# "The Economic Effects of Trade Policy Uncertainty"

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Summary

Model Structure

Comments

Conclusions

What are the effects of trade policy uncertainty (TPU) on the US economy?



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## **Summary**

What are the effects of trade policy uncertainty (TPU) on the US economy? CIMPR answer this question:

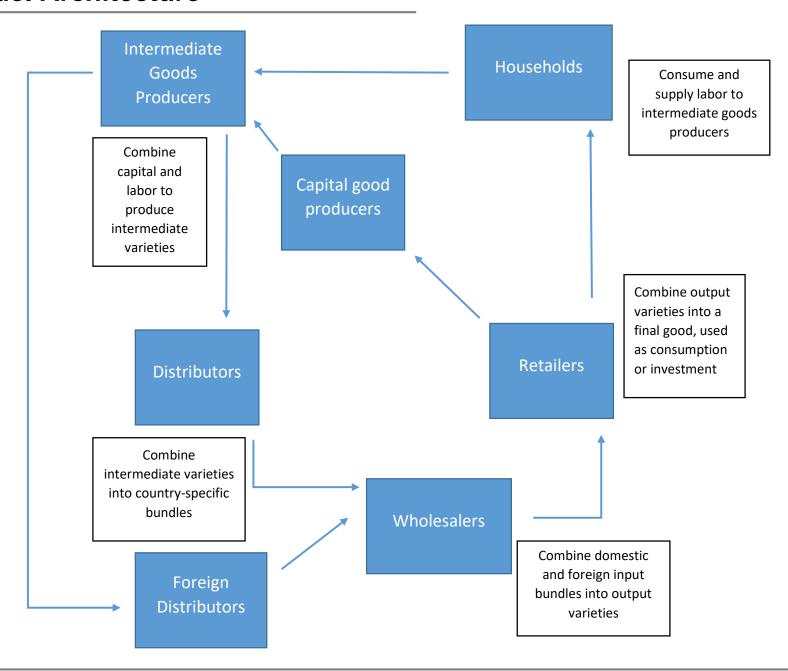
## Empirically:

- Construct novel measures of TPU at the firm- and aggregate level.
- Show that increases in TPU are associated with lower investment.

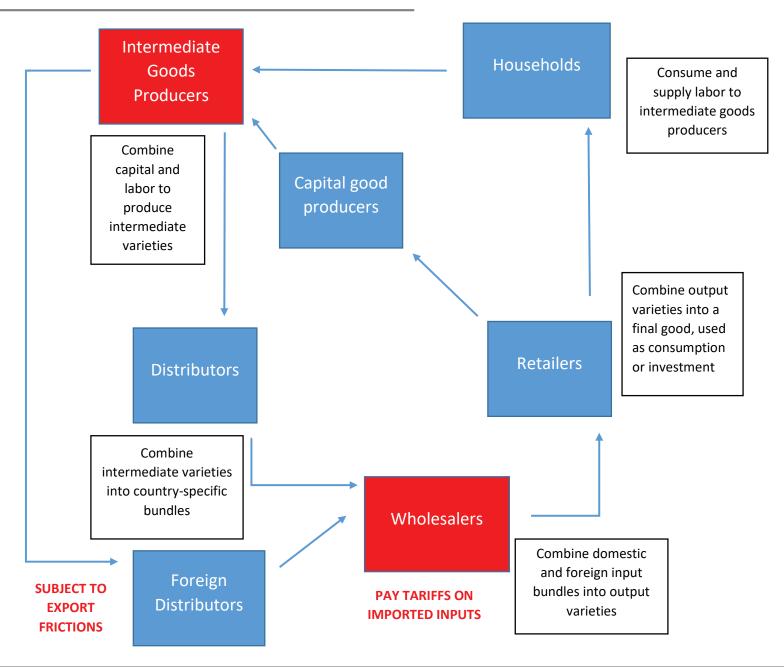
## Theoretically/Quantitatively:

- Build a two-country GE model with nominal rigidities and dynamic export participation decisions.
- The model generates a decline in aggregate investment which is broadly consistent with the data.

## **Model Architecture**



## **Model Architecture - Trade and TPU**





#### Comments

- Trade Modeling
- Heterogeneity
- MNEs

Conclusion

## **Some Words of Caution**

Should we be worried about inferring the consequences of TPU from a framework where the modeling of trade is "naive"?



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Conclusion:

## **Some Words of Caution**

Should we be worried about inferring the consequences of TPU from a framework where the modeling of trade is "naive"?

Three observations related to:

- Qualitative versus quantitative predictions.
- 2. Firm heterogeneity in the model and in the data.
- 3. Multinational firms, foreign direct investment, supply chains.



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## **Quantitative effects of TPU on Investment**

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For a qualitative answer, could use a simpler framework: augment AC with stochastic tariffs.



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## **Quantitative effects of TPU on Investment**

What are the effects of trade policy uncertainty (TPU) on the US economy?

For a qualitative answer, could use a simpler framework: augment AC with stochastic tariffs.

Then the goal of the paper must be quantitative!

- CIMPR's model is rich on the "macro" side: sticky wages, sticky prices, capital adjustment costs, a monetary authority.
- Not so much on the "trade" side:
  - Armington motive for trade: trade shares are driven by exogenous home bias
  - No transportation costs
  - Two symmetric countries



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# Firm heterogeneity in the model and in the data

- In CIMPR's model, export status is driven by i.i.d. productivity shocks:
  - No ex-ante systematic differences between exporters and non-exporters.
  - Degenerate capital distribution across firms.
  - Entry and exit dynamics unrelated to firms' ex-ante characteristics.
- In the data:
  - Exporters are ex-ante larger, more productive, and more capital-intensive than non-exporters (Bernard and Jensen, 1999, Bernard, Jensen, Redding, and Schott, 2007, and many others).
  - Larger exporters experience longer export spells (Fitzgerald, Haller, and Yedid-Levi, 2017).
- ⇒ Systematic firm heterogeneity + productivity and/or demand shocks (Impullitti, Irarrazabal and Opromolla, 2013, or Fillat and Garetto, 2015).



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# Firm heterogeneity in the model and in the data

TPU data can help discipline the model!

Does the firm-level response to TPU depend on export status?

$$\log k_{i,t+1} - \log k_{i,t-1} = \alpha_i + \alpha_t + \beta_h TPU_{i,t} + \beta_h TPU_{i,t} \times \mathbb{1}_{exp_{i,t}} + \Gamma' \mathbf{X_{i,t}} + \varepsilon_{i,t}$$

where  $\mathbb{1}_{exp_{i,t}} = 1$  if firm i is an exporter at t (available from Compustat).



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## I expect:

- exporters to be more responsive to TPU than non-exporters; and
- large exporters to be less responsive to TPU than small exporters (likely more able to reallocate resources across destination markets if changes in TPU are country-pair specific).



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# Multinational firms, foreign direct investment, supply chains

CIMPR are silent about the role of multinational enterprises (MNEs):

- The construction of the TPU measures does not include any term related to MNEs (multinational corporations, foreign direct investment, foreign affiliates, subsidiaries, ...).
- The model is silent about the role of MNEs.

Why should we care?



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# Multinational firms, foreign direct investment, supply chains

- Multinational enterprises (MNEs) intermediate more than 90% of US trade flows (Bernard, Jensen, and Schott, 2008).
- MNEs are affected by TPU because:
  - They are the largest exporters.
  - May produce intermediate inputs abroad to sell them in the US:
     vertical FDI is subject to tariffs.
  - May produce inputs domestically to ship them to foreign affiliates: intrafirm trade is subject to tariffs.
- The effect of TPU on MNEs may be different from the effect on other firms:
  - May be dampened as MNEs have large affiliates networks and can change production locations in response to tariffs (Flaaen, Hortacsu, and Tintelnot, 2019).
  - May be amplified by supply chains (Yi, 2003).



# **Conclusions**

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Timely, important, and thought-provoking paper.

• I look forward to more work that puts TRADE into the treatment of TPU.