

# Effect of Non-Tariff Measures on the extensive and intensive margins of agrifood trade from Least Developed Countries to the High-Income Countries

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## Objective

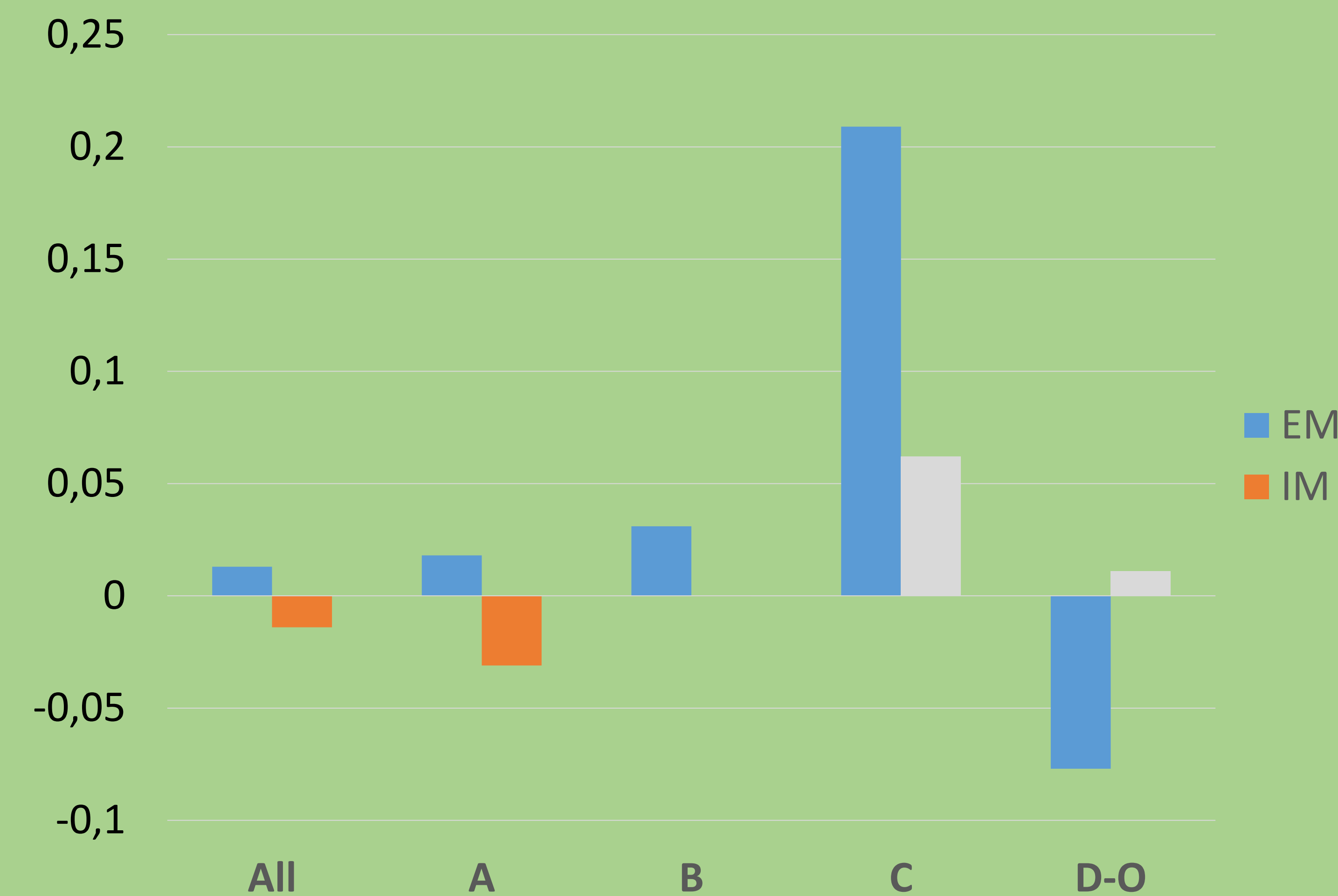
To disentangle the fixed (**extensive margin**) and variable costs (**intensive margin**) induced by NTMs, focusing on the agrifood trade from Least Developed Countries (LDC) to high income countries.

- NTMs can impose **additional costs** on exporters that could raise fixed and variable cost of firms reducing trade in terms of number of products exported (extensive margin) or value of trade (intensive margin).
- Special relevance for **developing countries**: market share and export diversification.

## Data

- **43 LD exporters** and **64 high-income importers** for the period **2010-2019**, considering all agrifood **HS-6** digit sectors.
- **Sources**: UNCTAD-Trains database (NTMs and tariffs), UN Comtrade (bilateral trade flows), and CEPII (gravity variables).

## Results



- ❖ Positive impact of NTMs on the EM for all NTMs and technical measures (quality and safety). Negative for non-technical measures (protectionism).
- ❖ Negative impact of NTMs on the IM for all NTMs and SPS measures (trade diversion).
- ❖ Negative effect of tariffs on EM and IM, and gravity variables with the expected sign.

## Methodology

Approach proposed by **Feenstra and Kee (2008)**:

- **EM**: weighted count of exporter  $j$ 's categories in year  $t$ , relative to the average world categories exported to  $i$  over the whole period considered.
- **IM**: measures the market share of country  $j$ 's within the set of categories exported to  $i$ .

**Gravity model estimated using PPML:**

$$M_{ijk,t} = \beta_0 + \beta_1 NTM_{ijk,t} + \beta_2 \ln(1 + Adv_{ijk,t}) + \mu_{ijk,t}$$

- **NTM**: count variable for the number of different 4-digit NTM categories applied for industry  $k$  by country  $i$  to country  $j$  in year  $t$ .
- Importer-exporter-time, exporter-time, importer-time, industry-time and time fixed effects → **Multilateral resistance terms** and control for the potential **endogeneity** of NTM regulations, reverse causality in particular (Yotov, 2016).
- **Robustness**: multilateral resistance terms substituted by traditional gravity variables.

### References

- Feenstra, R. and Kee, H.L. (2008). Export variety and country productivity: Estimating the monopolistic competition model with endogenous productivity. *Journal of International Economics* 74: 500-518.
- Yotov Y.V., Piermartini R., Monteiro J.A., Larch M. (2016). An advanced guide to trade policy analysis: the structural gravity model. New York: UN-WTO.