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The Implications of Market Liberalization and World Price Movements for Wheat Price Policy in Sudan

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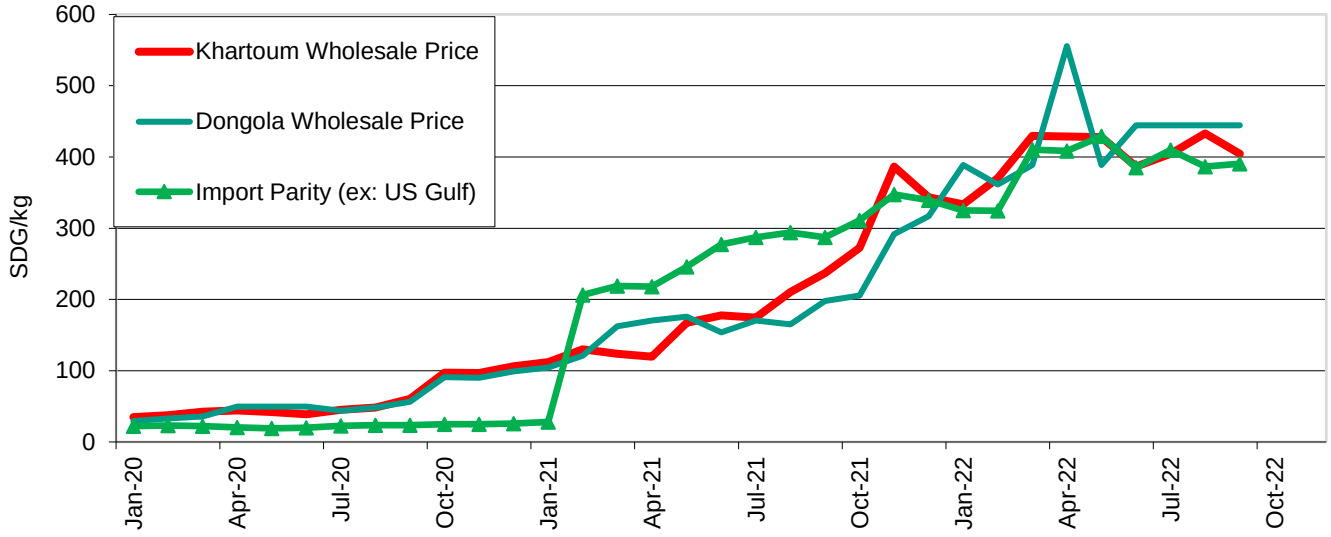
Wheat is an essential commodity in Sudan and a staple for millions. It is second only to sorghum as a key source of calories. The demand for wheat has grown over the last two decades because of a growing population and changing consumer preferences for bread and other wheat products. Domestic farming provides only about 15 percent of the national wheat requirement. The rest is imported mainly from the Black Sea port (Russia and Ukraine). With the Sudanese wheat growing season approaching, this policy brief observes the movement of domestic and international wheat prices and analyzes the possible implications of a reduction in real prices on production, imports, and consumption of wheat products.

Domestic wheat prices are closely tracking import parity prices and real prices have declined

The controls on foreign exchange and quantities of wheat imports imposed by the Government of Sudan kept domestic prices above estimated import parity prices up to February 2021 (Figure 1). Initially, when the foreign exchange controls were removed, import parity prices rose higher than domestic wholesale prices but from October 2021, domestic wholesale prices have been close to estimated import parity prices. Indeed, Khartoum wholesale wheat prices were, on average, only 4 percent above import parity prices from January through September 2022.

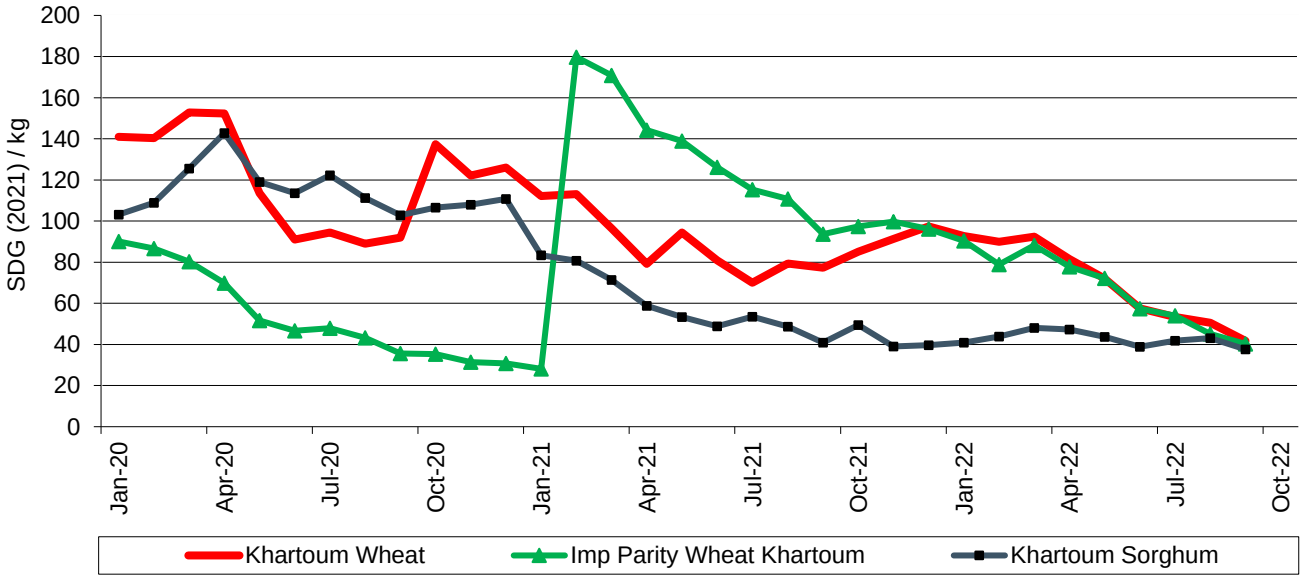
Figure 1: Wheat prices in Sudan (2020 -2022)



Source: CBS (2022), FAO (2022), IMF (2022), World Bank (2022) and authors' calculations.

Real (inflation-adjusted) domestic wholesale prices of both wheat and sorghum have declined sharply from their levels in late 2020 with wheat prices falling by two-thirds between October 2020 and September 2022, and by half between October 2021 and September 2022 (Figure 2). Similarly, real (2021) sorghum prices also fell sharply between October 2020 and October 2021 but have remained very stable since then. Instructively, since the exchange rate devaluation of February 2021, real wholesale wheat prices have declined along with import parity prices determined largely by changes in the world price of wheat and Sudan's exchange rate.

Figure 2: Real (2021) wheat prices in 2020 – 2022

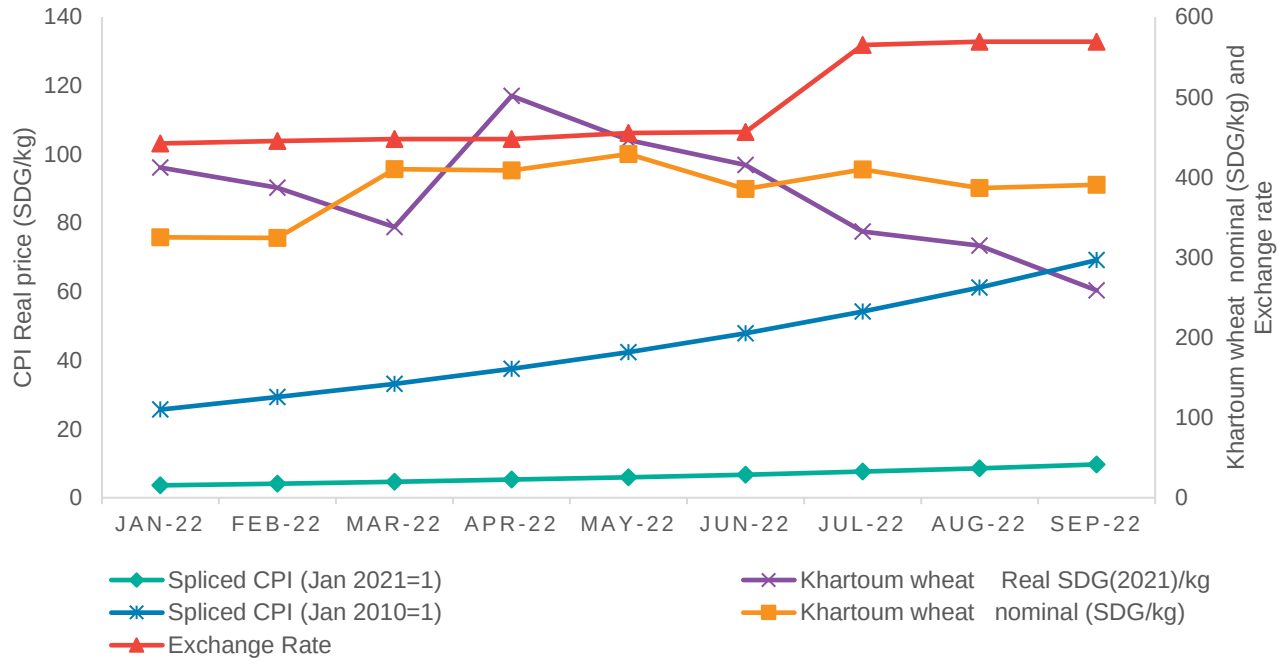


Source: CBS (2022), FAO (2022), IMF (2022), World Bank (2022) and authors' calculations.

Current policy efforts and potential policy space for addressing cereal prices

From July to September 2022, Sudan kept its nominal exchange rate nearly constant while domestic price inflation remained high. As a result, prices of imported goods including wheat fell (Figure 3). There are various policy options that could be applied to offset the impacts of these low prices, including import tariffs, exchange rate devaluation, and subsidies to producers. Without these policy interventions, a sharp decrease in international prices, will result in severe challenges to wheat producers in Sudan. The decline in the price of imported wheat coupled with increased prices of fertilizer, seeds, and labor implies that domestic wheat production would not be competitive.

Figure 3. Import parity, Exchange Rate, and CPI (July - September 2022)

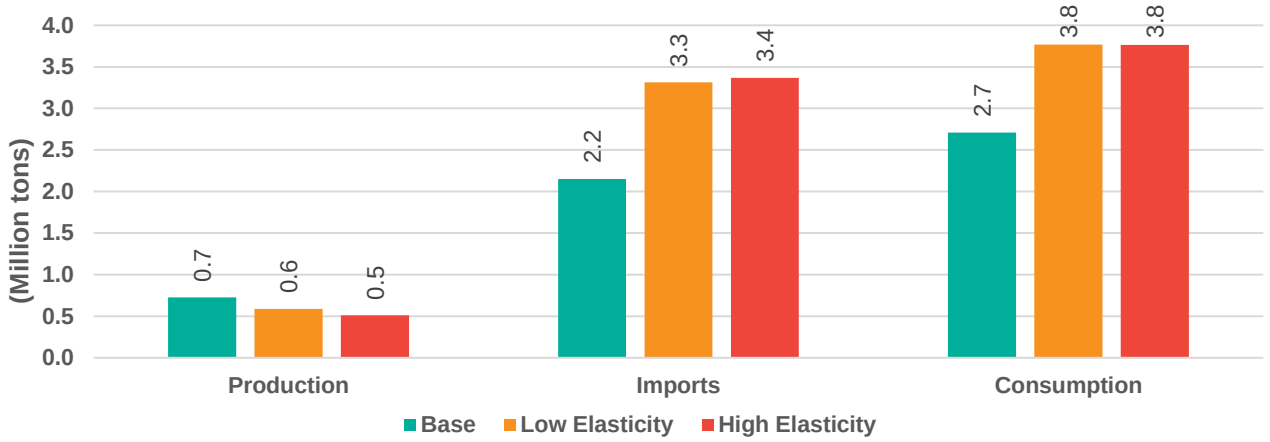


Source: CBS (2022) and authors' calculations.

The impacts of wheat market liberalization policies on production, consumption, and imports

Following recent international and domestic price movements, we simulated a 50 percent reduction in the real price of wheat in a wheat sector model for Sudan to assess possible implications.[1] This is particularly relevant now with the wheat growing season approaching. A 50 percent decline in the real wheat price reduces the profitability of wheat production by 19 to 29 percent (Figure 4).

Figure 4. Impact on production, imports, and consumption of wheat of a 50% decline in real price

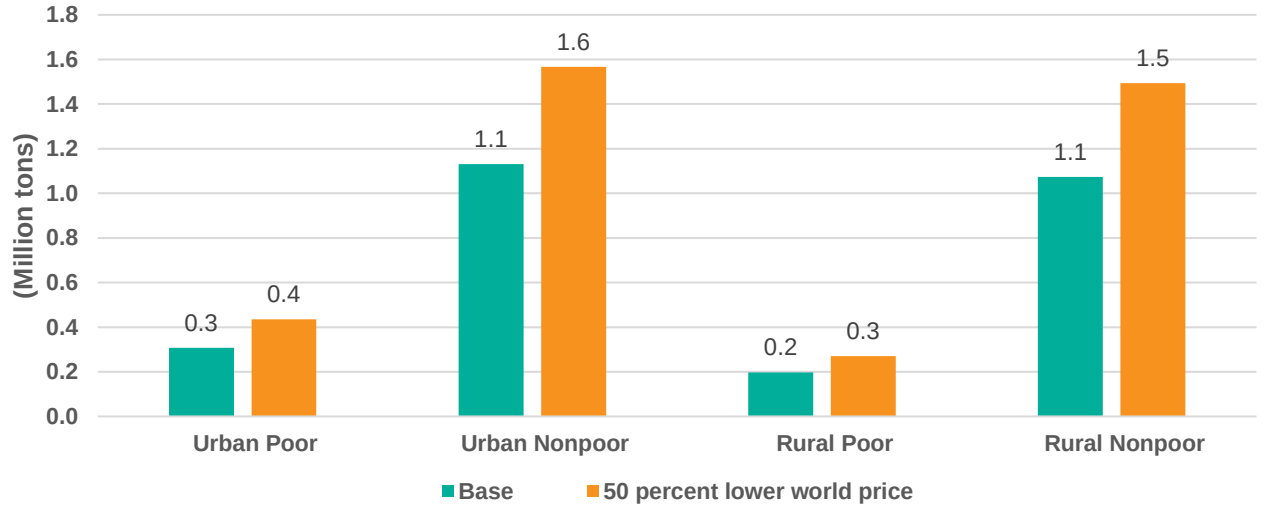


Note: Results are generated under two different assumptions of ease for farmers to grow crops other than wheat i.e., low and high elasticities of supply).

Source: Sudan wheat model simulations.

We posit that the 50 percent decline in the real price of wheat will lead to decline in bread prices by about 30%, which is equivalent to about 70% of the cost of reduced wheat prices. This would subsequently lead to increased consumption of wheat products by all household groups, ranging between 37 percent for the rural poor and 42 percent for the urban poor (Figure 5). Furthermore, wheat imports rise by 54 to 57 percent (about 1.2 million tons) to fill the widening gap between increased domestic consumption and reduced domestic production. The consumption increases for the rural nonpoor (39.1 percent) and urban nonpoor (38.5 percent) are similar.

Figure 5. Household consumption of wheat products with and without price changes

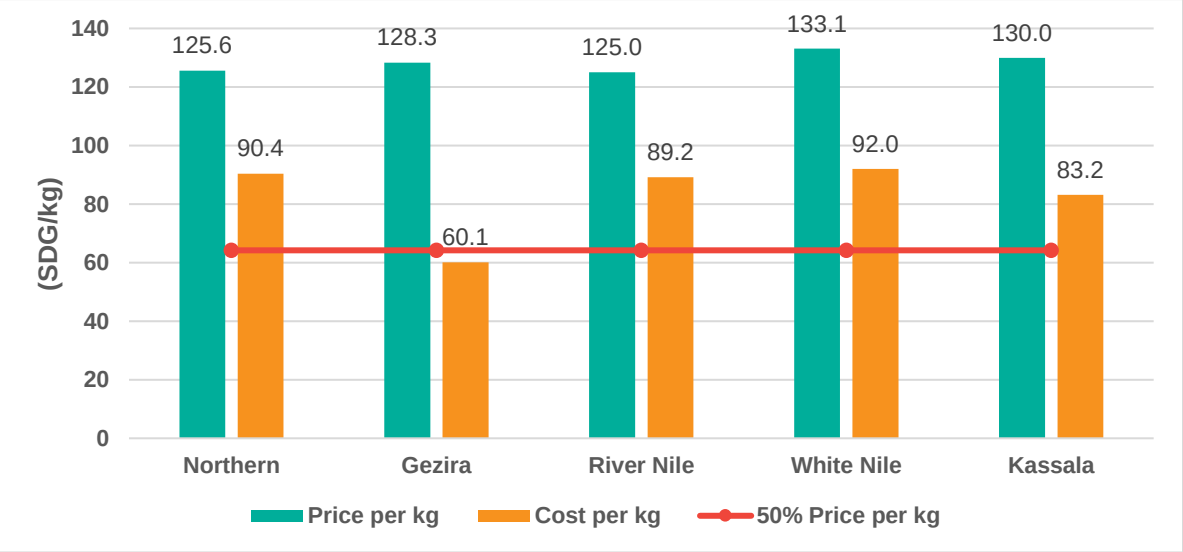


Source: Sudan wheat model simulations.

We also simulate the implications of a real price decline on domestic production. Our simulations show that the decline in the international real price of wheat could lead to a 20 to 30 percent decline in wheat production. Wheat consumers are expected to benefit from the lower prices. However, producers with

relatively high costs may switch to other crops, leading to greater import dependency but potentially higher crop incomes in the longer term. The estimates of the 2020/21 cost of wheat production by state suggest that a 50 percent reduction in price would result in average negative returns to farmers in all major producing states except Gezira (Figure 6).

Figure 6. Wheat price and cost of production and 50 percent reduction in average price (SDG/kg)



Note: The horizontal line is a simple average of wheat prices for each state reduced by 50 percent.

Source: Sudan wheat model simulations.

Conclusions

The decline in world wheat prices and a relatively stable nominal exchange rate has resulted in a 50 percent decline in the import parity price of wheat since 2021. Given the liberalization of wheat trade in 2021 and the end of subsidies on bread, this decline in the cost of imported wheat has translated into a similar decline in the real (inflation-adjusted) price of wheat and wheat products in Sudan. Model simulations indicate that this real price decline could lead to a 20 to 30 percent decline in wheat production and a 1.2 million ton increase in wheat imports. All wheat consumers benefit from the lower prices. Alternative crops may provide higher farmer incomes and foreign exchange earnings in the medium term, however. The resulting major changes in estimated wheat profitability highlight the importance of managing macro-economic policy, especially the real exchange rate, which will be a major factor determining profitability of tradable agricultural products.

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ENDNOTES

1 See Dorosh (2021) for details of the data base and equations of the model.

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