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How trade restrictions affect consumers: the case of frozen chicken

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Trade protection in South Africa has increased overall since 2014. This has manifested in a rising incidence of tariffs covering intermediate (e.g. steel) and consumer goods, including poultry, pasta, and frozen chips, of which poultry is by far the most important for South African consumers. The South African Poultry Association has contested the view that anti-dumping duties on chicken raise domestic prices. However, an econometric study shows that although there is a complex relationship between trade policies and consumer prices, the net effect on these products, including frozen chicken, has been to raise them.

Introduction

In August 2022, the Minister of Trade, Industry and Competition (DTIC), Ebrahim Patel, deferred anti-dumping duties on chicken imported from five countries, citing the fight against food inflation and its effects on the poor. However, the South African Poultry Association has contested the view that anti-dumping duties raise domestic prices. Its CEO, Izaak Breytenbach, stated: “*We have always argued that an increase in tariffs has never led to an increase in consumer prices*”¹

These views reflect the complex link between trade policies and consumer prices. While tariffs impose a tax on imported goods, their overall impact on the consumer price depends on several factors including whether exporters absorb the price increase through lowering their prices, distribution costs, the competitiveness of the wholesaling and retail industries, and domestic supply capacity. In this article, based on our paper published by the South African Reserve Bank,² we consider the impact of tariff increases and the imposition of safeguards and anti-dumping duties on one of the country’s most important consumer goods, frozen chicken.

Trade measures and import flows for chicken

The poultry industry is the largest subsector within the agricultural sector in terms of production value and provides more than 50 000 direct jobs.³ Poultry also accounts for

¹ Visser 2022

² <https://www.resbank.co.za/content/dam/sarb/publications/working-papers/2022/WP%202215.pdf> The full paper was authored by Lawrence Edwards, Zaakirah Ismail, Godfrey Kamutando, Simbarashe Mambara, Matthew Stern and Fouche Venter. The original paper considers in more detail the effects on frozen chips and pasta as well, but they are relatively small segments in the consumer market.

³ Dpt of Agriculture, Land Reform and Rural Development, 2020

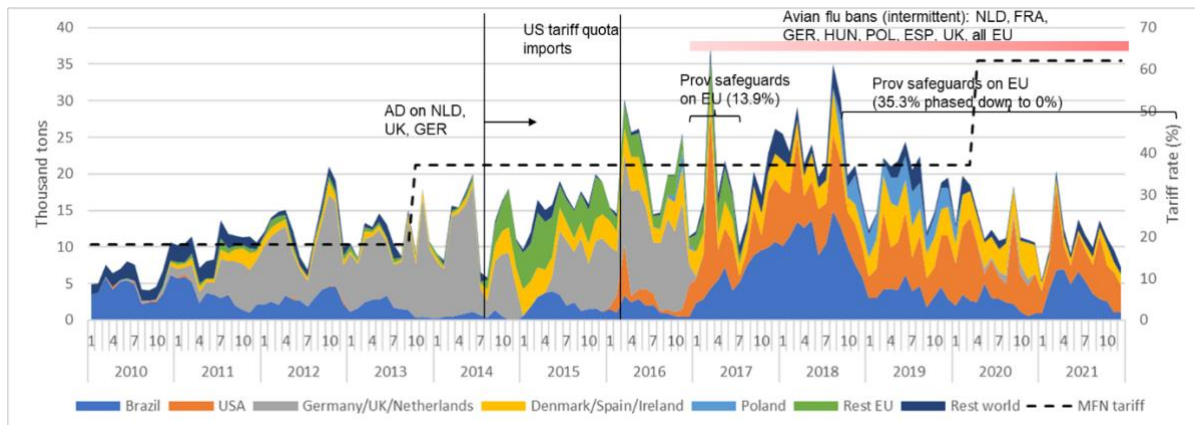
up to 60% of South Africa’s total meat consumption.⁴ Demand is predominantly for frozen bone-in (brown meat) chicken cuts; demand for fresh chicken meat is relatively small.

Over the past two and half decades, consumption growth has exceeded growth in production, leading to a rise in imports up to 2018. In response to rising import competition, the South African Poultry Association has applied to the International Trade Administration Commission (ITAC) and received various protection measures, including general tariff increases, anti-dumping duties on specific countries, quotas, and safeguard duties.

As seen in Figure 1, these measures interacted to jointly constrain access to imported frozen bone-in chicken, the primary source of dutiable chicken products.⁵ Most Favoured Nation (MFN) tariffs on selected chicken products were raised in 2013 and then again in 2020. While the MFN tariff increase in 2013 constrained imports from dutiable sources, their impact on aggregate import volumes was attenuated by rising imports from the EU, which has duty-free access in accordance with the preferential trade agreement. However, the higher customs duties became increasingly binding as anti-dumping and safeguard duties⁶ targeted EU sources of chicken. The Avian flu bans further compounded the binding nature of the trade measures. The net effect of these restrictions was that the total volume of imported frozen bone-in chicken in 2021 was no higher than it was in 2011/2012. Similar relationships are evident when looking at frozen bone-in chicken pieces and frozen whole chicken that have also been subject to increased trade protection.

The various trade measures effectively reduced import volumes of frozen chicken from countries directly affected, and increased imports from alternative non-dutiable sources.

Figure 1: Monthly import volumes of frozen bone-in chicken pieces



Source: Own calculations using SARS data.

The price impact of tariffs

We follow a two-prong approach to study the effect of the increases in tariffs and the imposition of safeguards and anti-dumping duties on the retail prices of three selected

⁴ US Department of Agriculture (USDA), 2019

⁵ Mechanically deboned meat (MDM) is the other major import of chicken, but no import duties are applied on this product.

⁶ Tariffs that WTO member countries agree to charge on imports from all other WTO members, outside of any preferential trading agreements.

consumer goods in South Africa - frozen chicken, frozen chips, and pasta – of which frozen chicken is the most significant for the majority of consumers.

Firstly, we use monthly trade data from 2010 to 2021 to econometrically estimate how the range of import barriers affect the volume and free-on-board price of imports of each product. Rising tariffs may be partially absorbed by foreign suppliers, implying a less than perfect pass-through of trade measures to the landed prices (including tariffs) of imports. The lower the pass-through, the smaller the tariffs' expected impact on final consumer prices.

Secondly, we estimate the pass-through of the various trade measures to consumer prices at the retail level using monthly product price data at the retail outlet level over the period 2010 to 2021. The retail price data (from Statistics South Africa) for chicken, frozen chips, and pasta covers a total of 911 outlets in 58 locations spread across urban and rural areas of South Africa.

Key findings

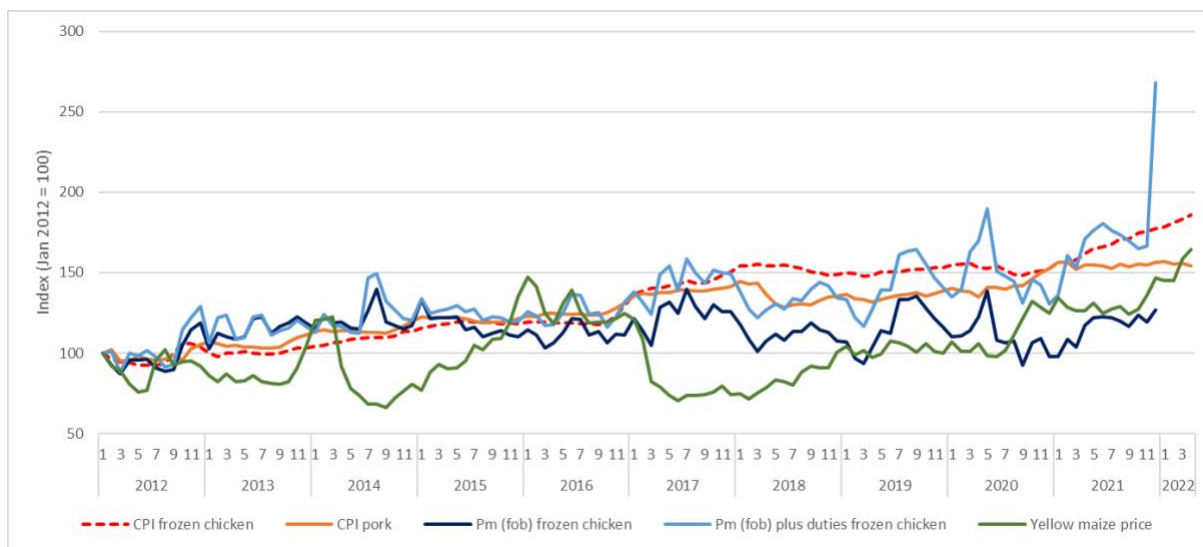
The econometric estimates support the argument that trade protection measures raised consumer prices of the selected products in South Africa.

The most consistent results are found for chicken products. The net effect has been a rise in the import-weighted average applied tariff on frozen boneless and bone-in chicken from around 9% in 2012 to 53% in 2021. The combined effect on import volumes has been considerable – total import volumes of bone-in chicken pieces, the most restricted product, in 2021 are at levels last seen in 2011/12 and are significantly down from the peak values of 2018.

To provide preliminary insights into the potential association between trade measures and consumer prices, Figure 2 presents trends in frozen chicken consumer prices against pork prices, the yellow maize price (a measure of feed costs), and the import-weighted average free-on-board (f.o.b) price of imported frozen chicken (combined bone-in and boneless), with and without the duties. The gap between the fob price of imports and the fob price inclusive of all duties is driven by the effect of customs duties, anti-dumping duties, and safeguard duties.

The figure reveals a widening divergence from mid-2014 between the free-on-board (fob) import price of frozen chicken and the import price including all import duties, as trade barriers became increasingly restrictive. The net effect has been a rise in the import-weighted average applied tariff on frozen boneless and bone-in chicken from around 9% in 2012 to 53% in 2021.

Figure 2: Price indices of frozen chicken and selected other products



Source: Own construction using retail level price data from SSA and import data from SARS. The fob import price inclusive of tariffs is the import weighted average unit value of frozen bone-in portions inclusive of customs duties, anti-dumping duties and safeguard duties. The frozen chicken CPI after 2016 is constructed by combining CPI for IQF and non-IQF portions using SSA CPI weights. The yellow maize price is the SAFEX yellow maize price sourced from www.grainsa.co.za.

The retail price of frozen chicken pieces and pork followed each other relatively closely from 2012 to 2016, but then diverged as frozen chicken prices rose more strongly. The years 2019 and 2020 are an exception: they reflect the record-level international pork prices following the African swine fever outbreak in China. Consumer prices of frozen chicken pieces have also risen faster than maize prices, although the latter are more volatile and are strongly influenced by whether a surplus of maize relative to consumption is produced. Overall, the data suggests that the combination of rising import duties, anti-dumping duties, safeguard measures and Avian flu bans contributed to lower import volumes and stronger increases in the consumer price of frozen chicken relative to pork.

The implementation of trade measures on frozen chicken, and the resulting import response, raises several broader economic issues:

- **South Africa's participation in a free trade agreement with a large industrial region such as the EU diminishes the effectiveness of tariffs as an instrument for industrial policy purposes.** While higher general tariffs protect domestic industries against dutiable sources, they also raise the preference margin in the domestic market for exporters from preferential trade partners. The outcome of the higher tariffs is an increase in trade diversion from relatively efficient global suppliers to alternative and possibly higher-cost suppliers in preferential partner countries. The welfare effects of this trade diversion are negative. The government loses customs revenue, and the price of imported goods rises, thus worsening the country's terms of trade.
- **Exporters do not lower their prices in response to the implementation of trade protection measures; instead, the full cost of the duty is carried by South African importers and consumers.** If foreign exporters lowered their

prices in response to tariff increases, then South Africa would be able to purchase the imported goods at a lower international price than before, thus improving the country's terms of trade. However, econometric estimates of the pass-through of tariffs to foreign exporter prices show that South Africa behaves like a small country regarding tariff increases for the products we have examined. This also raises the pass-through of the tariff to the final price consumers pay for the imported product.

- **Increases in trade duties can have a substantial impact on retail prices.** Our estimates for frozen chicken indicate an applied tariff pass-through rate of 0.477 to retail prices - in other words, close to half of the applied tariff increase is passed on to consumers through higher retail prices. The MFN tariff increases, anti-dumping duties, and the EU safeguards are estimated to have raised consumer prices of frozen chicken products by around 16% over and above what they would otherwise be over the 2012-2021 period. If fresh chicken is included, the price impact is estimated at 14%. Anti-dumping duties are also estimated to have raised frozen chips prices by 18.6% and pasta prices by 4%.
- **The impact of increases in retail prices of these food products are not distributed equally across all households.** Poor households spend a disproportionate share of their total expenditure on chicken relative to wealthier households. In the case of pasta and frozen chips, direct consumption is very low, with higher shares of expenditure on these products by wealthier households compared with poor households. Simulations using expenditure data show that the increase in trade duties on chicken products affected the poorest households most, with a negative welfare impact (the additional amount a household would need to spend in order to maintain previous levels of welfare) equivalent to 0.65% of total or 2.1% of food expenditure. The negative welfare effect for households in the top consumption decile was lower at 0.07% of total expenditure (1.1% food expenditure).
- **The aggregate price and welfare impacts are influenced by the sequencing, targeting, and combination of trade measures.** For example, the initial 2013 increase in MFN duties did not substantially impact retail prices, given the diversion of imports from Brazil to the EU. However, the additional restrictive safeguard and anti-dumping measures targeting EU imports, together with the Avian Influenza bans, have raised the degree to which the MFN tariffs are binding. From March 2022, chicken imports from all EU countries were restricted. All chicken imports, except for very low values of imports from SADC, have subsequently been subject to the MFN rates and, in the case of Brazil, from December 2021 to anti-dumping duties of up to 265.1%. This is one reason why the monthly import weighted average applied tariff rose to 53% in 2021 (excluding the very high rate in December).

Policy implications

These findings have important implications for trade and industrial policy in South Africa. By increasing tariffs or imposing new duties, ITAC aims to assist domestic producers by raising the demand and price they receive for their product. If, however, the tariff or duty merely leads to trade diversion to exporters located in preferential

trading partners, then these foreign exporters will be the primary beneficiaries. The less efficient domestic producers, the less likely they will be able to respond with increases in supply, and the more likely the foreign partners will be the main beneficiaries of the tariff increase. This is an important consideration, as domestic supply constraints including high input costs, labour productivity, municipal infrastructure failures, electricity and water supply, etc. are cited by poultry producers and SAPA as the key challenges they face and were part of the motivation for requested tariff increases.⁷

Further, this analysis provides some justification for Government's recently expressed concerns about the potential impact of the December 2021 anti-dumping duties on consumer prices. In considering tariff applications, much emphasis is placed by ITAC on the domestic firm's competitiveness with respect to imported products, including input costs, profit margins, market share, job losses, and price suppression. Tariffs are set to offset the price disadvantage, which has the danger of rewarding inefficiencies.

Although the impact of tariff increases on consumers is considered, no rigorous analysis is undertaken about how tariffs are likely to impact consumer prices.⁸ Likewise, insufficient consideration is given to the economy-wide impacts of tariff decisions on one product, on the many and more diverse downstream users of these products, such as in food processing and restaurant services, where employment is generally much higher. Finally, this study highlights a worrying trend, whereby domestic producers first look to ITAC⁹ to raise the MFN duty on global imports, and then follow-up with requests for more targeted protection on those remaining exporters that benefit from existing preferential trading agreements, through anti-dumping duties and safeguard measures. These latter measures are generally more severe than the initial protection sought through the MFN tariff hike or the tariff in place prior to the phase-down of tariffs through these agreements. The net effect of these interventions is to severely curtail all trade and to increase domestic prices – well beyond what would have been considered or projected when each of these applications was considered on its own.

It is crucial that ITAC pursues a holistic approach in assessing (or at least reviewing) the combined impacts of all applications and past decisions on a single product or industry, rather than adjudicating each application on its own. This is essential to protect the welfare of low-income consumers. Our econometric study shows that tariffs on frozen chicken, as they are applied now, significantly dent the welfare of the poorest consumers.

⁷International Trade Administration Commission of SA(ITAC) 2012,2019; Astral, 2021. In the justification for tariff increases for chicken products in 2012, ITAC noted that South African producers faced relatively high input costs.

⁸ The tariff amendment application form requires applicants to answer "To what extent will your firm's selling price for the product be influenced should the application for amendment in the duty be successful?" (pg 7) (<http://www.itac.org.za/pages/services/tariff-investigations/application-forms>). This can be expanded to include the costs (not just benefits) to downstream users of price increases, the impact on retail prices, plus how households at different income levels will be affected.

⁹ ITAC was established in 2003 as the successor to the Board of Tariffs and Trade (BTT). Industries can submit requests to ITAC to adjust tariffs or to introduce anti-dumping duties or safeguard measures, and it makes recommendations to the Minister of Trade, Industry and Competition.

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