

The Macroeconomic Effects of Protectionism

Fabio Ghironi

University of Washington, CEPR, and NBER

Global Business Forum

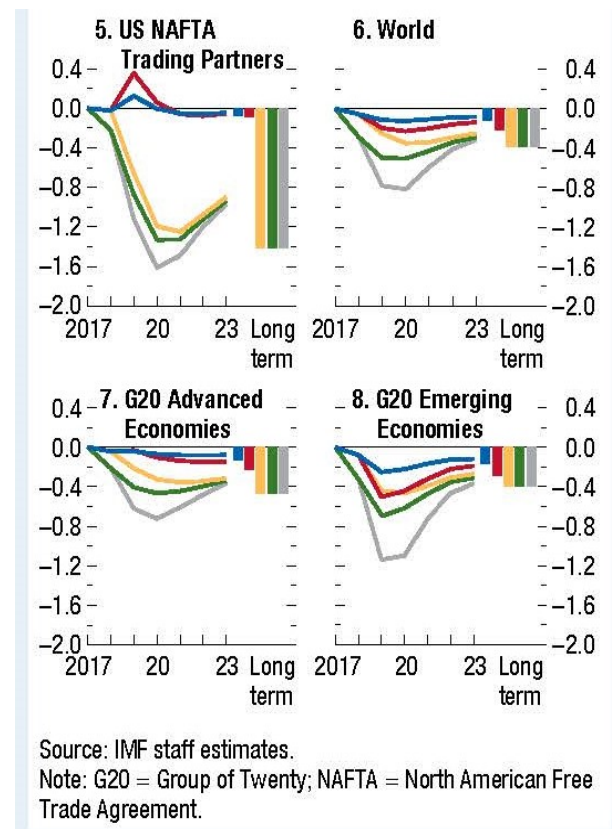
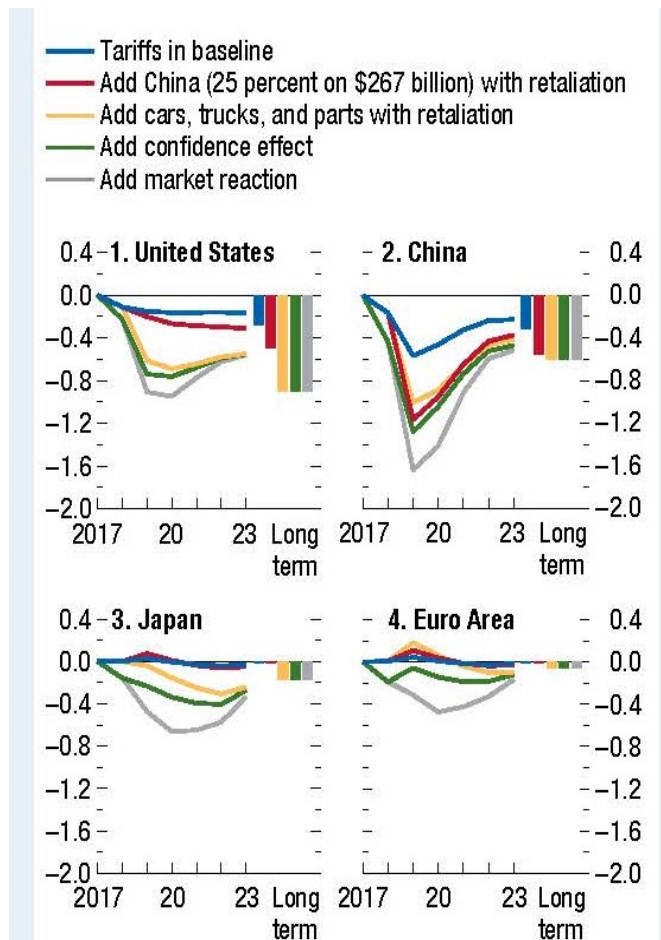
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Modeling the Macroeconomic Effects of Protectionism

- IMF, Fed: Multi-country, dynamic, general equilibrium, New Keynesian models with uncertainty (so-called DSGE models with nominal rigidity), including many “frictions” but no “deep” theory of trade.
- World Bank: So-called computable general equilibrium (CGE) multi-country models of trade, including richer specification of the sector structure of the economy but no explicit model of macro dynamics.
 - CGE models have been occasionally extended to account for heterogeneity across firms in studies at the World Bank and elsewhere (example, the Peterson Institute for International Economics).

Example: IMF WEO, October 2018

- Simulated consequences of protectionism:



Macro Needs Micro

“I would like to know how the macroeconomic model that I more or less believe can be reconciled with the trade models that I also more or less believe. [...] What we need to know is how to evaluate the microeconomics of international monetary systems. Until we can do that, we are making policy advice by the seat of our pants.”

Paul Krugman (1995), “What Do We Need to Know about the International Monetary System?” in *Understanding Interdependence*, edited by Peter Kenen, Princeton U Press.

Macro Meets International Trade

- Present-day, workhorse model of trade: Marc Melitz (2003, *Econometrica*): market power, producer entry into domestic and export markets, heterogeneous firms.
- Ghironi and Melitz (2005, *Quarterly Journal of Economics*): merger of Marc's model with dynamic, general equilibrium macro under uncertainty.
- Alessandro Barattieri, Matteo Cacciatore, and I (2018, NBER WP):
 - show evidence on dynamic effects of protectionism for small open economies (SOEs),
 - and use Ghironi-Melitz SOE model with nominal rigidity to explain channels and perform counterfactuals (zero lower bound, fixed exchange rate).

Bown (2016, World Bank): Global Anti-Dumping Database

- Focus on Canada and Turkey.

Size

- In Turkey, up to 5.3 percent of imported products are subject to temporary trade barriers over the period 1994-2009, amounting to 1 percent of GDP.
- For Canada, the percent of imported products is 2.2 percent, amounting to 0.4 percent of GDP.

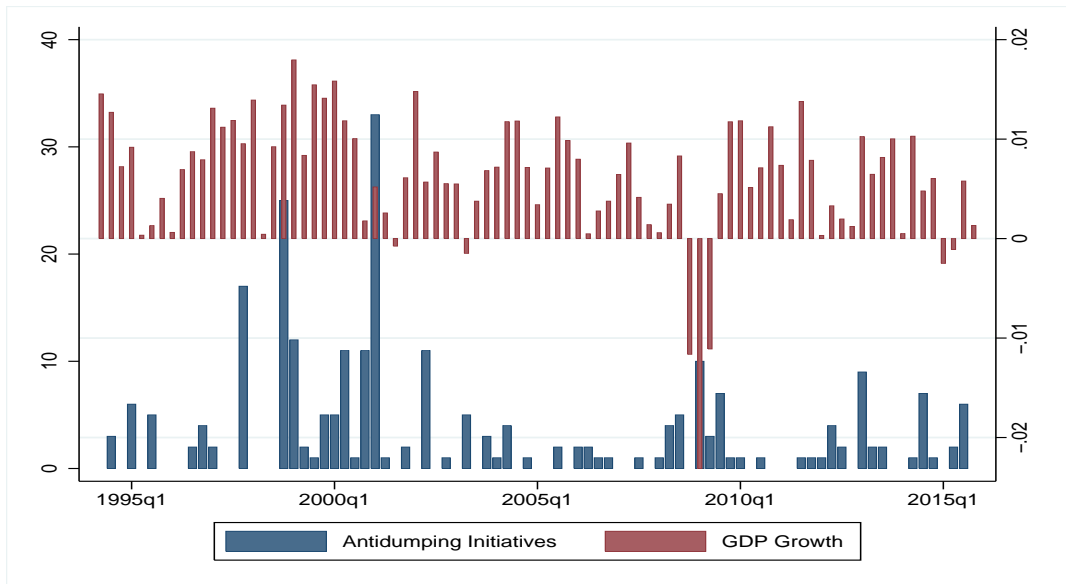


Figure 1: Anti-dumping initiatives and real GDP growth, Canada

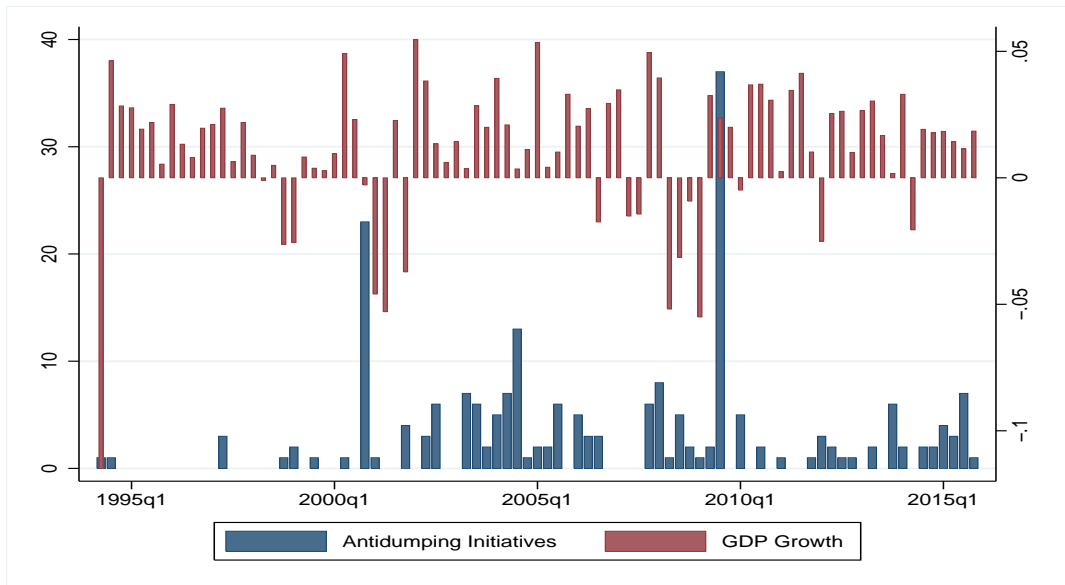


Figure 2: Anti-dumping initiatives and real GDP growth, Turkey.

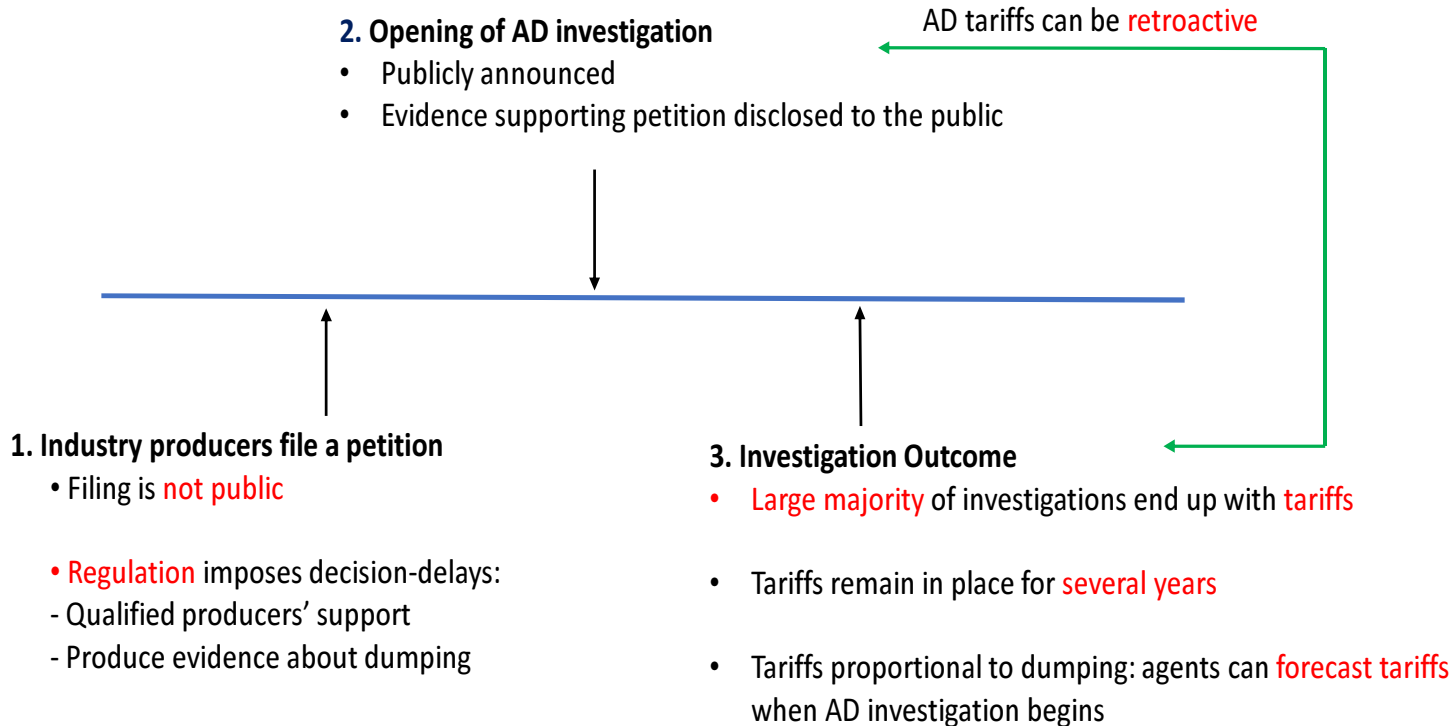


Figure 3: Institutional details about antidumping investigations and applied antidumping tariffs.

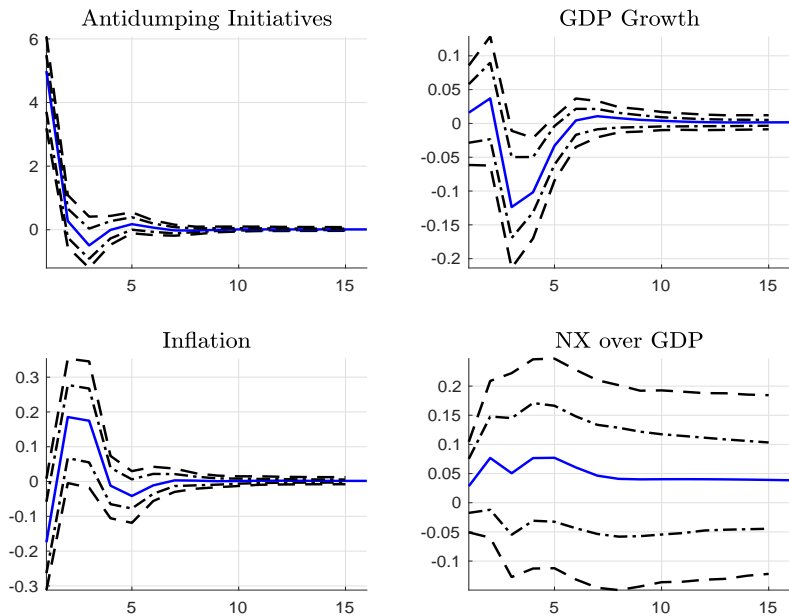


Figure 4: Quarterly VAR, one-standard deviation increase in antidumping initiatives in Canada. GDP growth and net exports over GDP are in percentage points. The inflation rate is annualized.

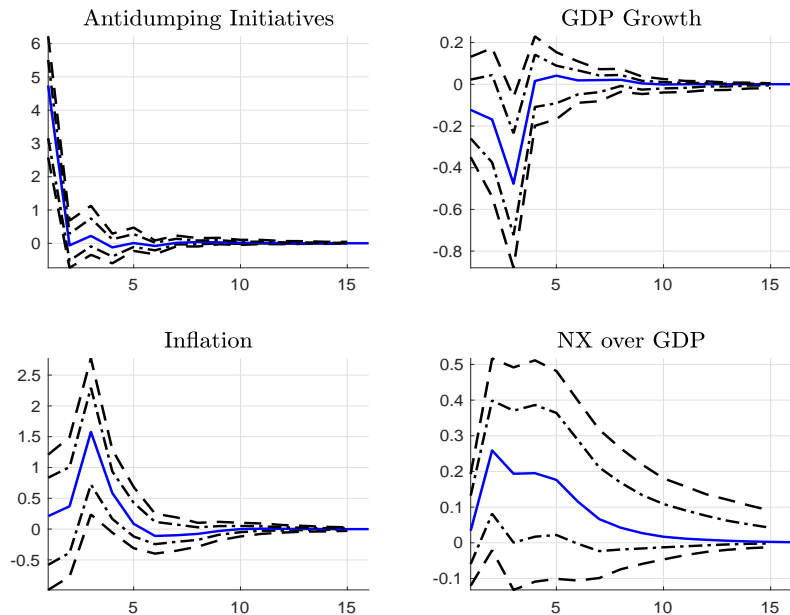


Figure 5: Quarterly VAR, one-standard deviation increase in antidumping initiatives in Turkey. GDP growth and net exports over GDP are in percentage points. The inflation rate is annualized.

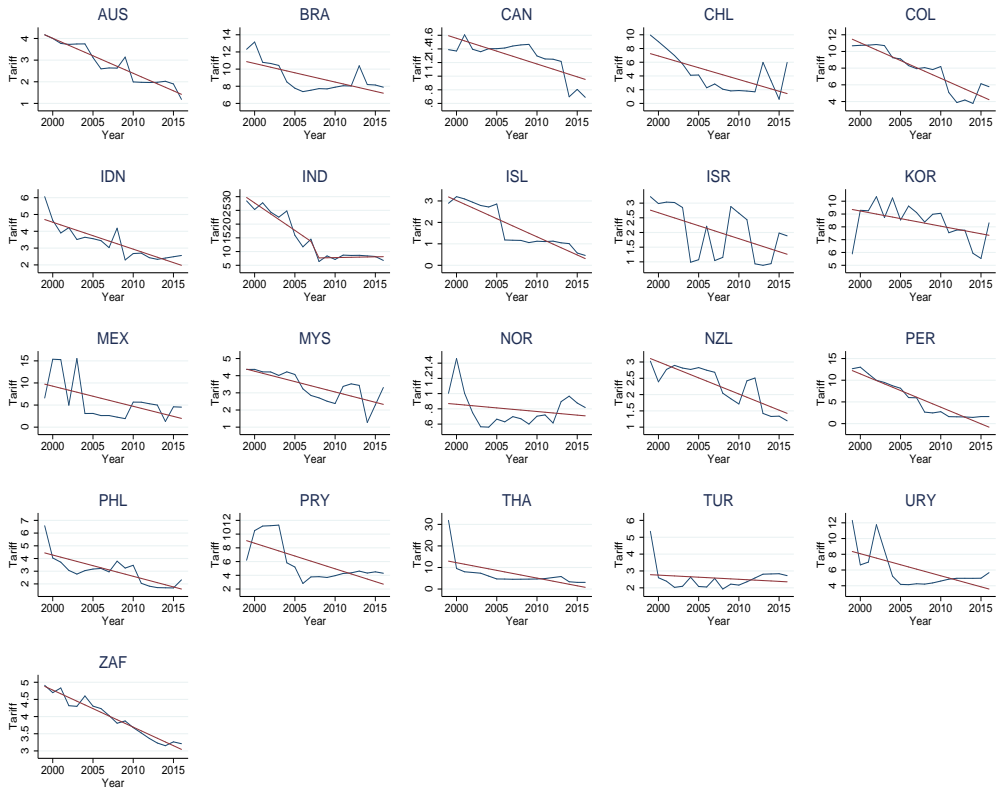


Figure 8: Weighted average of applied tariffs, 1999-2016.

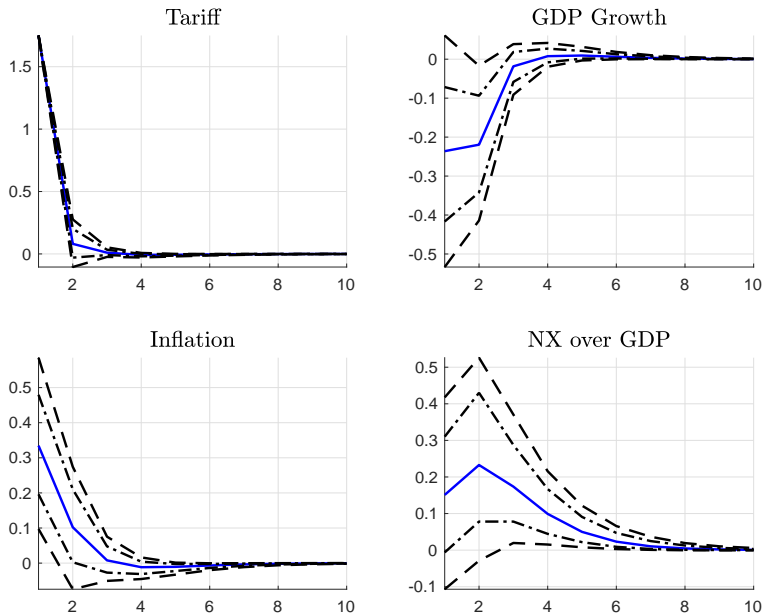


Figure 9, Panel A: Panel-VAR, impulse responses to a one-standard deviation increase in detrended tariffs. Tariffs, GDP growth, and net exports over GDP are in percentage points.

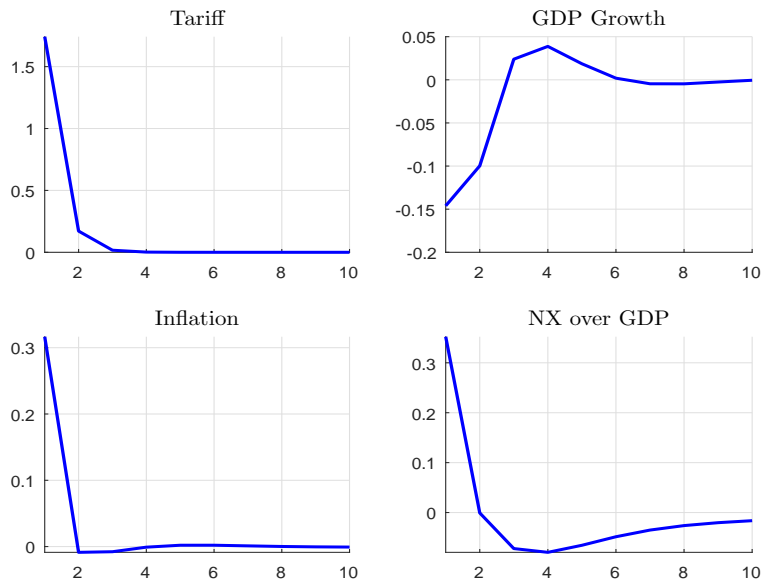


Figure 9, Panel B: Model-implied, annualized impulse responses to a tariff increase. The tariff shock matches size and persistence of the equivalent shock in the panel VAR (Figure 9A). Tariffs, GDP growth, and net exports over GDP are in percentage points.

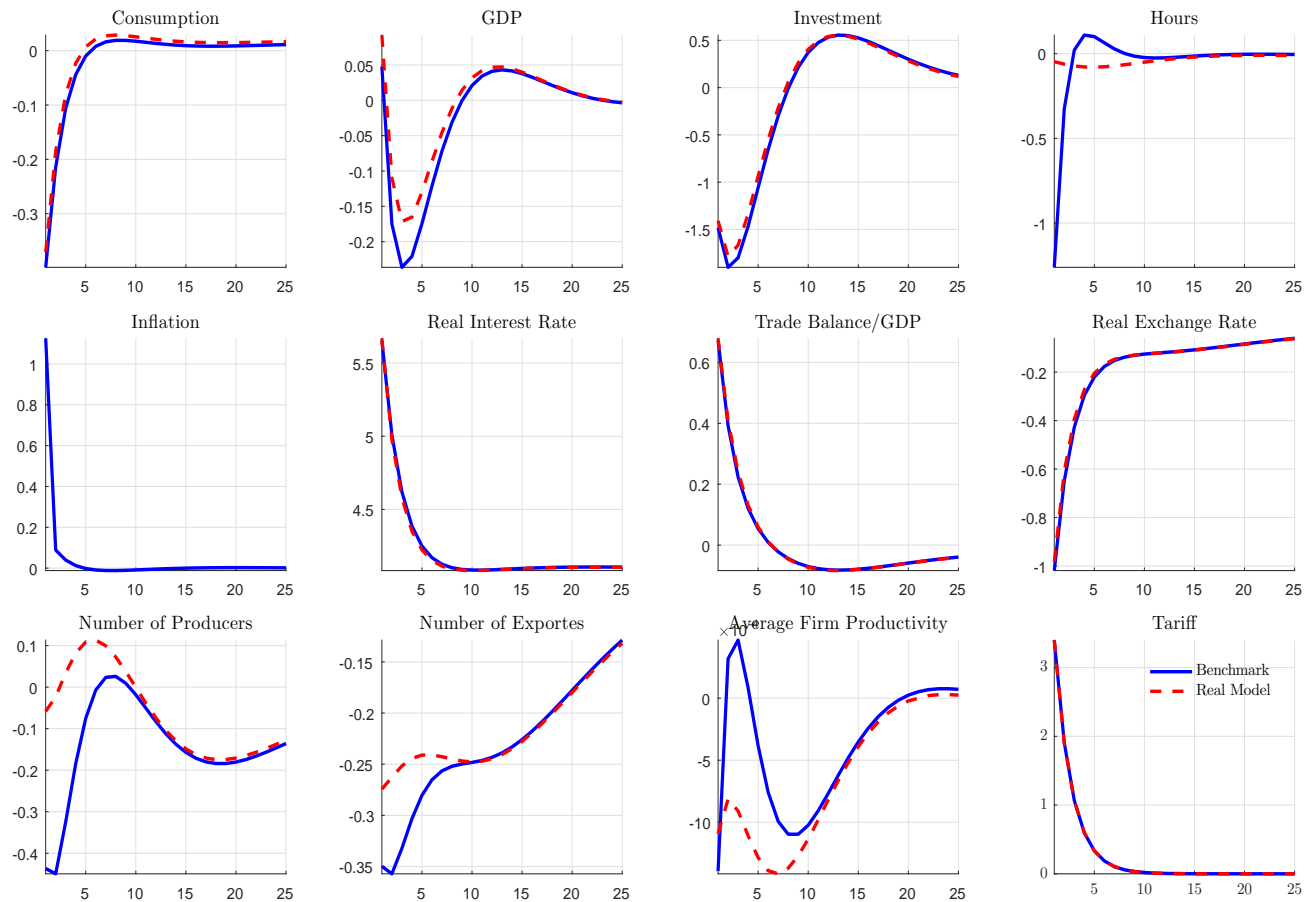


Figure 10: Responses to a temporary increase in Home trade barriers in normal times, benchmark model (continuous lines) and an alternative version without nominal rigidities (dashed lines). Responses show percentage deviations from the steady state. The inflation rate is annualized.

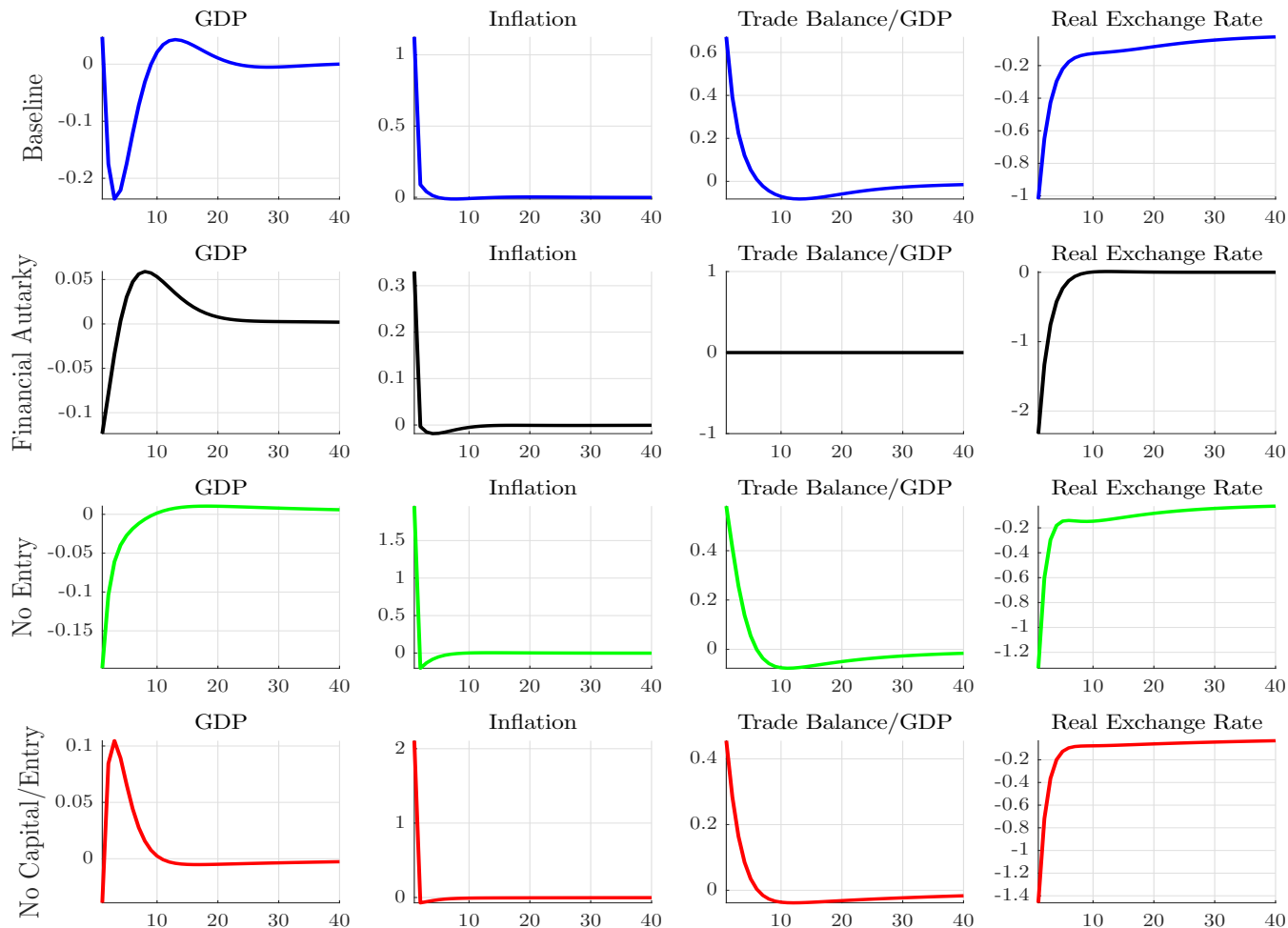
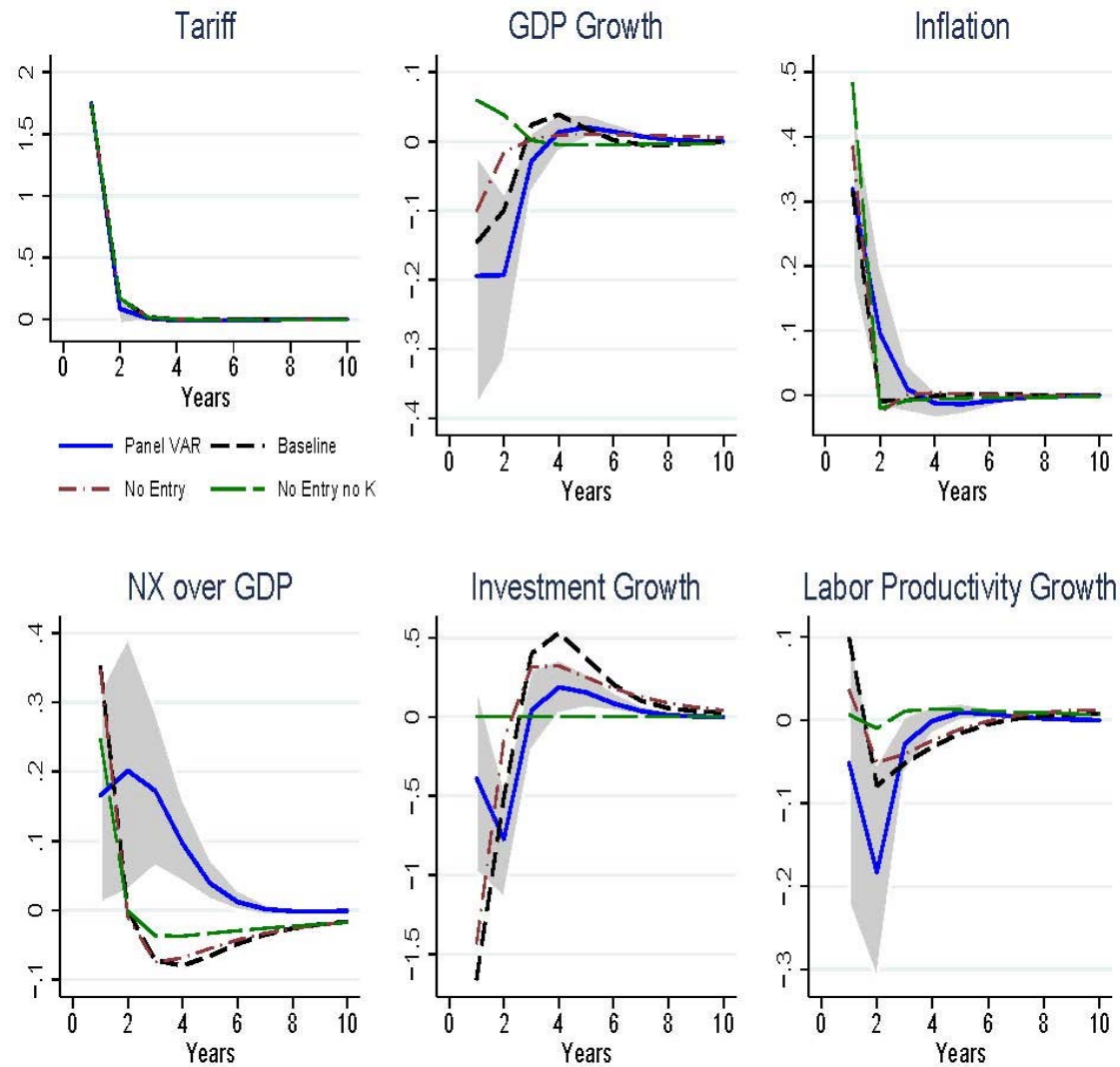


Figure 11: Responses to a temporary increase in Home tariffs in normal times, flexible exchange rate. The top row: baseline model; second row: baseline model under financial autarky; third row: baseline model without firm dynamics; fourth row: baseline model without firm dynamics and physical capital accumulation. Responses show percentage deviations from the steady state. The inflation rate is annualized.

Model versus Data



Conclusion

- Policy bottom line: Protectionism remains a bad idea, even when it is temporary, even when there is no retaliation, and even when the economy is in a liquidity trap or operating under a fixed exchange rate regime.
- Key to replicate and explain the effects of protectionism found in the data: inclusion of investment in physical capital and micro-level dynamics in the model.