

POTENTIAL EFFECTS OF TRADE LIBERALIZATION ON CHINA'S IMPORTS OF PLASTICS FROM THE GCC

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Overview

Bilateral trade between the Gulf Cooperation Council (GCC) countries and China has been expanding rapidly since the turn of the century. In 2016, China accounted for 12 percent of the GCC's imports, which made it the largest exporter to the region. The GCC countries also heavily rely on China as one of their major exports markets. Still dominated by fuels, their exports to China are becoming increasingly diversified as the GCC producers strive to convert parts of their vast petroleum reserves into higher value added products. In particular, plastics currently amount to about 7 percent of total GCC's exports to China, or to 30 percent of non-energy exports.

Developing trade and investment ties between the GCC and China called for institutional arrangements beyond the WTO framework to further enhance economic cooperation. The Free Trade Agreement (FTA) negotiations had been launched as early as 2004 and after several years of suspension resumed again in 2015. One of the major stumbling blocks in the negotiation process has, reportedly, been the issue of liberalizing petrochemical trade. Protecting its domestic producers, China proved to be reluctant to set forth significant concessions on import duties. Conversely, the GCC countries sought the preferential trade regime, since the development of their petrochemical industry has been primarily driven by exports and China represented a major global demand destination.

As the parties are progressing towards finalizing the FTA negotiations, understanding the potential effect that various liberalization scenarios for the petrochemicals trade can have on the major stakeholders can facilitate this process. This study aims to assess such effects by accomplishing the following steps:

First, we estimate the impact of tariff reduction and elimination of non-tariff barriers on the bilateral trade flows of three major plastics, classified according to the 6-digit HS 2012 code:

- 390110 – Polyethylene with a specific gravity of less than 0.94 (including LDPE and LLDPE – together referred to as LDPES);
- 390120 – Polyethylene with a specific gravity of 0.94 or more (HDPE);
- 390210 – Polypropylene (PP).

Second, we assess the consequences for the parties involved:

- Opportunities for the GCC exporters (as a block and by country);
- Net welfare gains for China and impact on its consumers and domestic producers.

Finally, we evaluate the feasibility of trade liberalization scenarios based on the market developments and estimated impact on key stakeholders.

Methods

We developed and estimated a dual stage model of import demand functions and applied it to the products in focus to quantify the trade creation and trade diversion effects that occur as a consequence of trade liberalization.

Following the existing literature, we derive import demand from a standard optimization framework, *where* imports are driven by activity variables and price variables.

In the first stage, we model total product quantities imported by China from the world. In the second stage, we model the allocation of import flows among competing exporters: the GCC and the rest of the world. The estimation is carried using two separate regressions for import demand and import substitution equations and then a simulation model is constructed with both equations running at the annual level. This design allows to estimate import demand and import substitution price elasticities and simulate alternative tariff reduction scenarios.

Results

We find that the price sensitivities of the total Chinese imports and of their structural composition differ significantly across the products. The coefficients for import demand elasticity, which drives the trade creation effect, range from -0.29 for PP to -1.19 for HDPE. The dispersion of import substitution elasticities, which define trade diversion, is less pronounced with the smallest coefficient of -0.86 recorded for PP and the largest (-1.41) – for LDPEs.

A preferential trade regime would have a significant impact on bilateral trade in plastics resulting in benefits to both parties. Elimination of import duties would lead to a 410 million USD incremental annual imports from the GCC, while Chinese consumers would benefit from the trade creation effect (estimated at 242 million USD) and net welfare gains of 6.3 million USD.

Within an FTA framework, elimination or significant reduction of import tariffs would be the most effective tool to increase the trade flows of the products in focus. Non-tariff barriers do not present a significant impediment to competitiveness of imports on the Chinese plastics market.

Estimated effects from trade liberalization vary significantly across the products (tariff lines). Polyethylene imports from the GCC to China can rise by over 11 percent leading to the 1.3 – 3.2 percent total increase in Chinese imports (depending on the product specification). Chinese polypropylene producers are more competitive: increase in total imports is expected to be within 0.5 percent, while incremental imports of 6.5 percent from the GCC would primarily be driven by substitution of other imports. Therefore, the distribution of potential exports gains between the GCC members depends on their capacity and export structure.

Conclusions

A preferential tariff regime would have a significant impact on petrochemical trade between the GCC and China. Over half of these potential gains can be attained in the HDPE (HS Code 390120) segment due to the demonstrated high sensitivity of its import volumes to price. The main beneficiaries of such arrangements among the GCC members would be Saudi Arabia and the UAE. Chinese consumers would also benefit from the trade creation effect enabling them to purchase from more cost-efficient producers, as well as from the implicit transfer of tariff revenues from the government.

The current state of the global petrochemical market and the supply-demand dynamics of plastics in the GCC and China attribute to feasibility of such scenario. China's demand for PE and PP remains strong and reliant on imports, whereas the GCC countries are capable of increasing their exports to China. However, the window of opportunity for the GCC to expand its presence on the Chinese plastics market may be closing in the medium- to long-term due to projected notable production capacity build up in the US, China's relentless drive to achieve self-sufficiency and its developing partnerships with the existing and potential producers under the Belt and Road initiative.

The main impediment to liberalizing bilateral trade in plastics is not dictated by the market conjuncture and lies in China's intent to protect its domestic producers – the only major stakeholder who could potentially be disadvantaged by such arrangement. Reciprocal elimination of the GCC's import tariffs on Chinese products made from primary plastics (i.e. those in the range of HS Codes 3920 - 3926) could add balance to the bilateral trade flows within the petrochemical value chain. Chinese producers may also be interested in joint projects with the GCC counterparts or investing in petrochemical capacity in the GCC region, which could help alleviate their hostility to the GCC competitors. Provisions facilitating this process can be introduced in the relevant section of an FTA.

From the methodological perspective, the findings of this study suggest the need to estimate the effect of changes in terms of trade on a disaggregated level. Even within the same group, behavior of import demand and import substitution functions and, thus, the impact on domestic producers and importers, can vary significantly for each specific product or tariff line. The effect of eliminating non-tariff barriers, though proven insignificant in the case of this particular study, also has to be taken into consideration for such analysis. Potential directions for further research in this field may include introducing a finite foreign export supply elasticity (challenging the assumption of the price-taker behavior by exporters) and accounting for the product substitution effect in the target import market.