Tipping the balance: Do freer imports lead to fewer exports?

By Holger Breinlich, Elsa Leromain, Dennis Novy and Thomas Sampson

Reducing restrictions on imports (import liberalisation) can bring down input costs and increase competition. But increased competition can shrink the scale of domestic production and in some cases reduce productivity, leading to fewer exports. Does import liberalisation therefore lead to export destruction? We look at evidence from US trade relations with China.

In 2001, the permanent normalisation of US trade relations with China (PNTR) granted China 'most favoured nation' status on a permanent basis. It removed the threat of higher tariffs on Chinese imports, which had been a significant factor in discouraging Chinese exporters from entering the US market (Handley and Limão, 2013 and 2017). What was the effect of this import liberalisation on US exports?

Today, economists tend to agree that import liberalisation brings great advantages, reducing input costs (the costs incurred to produce goods or services) and exposing domestic firms to the rigours of international competition. ▶

Economic theory, however, points to potential negative impacts. The work of Nobel economist Paul Krugman (1984), for example, suggests that at the industry level import competition can reduce domestic output and increase production costs, making domestic firms less competitive not only at home but also abroad. This is because production is subject to economies of scale, meaning that average production costs rise as output decreases.

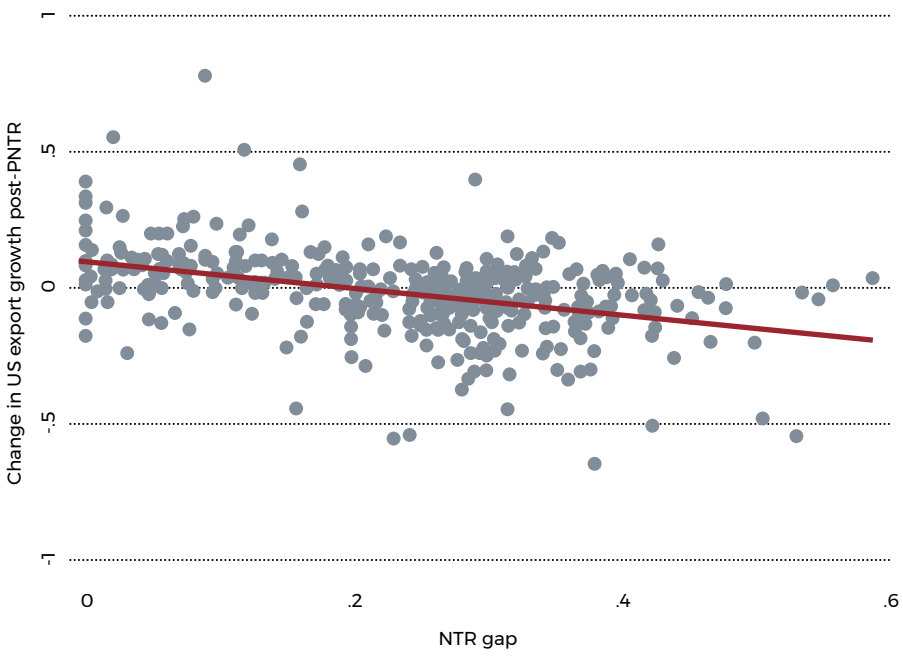
What happened to US exports after imports from China were liberalised? To find out, we study US export growth across goods industries with different exposure to PNTR (Breinlich et al., 2022). We measure exposure using the so-called 'NTR gap' — the tariff increase Chinese imports would have faced if the US had revoked China's 'most favoured nation' status. We interpret the removal of this threat (PNTR) as an effective trade liberalisation for Chinese imports.

US export growth declined in some industries

We find that US export growth declined in industries with higher NTR gaps (i.e., industries more exposed to Chinese import liberalisation) (Figure 1). This finding holds even when we use a more sophisticated regression analysis that controls for other factors potentially influencing US exports to third markets, such as demand growth in destination countries and global technology shocks.

The results suggest that US production features industry-level economies of scale. The data support Krugman's hypothesis that increased competition driven by import liberalisation can shrink domestic output, making it more expensive for industries to produce their goods. This in turn reduces how much they can export.

Figure 1: After PNTR, US export growth weakened in industries with higher exposure to import liberalisation



Notes: Change in US export growth post-PNTR is defined as the annualised change in log total exports between 2000 and 2007 minus the annualised change between 1995 and 2000. Each dot represents one industry. The solid line shows the fitted relationship from a linear regression.

However, at the same time we find that PNTR had a positive impact on US exports by reducing the costs of imported inputs used by US exporters (e.g., raw materials or semi-finished goods). This positive impact served to offset the negative impact caused by greater Chinese import competition but to a varying degree across industries. Overall, our estimates show that the net effect ranges between -24% (cigarette manufacturing) and +38% (ice manufacturing).

Reduced input costs and increased foreign demand boosted exports

We also need to account for general equilibrium effects, for example the fact that PNTR provided a boost to the Chinese economy and generated more demand for US exports. We use a state-of-the-art quantitative trade model with scale economies. We find that the overall effect of PNTR on US exports was positive. Increased foreign demand for goods, when combined with the reduction in imported input costs, was enough to offset the negative effects of import competition.

"The real market potential effect is negative in almost all sectors, consistent with Krugman's theory that increased competition has a negative impact on industry exports."

+3.6% **INCREASE IN TOTAL US EXPORTS (RELATIVE TO GDP) DUE TO THE PNTR-INDUCED LIBERALISATION**

In fact, we find that total US exports (relative to GDP) increased by 3.6% and exports rose in 13 out of 15 goods sectors due to the PNTR-induced liberalisation.

Figure 2 breaks down the impact of PNTR on exports in different sectors, measuring the real market potential effect (which captures the increase in import competition and reduction in scale), the input cost effect and the foreign demand effect.

The real market potential effect is negative in almost all sectors, consistent with Krugman's theory that increased competition has a negative impact on industry exports.

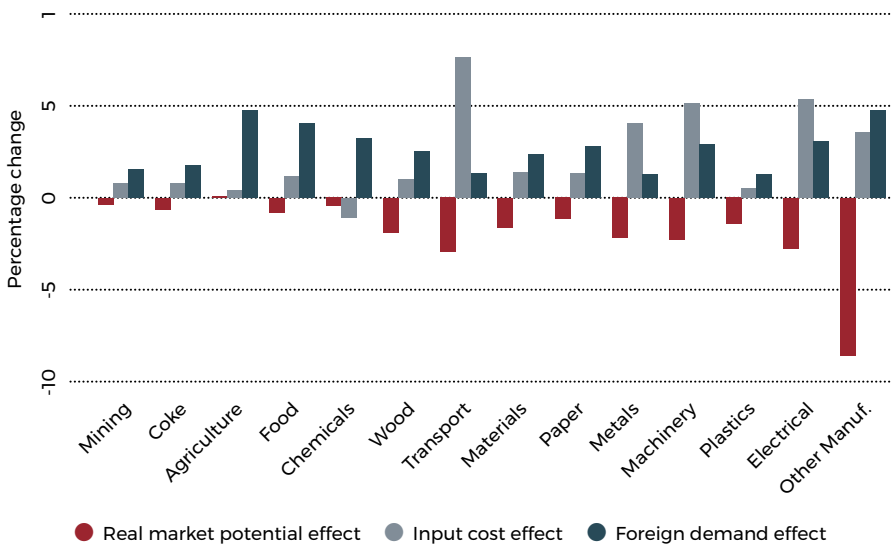
In most sectors, however, the positive effect of reduced input costs outweighs this negative effect — either on its own or when taken together with the positive effect of increased foreign demand.

US exports rose overall

Paul Krugman's idea that import protection might act as export promotion and, conversely, that import liberalisation might reduce exports, holds true in our data. But this is only part of the story. While Krugman was right that because of scale economies import liberalisation reduces exports through a decline in domestic output, liberalisation also raises exports by allowing firms to import cheaper inputs and by increasing foreign demand.

Taking all effects into account in general equilibrium, we find that the permanent normalisation of US trade relations with China boosted overall US exports, even though export growth was lower in more exposed sectors. ◀

Figure 2: The negative effects of PNTR on real market potential are offset by reduced input costs and increased foreign demand



Notes: Breakdown of simulated sectoral changes in exports due to PNTR into a real market potential (or import competition) effect, an input cost effect and a foreign demand effect. Sectors ordered with NTR gap increasing from left to right. Goods sectors only. Textiles and Leather not shown.

About the authors

Holger Breinlich is Professor of Economics at the University of Surrey. **Elsa Leromain** is Postdoctoral Researcher at UC Louvain, Belgium. **Dennis Novy** is Professor of Economics at the University of Warwick and CAGE Impact Director. **Thomas Sampson** is Associate Professor at the London School of Economics.

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References

Handley, K. and Limão, N. (2013). Does Policy Uncertainty Reduce Economic Activity? Insights and Evidence from Large Trade Reforms. VoxEU. [Accessed 30 August 2022].

Handley, K. and Limão, N. (2017). Policy Uncertainty, Trade, and Welfare: Theory and Evidence for China and the United States, *American Economic Review* 107(9): 2731–2783.

Krugman, P. (1984). Import Protection and Export Promotion: International Competition in the Presence of Oligopoly and Economies of Scale. In: Kierzkowski, H. (Ed.), *Monopolistic Competition and International Trade*. Oxford: Clarendon Press, 180–193.