

Impact of Global Value Chains on Tariffs and Non-Tariff Measures in Agriculture and Food

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HIGHLIGHTS

- Global Value Chains (GVCs) integration reduces trade barriers in the agricultural and food sectors.
- Domestic and foreign value-added measures of GVC integration correlate with lower tariffs and non-tariff measures (NTMs).
- The impact of GVCs on tariffs is more significant outside of regional trade agreements (RTAs).
- GVC integration impacts trade policy through political economy mechanisms, influencing lobbying and government incentives.

Industries' participation in GVCs increase industry incentives to lobby governments to reduce tariffs (Blanchard et al., 2021) . When domestic industries supply inputs to foreign ones, imposing tariffs on foreign producers' final products hurts domestic industries. When foreign industries provide inputs to domestic ones, protecting domestic industries against import competition benefits foreign input producers as well.

This contribution shows that Global Value Chain (GVC) integration significantly reduces trade barriers in the agricultural and food sectors by influencing tariffs and non-tariff measures, as predicted by Blanchard, Bown, and Johnson (2021) model.

INTRODUCTION

Global Value Chains (GVCs) have grown significantly, affecting the integration of industries into international markets and influencing trade policies. While government policies, particularly trade policies, have historically impacted GVC integration, recent studies suggest a bidirectional relationship. Theoretical models indicate that industries' participation in GVCs affects the lobbying for and implementation of trade policies, particularly tariffs. This study aims to empirically test these theoretical predictions within the agricultural and food sectors, focusing on the period from 1995 to 2015 across 160 countries.

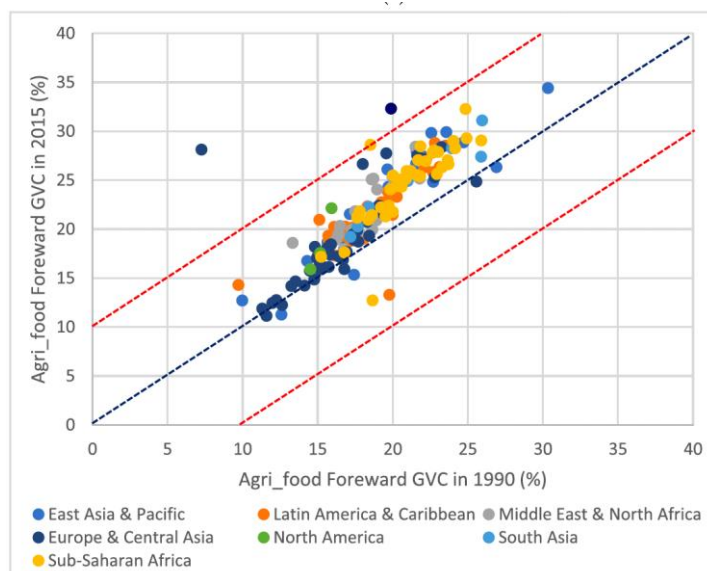


Fig. 1. Evolution of Forward GVC share over trading partners.

DATA AND METHOD

This study employs a dataset spanning from 1995 to 2015, covering 160 countries. The data includes measures of GVC integration, tariffs, and non-tariff measures (NTMs) within the agricultural and food sectors. GVC integration is measured using domestic value-added (DVA) in foreign final goods and foreign value-added (FVA) in domestic final goods.

The empirical analysis uses various econometric models, including Ordinary Least Squares (OLS) and Instrumental Variables (IV) regressions, to test the impact of GVC integration on trade policy. The study also differentiates between the effects within and outside regional trade agreements (RTAs).

To test the impact of domestic (and foreign) value added on tariffs and NTMs, variants of the following general model has been used:

$$t_{xjt}^i = \beta_1 \ln(DVA_{xit}^j) + \beta_2 \ln(FVA_{xit}^j) + X_{xit} + v_{xijt},$$

where the dependent variable t_{xjt}^i is, alternatively, tariffs or the NTM bilateral index; X_{xit} is a vector of controls, including fixed effect, gravity and RTAs controls. The right-hand side variables of interest are DVA and FVA , with coefficient sign prediction $\beta_1 < 0$ and $\beta_2 < 0$.

MAIN RESULTS

- 1. Tariffs and Forward GVC Integration:** The study finds a significant negative relationship between tariffs and forward GVC integration. Countries with higher domestic value-added in foreign final goods tend to impose lower tariffs.
- 2. Tariffs and Backward GVC Integration:** Similar to forward integration, backward GVC integration (foreign value-added in domestic final goods) is associated with lower tariffs.
- 3. Non-Tariff Measures (NTMs) and GVC Integration:** Both forward and backward GVC linkages reduce restrictive NTMs. This effect is consistent both inside and outside RTAs.
- 4. Regional Trade Agreements (RTAs):** The impact of GVC integration on tariffs is more pronounced outside RTAs, suggesting that RTAs might already incorporate mechanisms that reduce the need for tariff adjustments based on GVC participation.

POLICY RECOMMENDATIONS

- 1. Enhancing GVC Participation:** Policymakers should encourage deeper integration into GVCs for agricultural and food industries, through investment in infrastructure, technology, and education to increase domestic value-added in global supply chains.
- 2. Reducing Trade Barriers:** Given the evidence that GVC participation lowers tariffs and NTMs, governments should consider reducing trade barriers to facilitate smoother integration into GVCs. This includes simplifying customs procedures.
- 3. Strengthening Regional Cooperation:** While the impact of GVCs on tariffs is more significant outside RTAs, there is a need to enhance the effectiveness of RTAs in reducing trade barriers. Policymakers should work on harmonizing standards and regulations within RTAs to maximize the benefits of GVC participation.
- 4. Supporting Domestic Industries:** Governments should support domestic industries that contribute to GVCs providing subsidies, tax incentives, and other support to enhance their competitiveness and integration into global markets.