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covid-19 Brief

August 2020

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Impact of Trade Shocks on Growth and Poverty in Senegal.

Ismael Fofana, Director, Capacity and Deployment and Leysa Maty Sall, Associate Scientist.

The COVID-19 pandemic is affecting economies through several channels, including through changes in global commodity markets. This brief assesses growth and poverty effects of disruption in primary commodity markets in Senegal. The analysis focuses exclusively on the impact of the disruption in global commodity trade, that is, of changes in global prices and market.

The combined variation of primary commodities¹ translate to an average rise in Senegal's export price index or value of exports by 1.4 pp (Figure 1). The corresponding decline in the average import price index is -10.6 pp. The predicted net increase in export prices and decrease in import prices of primary commodities under COVID compared to baseline should have a positive impact on economic growth, provided that the country can take advantage of these changes (Figure 2).

The ultimate effects on Senegal's economy will depend on its capacity to respond to changes in global trade conditions. To have a more accurate picture of how the economy is affected, varying degrees of responsiveness to the changes in prices and market access were considered. The numbers on the horizontal axis in Figure 1 represent decreasing degrees of responsiveness from 1 (highest) to 36 (lowest) as one moves from left to right. The measure for responsiveness is a combination of elasticities of export supply and import demand by firms and consumers in Senegal, as well as elasticities of demand for Senegal's exports in foreign markets. As the degree of responsiveness is varied from high to low, the

pressure to adjust falls increasingly on the exchange rate which gradually appreciates. The simulated change in the value of exports goes from an increase of 8 pp to a decrease of 5 pp. The cost of imports, on the other hand, increases by between 21 and 1 pp (Figure 1).

The above changes reflect likely adjustments in the broader economy to changing global market conditions, with potentially serious consequences for overall growth and poverty rates. Figure 2 shows the likely effects on economic growth, with changes in GDP growth rates ranging from an increase by 3 pp to a decrease of 1.2 pp. The decline in GDP growth is the more probable case in face of limited capacity by the economy to respond to global price changes, given the widespread disruption in domestic supply chains. As a result, this is expected to lead to rising poverty rates. Table 1 shows the estimates of changes in poverty rates resulting from deteriorating global trade environment and adjustments by Senegal's economy. The figures are based on the lowest responsiveness scenarios. As the country battles to gain control over the pandemic, the measures put in place are likely to slow down economic activities. It is therefore more likely that the actual ability to adjust to changing global trade conditions will be limited, meaning that actual responsiveness is more likely to be closer to the low scenario case. Poverty rates are thus estimated to increase by about 1.3 pp across the board, although higher in urban areas. These rates are estimated based on the highest decline in exports (-4.6 pp), lowest decline in imports (0.9 pp) and smallest reduction in GDP growth

¹ See Figure 3 and 4 in Brief 007

(-0.1 pp). Higher responsiveness to the changing global trade environment would allow the country to benefit from the changes in export and import prices. The likelihood of a positive impact on growth and thus on poverty rises with increasing degree of responsiveness,

as can be seen in Figure 2, where the change in the rate of growth goes from negative to positive as one moves towards the origin. This outcome is more likely the longer the disruption in global markets persists, and the more firms and households find ways to adjust.

Figure 1: Trade Effects of Global Commodity Market Disruption (pp)

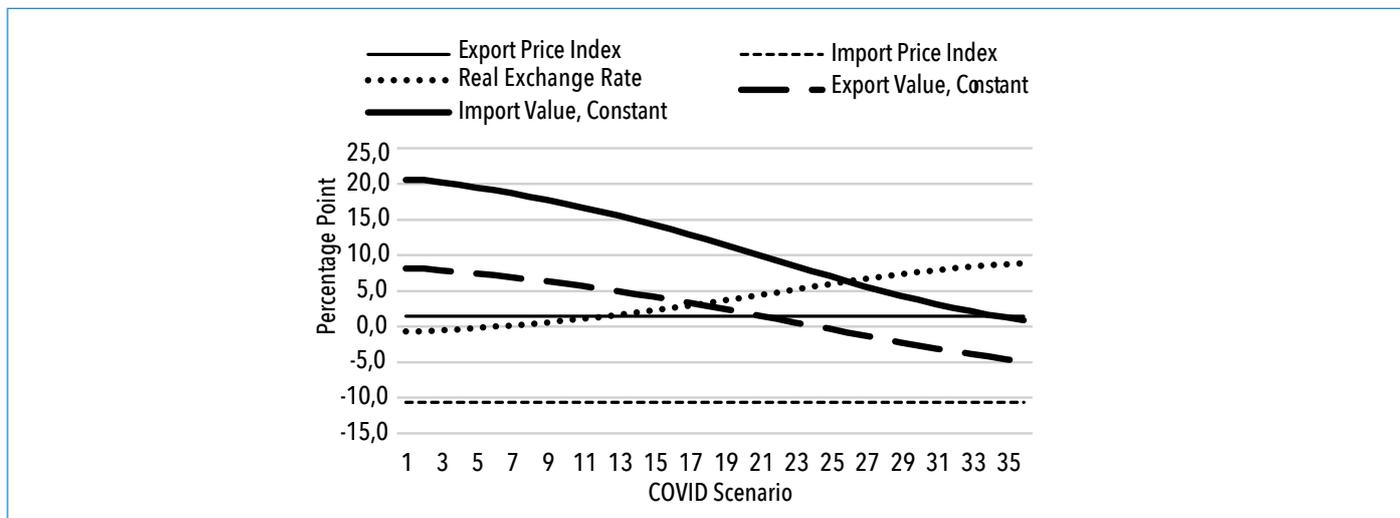
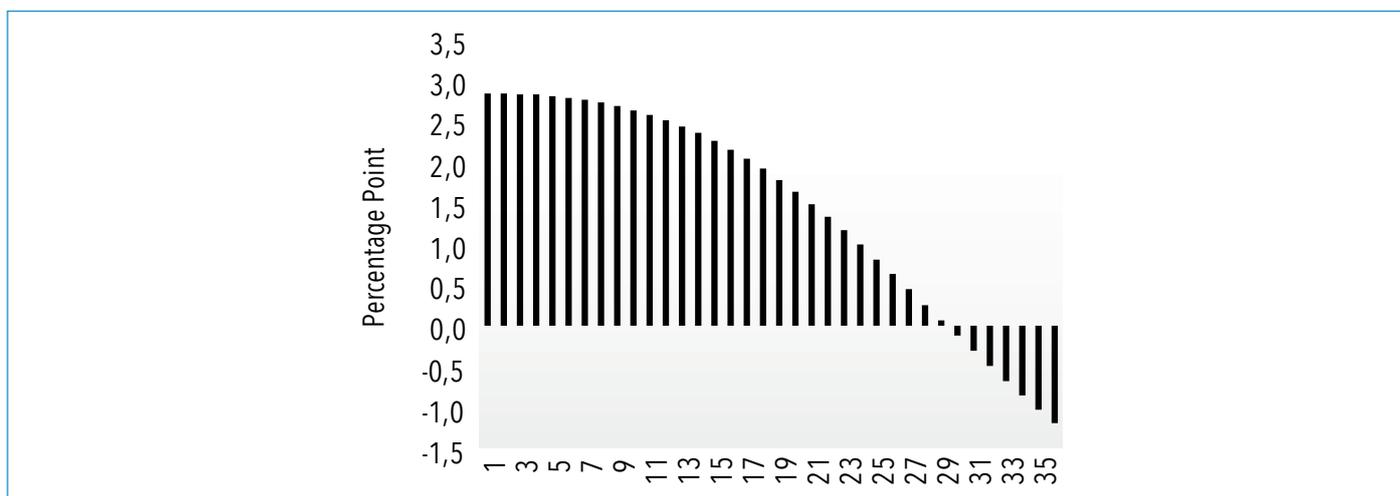


Figure 2: GDP Growth Effects of Global Commodity Market Disruption (pp)



Note: The COVID scenarios (1 to 36) combine different values of trade (import and export) elasticities across commodities to mimic the responsiveness of Senegal's economy to changing global market conditions. Scenario 1 uses the highest and scenario 36 the lowest elasticity values. The remaining scenarios combine difference values of elasticities between the two extremes. Export price refers to the average weighted F.O.B. price indexes. Import price refers to the average weighted C.I.F. price indexes. Export and import values are in constant 2019 prices.

Table 1. Poverty Headcount, COVID vs. Baseline

	Senegal	Urban	Rural
Ratio (pp)	1.3	1.7	1.1
Number	187,865	103,149	84,716

Source: Authors' calculations.

Note: The results are based on COVID scenario 36 which combines the lowest values of trade (import and export) elasticities with the shock in commodity prices.



AKADEMIYA2063 is grateful to USAID for funding for this work through a Feed the Future grant with Policy LINK. Any opinions stated here are those of the author(s) and are not necessarily representative of or endorsed by AKADEMIYA2063.