

# The Potential Impact of Escalated Tariffs on the U.S. Economy

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Prepared for the Advisory Committee of the Federal Reserve Bank  
of Chicago

Chicago, October 18, 2018

# Some basic theory on the gains from trade ... and the costs of restricting it

Country exports X in exchange for Y

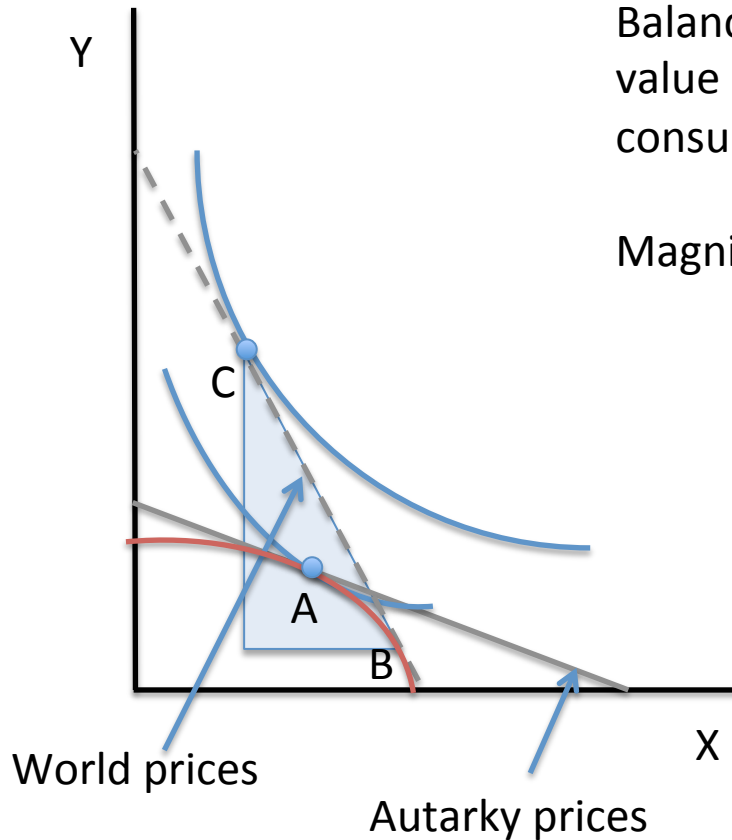
Balanced trade:  
value of exports = value of imports at world prices.  
consumption gains = production gains

Magnitude of gains:

$$G_j = 1 - \lambda_{jj}^{1/\epsilon}$$

Two parameters govern magnitude of gains:  
(Arkolakis, Costinot, Rodriguez-Clare)

- \* trade elasticity
- \* expenditure share on domestic goods



Extensions:

- Multiple sectors
- Intermediate goods trade
- Monopolistic competition

## Welfare gains from trade

Gains in percentages

	US	China	ROW
One sector	1.8	2.6	4.4
Multiple sectors	4.4	4.0	15.3
Mult sectors with intermediate goods, perfect competition	8.3	11.5	26.9
Mult sectors with intermediate goods, monopolistic competition	10.3	77.9	40.0

Source: Table 4.1 "Trade Theory with Numbers: Quantifying the Consequences of Globalization," Costinot and Rodriguez-Clare, Handbook of International Economics, 2014.

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Gains relatively small because trade elasticity is fairly high, and share spent on imports is relatively small

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Countries differ in sectoral composition and sectoral elasticity lower than trade elasticity. More scope for specialization and larger gains from trade.

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Amplification of gains from specialization.

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Additional margin of firm entry with love of variety magnifies gains from trade.

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Bown and Kolb, Peterson Institute for International Economics

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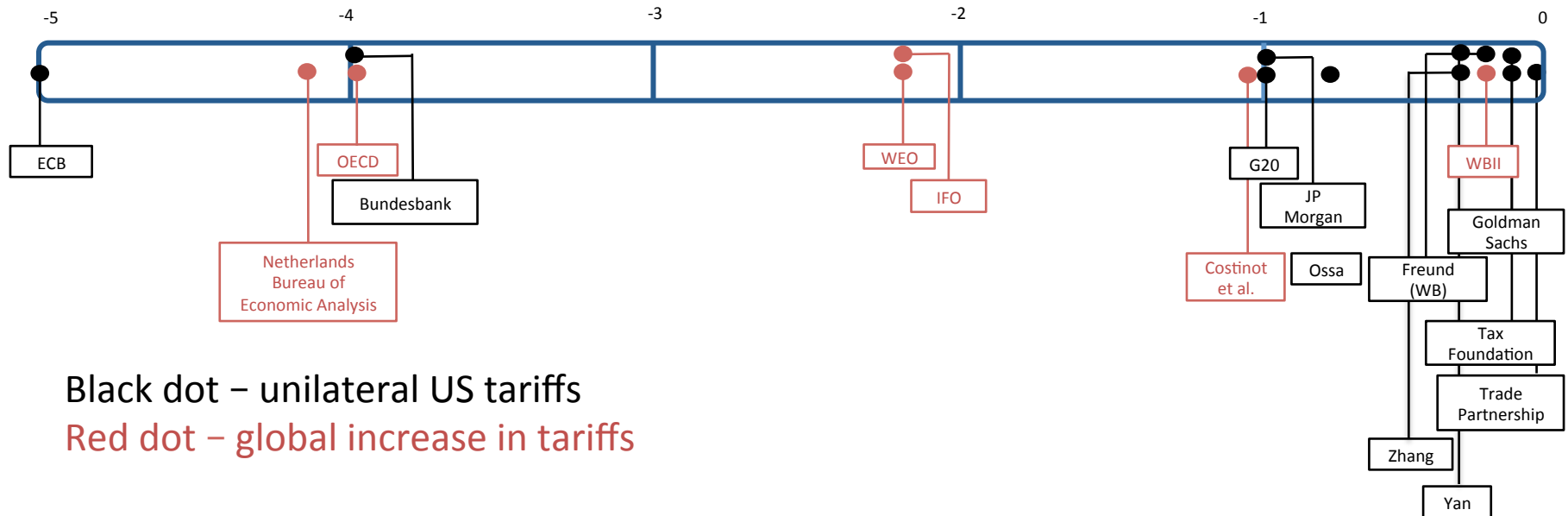
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# Estimates of US GDP Impact of 20% US Import Tariff



Impact on output ranges from less than 1 percent to nearly 5 percent.  
 What accounts for the difference?

# Zhang multi-sector model

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Unilateral US Tariff 20 percent

Percent changes

	Consumption (Output) loss	Export	Labor in goods sector	Wage	CPI	Real wage
Canada	-0.38	-6.37	-1.29	-1.74	-1.38	-0.36
China	-0.04	-2.02	-0.05	-0.54	-0.50	-0.04
Mexico	-0.64	-9.57	-0.85	-3.07	-2.46	-0.61
US	-0.28	-9.84	1.63	1.68	1.97	-0.29
ROW	-0.07	-1.77	-0.12	-0.50	-0.44	-0.06

Global Tariff Increase of 20 percent

Percent changes

Canada	-0.85	-11.38	-0.82	-1.41	-0.58	-0.83
China	-0.08	-2.24	0.00	0.37	0.45	-0.08
Mexico	-1.01	-13.12	-0.69	-2.65	-1.68	-0.97
US	-0.46	-19.68	1.59	-1.16	-0.71	-0.45
ROW	-0.14	-2.13	-0.06	0.49	0.63	-0.14

## Models where losses from trade barriers are small

- Eaton-Kortum models (Applied GE models)
  - K, L used in each sector
  - Continuum of varieties in each sector – lots of substitutability
  - Most cost effective producers export – gains come from obtaining varieties at a lower price
- Model successfully explains:
  - Intra-industry trade
  - Matches relative country sizes, sectoral size, and input-output linkages (Levchenko and Zhang (2016))
  - Tariff causes output and trade to fall, rising prices and wages (real wage falls) (Zhang (2018))
- Is this a good model for explaining effect of tariffs?
  - Models do *not* do a good job of predicting which sectors will expand following a trade liberalization (Kehoe et. al.)
  - Model depends on sectoral and trade elasticities – estimates of these are very poor (Ossa (2015), Caliendo and Parro (2010))

## So when might the effects of tariffs be large?

- Estimates based on Econometric models (ECB, Bank of England)
  - Feedback effects through exchange rates
  - Monetary policy adjustment
- Trade in a specific factor with no close substitutes
  - Minerals, oil, key components for production
  - E.g. Finland (Gorodnichenko et al 2012) – exported goods specific to USSR, barter exchange for oil, overvalued exchange rate, rigid labor market
- Spillovers to financial system / uncertainty
  - Decline in trade weakens banks; raises cost of capital
- Trade affects TFP
  - Imports embody knowledge
  - Trade encourages physical and/or human capital accumulation
- Dynamics
  - Adds a role for investment
  - Costly transition dynamics
  - But also adds another dimension for substitutability

## Summary

- US tariffs will have a smaller impact if:
  - Tariffs affects goods/sectors for which:
    - US firms have alternative sources
    - US consumers have close substitutes
  - Financial markets are not destabilized
  - Retaliation is limited
- Small aggregate consequences could still imply large distributional effects, across states as well as across countries
  - Depends on incidence of trade barriers, composition of consumption and labor mobility (Auer et. al. 2018)