

# 30 The Russia-Ukraine conflict is likely to compound Sudan's existing food security problems

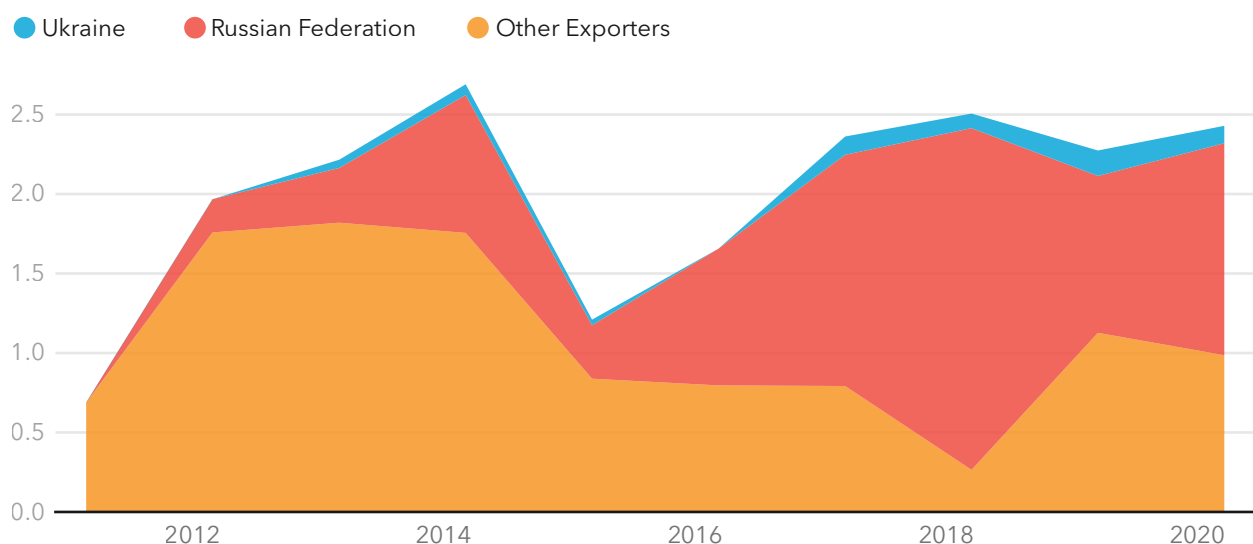
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Russia's invasion of Ukraine has disrupted agricultural production and trade from one of the world's major food exporting regions. The war threatens to drive rising food prices still higher and create scarcity, especially for regions most dependent on wheat and other exports from Russia and Ukraine – particularly the Middle East and North Africa.

Sudan faces a uniquely difficult set of circumstances as these disruptions loom. As with other countries in the region, wheat is a key food item for Sudan, second only to sorghum as a source of calories and accounting for 530 calories/person/day – a fifth of the estimated 2,576 total calories consumed daily. Only about 15% of the wheat consumed is grown in Sudan – a share that might shrink due to rising fertilizer and energy prices; the rest is imported, with a majority sourced from Russia and Ukraine in recent years (Figure 1). Adding to these vulnerabilities, prices for wheat and fuel were already spiking before the war began, compounding the risk of rising food insecurity.

**Figure 1: Sudan's wheat imports by origin, million metric tons**



Source: COMTRADE

## What led to this situation, how serious is it, and what can be done to head off future crises?

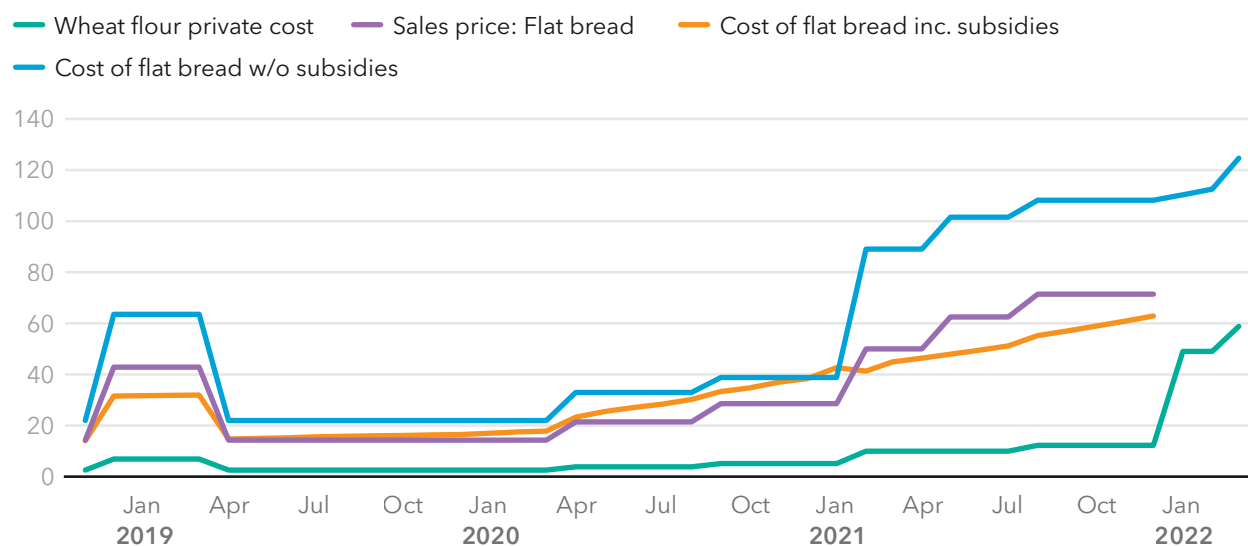
Wheat and bread play a central role for food security and political stability in Sudan. Demand for wheat has grown rapidly in the last 15–20 years, especially in urban areas where 35% of the population lives, driven mainly by population growth and changing consumer preferences for bread and other wheat products. Wheat is thus politically important, and large-scale protests have followed changes in the subsidized price of baladi bread (traditional flatbread) in recent years. For example, a sharp increase in the sales price of baladi bread in December 2018 led to massive street protests.

About 85% of Sudan’s wheat supply has come from imports over the past decade, costing the country about US\$500 million a year (FEWS NET 2015; World Bank 2020). Domestic wheat production, which accounts for the remainder of supply, is concentrated in El Gezira State in the Gezira Scheme, one of the world’s largest irrigation projects. The average national yield is low (about 2 metric tons per hectare), and increasing area for wheat cultivation may be possible but would have important trade-offs with other higher-value agricultural goods.

Wheat prices and volatility had increased sharply before the Russia-Ukraine conflict, the result of a series of domestic problems, including high inflation and political instability, with severe adverse consequences for the Sudanese economy. Wheat prices began rising in 2019 and have recently spiked (Figure 2).

In particular, the most recent surge in wheat prices in 2021 is due largely to overall domestic inflation, foreign exchange shortages that limited wheat imports, a rapid depreciation of the exchange rate, and continued low productivity of domestic production. In addition, the removal of fuel subsidies in June 2021 contributed to increased production costs for farmers and bakeries for non-subsidized inputs such as water, yeast, cooking gas, labor, and oil. The inflationary pressures were compounded further by a cut in funding from international donors following the military coup in October 2021. Many bakeries went out of business as production costs increased more than the official sales price of subsidized flatbread.

**Figure 2: Domestic wheat and bread prices, Sudanese pounds per kilo**



Note: Wheat flour private cost includes the subsidy (prior to January 2022).

These problems intensified with the arrival of 2022. On January 1, Sudan’s government abandoned all forms of subsidies on wheat (grain, flour, and bread), forcing milling companies to obtain grain in the higher-priced open market (Al-Nilin 2021; Abay 2021). Overall, between July 2021 and February 2022, the wholesale price of wheat in Khartoum rose by 112% (about 60% in real terms).

Then came Russia’s invasion of Ukraine. The resulting disruption of wheat exports from those countries has pushed imported wheat prices still higher. Bread prices are expected to rise further as well, both because of higher wheat prices and increased production costs due to higher oil and gas prices.

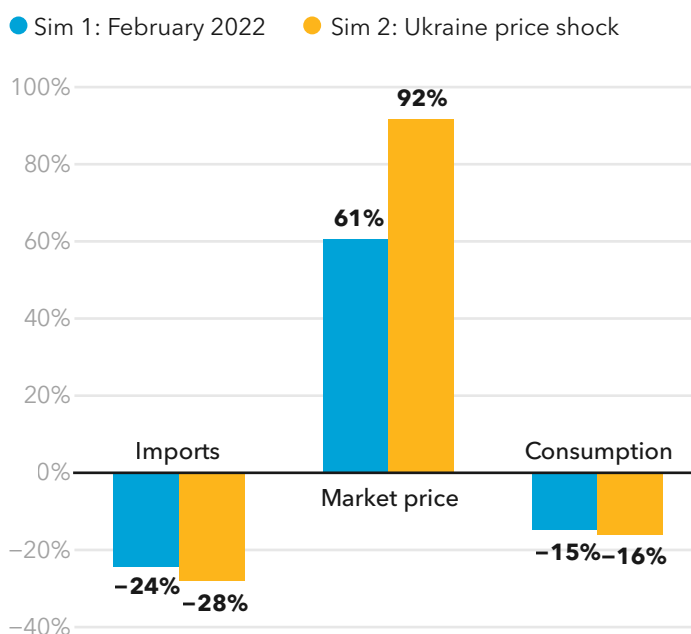
For example, the price of gas used as cooking fuel for most bakeries has recently jumped 56%; the price of a jerry can of oil has jumped 67%. Higher wheat and petroleum prices also add to pressure on foreign exchange reserves, contributing to a recent government decision to sell gold to fund additional food imports in advance of the upcoming Ramadan months, when household food consumption typically increases sharply. (Authorities have been forced to increase withdrawal of proceeds from the gold trade to pay for imports of strategic commodities.)

To better understand these market dynamics, we ran simulations using a partial equilibrium model. These suggest that the large increase in nominal and real wheat market prices between August 2021 and February 2022 is consistent with a 24% decline in wheat imports and a decline in total wheat consumption (including wheat consumed as bread) of 15%. The recent world price increase associated with the Ukraine war can be expected to lead to an additional increase in market prices of imports and domestic wheat of about 20%, and a further decline in wheat imports and consumer demand for wheat products of 9 and 5 percentage points, respectively (Figure 3).

Urban poor households are most affected, as their wheat consumption drops by 16% to 19% between July 2021 and February 2022 because of domestic policy changes, and then by another 5% in March 2022 (Figure 4). Percentage declines in wheat consumption are similar, but slightly less severe for other household groups. The welfare of rural poor households, which constitute the majority of the population, is least affected by these wheat market shocks given their relatively low per capita consumption of wheat products in 2022 (only about 12 kg/person).

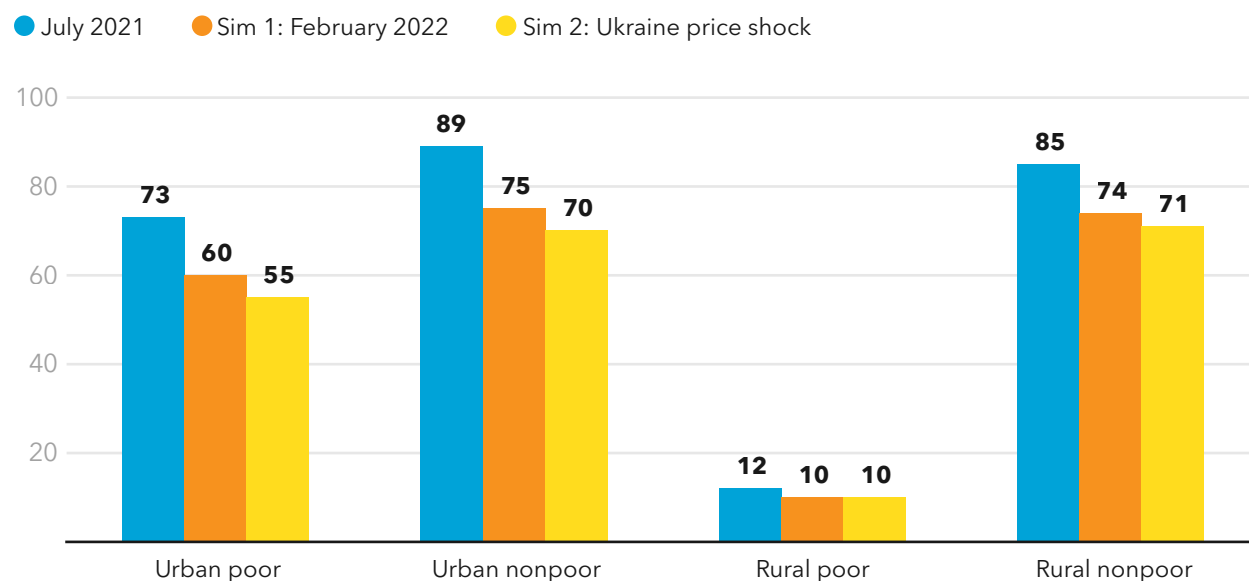
Thus, the model indicates that disruptions in the world wheat market due to the Russia-Ukraine war have had a major impact on Sudan’s wheat market – though the estimated effect is only about half the magnitude of the adverse shock of July 2021 to February 2022. Nonetheless, the combined effect of these wheat price shocks has serious consequences for Sudan’s food economy and especially urban poor households.

**Figure 3: Effects of import shocks on Sudan’s wheat market**



Source: Sudan wheat model simulations

**Figure 4: Effects of world wheat price shocks on household wheat consumption in Sudan, kilograms per person per year**



Source: Sudan wheat model simulations

In addition to addressing the immediate impacts of the current crisis, Sudan should look to building its resilience in order to reduce the impacts of the next one. Here are several policy measures to consider:

- Increased investments in roads and other market infrastructure to reduce transaction costs, raise producer prices and improve the functioning and efficiency of markets.
- Additional research and extension efforts to increase production of alternatives to wheat, including drought-tolerant sorghum and millet on non-irrigated land and high-value export crops on irrigated land. Such a shift in production has the potential to increase foreign exchange earnings and promote overall growth and employment.
- As bread subsidies are removed, a cash-transfer system targeting the poorest households could be considered. Such a program could build on the experiences from the Sudan Family Support Program (Samarat) introduced in 2021 but then halted, as well as lessons from successful cash-transfer program in other countries, including Egypt's Takaful and Karama programs. The size of the cash transfer would need to be carefully calibrated and perhaps adjusted frequently as wheat prices and inflation change.
- Food security data gaps need to be addressed and monitoring and analytical capacity should be increased. Accurate targeting of either cash or in-kind transfer programs would require up-to-date household data. Public sector capacity should also be enhanced to increase the effectiveness of standards agencies to enforce regulations for monitoring of wheat flour quality, ensure competition in wheat milling, and effectively build and manage a cash transfer program.

Putting some or all of these in place can help to build a more resilient wheat and agrifood system in Sudan, giving households the wherewithal to better withstand future economic shocks.