Policy Note: The Effect of Product Standards on Agricultural Exports from Developing Countries

By: Esteban Ferro, John S. Wilson and Tsunehiro Otsuki

The following policy note regards new research from the World Bank Development Economics Research Group – Trade and International Integration (DEC-TI) on the impact of product standards on the agricultural exports of developing countries. The research addresses the question: what are the implications for developing country exports when their export markets impose more restrictive import standards on agricultural goods? The research suggests that more restrictive standards in export markets have a significant impact on whether a country exports to that market, likely owing to higher fixed costs of standards compliance. This can have particularly serious implications for exporting SMEs. These findings should advise policymakers in developing countries as they develop trade and export competitiveness strategies.

Key Findings:

- There is a positive correlation between a country’s income and the restrictiveness of its import standards on agriculture goods. As countries grow wealthier, on average, they tend to increase the number or intensity of their standards for food and agriculture imports.
- More restrictive food safety standards (as determined by the number and intensity of standards) have a statistically significant and negative impact on the probability that two countries will trade in agricultural goods.
- We do not observe an impact of more restrictive standards on the intensive margin of trade. This suggests that meeting more stringent standards increases primarily the fixed costs of exporting. But once firms enter that market, the standards do not have a negative impact on the level of exports.
- There is a greater marginal effect of increased standards restrictiveness in the BRICS (Brazil, Russia, India, China and South Africa) on the exports of other countries into those markets. Though, on balance, standards restrictiveness in the BRICS remains lower than in high-income countries.

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1 John S. Wilson is Lead Economist and Esteban Ferro is a consultant in the World Bank Development Economics Research Group; Tsunehiro Otsuki is a professor at Osaka School of International Public Policy, Osaka University
2 For more information on this research, how it may impact your country programs, or to access the dataset, contact John S. Wilson (jswilson@worldbank.org) or Esteban Ferro (eferro@worldbank.org).
3 This policy note was written and prepared by Bruce Thomson, consultant, World Bank Development Economics Research Group – Trade and International Integration
4 The research was conducted with the support of the Bank-Netherlands Partnership Program (BNPP).
Exports from low-income countries are particularly vulnerable to the impacts of stricter standards on their agriculture exports. This is likely because their domestic standards are less strict than the standards in their export markets, increasing the cost of compliance for exporting firms.

Policy & Operational Implications:

Food and agriculture exporters risk being excluded from important overseas markets if those markets impose stricter import standards on agricultural goods. Health and safety considerations are most often the rationale behind the stricter standards – as consumers become wealthier, they can be more selective in the foods they choose to consume and look to their governments to regulate the quality of goods entering the country. Therefore, the lack of capacity in developing countries to meet and/or properly verify compliance with international food safety standards may significantly impact export competitiveness and disadvantage local firms looking to expand into overseas markets – particularly SMEs.

From a policy and program perspective, we recommend three primary areas of focus:

1) **Supporting Production and Processing Methods**: Emphasis should be given to supporting domestic agriculture and food producers in their efforts to produce and process foods in ways that meet international standards. In particular, small exporters are more likely to be hurt by higher fixed costs of standards compliance, but in addition, SMEs which feed into larger exporters (and thus, are indirect exporters) also face risks due to higher standards. Therefore, policymakers should lend particular focus to SMEs to help mitigate the added costs of compliance and encourage more inclusive growth.

2) **Building Institutional and Technical Capacity**: Governments and domestic regulatory and standards bodies must build the institutional and technical capacity to properly test and confirm compliance with international standards in ways that meet international norms.

3) **Harmonizing Domestic Standards**: Harmonizing domestic food standards to international norms can significantly help exporters of food and agriculture products. Internationally harmonized standards can have a tremendous “signaling effect,” indicating to overseas markets that goods exported from the country of origin can and will meet their import standards. This improves the likelihood that overseas buyers will consider making purchases from these markets.

Research Overview & Summary:

In order to examine the impacts of more restrictive standards on agriculture exports from developing countries, the authors first develop a new “standards restrictiveness index” based on 1) an importing country’s number of standards imposed on agriculture imports and 2) the intensity of those standards. This analysis draws from a database of standards regulating the maximum residue levels (MRLs) of pesticides allowed for the import of 243 different agricultural products. The database covers 61 different importing countries.

This data allows the authors to develop a separate measure of import standards restrictiveness for each of the importing countries that corresponds to the number of standards that regulate
the import of agriculture goods as well as the intensity of those standards (i.e. a higher MRL is indicative of a lower restrictiveness; or put another way, higher MRLs allow products with higher pesticide levels to be imported).

Overall, it is clear that higher incomes are associated with more restrictive food and agriculture import standards. This is an intuitive result given that it would be expected that in wealthier countries, consumers can be more sensitive to the quality of food they consume and thus demand that their governments more closely regulate imported foods.

Furthermore, as the BRICS countries are viewed as critical growing markets for exports from developing countries, the authors analyze separately trends in standards regulations for this bloc relative to high-income importing countries. The analysis shows that while BRICS overall remain less restrictive than non-BRICS, these large emerging markets are becoming increasingly more restrictive. This has important implications for developing countries looking to export into the BRICS. As their import restrictions increase, exporters from countries that cannot verify compliance with the import standards in BRICS markets risk being excluded entirely.

Having established the standards restrictiveness index for importing countries, the authors combine the standards data with international trade data in order to conduct a regression analysis based on the gravity model to determine the effect of import standards on trade flows.

What the analysis finds is that standards in the importing country are important determinants of whether or not a firm exports to the destination. In other words, standards have a negative effect on the extensive margin of trade. However, the analysis also reveals no impact to the intensive margin of trade – which is to say that standards do not appear to affect the level of trade with a country once a firm has entered that market. These findings are consistent with the view that standards compliance imposes a fixed cost to firms looking to export, keeping some firms out of the market. But once those fixed costs are overcome, trade is no longer impacted.

Finally, the authors analyze the impact of importer product standards on exports by country income group (low, lower-middle, higher-middle and high income). Results indicate that exports from low income countries are more negatively affected by product standards than those from higher income countries. In other words, the research suggests more restrictive import standards particularly disadvantage firms in developing countries which may not have the capacity to meet international standards or face higher costs associated with compliance. This may in part be because producers in developing countries may face less restrictive regulations in their domestic market, and thus, adapting production to meet stricter foreign standards will likely be more expensive in lower income countries. The results may also be a function of the domestic institutions and/or standards bodies’ technical capacity to test and verify international standards compliance.