The Impact of China Tariffs on the US Economy

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China Strategy is a Threat to US Prosperity

- IP Theft
 - Cost estimate: \$250 billion per yr (Gen. Alexander)
- Lost US jobs
 - 2-3 million lost mfg jobs due to China (David Autor)
- Lost US industries
 - 60,000 mfg establishments closed (Census)
- Bilateral deficit
 - \$420B in 2018 (Census)
- Made in China 2025 threatens US high-tech future
 - China targeting self-sufficiency in chips, alternative energy, robotics, etc.

Modeling Tariffs

- CPA models permanent, across-the-board 25% tariffs on all China imports (\$540B)
- Methodology
 - 1. Partial equilibrium model of manufacturing moves
 - General equilibrium model of US economy using REMI

Manufacturing Production Leaves China

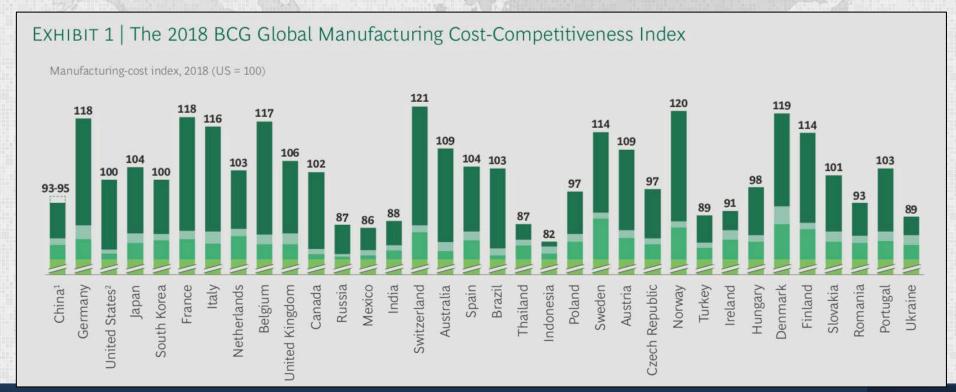
- Permanent 25% tariff spurs MNCs to move production out of China
- Destinations determined by existing production base & cost differential
- We add in a 50% surcharge to reflect one-time cost of moving production
- Partial-equilibrium model estimates production departure for top 10 import categories

Manufacturing Moves Over 5 Years

Product Category	hina nports 2018	Percent of 2018 total	Share of prod to 3 rd countries	Share of prod to US
Cell phones and other household goods, n.e.c.	\$ 71,815,059,013.00	13.3%	50%	5%
Computers	\$ 47,323,192,856.00	8.8%	70%	5%
Telecommunications equipment	\$ 33,948,224,547.00	6.3%	60%	10%
Computer accessories	\$ 32,562,931,036.00	6.0%	70%	5%
Toys, games, and sporting goods	\$ 28,225,390,806.00	5.2%	60%	20%
Apparel, textiles, nonwool or cotton	\$ 25,160,790,953.00	4.7%	40%	20%
Furniture, household goods, etc.	\$ 22,700,483,965.00	4.2%	50%	15%
Other parts and accessories of vehicles	\$ 16,377,153,737.00	3.0%	50%	10%
Apparel, household goods - cotton	\$ 12,405,586,600.00	2.3%	40%	20%
Footwear	\$ 11,435,575,244.00	2.1%	80%	5%

Manufacturing Cost Comparison

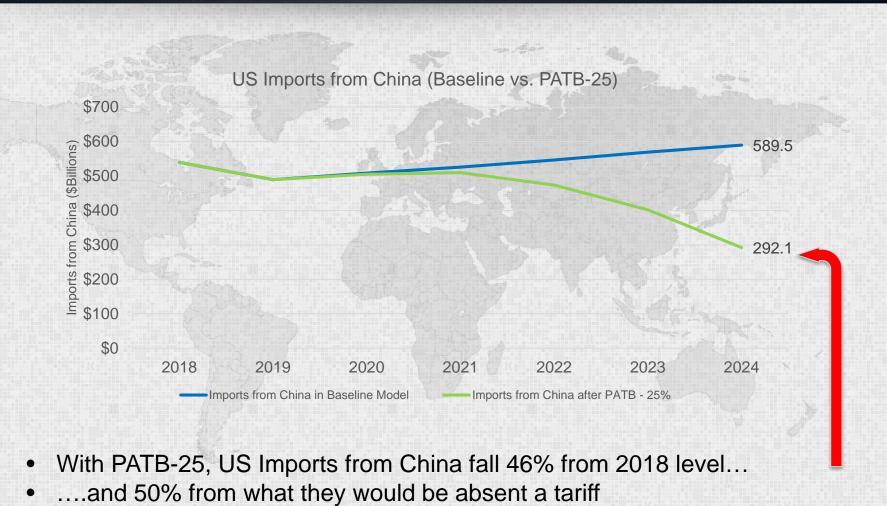
- Chinese manufacturing costs have risen dramatically in last 10 years
- Example: China mfg worker \$800/mo. Vietnam: \$400/mo.
- Cheaper countries than China:
 - Mexico, Thailand, Malaysia, Turkey, Russia, India,



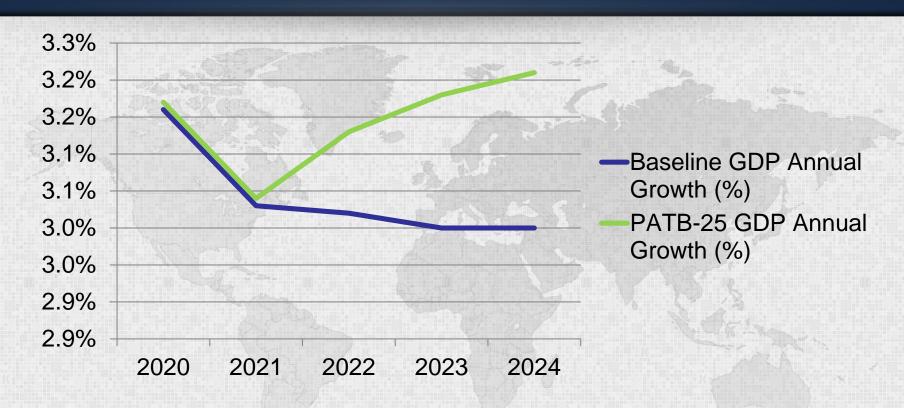
Companies Are Already Leaving China Public Announcements/Completions

Companies Movi 3 rd Countries	ng Production to	Companies Moving Production USA					
Foxconn	Electronics	Stanley Tools	Tools				
Pegatron	Electronics	Caterpillar	Construction equipment				
Ikea	Furniture	Whirlpool	Appliances				
Sea Eagle	Boats	Williams-Sonoma	Furniture, kitchenware				
GoPro	Cameras	Restoration Hardware	Furniture				
Cisco	Networking						
Williams-Sonoma	Furniture, kitchenware						
Apple	Computers & smartphones						

Permanent Tariff Cuts China Imports in Half

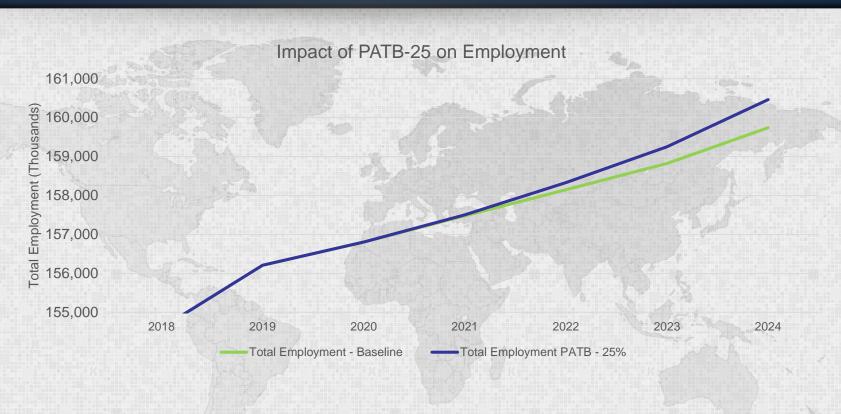


Tariffs Add \$125B to GDP in 2024



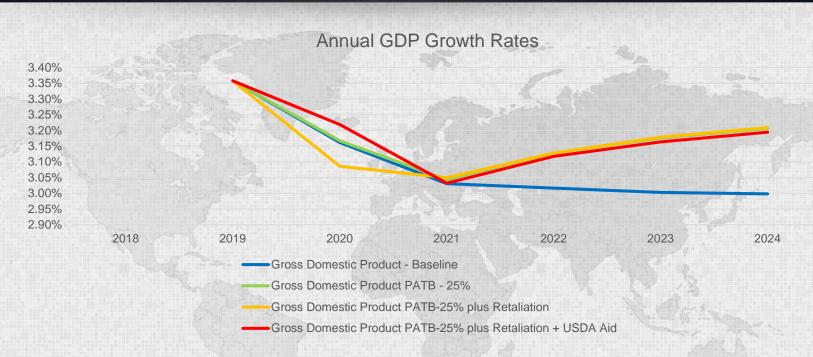
- With PATB-25 tariffs: GDP growth 0.11% pa larger (3.15% vs. 3.04%)
- Growth driven by returning US production & lower import prices
- In 2024, GDP is \$125B larger (0.5%)
- Equivalent to \$379 for each American

Impact of PATB-25 on Employment



- Baseline adds 3.53 million jobs 2019-2024
- PATB-25 adds 4.25 million jobs 2019-2024
- Gain=721,000 additional jobs

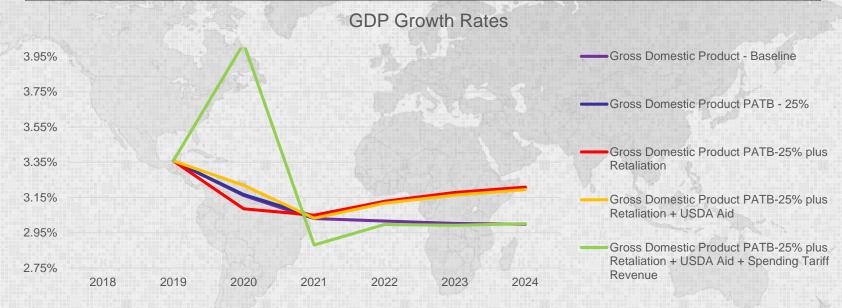
Chinese Retaliation Reduces GDP, Jobs Benefit USDA Program Provides Partial Offset



- Chinese retaliation on \$60 billion of US exports reduces benefit to US economy
- With retaliation, avg. GDP growth rate is 3.13%, net jobs benefit in 2024 is 642,000
- USDA program spends \$16 billion/year on commodity purchase & direct aid to farmers
- With retaliation + USDA program, GDP growth rate is 3.15%, net jobs benefit 774,000
- Economy benefits from tariff and retaliation, but some farmers still suffer from reduced market

Spending the Tariff Revenue Tariff + Infrastructure Creates 1.05M Jobs

Tariff Revenue from Tariffs on Chinese Imports Available for Government Spending							
2020 2021 2022 2023 2024 5							
US imports from China subject to tariff	\$505.0B	\$509.6B	\$473.7B	\$401.6B	\$292.1B		
Available tariff revenue \$110.3B \$111.5B \$102.8B \$85.2B \$58.2B							



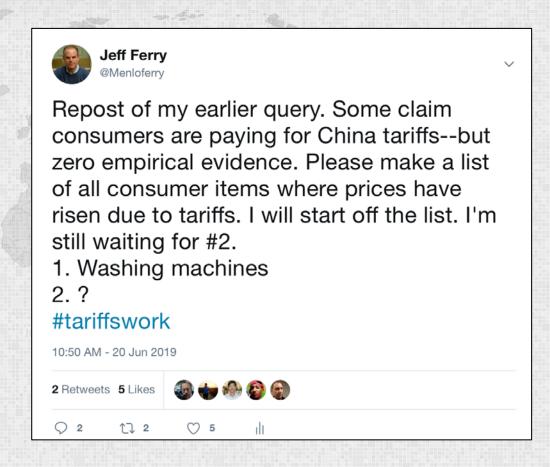
- Government can re-invest tariff revenue in US economy
- For example: \$468 billion 5-year infrastructure program
- Additional 0.1% boost to GDP
- Additional jobs over baseline: 1.05 million

Conclusion

- 1. Permanent across-the-board tariffs @ 25% stimulate the US economy
- 2. Create between 600K and 1.05M new jobs
- 3. China-specific tariffs reduce US dependence on China
- 4. Tariffs bring manufacturing production back to the US
- 5. Tariffs raise inflation by <0.1% per year
- 6. Retaliation hurts some farmers & must be addressed
- 7. Tariff revenue presents opportunity for value-creating government spending such as a 5-yr infrastructure program

One Final Point Tariffs & Prices

- Many claim China tariffs leading to increased consumer prices
- ...but <u>NO</u> examples
- Academic studies use complex regression analysis & unpublished data
- BLS data shows prices of tariffed items (furniture, bicycles) continue at ~2% rate of inflation
- Goods prices continue to rise slower than services
- I posted this on Twitter 6 weeks ago—still awaiting item no. 2



Thank You

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REMI General Equilibrium Model Baseline Forecast (CEA 2019)

Table 18 18 19		Trumpono	mics Baseli	ne (BLS an	d Current)			24	16
	Units	2018	2019	2020	2021	2022	2023	2024	5-Yr Avg
Total	KAR I	100	A	, K					
Employment	Thousands (Jobs)	154595.5	156207.6	156801.1	157477	158147.4	158820	159738.2	
	YOY % Growth		1.04%	0.38%	0.43%	0.43%	0.43%	0.58%	
Population	Thousands	327775.4	330200.3	332512.2	334807.1	337105.4	339423.2	341757	
Labor Force	Thousands	158246.2	159426.9	160856.7	162225.7	163380.7	164599.1	165707.6	
Gross Domestic	D.II	20018 12	21620.55	22204.00	22000 02	22672.2	24294	25115.05	R
Product	Billions of Dollars	20918.12	21620.55	22304.09	22980.03	23673.2	24384	25115.05	2.0.40/
	YOY % Growth		3.36%	3.16%	3.03%	3.02%	3.00%	3.00%	3.04%
Output	Billions of Dollars	30135.94	31159.38	32145.21	33115.5	34100.12	35105.58	36137.2	
Value-Added	Billions of Dollars	17746.93	18342.88	18922.79	19496.26	20084.34	20687.38	21307.61	
Personal Income	Billions of Dollars	17335.33	18368.71	19582.95	20842.08	22145.01	23331.52	24540.57	
Disposable Personal	1997		и		10		R		×
Income	Billions of Dollars	15190.44	16100.26	17166.83	18298.11	19438.55	20443.7	21463.04	
PCE-Price	HITTIN							13	100
Index	2009=100 (Nation)	115.022	117.385	120.06	122.819	125.594	128.392	131.172	
	YOY % Growth		2.05%	2.28%	2.30%	2.26%	2.23%	2.17%	2.25%

Forecast Production out of China

Mapping Production from China to Other Countries and US 2020-2024									
	2020	2021	2022	2023	2024				
Production That left China to other countries not including US	\$2.4B	\$13.3B	\$56.5B	\$128.2B	\$227.9B				
Percent of Production that left China to other Countries not including US	72.8%	83.0%	77.6%	76.5%	76.6%				
Production that left China to the US	\$0.9B	\$2.7B	\$16.3B	\$39.3B	\$69.5B				
Percent Production that left China to the US	0.2%	0.5%	3.4%	9.8%	23.8%				
Total Production that Left China	\$3.2B	\$16.0B	\$72.7B	\$167.4B	\$297.4B				
Percent Total Production that left China	1%	3%	13%	29%	50%				
Net Imports to US from China (after taking into account Migration out of China	\$505.0B	\$509.6B	\$473.7B	\$401.6B	\$292.1B				
Percent of Production still coming from China	99.4%	97.0%	86.7%	70.6%	49.6%				
Percent of Production Coming from Other Places than China including the US.		3.0%	13.3%	29.4%	50.4%				

Forecast (PATB-25)

74527 764 Blooms 510	PATB – 25% (BLS and Current)											
Category	Units	2018	2019	2020	2021	2022	2023	2024	5-Yr Avg			
Total Employment	Thousands (Jobs)	154595.5	156207.6	156804.1	157501.0	158330.1	159249.6	160459.2	7			
	YOY % Growth		1.04%	0.38%	0.44%	0.53%	0.58%	0.76%				
Population	Thousands	327775.4	330200.3	332512.2	334807.1	337105.4	339423.2	341757.0				
Labor Force	Thousands	158246.2	159426.9	160856.7	162225.7	163380.7	164599.1	165707.6				
Gross Domestic Product	Billions of Dollars	20918.1	21620.6	22305.3	22984.2	23703.1	24455.9	25240.1				
	YOY % Growth		3.36%	3.17%	3.04%	3.13%	3.18%	3.21%				
Output	Billions of Dollars	30135.9	31159.4	32145.2	33115.5	34100.1	35105.6	36137.2				
Value-Added	Billions of Dollars	17746.9	18342.9	18922.8	19496.3	20084.3	20687.4	21307.6				
Personal Income	Billions of Dollars	17335.3	18368.7	19583.0	20842.1	22145.0	23331.5	24540.6				
Disposable Personal Income	Billions of Dollars	15190.4	16100.3	17166.8	18298.1	19438.5	20443.7	21463.0				
PCE-Price Index	2009=100 (Nation)	115.0	117.4	120.1	122.8	125.6	128.4	131.2				
	YOY % Growth	Z K	2.05%	2.28%	2.30%	2.26%	2.23%	2.17%				

- With PTAB 25% by 2024:
 - Employment is up an additional 721K
 - Economy is \$125B larger

(PATB-25) + Chinese Retaliation on \$60B US Exports

	Retaliation (BLS and Current)									
Category	Units	2018	2019	2020	2021	2022	2023	2024		
Total Employment	Thousands (Jobs)	154595.5	156207.6	156709.3	157414.3	158243.9	159166.9	160380.1		
the Company of the Co	YOY % Growth		1.04%	0.32%	0.45%	0.53%	0.58%	0.76%		
Population	Thousands	327775.4	330200.3	332512.2	334807.1	337105.4	339423.2	341757.0		
Labor Force	Thousands	158246.2	159426.9	160856.7	162225.7	163380.7	164599.1	165707.6		
Gross Domestic Product	Billions of Dollars	20918.1	21620.6	22287.8	22967.4	23685.9	24438.8	25223.1		
	YOY % Growth		3.36%	3.09%	3.05%	3.13%	3.18%	3.21%		
Output	Billions of Dollars	30135.9	31159.4	32145.2	33115.5	34100.1	35105.6	36137.2		
Value-Added	Billions of Dollars	17746.9	18342.9	18922.8	19496.3	20084.3	20687.4	21307.6		
Personal Income	Billions of Dollars	17335.3	18368.7	19583.0	20842.1	22145.0	23331.5	24540.6		
Disposable Personal Income	Billions of Dollars	15190.4	16100.3	17166.8	18298.1	19438.5	20443.7	21463.0		
PCE-Price Index	2009=100 (Nation)	115.0	117.4	120.1	122.8	125.6	128.4	131.2		
	YOY % Growth		2.05%	2.28%	2.30%	2.26%	2.23%	2.17%		

- With Retaliation by 2024:
 - Employment drops by 79K, but is still up an additional 642K Over Baseline
 - Economy contracts by \$17B but is still up \$108B over Baseline

(PATB-25) + Chinese Retaliation on \$60B US Exports + USDA Aid to Ag Sector

	Retaliation	(BLS and C	Current) + US	AID to Ag S	Sector	Jan.		
Category	Units	2018	2019	2020	2021	2022	2023	2024
Total Employment	Thousands (Jobs)	154595.5	156207.6	156925.7	157605.2	158419.3	159320.3	160512.1
Ly Commander 200	YOY % Growth		1.04%	0.46%	0.43%	0.52%	0.57%	0.75%
Population	Thousands	327775.4	330200.3	332512.2	334807.1	337105.4	339423.2	341757.0
Labor Force	Thousands	158246.2	159426.9	160856.7	162225.7	163380.7	164599.1	165707.6
Gross Domestic Product	Billions of Dollars	20918.1	21620.6	22316.5	22993.2	23710.0	24460.1	25241.5
	YOY % Growth	y-2	3.36%	3.22%	3.03%	3.12%	3.16%	3.19%
Output	Billions of Dollars	30135.9	31159.4	32145.2	33115.5	34100.1	35105.6	36137.2
Value-Added	Billions of Dollars	17746.9	18342.9	18922.8	19496.3	20084.3	20687.4	21307.6
Personal Income	Billions of Dollars	17335.3	18368.7	19583.0	20842.1	22145.0	23331.5	24540.6
Disposable Personal Income	Billions of Dollars	15190.4	16100.3	17166.8	18298.1	19438.5	20443.7	21463.0
PCE-Price Index	2009=100 (Nation)	115.0	117.4	120.1	122.8	125.6	128.4	131.2
	YOY % Growth		2.05%	2.28%	2.30%	2.26%	2.23%	2.17%

- With Retaliation by 2024:
 - Employment rebounds by 131.9K, up an additional 774K Over Baseline
 - Economy is larger by \$18.4B, up \$126.5B over Baseline

Revenue Generated from Tariffs

Tariff Revenue from Tariffs on Chinese Imports Available for Government Spending									
	2020	2021	2022	2023	2024				
Imports Output Baseline (Less Production that Left China)	126.2	127.4	118.4	100.4	73.0				
Imports, 25% tariff on Chinese Imports to the US (Less Production that left China	126.2	127.4	118.5	100.6	73.3				
Imports, 25% tariff on Chinese Imports to the US with Production Returning to US (less Production that left China)	126.2	127.4	118.7	101.1	74.2				
Imports 25% Tariff on \$60B (Less Producion that let China)	126.0	127.3	118.5	100.9	74.0				
Imports25% Tariff on \$60B with \$1.4B Gov't Farm Purchases (Less Production that left China)	124.7	125.9	117.1	99.5	72.6				
Imports25% Tariff on \$60B with \$1.4B Gov't Farm Purchases + \$14.5 B Transfer Payments	110.3	111.5	102.8	85.2	58.2				

We simulate the effects of the net tariff revenue available for the Government to Spend (see in yellow). The results are on the next slide

(PATB-25) + Chinese Retaliation on \$60B US Exports + USDA Aid to Ag Sector + Increase in Gov't Spending Using Tariff Revenue

	Retaliation	(BLS and C	Current) + US	AID to Ag S	Sector	Jan.		
Category	Units	2018	2019	2020	2021	2022	2023	2024
Total Employment	Thousands (Jobs)	154595.5	156207.6	158126.0	158586.6	159230.5	159881.8	160786.0
The second second	YOY % Growth		1.04%	1.23%	0.29%	0.41%	0.41%	0.57%
Population	Thousands	327775.4	330200.3	332512.2	334807.1	337105.4	339423.2	341757.0
Labor Force	Thousands	158246.2	159426.9	160856.7	162225.7	163380.7	164599.1	165707.6
Gross Domestic Product	Billions of Dollars	20918.1	21620.6	22490.9	23138.8	23832.2	24545.3	25282.0
	YOY % Growth		3.36%	4.03%	2.88%	3.00%	2.99%	3.00%
Output	Billions of Dollars	30135.9	31159.4	32145.2	33115.5	34100.1	35105.6	36137.2
Value-Added	Billions of Dollars	17746.9	18342.9	18922.8	19496.3	20084.3	20687.4	21307.6
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Disposable Personal Income	Billions of Dollars	15190.4	16100.3	17166.8	18298.1	19438.5	20443.7	21463.0
PCE-Price Index	2009=100 (Nation)	115.0	117.4	120.1	122.8	125.6	128.4	131.2
	YOY % Growth		2.05%	2.28%	2.30%	2.26%	2.23%	2.17%

- With Retaliation by 2024:
 - Employment rebounds by 274K, up an additional 1,048K Over Baseline
 - Economy is larger by \$40.5B, up \$166.9B over Baseline