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TRADE LIBERALIZATION IN ENVIRONMENTAL PRODUCTS: WHAT IS AT STAKE FOR ARGENTINA?

CONTEXT

The 2001 Doha Ministerial Declaration singled out trade liberalization of environmental goods and services (EGSs) as a way to achieve sustainable development by creating a triple-win situation for trade, development, and the environment. Several questions have been raised in this context about the definition of EGSs, approaches to negotiation and modalities of trade liberalization, and special and differentiated treatment for developing countries. Various members of the World Trade Organization have submitted their negotiation proposals to the Committee on Trade and Environment in Special Session (CTESS). However, none of the proposals has reached a consensus due to conflicting interests among the negotiating parties and because the countries involved argue that the proposals are far from meeting the triple-win objective.

Most of the proposals submitted follow the list approach, which consists of identifying sets of products, based on the Harmonized System classification, to be considered as EGSs. Consequently, our study focuses on evaluating the multilateral liberalization of trade in EGSs through the elimination of tariffs according to the four main EGS lists under discussion. These include the lists submitted by Japan, Asia-Pacific Economic Cooperation (APEC), the Organisation for Economic Co-operation and Development (OECD), and the United Nations Conference on Trade and Development (UNCTAD). These lists mainly reflect the export interests of developed countries in non-agricultural trade, with the exception of the UNCTAD list, which includes some agricultural products that fall under the definition of environmentally preferable products.

These four EGS lists would have different effects on Argentina. Depending on the list, adoption could boost Argentina's exports of products in which it has a comparative advantage, as well as make imported goods cheaper for domestic consumption. None of the lists entirely covers the EGSs of import and export interest to Argentina. It is therefore important to assess the benefits of each of them to understand which ones would be more beneficial for the country. How would each of the lists affect Argentina's trade? What would be the welfare gains generated by the lists, and how would those gains be distributed across different groups of households? What would be the environmental consequences globally and for Argentina of each of these lists? In this context, the aim of our study is to provide an analysis that could be used by the government in the EGS negotiations at the World Trade Organization.

METHODOLOGY AND DATA

The trade, welfare, and environmental assessment of trade liberalization (tariff cuts) under four scenarios (one for each EGS list above) is undertaken using a two-step methodology that combines a recursive-dynamic, multi-region computable general equilibrium (CGE) model and a micro-simulation model. The advantage of CGE models is that they capture not only the direct but also the indirect effects of an economic shock or a government policy.

The first step simulates the four scenarios with the MIRAGE-e CGE model (Fontagné *et al.*, 2013) that provides changes in macroeconomic, environmental, and sector variables in Argentina and also other regions resulting from EGS trade liberalization. Given that the CGE model only considers one representative household for each region, the welfare impact is measured at an aggregated level.

Therefore, in the second step, the changes in consumer prices and wages simulated in the CGE model are transmitted to the micro-simulation model to analyse the welfare impact across different groups of households. The micro-simulation model accounts for heterogeneity in household consumption patterns (the types of goods they buy) and labour endowments (skilled or unskilled labour). These differences determine the effect of changes in consumer prices and wages resulting from EGS trade liberalization on the welfare of each household.

The analysis uses the Global Social Account Matrix from the Global Trade Analysis Project (GTAP – Version 7.1) and the MacMap-HS6 dataset for the CGE model; and Argentina's 1996–1997 National Survey of Household Expenditures for the microsimulation model.

FINDINGS

Two time horizons are considered in the study: the medium term (up to year 2020) and the long term (up to year 2030). The results are expressed as percentage changes with respect to the baseline scenario that assumes no trade liberalization for both time horizons.

The study finds that Argentina's total trade increases under all the scenarios. The highest

increase is found under the Japanese list, for which volumes of exports and imports increase by 0.63 and 0.40 per cent, respectively, in the medium term, and by 1.20 and 0.74 per cent, respectively, in the long term. This increase is even higher if we only look at trade between Argentina and Japan, Switzerland, and Norway: exports increase by more than 4 per cent and imports by more than 10 per cent in the long term.

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Conversely, trade with Brazil falls considerably – about 8 per cent for both exports and imports – in the long term. The second largest trade impact is found in the UNCTAD list scenario, under which exports to China and Hong Kong, China, grow by 4.56 per cent and exports to India increase by 14.21 per cent. At a disaggregated level, Argentina's exports under this list increase only for clothing and food and beverages. However, under the Japanese list, Argentina's exports increase for all goods categories except transport, communication, and housing. The OECD and the APEC scenarios result in rather small changes in the growth of trade for Argentina.

The CGE model also reports changes in wages and consumer prices, which are subsequently used for the welfare analysis in the microsimulation model. Wages of both skilled and unskilled workers increase in almost all scenarios and time horizons, indicating that the wage effect on welfare will be positive for all households. The only exceptions are the APEC and OECD lists in the medium term. The highest increases in wages are found in the Japanese list, under which skilled and unskilled wages increase, respectively, by 0.048 and 0.045 per cent in the medium term and by 0.16 and 0.13 per cent in the long term. Consumer prices decrease for both time horizons under the APEC, Japanese, and OECD scenarios. For the UNCTAD scenario, all prices increase except those for clothing in the long term. Once again, the reported results show that the highest changes are associated with EGS liberalization following the Japanese list.

Findings from the microsimulation model show that the highest welfare gains for all households take place under the Japanese scenario. The welfare distribution is pro-rich because the increase in wages is higher for skilled than for unskilled workers. The UNCTAD scenario produces an overall negative effect on welfare for all households. This can be explained by the fact that the positive and pro-poor wage effect is not high enough to offset the negative consumption effect due to rising consumer prices. Finally, the OECD and APEC scenarios result in small increases in welfare through both the wage and consumption effects, and exhibit neither a clear pro-rich nor pro-poor pattern.

Concerning the environmental results, CO₂ emissions caused in the long term by fossil energy consumption vary across regions and according to the EGS list considered. Nevertheless, reductions in emissions in some regions do not offset the increase in emissions in other regions. Consequently, global CO₂ emissions increase under all four EGS lists, ranging from 0.01 per cent under the APEC and UNCTAD lists to 0.14 per cent under the Japanese list. For Argentina, CO₂ emissions also differ across scenarios. They increase under the Japanese and APEC lists, but fall under the OECD and UNCTAD lists, with the UNCTAD list representing the least environmentally harmful scenario.

POLICY RECOMMENDATIONS

Although eliminating trade protection within the framework of any of the EGS lists does not guarantee achievement of the triple-win objective, it is possible to conclude that the Japanese list results in the highest welfare gains, and that the UNCTAD list produces the lowest environmental impact for Argentina.

The impact of EGS trade liberalization following the list approach could be enhanced by applying special and differentiated treatment provisions for developing countries. For instance, greater gains for welfare, trade, and the environment could be achieved through differentiated tariff cut modalities that take into account each country's development needs. In addition, a mechanism to transfer technology to developing countries seems necessary to ensure more balanced opportunities from EGS liberalization between developed and developing countries. A multilateral agreement on EGS trade liberalization could follow these recommendations, which are also contained in the proposal submitted by Argentina.

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