

ERF Policy Brief

Is COVID-19 Driving Up Consumer Prices in Tunisia? Evidence from COVID-19 Shock Pass-Through

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In a nutshell

- Import unit prices have had a positive and significant pass-through to consumer prices, but only in the pre-pandemic period.
- Tariffs and non-tariff measures implemented on imports in Tunisia have had a positive and significant pass-through to consumer prices, particularly in food and agriculture products.
- Real exchange rate changes lead to increases in consumer prices – more so for agricultural and food products before the pandemic. Further, a strong impact is observed for manufacturing and services during the pandemic.

This policy brief evaluates the pass-through of the COVID-19 shock on international prices to consumer prices in Tunisia, with a focus on the extent to which changes in international prices, exchange rates, and trade policy measures due to COVID-19 (that is, new export restrictions imposed by Tunisia's partner countries) are transmitted into consumer prices in Tunisia. Monthly data from January 2018 to December 2020 are used to estimate a pass-through equation based on sectoral panel data at the retail-product level. Linear panel data techniques are applied to account for unobserved heterogeneity in the dimensions of the panel. The empirical strategy we adopted consists of adapting the framework developed by Goldberg and Knetter (1997) and Campa and Goldberg (2008) and used by Nicita (2009) and Borraz (2013) to the Tunisian case.

COVID-19 heavily disrupted supply chains and commodity prices

The COVID-19 pandemic has significantly disrupted commodity prices since its outbreak in April 2020. The economic and social disruptions significantly affected trade in goods and services in 2020. World trade in goods fell by 5.1 percent against a quasi-stagnation (0.3 percent) during the previous year.

New trade policy measures were introduced by countries altering their trade policies for some products that were considered essential, mainly medical and food products.

The COVID-19 pandemic, along with the imposed lockdowns and aforementioned trade policies implemented to cope with the shock, impacted the final prices of goods for consumers.

The prices of most commodities increased at the global level in the second half of 2020, after a sharp drop in the first months of 2020. For instance, oil prices, which had fallen sharply during the first months of the health crisis, have recorded to some extent but without returning to their pre-pandemic levels.

In Tunisia, consumer prices for food products in particular experienced an increase during April-May 2020 and increased again after the summer of 2020. Since then, they have followed an increasing trend. Producer prices for the chemical industry show an important increase in January 2020 and then a downward trend until April 2020. The same month registered a decrease for the textile, clothing, and leather industry, the mechanical and electrical industry, manufacturing industries, and –

to a lesser extent – agri-food industries. Prices increased again in May-June 2020.

Transmission channels of COVID-19 shock to consumer prices

The shock to consumer prices is transmitted through different channels. We consider the following as potential transmission channels: Supply disruptions (production), demand disruptions (consumers stockpiling), trade costs (freight cost, delays of import and export... etc.), trade policy measures that were enacted by many countries (such as tariff reductions/increase), non-tariff measures and export restrictions from Tunisia's partner countries, and domestic policies, such as price support and exchange rate policies and policies on the institutional, economic environment, and competition levels.

Some local factors may, however, dampen the transmission of the shock to consumer prices, including price support policies, the rigid margins of intermediaries, the influence of competitor prices, the impact of transport costs, the lack of substitutes...etc. Price transmission also depends on the market shares of the production and consumption of the products. For example, if a country is a large producer or consumer of a given product, it could impact its international price. In the case of Tunisia, which could be considered a small country in economic terms, this should not be an issue.

The speed of adjustment is yet another important aspect that should be considered. According to the World Bank, changes in international prices of commodities in developing countries are passed through to domestic prices within three to six months, depending on the local production situation, access to markets, and import/export logistics. Even if markets are fully integrated and well-functioning, the average pass-through ranges between 20-70 percent; meaning that a ten percent change in international prices results in a two to seven percent increase in domestic prices. However, this should not be the case in countries like Tunisia, which have high food subsidies and controlled prices.

Import prices, real exchange rates, and tariff and non-tariff measures are driving up consumer prices

The main results show that a positive and significant pass-through to consumer prices depends on three channels. The first is import unit prices, which is an important channel in the pre-pandemic period. The second is tariff



and non-tariff measures on Tunisian imports, particularly for food and agriculture. Finally, the third is the real exchange rate, specifically for agricultural and food products and with a significantly higher impact during the pandemic, reaching a pass-through of around 60 percent. This indicates that changes in the real effective exchange rate translated into changes in domestic prices more heavily during the period from February 2020 to December 2020 than during the previous 26 months.

On the other hand, export restrictions imposed by Tunisia do not impact consumer prices. Changes in producer prices do not appear to be relevant since their effect is not statistically significant in the estimated models. However, they do have a negative effect on the consumer prices of manufacturing and services. The share of intermediate products lowers consumer prices in food and agricultural products.

Using heterogeneous coefficients for the tariff pass-through and the exchange rate, we find a positive impact of higher tariffs on the prices of fish and seafood (0.025), fruits (0.046), and vegetables (0.030). Regarding manufacturing products, there is a significant and positive tariff pass-through into the prices of footwear (0.074), motor cars (0.066), and motorcycles (0.049). The pass-through of real effective exchange rates into consumer prices is significant and positive for bread and cereals (0.431), fish and seafood (0.461), fruit (0.565), milk, cheese, and eggs (0.365), oil and fats (0.432), and vegetables (0.578). In the case of manufacturing products, there is a significant and positive real effective exchange rate pass-through for all products, with higher magnitudes for fuels and lubricants for personal transport (0.573), major household appliances (0.623), and motor cars (0.579).

Next, to differentiate the effects of the post-pandemic period from the pre-pandemic period, we interacted a dummy variable that takes the value of one after the COVID-19 outbreak with the main explanatory variables in our model. Our results confirm the previous evidence, except for the impact of the real effective exchange rate. The pass-through of the real effective exchange rate is around 42 percent for agricultural and food products and non-significant for manufactures and services. The COVID-19 dummy is statistically significant and positively signed, indicating that prices were about three percent (four percent) higher during COVID-19 for the agricultural sector (other sectors) in comparison to the previous months (from January 2018 to February 2020).

Finally, estimations show that when interactions between

the COVID-19 dummy variable and all the explanatory variables are added, as well as the product fixed effects in the model, the exchange rate pass-through significantly increases during the COVID-19 outbreak period (March-Dec 2020) compared to the previous 26 months, reaching around 50 percent during the pandemic. In contrast, the import unit-values coefficient is only statistically significant in the pre-pandemic period for food and agriculture and the same is the case for the weighted tariffs.

COVID-19 pass-through to consumer prices exposes vulnerable populations to more risks

The worldwide increase in food prices did not fully translate into a rise in consumer prices, most likely because of the Tunisian government's universal food subsidy program that keeps the prices of wheat products and vegetable oil stable. Conversely, the exchange rate pass-through had a strong upward effect on consumer prices.

Supply chains disruptions, tariffs, and non-tariff barriers are increasing essential product prices. This is posing major risks to already vulnerable populations.

The Tunisian government should consider offering cash transfers to the poorer households to counteract the potential effects on the price increase. Those subsidies should target the most vulnerable populations.

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