

# The US-China trade war and its impact on soya bean imports

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*In 2011, before running for president of the United States (US), Donald Trump tweeted: "China is neither an ally or a friend – they want to beat us and own our country." In 2016, while campaigning for the Republican Party's presidential nomination, he said: "We can't continue to allow China to rape our country and that's what they're doing. It's the greatest theft in the history of the world." These are just some of the statements Trump made, criticising China's trade practices.*

In February 2018, after he was elected, and after several rounds of talks between the presidents of the two countries as well as investigations into different kinds of American imports, the US implemented a 30% tariff on all solar panel imports (excluding Canada) as well as a 20% tariff on washing machines. The total value of tariffed goods amounted to more than \$10 billion.

In the following month, the US imposed tariffs ranging from 10 to 25% on steel and aluminium imports from certain countries (including China) and filed a case against China for their discriminatory licencing practices with the World Trade Organization.

In retaliation to the US steel and aluminium tariffs, China fired its first shot in the trade war on 2 April 2018 by imposing tariffs (ranging from 15 to 25%) on 128 products (worth \$3 billion), including fruit, wine, seamless steel pipes, pork and recycled aluminium. This was followed by a 25% tariff on another 106 products, worth \$50 billion, on 4 April. US soya beans was one of these casualties.

This should not have come as a big surprise to the US, as China made it clear as far back as September 2017, that soya beans could be hit in a US-China trade war. After the announcement, the Chicago Mercantile Exchange Soybean Futures plummeted, as illustrated in Figure 1.

## Winners and losers

What is the effect of a 25% tariff on US soya bean imports to China for both countries?

The US and Brazil are the two largest soya bean producers and exporters globally. US production was 117 million tons in 2016, while Brazil produced 114 million tons. China is the world's largest soya bean importer and imported 94 million tons in 2016, approximately 65% of all global soya bean imports.

Figures 2 and 3 illustrate total US soya bean exports, as well as exports to the most important destinations.

It is clear from Figure 2 that US soya bean exports dropped by 10 million tons between 2017 and 2018 (before and after Chinese soya bean tariffs). In terms of

specific countries (Figure 3), exports to China were halved from 2016 to 2019; however, exports to other major export destinations have increased considerably.

## Longer-term economic effects

An article by Farzad Taheripour and Wallace E Tynerin on the *Choices Magazine* website, attempted to quantify the longer-term (over five years) economic effects on maize and soya beans of a 25% Chinese tariff on US soya bean imports. They used the Global Trade Analysis Project Biofuels (GTAP-BIO), a well-known global economic model, to evaluate the global economic impact of Chinese tariffs on US soya beans.

The simulations made with this model determine, among other outputs, changes in demand and supply of goods and services and their prices in each region; changes in bilateral trade among all trade partners for goods and services; and changes in the allocation of resources and in economic gains or losses (economic welfare).

Economic models usually use trade elasticities to simulate trade relationships among trade partners worldwide. Smaller

Figure 1: US soya bean prices (cent/bushel).



Figure 2: US soya bean exports.

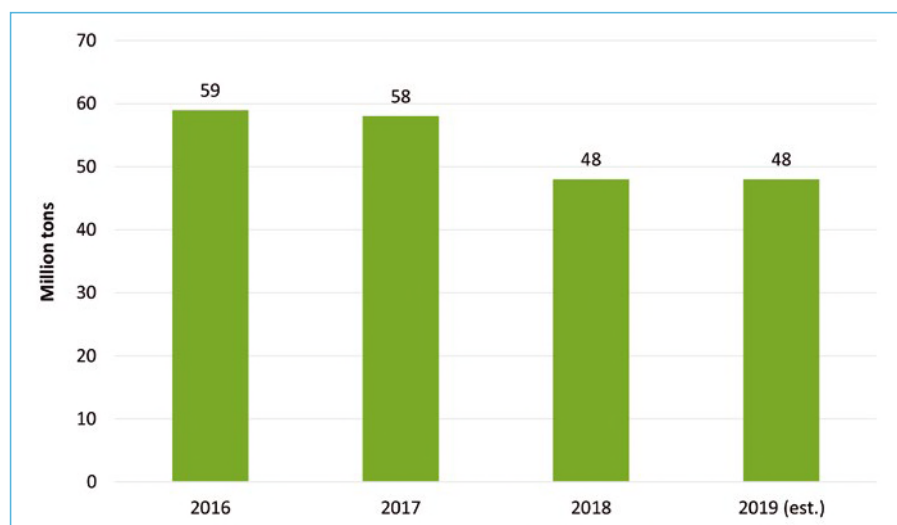
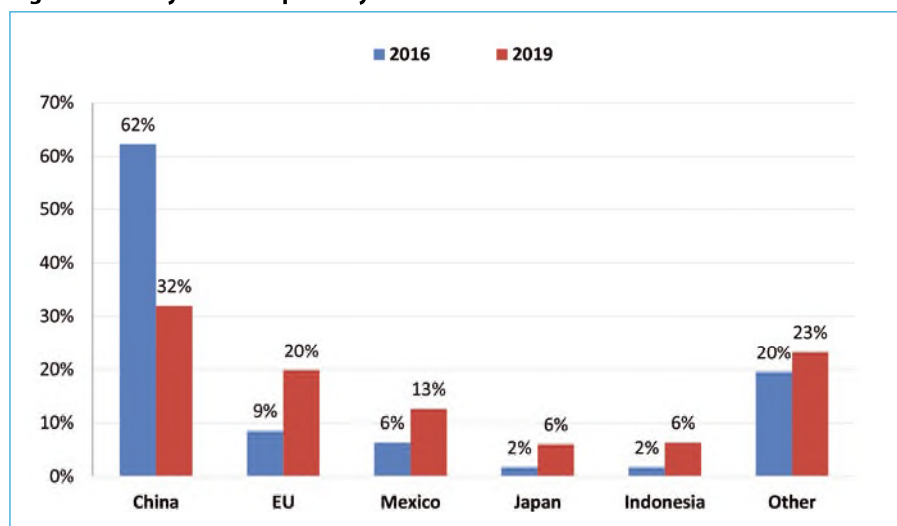


Figure 3: US soya bean exports by destination.



trade elasticities imply less reaction among trade partners in response to changes in economic variables (such as tariffs or other trade restrictions), and larger elasticities allow for larger responses. The projections of these models depend on the sizes of the trade elasticities. Two sets of applicable trade elasticities were used in the article to determine the lower and upper limits of the impact of such a tariff.

The results of this model show that US soya bean exports to China will decline by 48 to 91%, while exports to the rest of the world will increase by between 15 and 64%. The overall effect (total US soya bean exports) will show a drop from 24 to 34%. US soya bean production will fall by 11 to 15%, with a limited positive impact on world production (0 to 0,5%). US soya bean producer prices will

be negatively affected by 4 to 5%.

In the case of maize, a 25% Chinese tariff on US soya bean imports should lead to an increase in US maize production of 1,2 to 1,7%, with a negligible price impact.

This model was also used to calculate changes in economic welfare. It was no surprise to see a drop of \$2,2 to \$2,9 billion in US economic welfare. It was, however, interesting to see that Chinese economic welfare also declined by \$1,7 to \$3,4 billion per year. The model therefore showed that the 25% Chinese tariff on US soya beans is a lose-lose proposition for both China and the US.

#### Effect on South Africa

When compared, South Africa has an annual soya bean production of less

than 2% of either the US or Brazilian crop. From where, or at what tariff, China imports soya beans, it is unlikely to have a direct influence on the South African soya bean industry.

South African soya bean prices are, however, linked to international prices via import and export parity price levels. Import parity is the price level at which it becomes cheaper to import soya beans, rather than buying it locally, while at export parity price levels, it is more profitable to sell soya beans in the international market, rather than locally.

The real cost could perhaps be hidden in the cancelled construction of a soya bean processing plant due to the extra uncertainties of a trade war, or other shelved investment decisions unknown to us.

If the 5% reduction in US soya bean prices as calculated by the GTAP-BIO model is used as guideline, it will translate to a R200 per ton reduction in import and export parity prices at current international price and exchange rate levels. Whether this reduction is already reflected in local prices, or whether it is still to come, is a difficult question to answer.

#### In conclusion

As is the case with 'normal' wars, there are no winners in trade wars – there are only losers. Soya beans in South Africa are not affected by the US-China trade war in any obvious way. The real cost could perhaps be hidden in the cancelled construction of a soya bean processing plant due to the extra uncertainties of a trade war, or other shelved investment decisions unknown to us. 📍

References available from the author. For enquiries, contact Johann Strauss on 051 401 2824 or [straussjs@ufs.ac.za](mailto:straussjs@ufs.ac.za).