



Global Trade Analysis Project

US – China trade war: impact assessment

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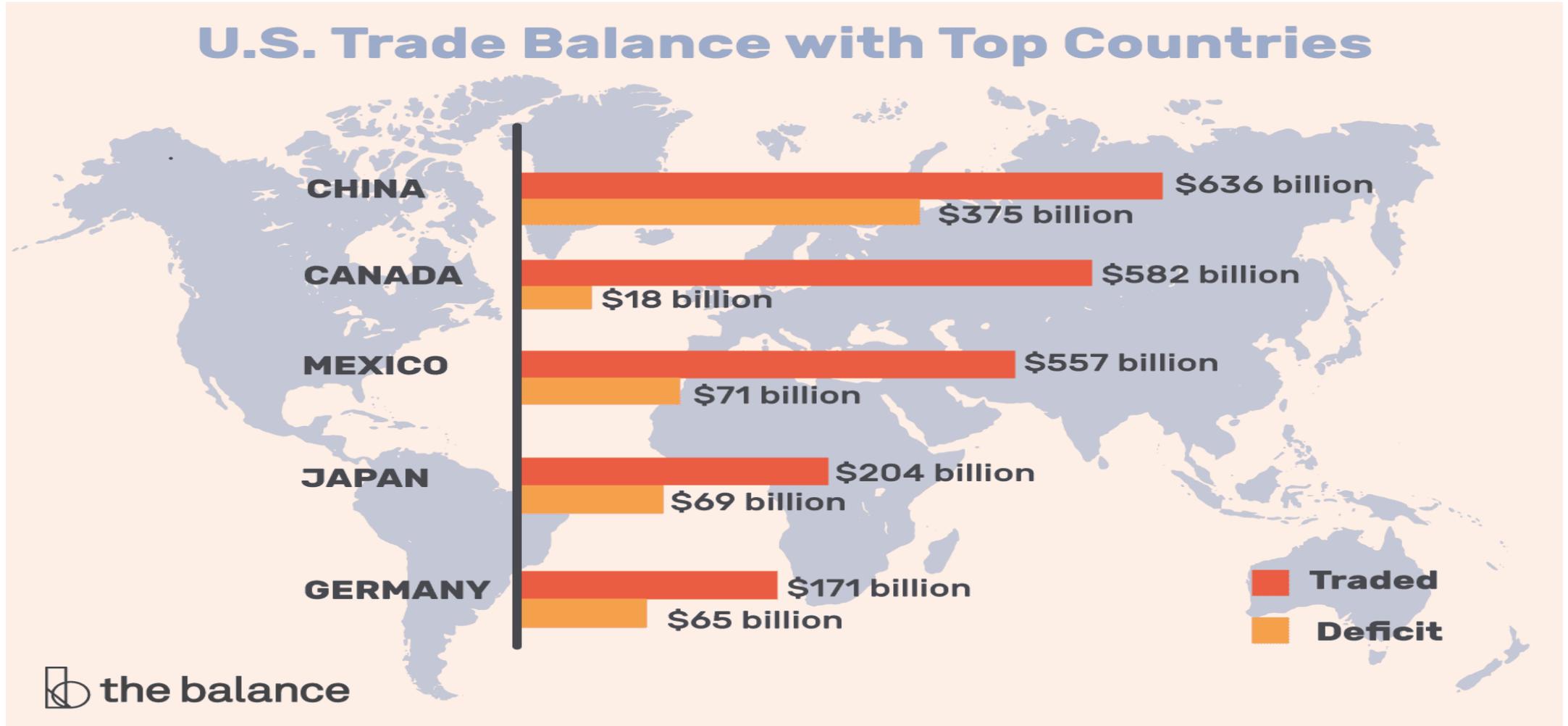
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We are assessing the impact of the current trade dispute between the US and China



Summary

- **Scenario 1: small effects on welfare; positive for the US and negative for China** → “war of words”
- **Scenario 2: effects on welfare are negative for both China and the US** → “trade skirmish”
- **Scenario 3: effects on welfare are positive for the US and negative for China** → “escalation of trade tensions”
- **Scenario 4: effects on welfare are negative for both the US and China** → “increasing signs of a trade war”.

Agenda

Introduction to the US-China trade war

Scenario 1 – US tariffs on Chinese steel and aluminum imports (Section 232)

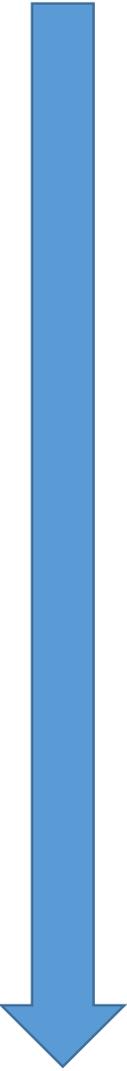
Scenario 2 – Chinese retaliatory tariffs on selected US agriculture products (Section 232)

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Impact summary

Chronology of US-China trade dispute in 2018

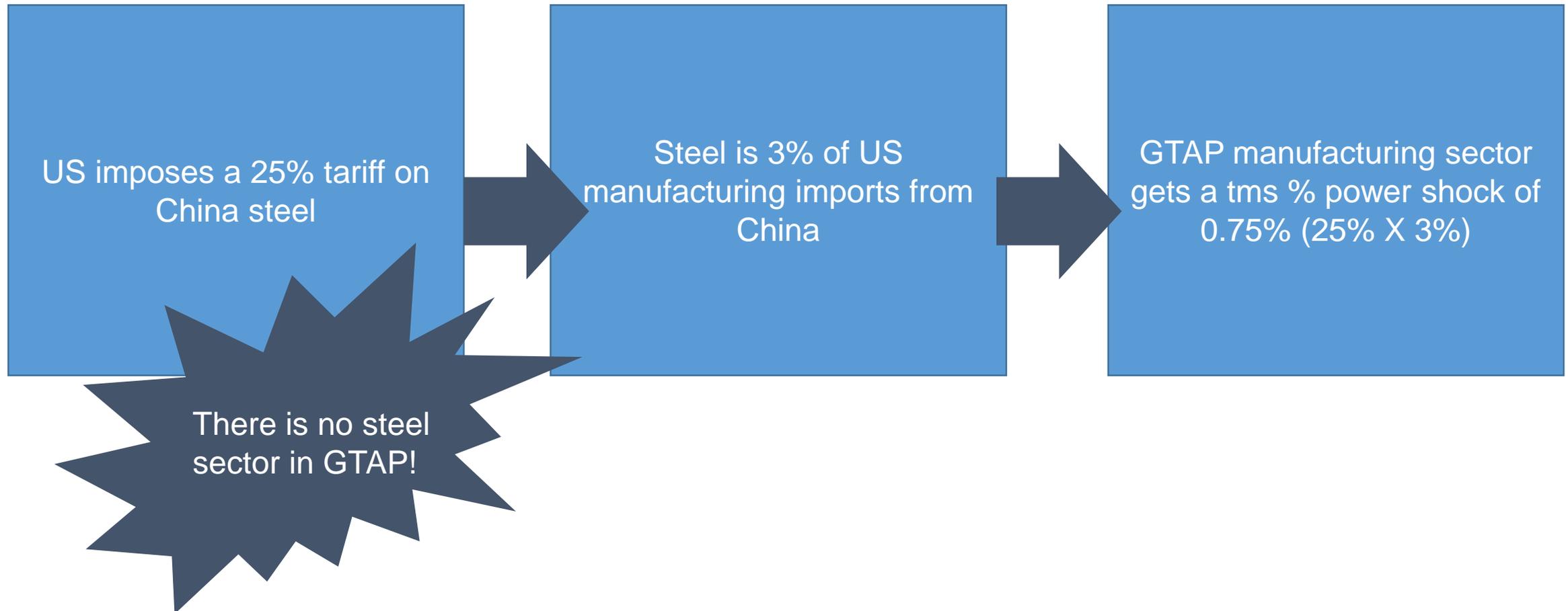
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- *January:* US placed tariffs on Chinese solar panels and washing machines' imports (excluded from this analysis)
 - *March:* US placed tariffs on the imports of steel (25%) and aluminum (10%)
 - *June:* China responded by imposing tariffs on US exports worth of **US\$ 3 billion**
 - *June:* US placed tariffs on US imports worth of **US\$ 34 billion**
 - *July:* China retaliated imposing tariffs of **US\$ 34 billion** worth of US goods

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We have used trade-weighted average tariff equivalents to estimate the additional tariff rate (tms) on selected GTAP commodities

Illustrative example



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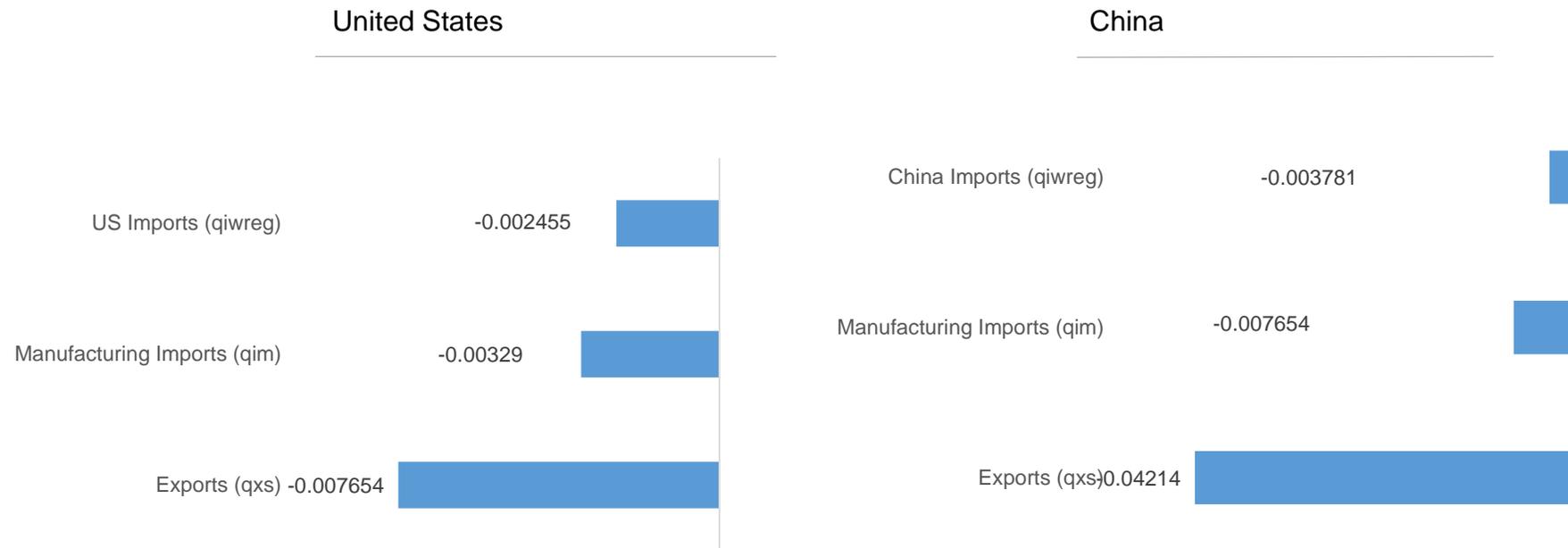
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Bilateral trade deteriorates: Chinese manufacturing exports decrease by 0.042%

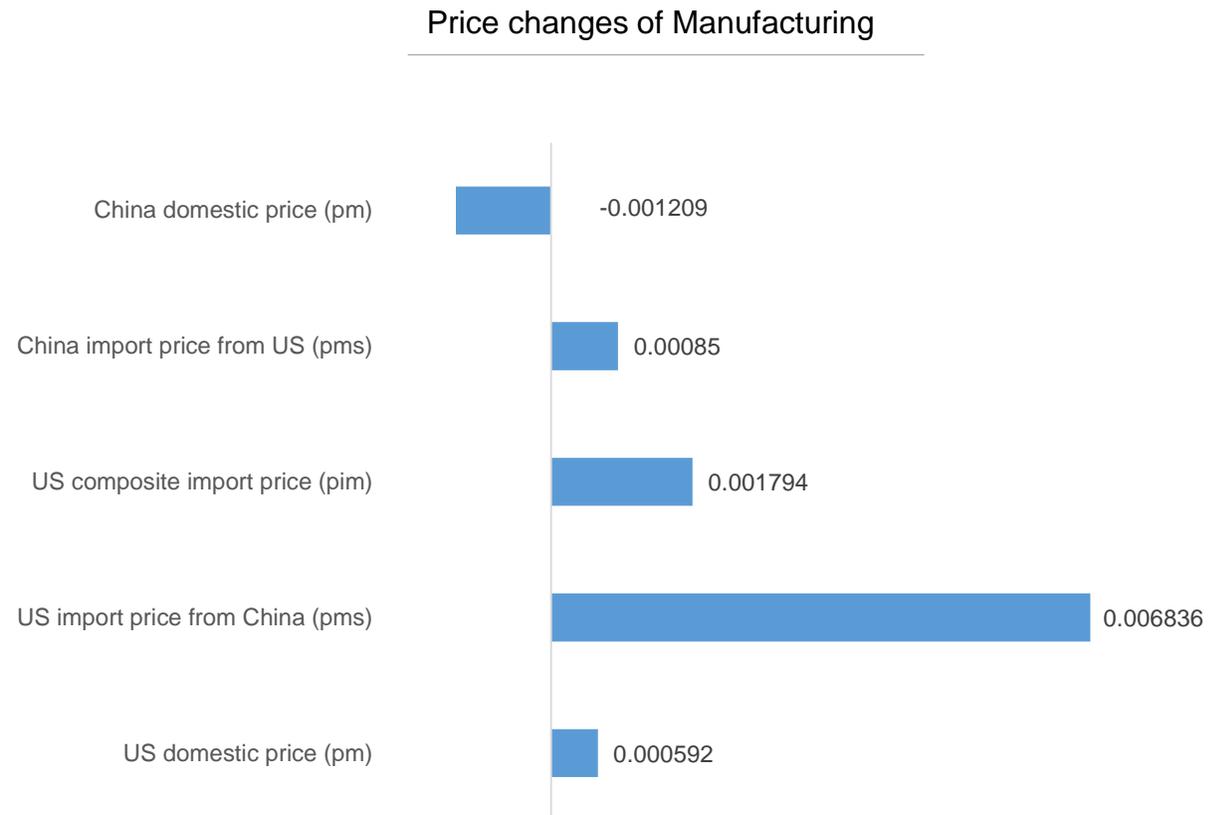
US manufacturing imports decrease by 0.003% change relative to baseline



- US Manufacturing output increases are governed by domestic demand
- Chinese Manufacturing output is used as intermediate inputs in China

US import prices from China increase by 0.006%

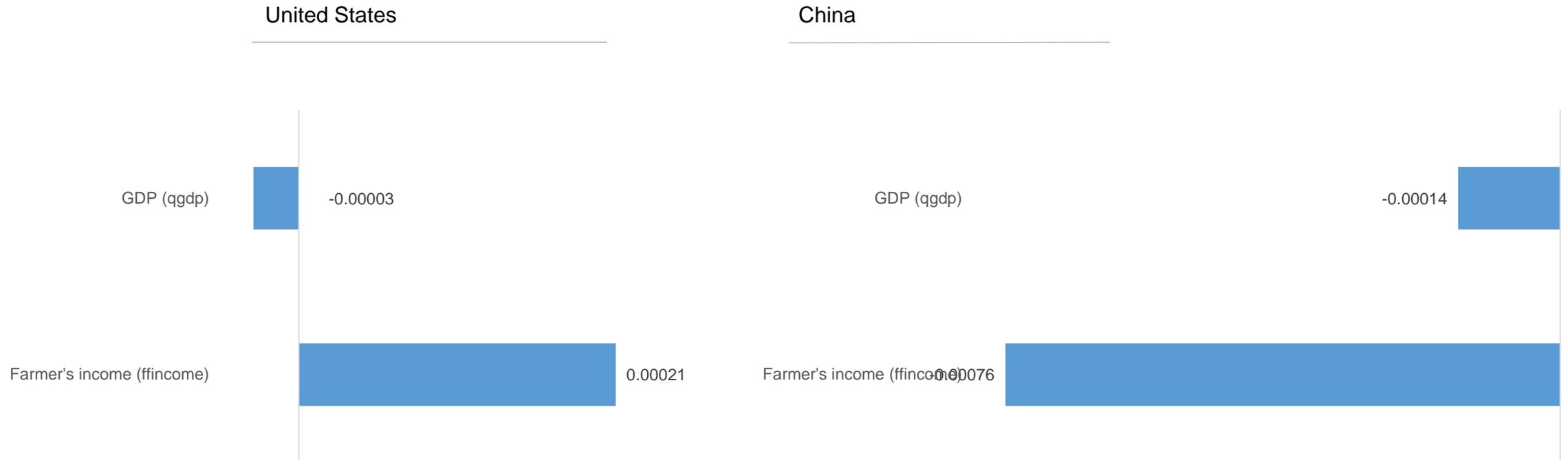
Impact on prices, % change relative to baseline



- Shock: US increase tariffs by 0.007% on MFG imports from China
- US manufacturing imports price from China increase more than average imports price

For both countries, there are negative effects on GDP...

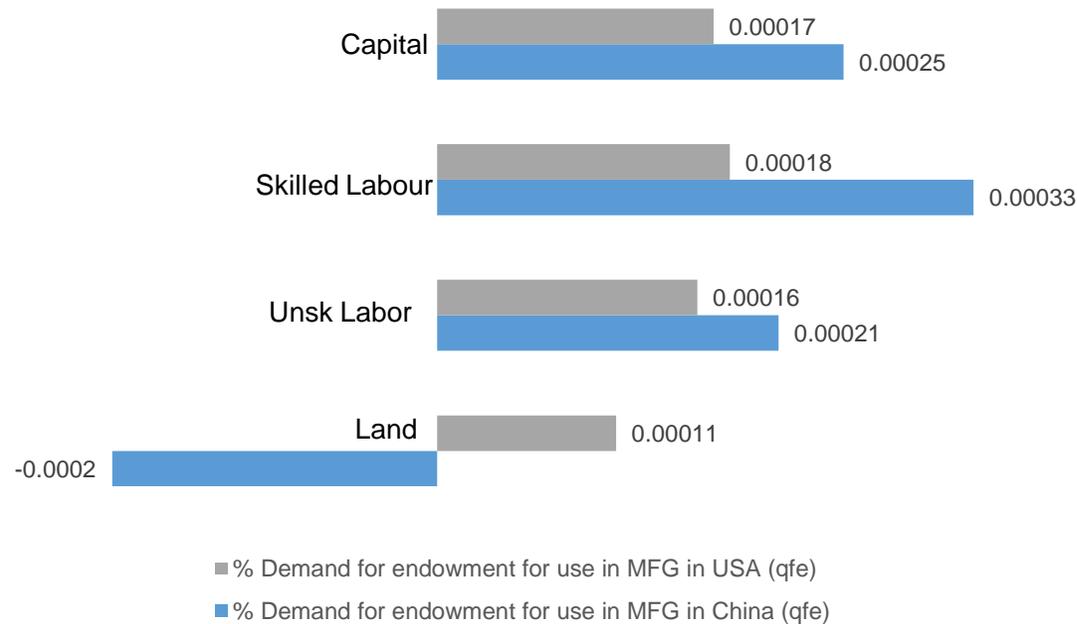
US: -0.00003% Impact on GDP and 0.00021% on farmer's income,
% change relative to baseline



China: -0.00014% Impact on GDP and -0.00076 on farmer's
income, % change relative to baseline

Positive effects on manufacturing demand is positive in both countries

US: 0.00033% increase of skilled labor, relative to baseline

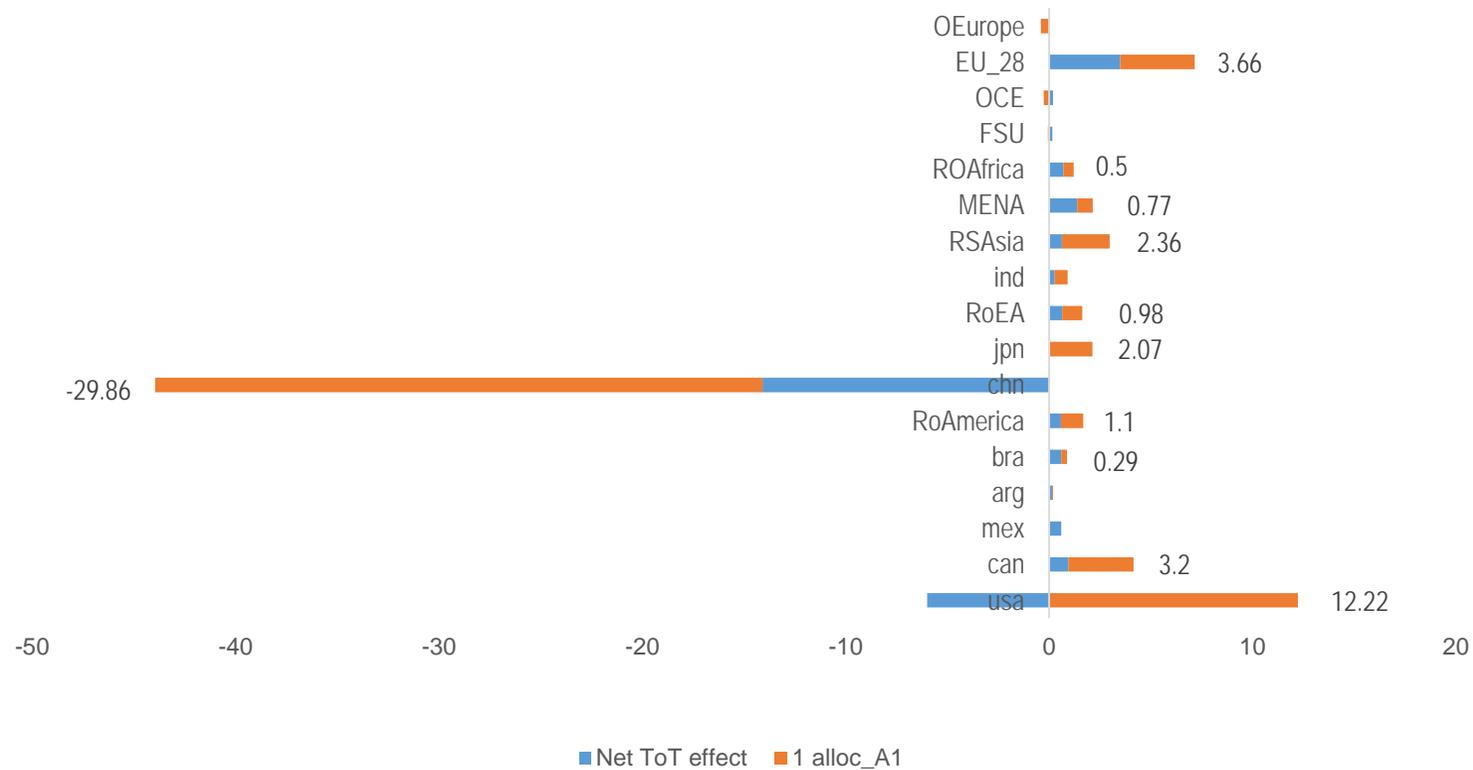


- Labor from agricultural production moves to US manufacturing
- In China, demand for land increases for the production of certain agricultural commodities

US tariff increases has implications in world prices affecting terms of trade

China: Negative Impact on welfare, -29.86USD Million relative to baseline

US: Positive impact on welfare, 12.22USD Million relative to baseline



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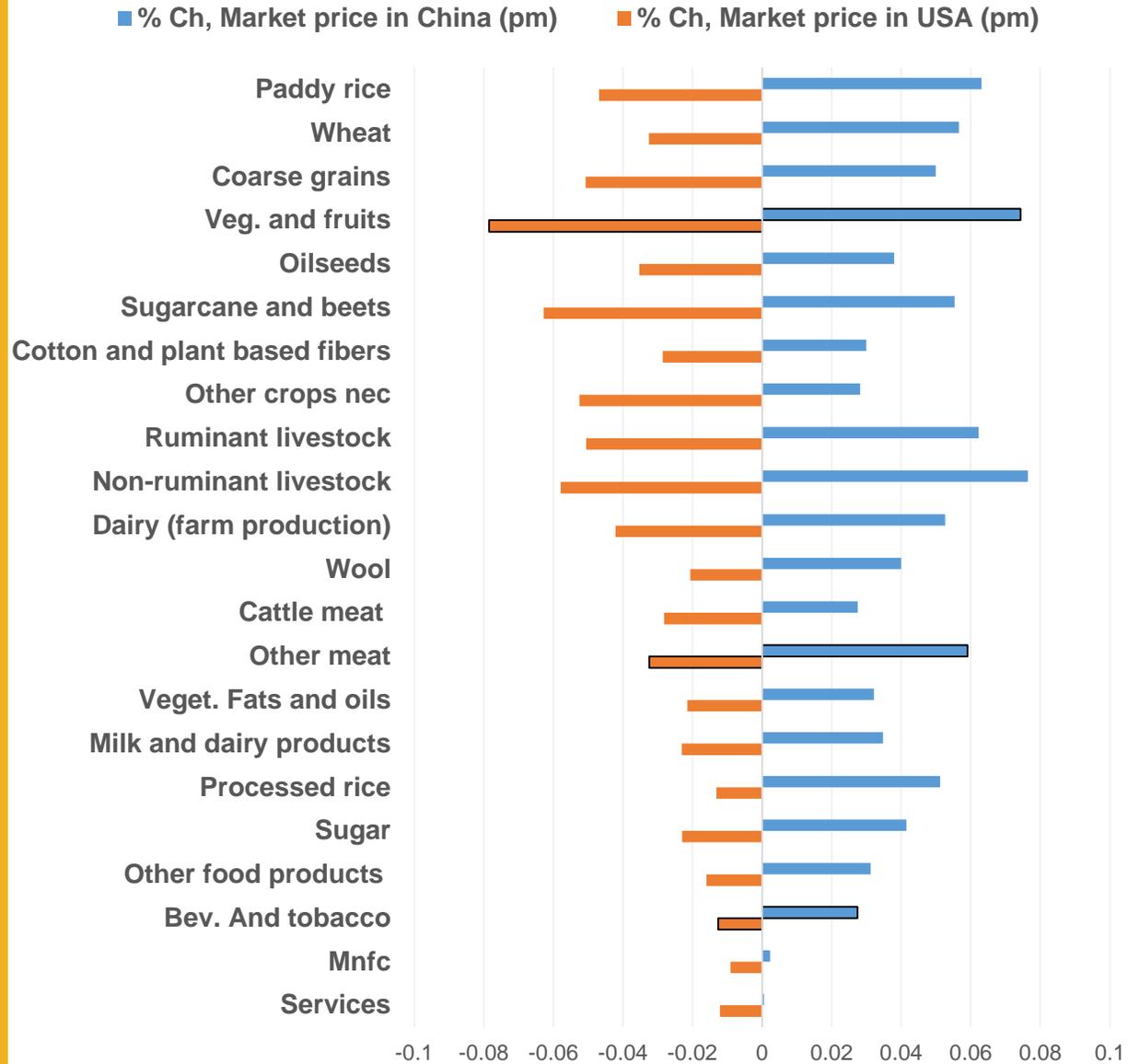
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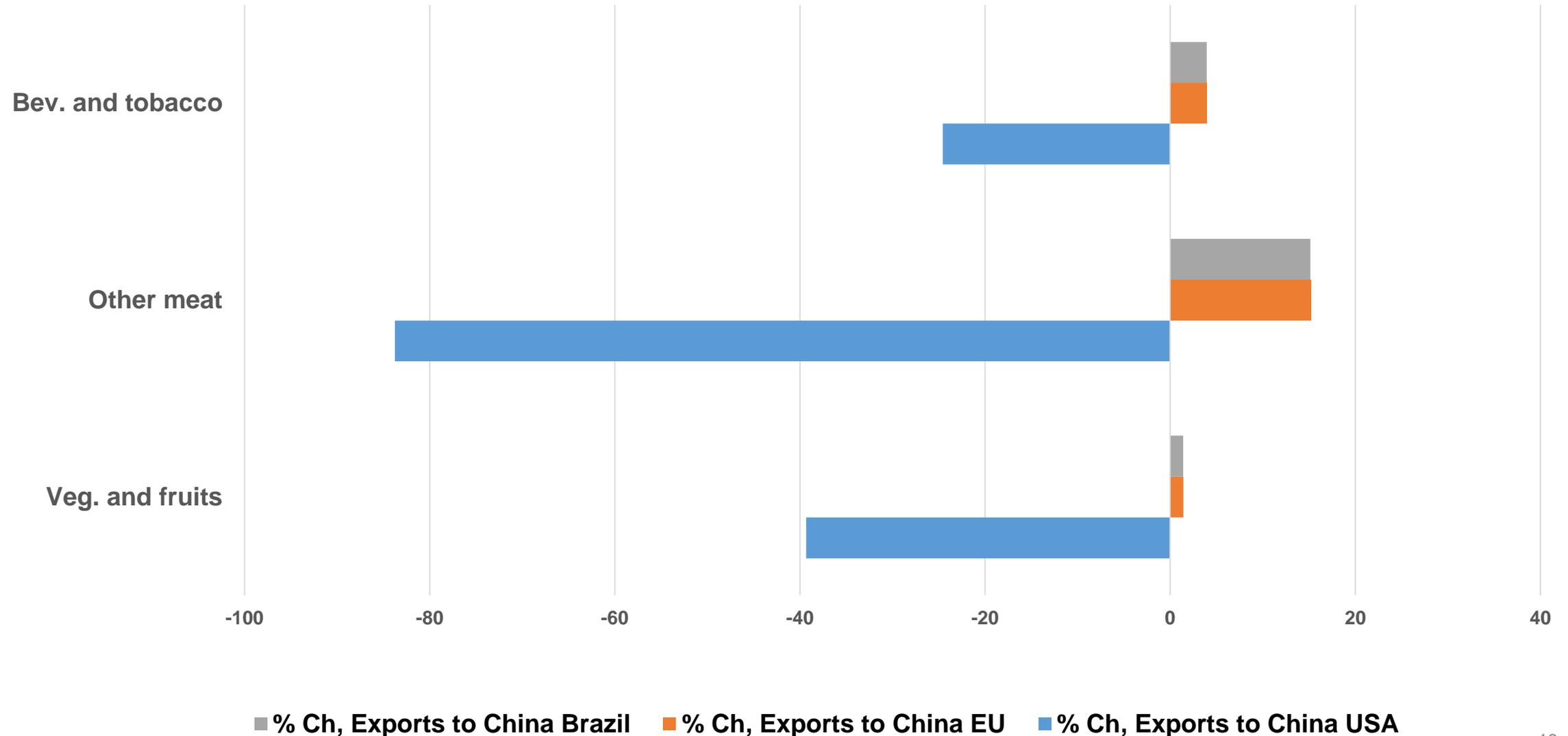
Scenario 2 - Chinese retaliatory tariffs... implications for prices



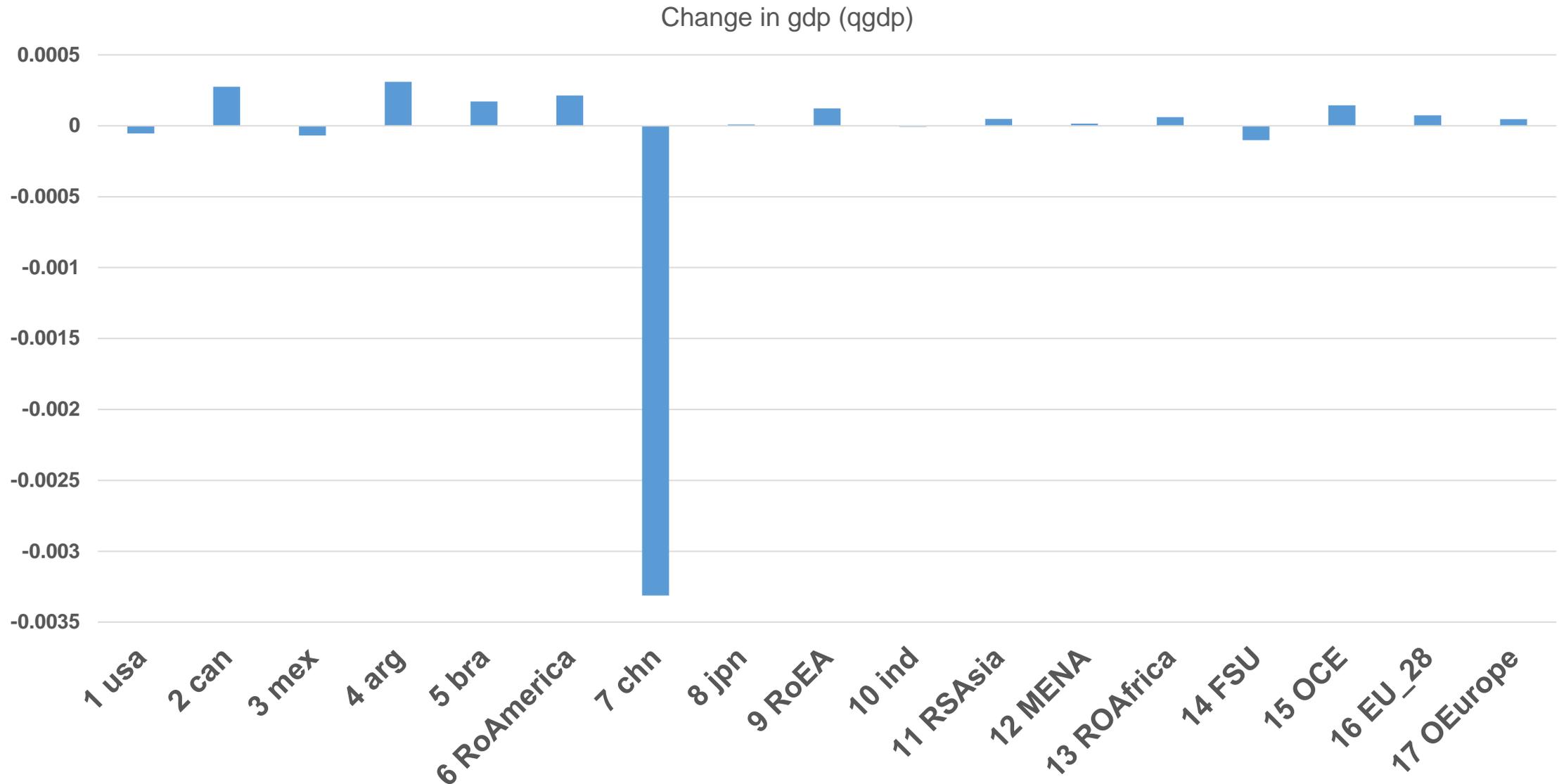
	%Ch, domestic prices for commodities supplied	
	USA to China (pim)	China to USA (pim)
Paddy rice	-0.04276	0.06307
Wheat	-0.0285	0.05328
Coarse grains	-0.04276	0.04839
Veg. and fruits	14.92063	0.06907
Oilseeds	-0.03263	0.0356
Sugarcane and beets	-0.06283	0.05531
Cotton and plant based fibers	-0.02703	0.02506
Other crops nec	-0.04727	0.02629
Ruminant livestock	-0.04766	0.06225
Non-ruminant livestock	-0.05466	0.07343
Dairy (farm production)	-0.04215	0.05261
Wool	-0.02	0.03868
Cattle meat	-0.02771	0.02706
Other meat	24.96088	0.05767
Veget. Fats and oils	-0.02042	0.03075
Milk and dairy products	-0.02211	0.03478
Processed rice	-0.01255	0.05037
Sugar	-0.02078	0.03855
Other food products	-0.01503	0.02938
Bev. and tobacco	14.98684	0.02648
Mnfc	-0.0064	0.00928

Scenario 2 - China retaliatory tariffs...implications for exports into CHN

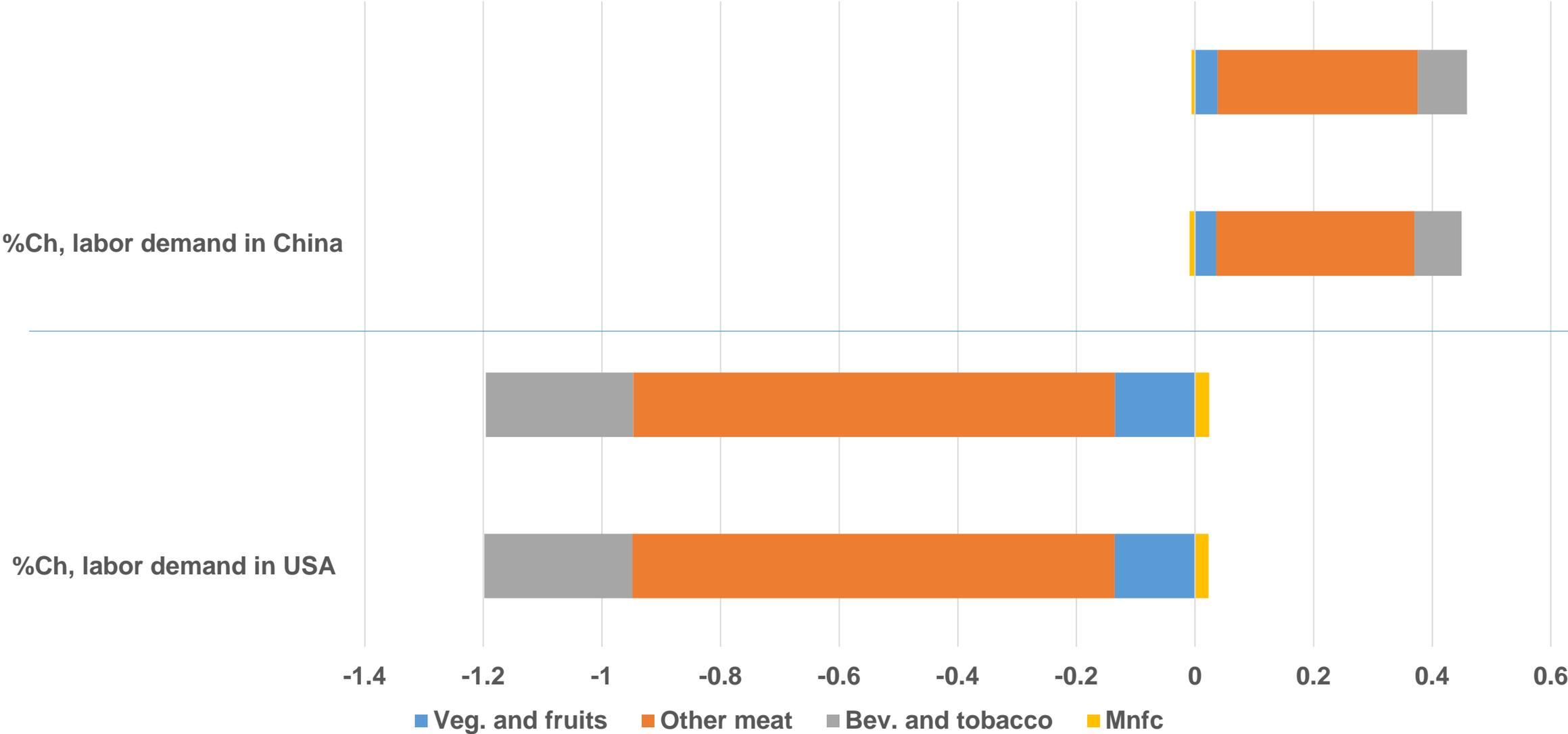
%Ch, Exports of selected commodities (retaliated) to China



Scenario 2 – Chinese retaliatory tariffs on selected US agriculture products (Section 232) - marginal impact on % GDP



Scenario 2 – Implications for labor demand in USA and China



Scenario 2 – Welfare decomposition... losers and winners

WELFARE	1 alloc_A1	2 endw_B1	3 tech_C1	4 pop_D1	5 tot_E1	6 IS_F1	7 pref_G1	Total
1 USA	-9.32	0	0	0	-274.57	-93.88	0	-377.78
2 can	4.91	0	0	0	33.68	1.46	0	40.05
3 mex	-0.88	0	0	0	17.58	1.09	0	17.79
4 arg	1.7	0	0	0	4.74	-0.02	0	6.41
5 bra	4.12	0	0	0	27.23	4.89	0	36.24
6 RoAmerica	4.58	0	0	0	17.47	2.55	0	24.6
7 CHINA	-342.85	0	0	0	36.65	35.88	0	-270.32
8 jpn	0.4	0	0	0	10.23	2.8	0	13.43
9 RoEA	2.82	0	0	0	3.46	5.08	0	11.36
10 ind	-0.15	0	0	0	3.31	4	0	7.16
11 RSAAsia	1.49	0	0	0	17.32	5.2	0	24
12 MENA	0.66	0	0	0	0.86	7.85	0	9.37
13 ROAfrica	1.06	0	0	0	5.96	1.99	0	9.01
14 FSU	-2.72	0	0	0	0.72	4.62	0	2.62
15 OCE	2.47	0	0	0	7.29	2.35	0	12.11
16 EU_28	13.64	0	0	0	88.17	12.02	0	113.82
17 OEurope	0.62	0	0	0	-0.23	2.08	0	2.48
Total	-317.46	0	0	0	-0.15	-0.04	0	-317.65

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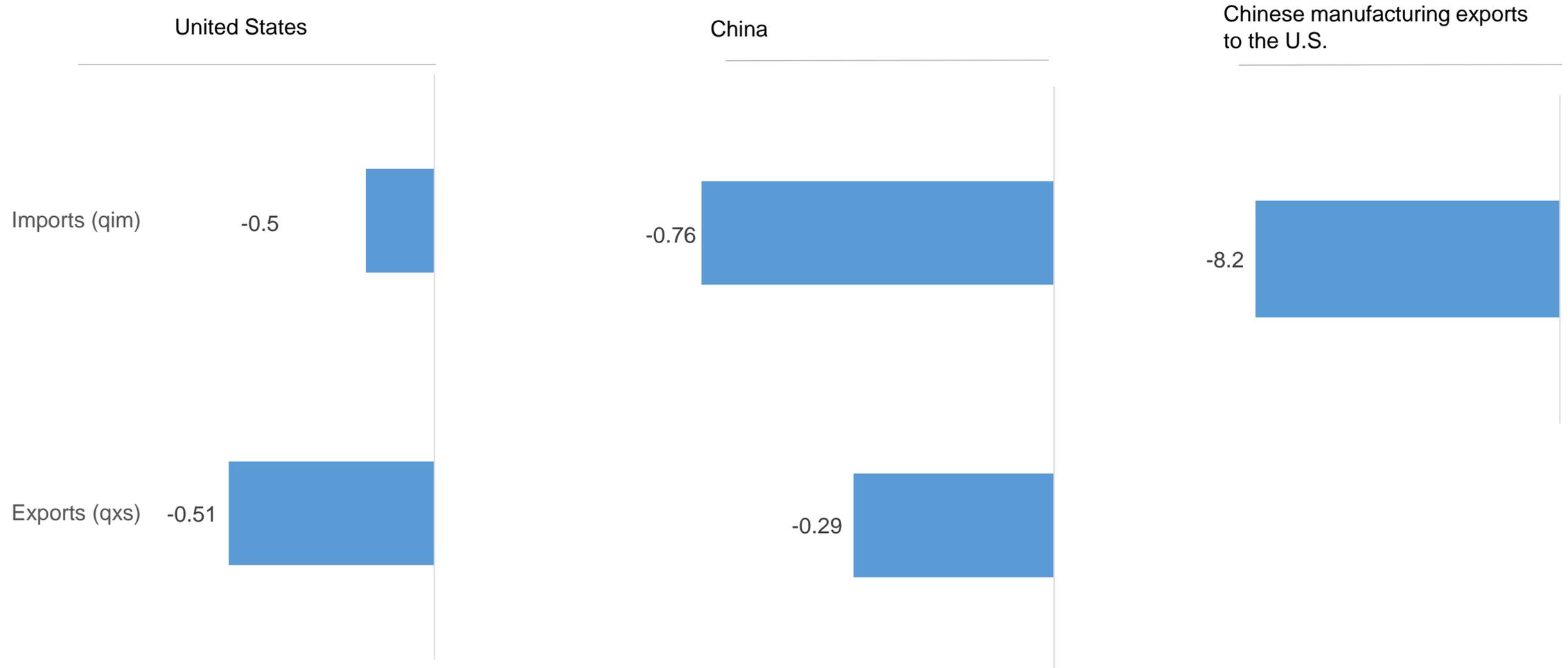
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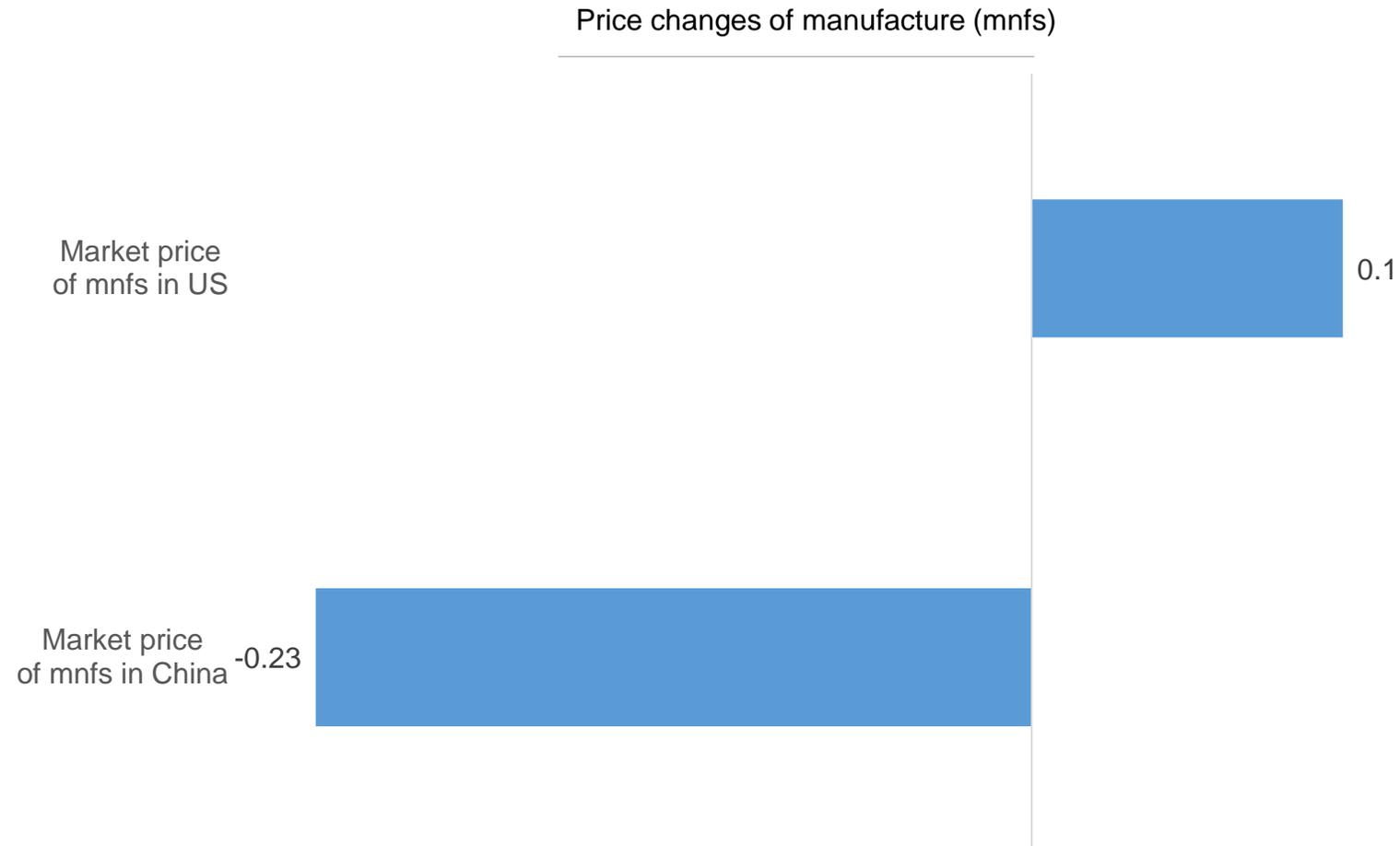
Chinese manufactures export to the U.S. are decreasing by -8.2%

Impact on trade, % change relative to baseline



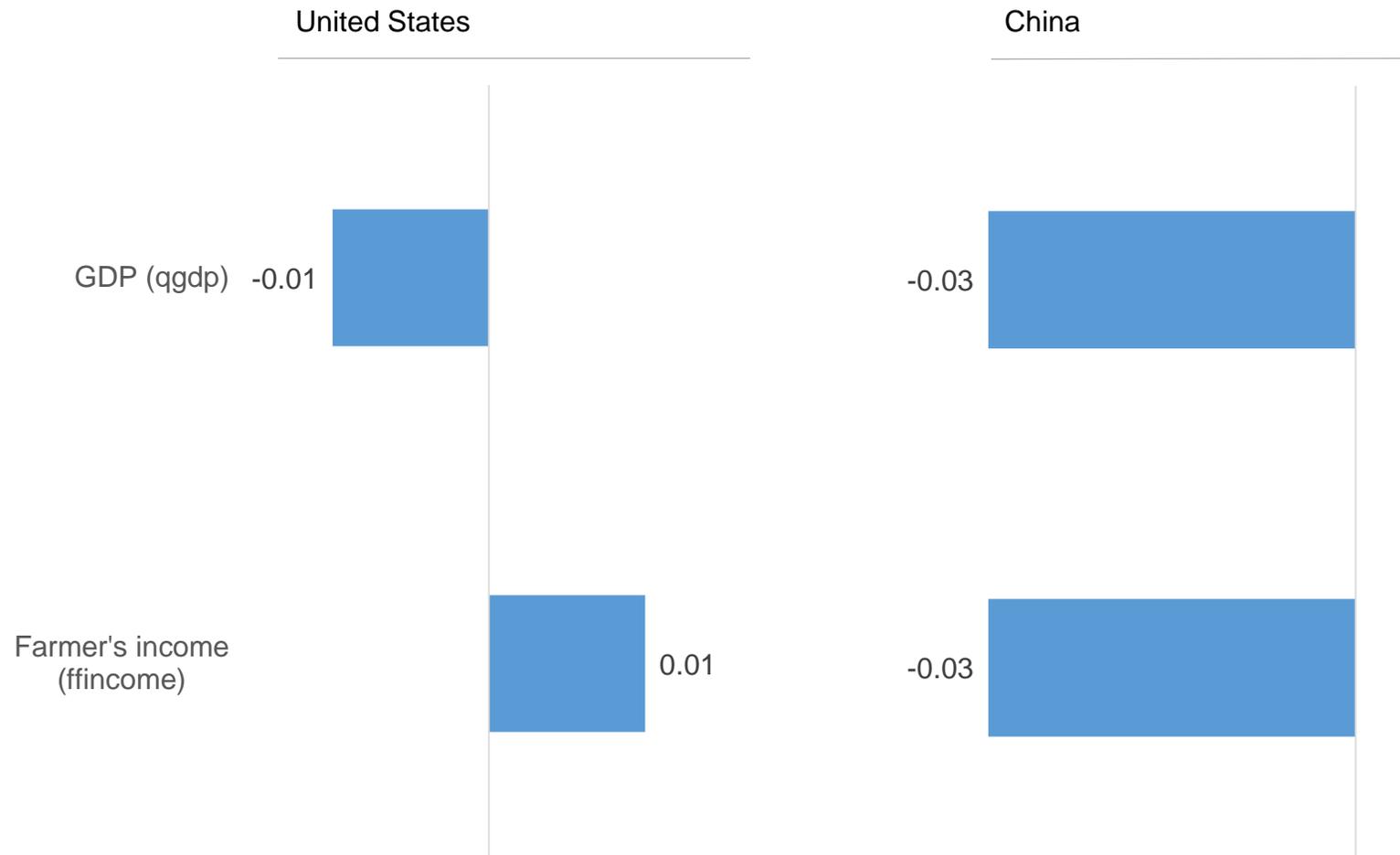
Manufacturing price goes up by 0.1% in the U.S. and down by 0.23% in China

Impact on prices, % change relative to baseline



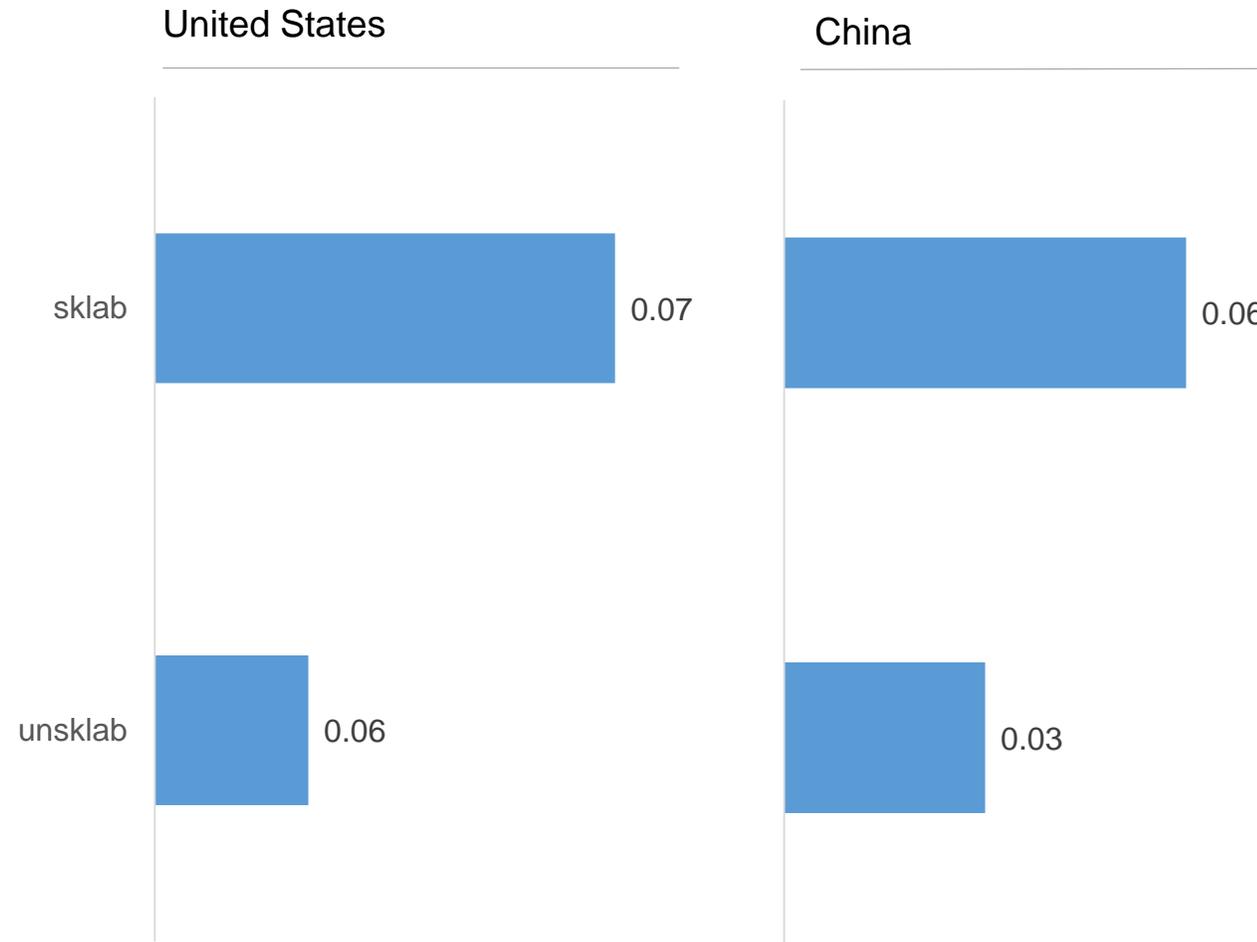
GDP growth rate decreases in the U.S. and China

Impact on GDP and farmer's income, % change relative to baseline



Demand of labor for manufacturing products in the U.S. and China increases

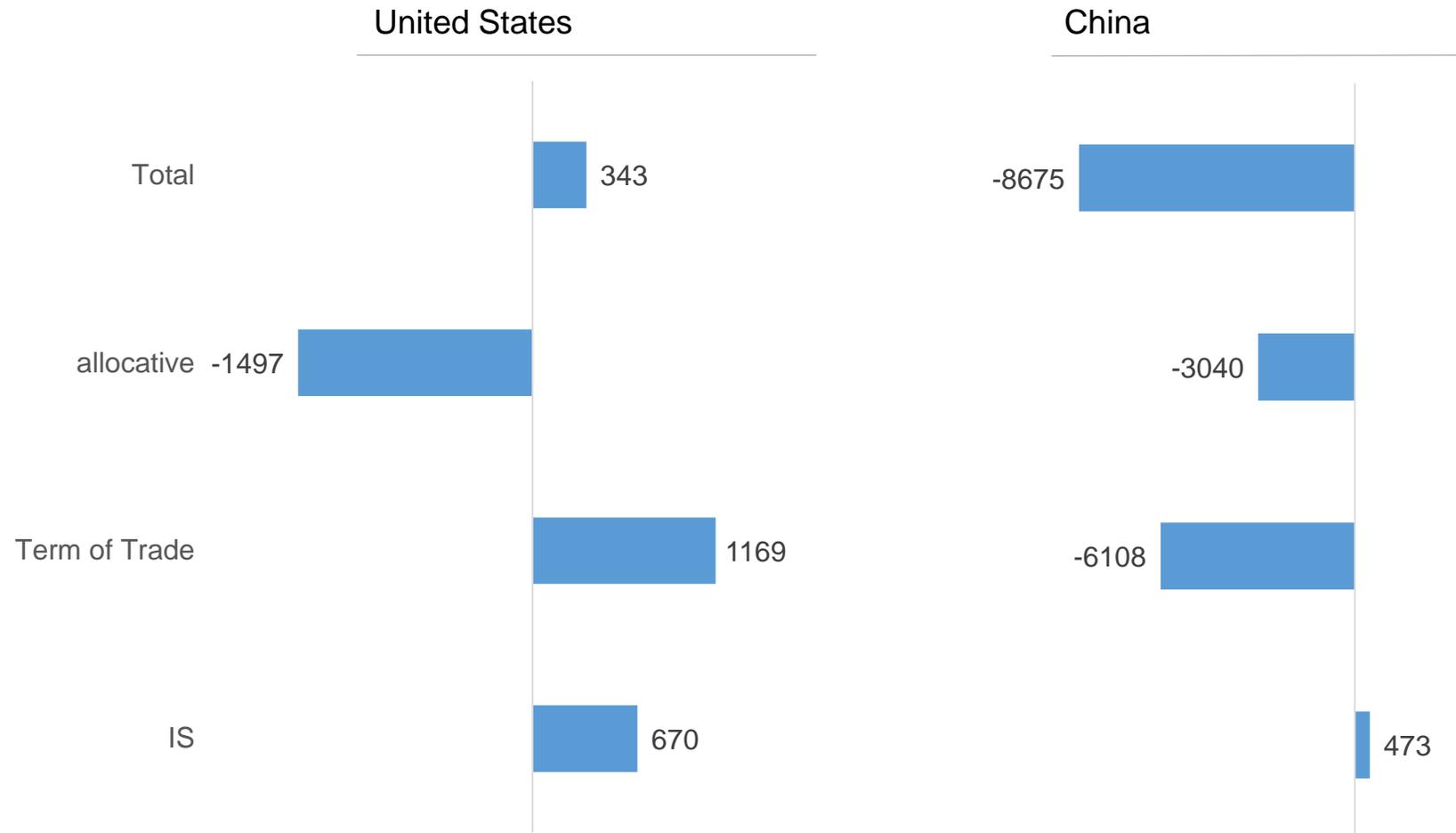
Impact on employment, % change relative to baseline



- Manufacturing output increases slightly in China and US
- Domestic supply in manufacturing has increased more in the US than in China (0.16% vs 0.10% respectively)
- The share of manufacturing production destined for foreign markets has decreased more in the US than in China (-0.1% vs -0.06%)

The U.S. would gain from imposing tariff on Chinese manufacturing, while China would lose from the U.S. trade policy

Impact on welfare, % change relative to baseline



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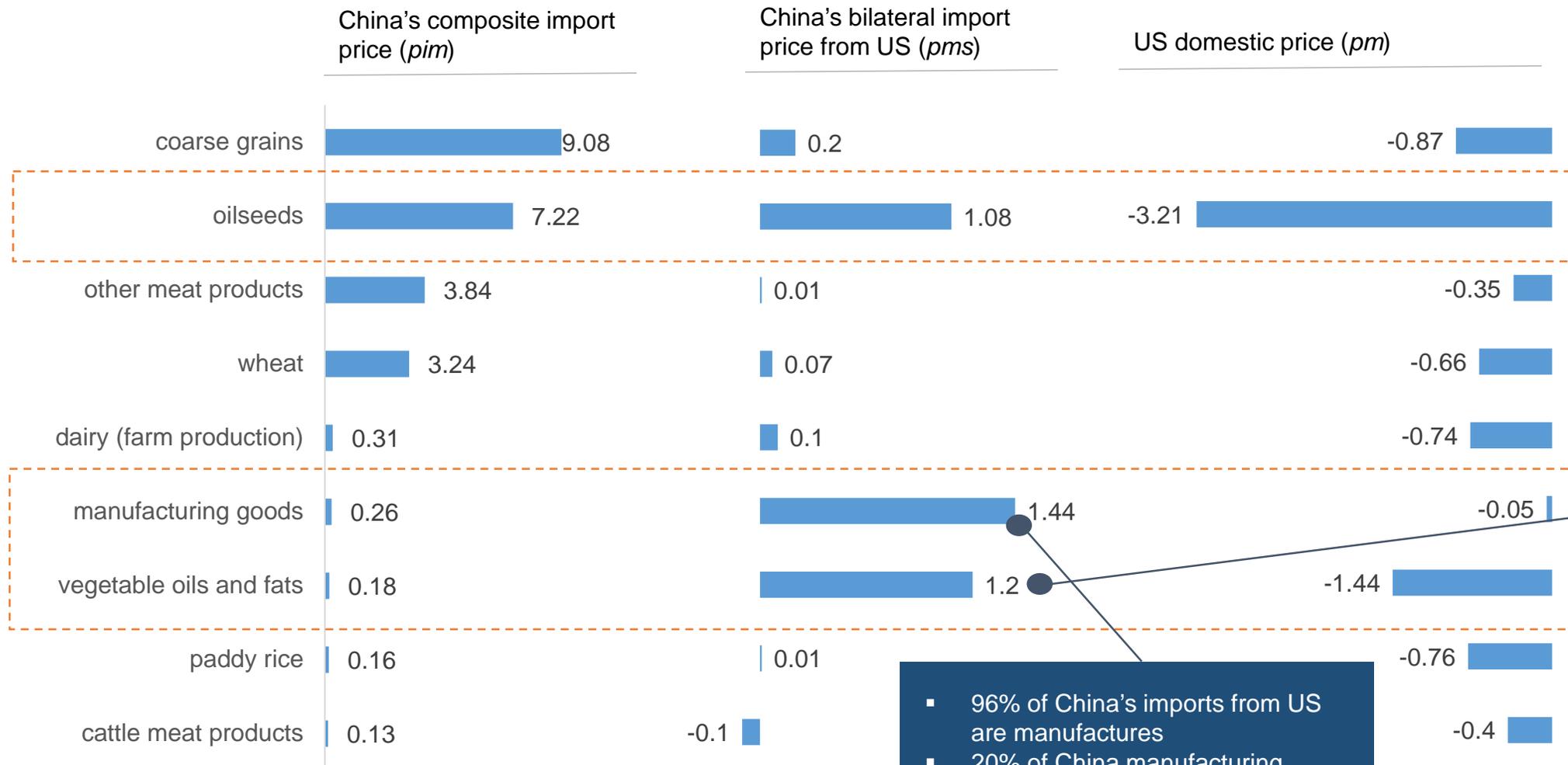
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Import tax on oilseeds increases the bilateral import price in China from the US, also affecting vegetable oil prices as these are substitutes

Impact on prices, % change relative to baseline

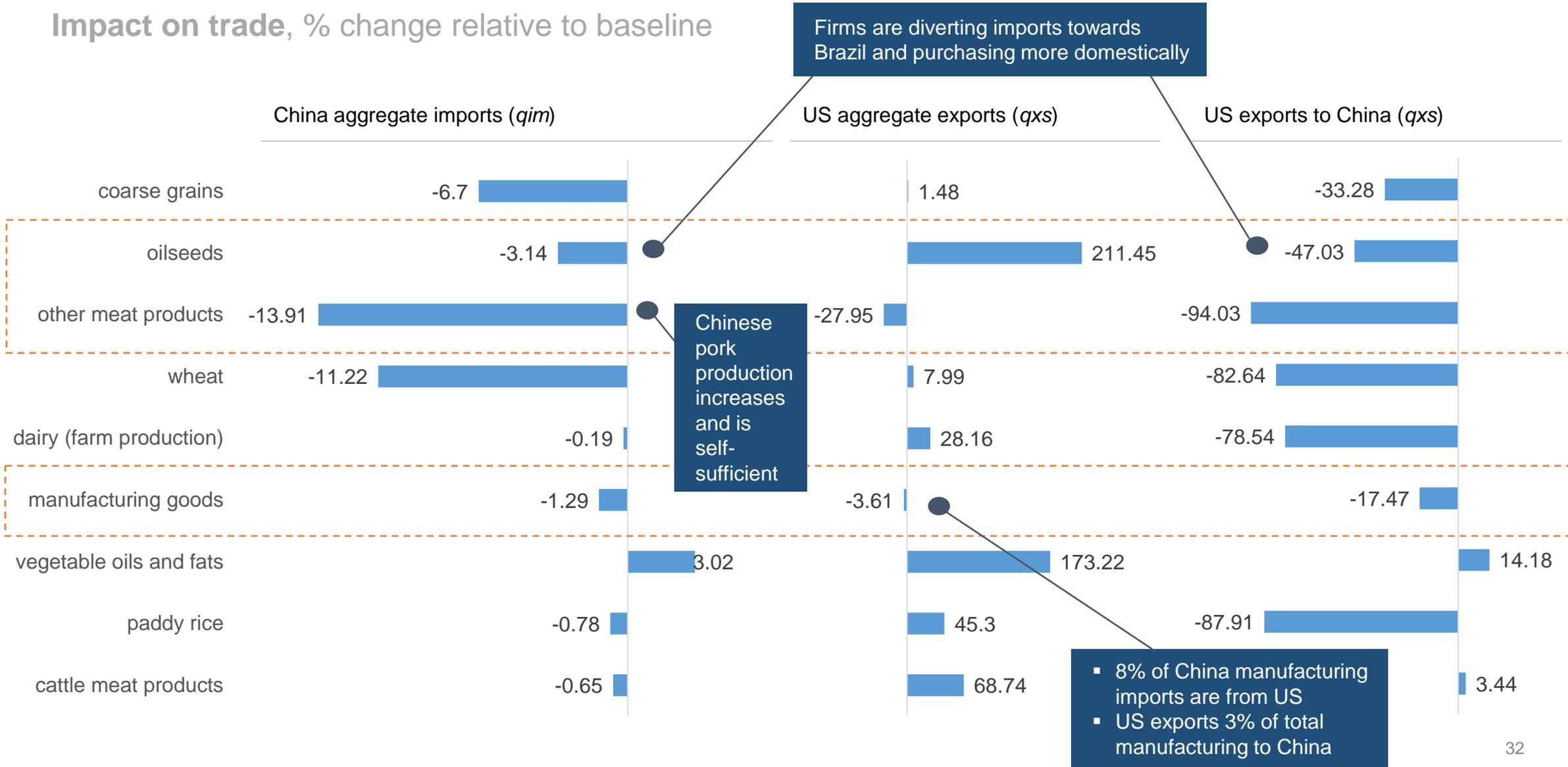


China imports of vegetable oils and fats increased by +3%

- 96% of China's imports from US are manufactures
- 20% of China manufacturing imports origin from the US

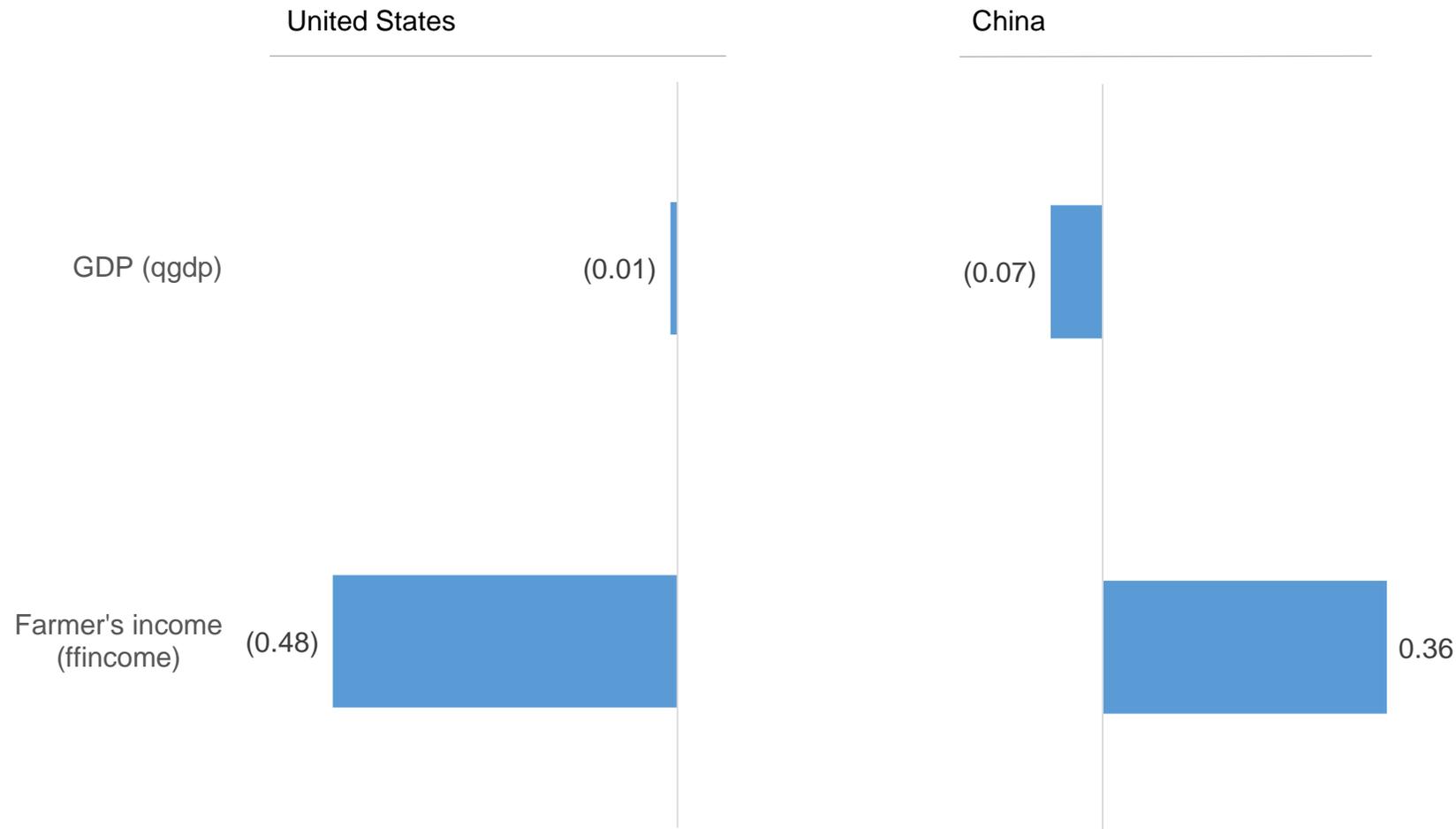
China's retaliation mainly impacts US exports of pork meat and manufacturing goods

Impact on trade, % change relative to baseline



Overall impact on income is negligent, though US farmers are bearing most of the cost of the trade dispute

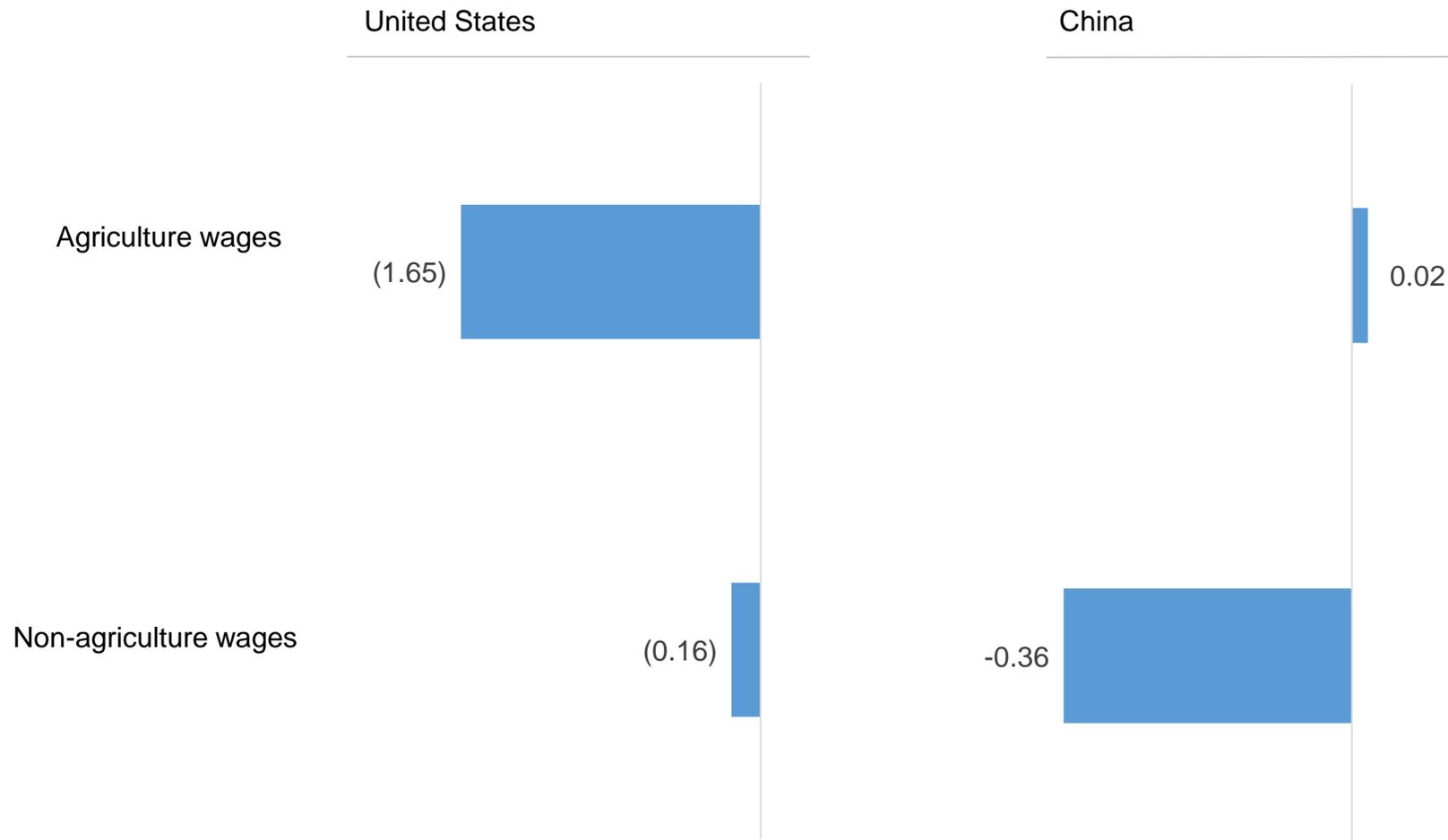
Impact on GDP and farmer's income, % change relative to baseline



- Most products impacted in dispute are agriculture goods
- However, agriculture makes <2% of US economy
- Thus, impact on GDP is low
- US farmers' factor income decreases by 0.5% relative to baseline

US agriculture wages fall by ~2%

Impact on wages, % change relative to baseline

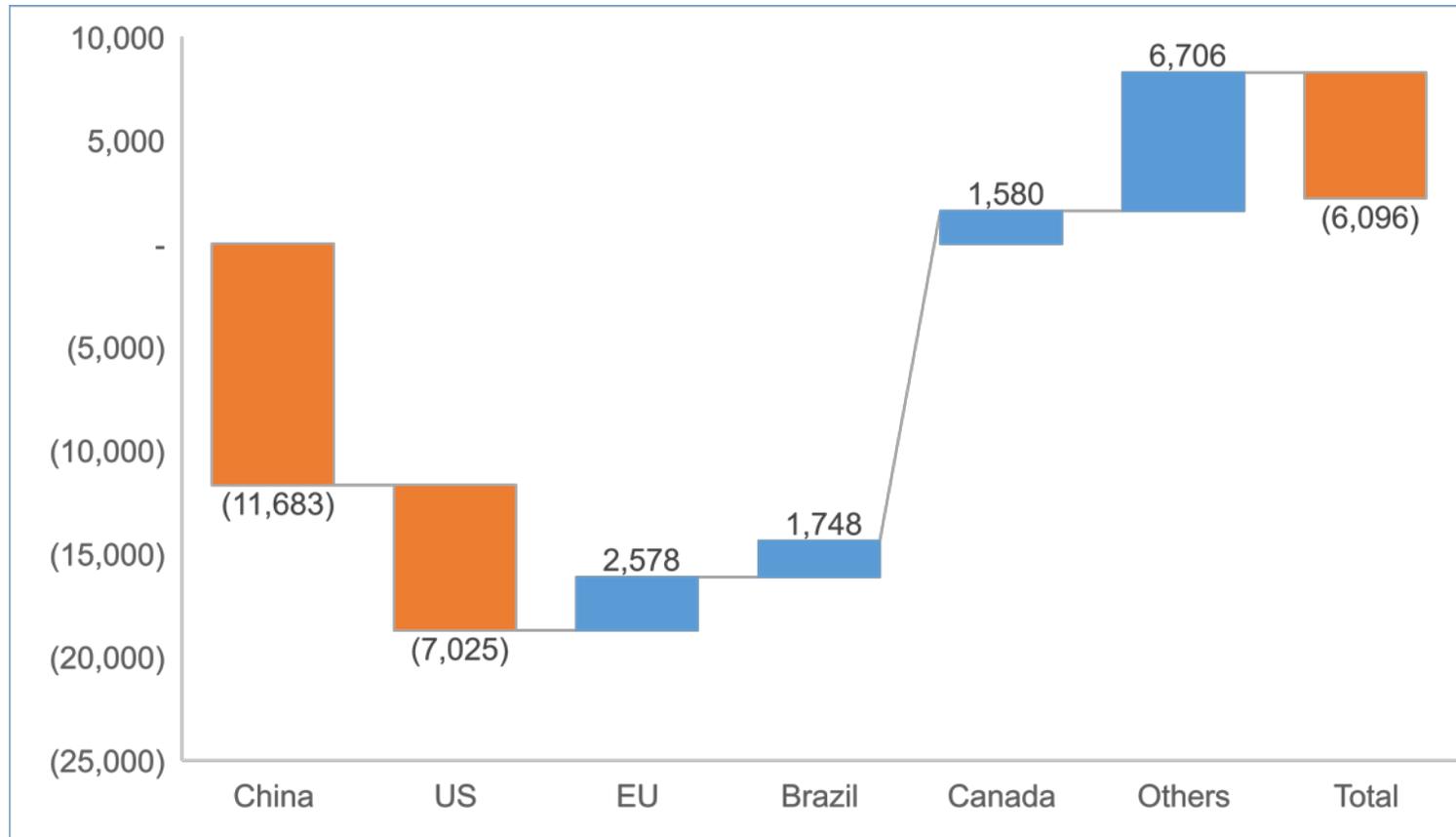


- Wages are barely affected in the model
- Labor mobility only exists within agriculture vs. non-agriculture sectors
- Drop in wages in US agriculture wages will incentivize labor to move from agriculture to non-agriculture sectors

As theory suggests, trade wars are negatively affecting global welfare, with China losing most in this dispute with the US

Impact on welfare, % change relative to baseline

Winners and losers in terms of welfare



- US is losing welfare due to a deterioration of terms of trade
- China is losing in welfare due to both – inefficiency in allocation of resources and deterioration in terms of trade
- Chinese investment – saving position is improving

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Panel Q&A

(All presenters from group)

