to support farmers and food processors negatively affected by Chinese retaliation; and, we add the impact of the US government spending the revenue generated by the China tariffs. We find that Chinese retaliation reduces the benefit to the US economy by 14 percent, but the net benefit remains large. The USDA programs provide relief to the agricultural industry and restore the net benefit to almost the same level as before the retaliation. Finally, we look at the impact of the government reinvesting the tariff revenue in the US economy by boosting government

spending. The tariff revenue totals \$547 billion over five years. If those funds are reinjected back into the economy each year, this additional stimulus to growth results in a \$167 billion boost to GDP and 1.05 million additional jobs in 2024.

The results of the Coalition for a Prosperous America (CPA) model show that tariffs will have a sustained, positive impact on the US economy, including jobs, output, and investment. Our results differ markedly from other economic modeling efforts regarding tariffs (see, for example, this [study](#)), which found negative impacts. The differences result primarily from different assumptions about how businesses and consumers react to tariffs. Other models reflect a pro-free-trade bias and assume that (a) no production returns to the US as a result of tariffs (b) prices of US imports always rise when imports move from China to third countries and (c) US consumers react very negatively to higher prices, leading to reduced sales and output in the US economy. A close study of the available empirical evidence shows these assumptions are unwarranted. Tariffs will always induce many effects in the US and global economy, some negative and some positive. A realistic, balanced view of these effects shows that tariffs imposed on a nation with whom the US has a huge bilateral trade deficit will, unsurprisingly, produce positive effects as the domestic US economy responds to the stimulus of demand redirected to home production.

Our May 15th study, [CPA Study Shows Across-the-Board China Tariff Would Boost US Economy, Create Thousands of Jobs](#), modeled the impact of a permanent across-the-board 25% tariff (PATB-25) on all Chinese imports to the US over five years (2020 to 2024) and found that the tariff boosted GDP over the baseline forecast each year, with the additional growth rising to \$125 billion in 2024. The tariff stimulus also boosted US employment, culminating in an additional 721,000 jobs in 2024. Our model consisted of two parts: a partial equilibrium model, which looked at how production in China for export to the US responded to the presence of a permanent across-the-board tariff, and a general-equilibrium model, based on the widely-used REMI economic model to explore the effects of production shifts on the US economy over a five-year forecast period.

We used independent data from Boston Consulting Group and others to estimate the cost impact of US-destined production shifting out of China. By 2024, some 42 percent of the 2018 level of Chinese imports to the US, \$228 billion, will have migrated to third countries. On average, these third countries have lower production costs than China. Chinese cost inflation in recent years has already led many manufacturing companies to start shifting production out of China. The section 301 tariffs applied by the Trump administration since 2018 have sped up this process. Permanent, across-the-board tariffs would speed up the process still further. The result is that, in our model, in 2024, the average trade-weighted cost of US imports falls by 4.6 percent below the baseline (i.e. non-tariff) forecast. A small, steadily growing portion of US-destined China production also leaves China to relocate in the US. In 2024, this reaches a total of \$69 billion worth of production, equivalent to 13 percent of the 2018 level of US imports from China.

The cumulative effect of those production moves is to stimulate growth in the US economy. It's worth noting that inflation is barely higher (no more than 0.02 percent in any one year) because the inflationary effects of the tariff are offset by the cost reductions in imports that move out of China. The stimulus effect is felt most strongly in manufacturing, because manufactured goods account for the bulk of present US imports from China. Manufacturing jobs rise by 192,000, or 27

percent of the total additional jobs created by the PATB-25 tariff.

Another benefit of the move of billions of dollars of US-bound production to third countries is that, in future years, those US imports are more likely to lead to increased US exports than if such production had stayed in China. China exerts tight control over its manufacturing sector (seeking self-sufficiency in many sectors), and limits its imports from the US or other advanced nations. Many of the smaller nations who would become larger exporters to the US under a permanent China tariff system would be expected to use that export revenue to allow their domestic consumption to rise, and to purchase more US industrial goods.

China's Retaliation

Earlier this year, China announced the imposition of retaliatory tariffs on an additional \$60 billion dollars of Chinese imports from the US, taking effect June 1, 2019. We expanded on our previous analysis to apply these 25% retaliatory Chinese tariffs to US exports to China. Total US exports fall, with a negative impact on the US economy. However, the impact is much smaller than the positive impact of the US tariffs on over \$500 billion of US imports from China. Including both the US PATB-25 tariffs and Chinese retaliation, US GDP in 2024 is \$108 billion higher than in the baseline forecast. (See Table 1 below) In other words, Chinese retaliation reduces the positive impact of the US tariff by \$17 billion or - 13.6% in 2024.

On May 23rd, 2019, the US Secretary of Agriculture Sonny Perdue announced a US Department of Agriculture (USDA) support program for farmers suffering financial injury due to Chinese retaliatory tariffs. There are two components to the aid program:

1. Food Purchase and Distribution Program (FPDP) consisting of \$1.4 billion through the Agricultural Marketing Service (AMS) to purchase surplus commodities affected by trade retaliation such and fruits, vegetables, some processed foods, beef, pork, lamb, poultry, and milk for distribution to food banks, schools, and other outlets serving low-income individuals.

2. Market Facilitation Program (MFP) authorized under the Commodity Credit Corporation (CCC) Charter Act and administered by the Farm Service Agency (FSA) will provide \$14.5 billion in direct payments to agricultural producers. Payment will be made in up to three tranches, with the second and third tranches evaluated as market conditions and trade opportunities dictate. The first tranche will begin in late July/August 2019 as soon as practical after FSA crop reporting is completed by July 15th. If conditions warrant, the second and third tranches will be made in November 2019 and early January 2020.

When we add these agricultural support programs into the model, the additional government spending fully offsets the negative impact of the Chinese retaliation on US GDP. Table 1 shows that 2024 GDP is now \$125 billion above the baseline forecast. Note that this macroeconomic forecast does not address the microeconomic effects of the retaliation. In other words, the incomes of many individual food processing companies or farmers may not be fully impacted by the USDA support programs.

Table 1 shows the effects on GDP in each of the scenarios. All figures are in constant (inflation-adjusted) 2019 dollars.

Table 1 – GDP Forecasts, Five Scenarios (Billions of 2019 Dollars)							
	2019	2020	2021	2022	2023	2024	Delta to Baseline 2024
Scenario 1: Baseline Forecast	\$21,621	\$22,304	\$22,980	\$23,673	\$24,384	\$25,115	N/A
Scenario 2: PATB-25 Tariff on US Imports from China	\$21,621	\$22,305	\$22,984	\$23,703	\$24,456	\$25,240	\$125
Scenario 3: PATB-25 tariff, with Chinese retaliation	\$21,621	\$22,288	\$22,967	\$23,686	\$24,439	\$25,223	\$108
Scenario 4: PATB-25 tariff, Chinese retaliation, USDA \$16B agriculture support	\$21,621	\$22,317	\$22,993	\$23,710	\$24,460	\$25,242	\$126
Scenario 5: PATB-25 tariff, Chinese retaliation, USDA \$16B support, Federal infrastructure spending	\$21,621	\$22,491	\$23,139	\$23,832	\$24,545	\$25,282	\$167

China Production Moves to US & 3rd Countries

Table 2 shows the effect of the tariff on US-bound China production. A small but growing share of US imports move out of China to be produced in other countries. In 2024, \$227.9 billion of US imports have moved from China to other countries. In 2024, \$69.5 billion of China-based production for the US market returns to the US. We view the shift to the US market as a conservative forecast, based on current indications from the market. Even though the current 25% tariff on US imports from China applies to only half of total imports and is widely viewed as temporary, there has nevertheless been a significant trend to re-shore production.

Large companies that have announced re-shoring plans include Stanley Black & Decker, Restoration Hardware, and Williams-Sonoma.

On July 10th, the CEO of Li & Fung, the world's largest supplier of consumer goods, whose customers include Walmart, Kohl's, and Nike, [told Bloomberg News](#) that factories in China are shutting down and cutting prices as US companies seek production sites elsewhere. The effects of a permanent across-the-board tariff would be still more powerful because, instead of today's uncertainty, businesses would know for

sure that imports from China would attract a tariff for years to come.

Table 2 – U.S. Imports from China (Billions of 2019 Dollars)							
	2018	2019	2020	2021	2022	2023	2024
Scenario 1: Baseline Forecast	\$539.5	\$489.3	\$508.2	\$525.6	\$546.4	\$569.0	\$589.5
Scenario 4 Forecast (PATB-25 tariff, China retaliation, USDA support programs)	\$539.5	\$489.3	\$504.9	\$509.7	\$474.8	\$404.2	\$296.6
Production Leaving China to Non -US Countries			\$2.4	\$13.3	\$56.5	\$128.2	\$227.9
Production Returning to US			\$0.88	\$2.7	\$16.3	\$39.3	\$69.5

With a permanent tariff, federal tariff revenue would become larger and more predictable. Table 3 shows the annual tariff revenue linked only to China imports over the forecast period. (In contrast, total US tariff revenue before 2017 was about \$40 billion a year and based on early 2019 data could total around \$75 billion this year.) Tariff revenue is borne by both sellers and purchasers of the tariffed goods, depending on

the specific elasticities of supply and demand and the competitive dynamics in each market. Since a portion of the revenue is borne either by US business or US consumers, tariffs exert a negative or contractionary impact on the economy.

Table 3 – US Tariff Revenue from US Imports from China (Billions of 2019 Dollars)						
	2020	2021	2022	2023	2024	Cumulative 2020-2024
US Imports from China (Sc. 4)	\$504.9	\$509.7	\$474.8	\$404.2	\$296.6	\$2190.2
Tariff Revenue	\$126.2	\$127.4	\$118.7	\$101.1	\$74.2	\$547.6

It therefore makes sense for the government to spend this revenue in the economy, to offset the purchasing power that has been lost. Our final scenario, Scenario 5, shows the impact on the economy of the government spending all China tariff revenue, a total of \$547.6 billion, over the years 2020-2024. This could be achieved through a tax cut or additional government spending. In our model, we looked at the impact of additional spending. There has been much talk about a federally funded infrastructure program, with a total cost of \$1 trillion often mentioned. As Table 3 shows, the total of the PATB-25 China tariff revenue adjusted for Chinese retaliatory tariffs and the USDA aid program cumulatively over five years could fund over half of this infrastructure program.

Unsurprisingly, half a trillion dollars of additional government spending further boosts the economy. Table 1 shows that in this case (Scenario 5) the additional benefit to GDP over baseline rises to \$167 billion. Table 4 shows the baseline forecast for US employment, which rises steadily with population growth. Subsequent rows in the table show the additional jobs created by the policy actions in Scenarios 2 through 5. In Scenario 5, \$547 billion in infrastructure spending raises the additional employment benefit to 1.05 million jobs over and above the baseline. The model does not include the indirect benefits of an infrastructure program (such as reduced travel times due to improved roads, bridges, and airports), which are likely to be large and extend over a long period of time into the future.

Table 4 – Employment (Thousands of Employees)						
	2019	2020	2021	2022	2023	2024
Scenario 1: Baseline Forecast	156,208	156,801	157,477	158,147	158,820	159,738
Scenario 2: PATB-25 Tariff on US Imports from China (Delta from Baseline)	0	3	24	183	430	721
Scenario 3: PATB-25 tariff, with Chinese retaliation (Delta from Baseline)	0	-92	-63	96	347	642
Scenario 4: PATB-25 tariff, Chinese retaliation, USDA \$16B agriculture support (Delta from Baseline)	0	125	128	272	500	774
Scenario 5: PATB-25 tariff, Chinese retaliation, USDA \$16B support, Federal infrastructure spending (Delta from Baseline)	0	1325	1110	1083	1062	1048

CONCLUSION

A permanent, across-the-board tariff of 25% on all US imports from China would deliver significant, immediate benefits to the US economy through a) the price effects of US-bound production moving out of China and b) the income and employment effects of a portion of that production re-shoring to the US. Retaliation by China against US exports to China reduces the benefits, but only modestly. The federal program to support the agricultural community has the effect of offsetting the macroeconomic impact of China's retaliation, which is primarily aimed at US agriculture. Finally, a program to spend all tariff revenue linked to US imports from China provides an additional boost to the economy. The job creation forecast by our model varies between 642,000 and 1.05 million additional jobs.

Our forecast results differ from many others because ours incorporate more real-world

evidence than other forecasts, which tend to rely excessively on unrealistic assumptions based on neoclassical economics. For example, forecasters who have found that tariffs depress US GDP often assume that all or most of the tariff price is passed onto consumers, and that spending on these goods falls substantially as a result of price increases. These assumptions are unwarranted, noting the evidence from the tariffs of 2018-2019, where we have seen minimal price increases from Section 201 and China tariffs. Equally important, trade models are designed with a bias towards "free trade," i.e. they exclude the growth in domestic output and employment caused by trade actions such as tariffs. Our model has been modified to capture these effects and thus provide a more balanced view of the effects of actions to manage foreign trade.