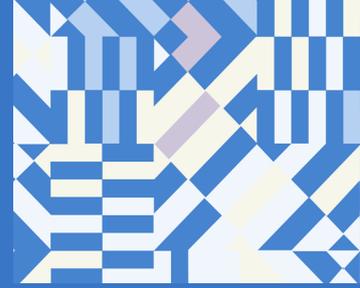




AKADEMIYA

The Expertise We Need. The Africa We Want.



March 2023

No. 24

UKRAINE CRISIS BRIEF SERIES

Exposure and Vulnerability to Global Wheat and Vegetable Oils Trade and Market Disruptions: Malawi Case Study

Ismael Fofana, **Leysa Maty Sall, and *Ramos Mabugu*



1. Introduction

The Russia-Ukraine war has induced global trade and market disruptions which are being transmitted to African economies through various channels. Within domestic economic sectors, prices of individual commodities such as fertilizers, wheat products, vegetable oils and oilseed products, as well as their close local substitutes, are changing. Impacts from the transmission of global price changes on a country's economy through this channel will likely be less than the impact of generalized changes on a country's Terms of Trade (ToT) and its real exchange rate. Nonetheless, the transmission of price changes is likely to have significant effects on individual domestic sectors and consumption. Effects on domestic production may be significant, but the sector's size within the economy will ultimately determine the macroeconomic changes and the related effects on income, inflation, and food security.

2. Exposure and Vulnerability to Wheat Trade and Market Disruptions

The Russia-Ukraine war raises serious concerns about trade in grain as the two countries are major global exporters of wheat, corn, and other staples.

* Director of Capacity and Deployment, AKADEMIYA2063

** Senior Associate Scientist, AKADEMIYA2063

*** Professor of Economics, Sol Plaatje University, School of Economic and Management Sciences

THE UKRAINE CRISIS
AND AFRICAN ECONOMIES

Malawi essentially relies on wheat imports to satisfy its domestic consumption needs and is highly dependent on Russia and Ukraine, with 47 percent of its wheat imports originating from the two countries. Wheat supply disruptions and the rising prices caused by the Russia-Ukraine conflict can have significant sectoral implications, including inflationary pressures on food prices which in turn affect food security. Wheat products are intermediate inputs mostly used by the processing (i.e., milling and baking) industries. When wheat import prices rise, they not only increase input costs and the prices of wheat-related products, but also contribute to higher prices for cereals and other substitute products within the domestic market. This section of the brief looks at the effects of the disruption of global wheat markets on gross incomes, food price inflation, and food consumption levels.

- *Wheat Price Shocks under Ukraine Crisis*

In the wake of the crisis, global wheat prices were projected to rise by more than 40 percent in 2022 from the already historically high levels in the aftermath of the COVID-19 pandemic. Wheat prices are expected to start declining in 2023 but will still be almost 25 percent higher in 2024 than in the pre-war period (Figure 1).

Figure 1: Changes in International Wheat Prices (%)



Source: World Bank, commodity markets outlook. Retrieved in April 2022.
Note: World Bank forecasts released in October 2021 and April 2022 (in percent).

- *Effects of Rising Wheat Prices on Household Incomes*

The higher prices of wheat and wheat products raise expenditure on cereal products and reduce the income that is available to spend on other products. The effect of rising global wheat prices is, therefore, equivalent to a tax on incomes, shown by the generalized decrease in incomes across all household categories (Figure 2). The decrease in income is more pronounced among poor urban and rural farm households, while rural non-farm households experience smaller declines in income.

- *Global Wheat Price Increases and Food Price Inflation*

Higher wheat prices have a significant impact on rising food prices and, consequently, reduce living standards. These impacts will likely be seen in Malawi, a major wheat-importing country. The graphs in Figure 2 show that the rise in global wheat prices will trigger a generalized food price increase across the country. A sharper increase in food prices is seen among low-income households in rural and urban areas. Rural non-farm households are more affected than farm households.

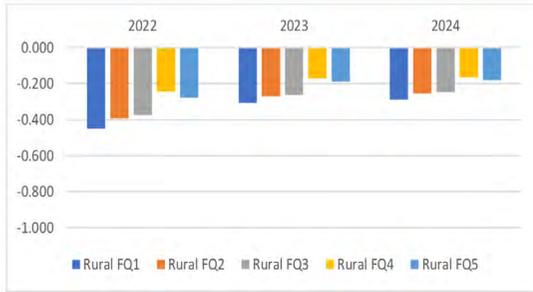
- *Impacts of Rising Wheat Prices on Food Consumption*

The combination of falling incomes and rising food prices affects household consumption and likely triggers a decline in food consumption. All categories of households experience a drop in food consumption, particularly among low-income rural and urban households (Figure 2). Because of differences in consumption baskets and pre-crisis purchasing power among poor rural and urban households, identical price changes may trigger varied food consumption effects. Food consumption decreases more among rural non-farm households than farm households as they face higher inflationary pressures on food prices.

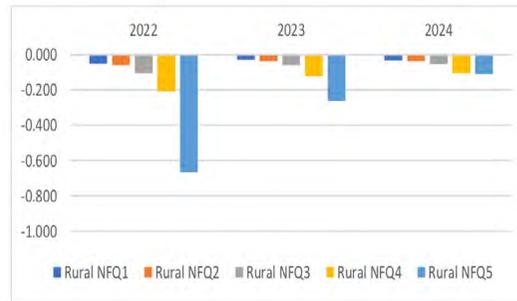


Figures 2: Effects of Rising Wheat Prices on Gross Income, Food Price Index, and Food Consumption, Changes Ukraine vs. Baseline (%)

Gross Income, Rural Farm Households



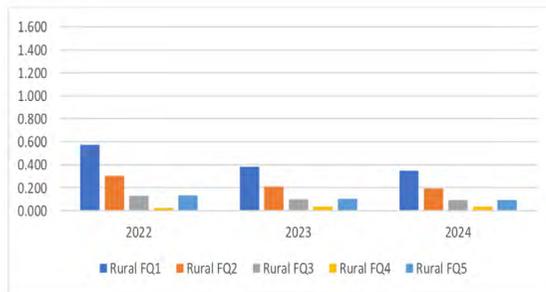
Gross Income, Rural Non-Farm Households



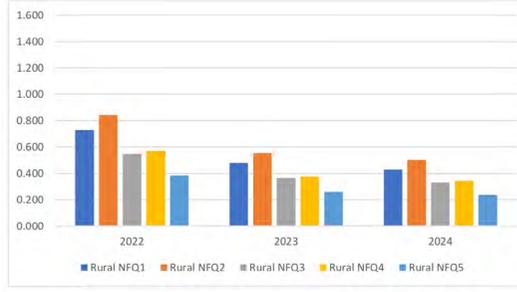
Gross Income, Urban Households



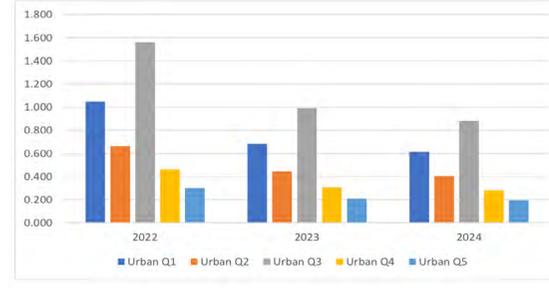
Food Price Index, Rural Farm Households



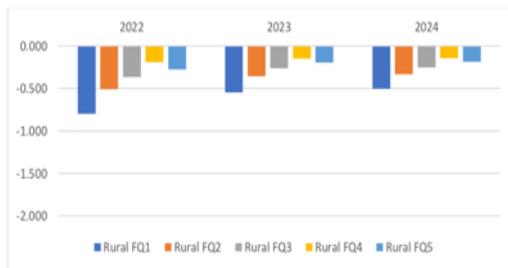
Food Price Index, Rural Non-Farm Households



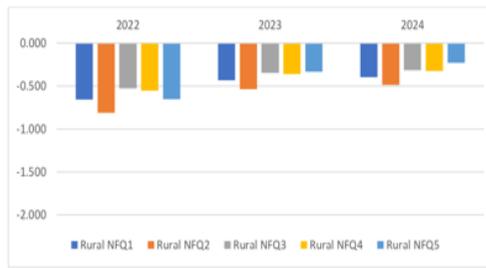
Food Price Index, Urban Households



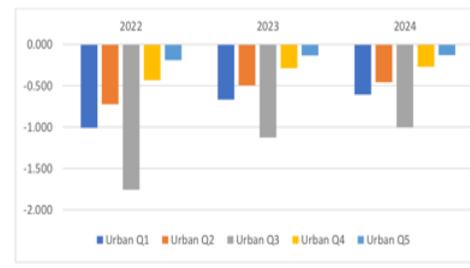
Food Consumption, Rural Farm Households



Food Consumption, Rural Non-Farm Households



Food Consumption, Urban Households



Source: Data are based on results from authors' simulations. Retrieved in April 2022. **Note:** Q1-5: Quintile 1-5. FQ1-5: Rural farm household quintile 1-5. NFQ1-5: Rural non-farm household quintile 1-5.



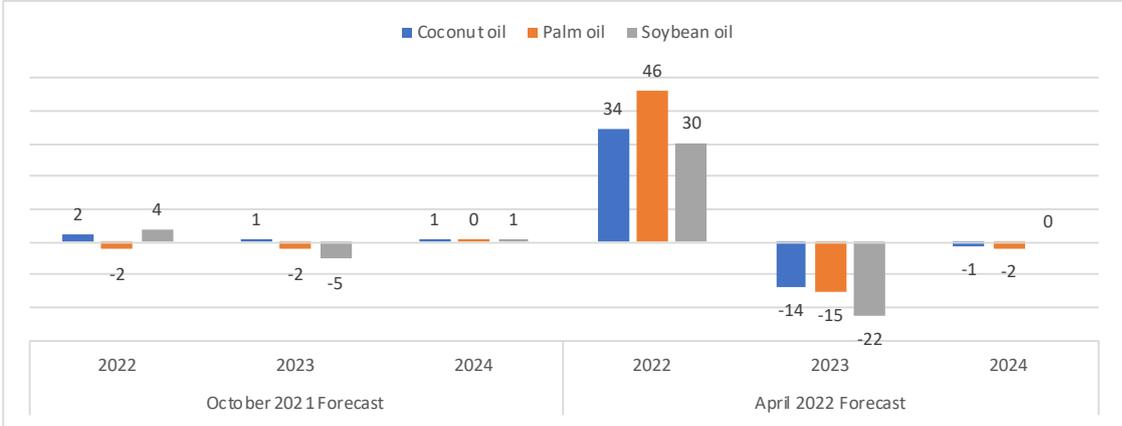
3. Exposure, Contagion and Vulnerability to Vegetable Oils' Trade and Market Disruptions

The Russia-Ukraine war is a source of both short- and long-term disruptions to the trade in and markets for vegetable oils and oilseeds. Malawi does not import vegetable oils directly from Russia and Ukraine but depends on the global market for nearly 50 percent of its domestic needs. The impact of the disruptions on global vegetable oil markets is reflected in the effects on domestic prices and the production of competing oilseeds. The impact of the disruptions to the oilseed industry is expected to be less important as the weight of the sector in the country's agricultural sector is less than 1 percent.

- *Price Shocks to Vegetable Oils under Ukraine Crisis*

Having stabilized in the aftermath of COVID-19, global prices of vegetable oils rose sharply after the start of the Ukraine war in 2022 (Figure 3). Average annual prices of coconut, palm, and soybean oil are projected to increase by 30-46 percent in 2022 before declining by 14-22 percent in 2023 and then stabilizing in 2024.

Figure 3: Changes in Prices of Global Vegetable Oils (%)



Source: Commodity price database (World Bank, 2022).
 Note: Difference in prices projected by the World Bank in October 2021 and April 2022.

- *Effects of Rising Vegetable Oil Prices on Household Incomes*

In Malawi, the income effects resulting from the disruptions to the vegetable oils sector are generally negligible for all household groups, urban as well as rural, except for higher income groups among rural non-farm households (Figure 4). Even for this group, the drop in income is marginal, i.e., close to only 1 percent in 2022.

- *Global Vegetable Oil Price Increases and Food Price Inflation*

Food price inflationary pressures are rather benign in Malawi and noticeable only in 2022 (Figure 4). Even then, the inflationary pressures tend to be concentrated among the income groups' top two quintiles (top 40 percent).

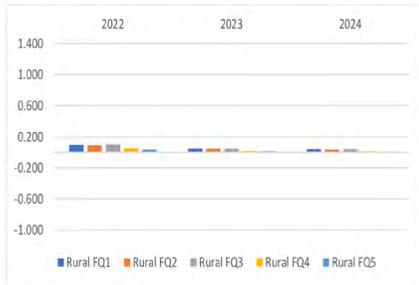
- *Impact of Rising Vegetable Oil Prices on Food Consumption*

Food consumption effects are noticeable only in 2022 and are primarily experienced among higher income brackets in urban and rural non-farm households (Figure 4). Consumption effects among rural farm households are minor.

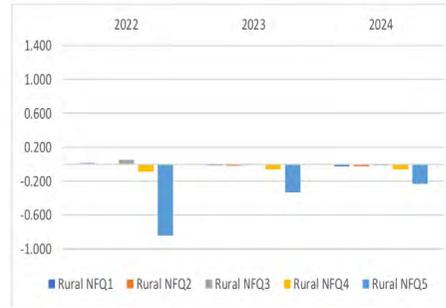


Figures 4: Effects of Rising Vegetable Oil Prices on Gross Income, Food Price Index, and Food Consumption, Changes Ukraine vs. Baseline (%)

Gross Income, Rural Farm Households



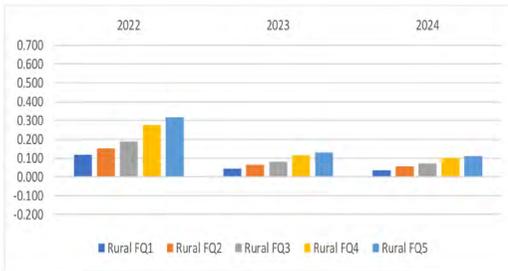
Gross Income, Rural Non-Farm Households



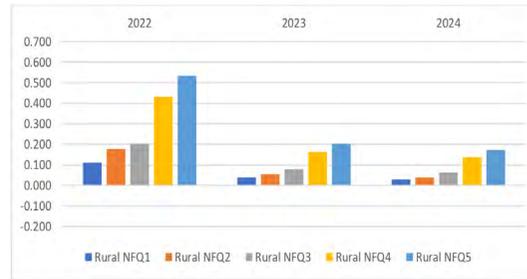
Gross Income, Urban Households



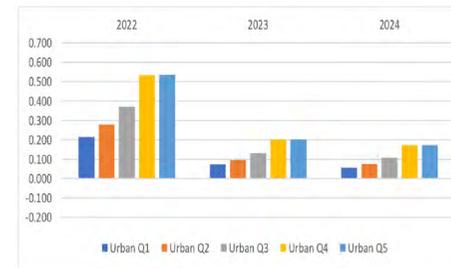
Food Price Index, Rural Farm Households



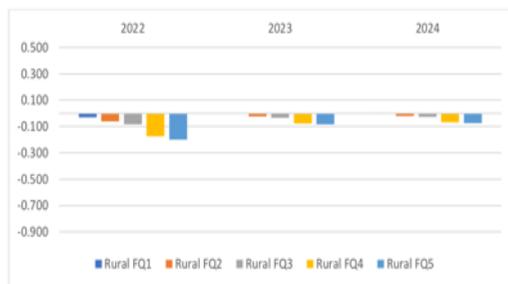
Food Price Index, Rural Non-Farm Households



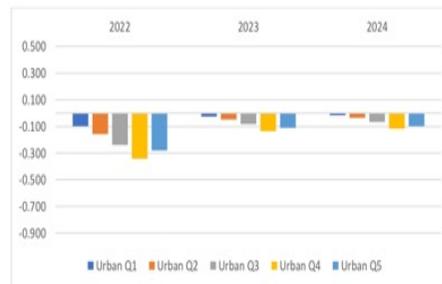
Food Price Index, Urban Households



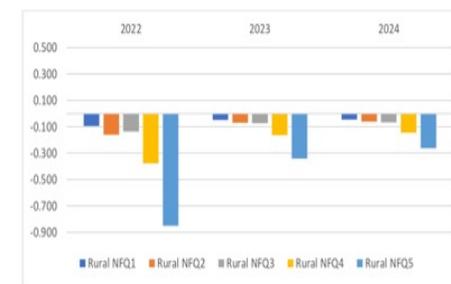
Food Consumption, Rural Farm Households



Food Consumption, Rural Non-Farm Households



Food Consumption, Urban Households



Source: Data are based on results from authors' simulations. Retrieved in April 2022. **Note:** Q1-5: Quintile 1-5. FQ1-5: Rural farm household quintile 1-5. NFQ1-5: Rural non-farm household quintile 1-5.



4. Conclusion

Given the small size of the wheat production sector in Malawi, the disruptions to global trade in wheat are unlikely to have major macroeconomic ramifications. It is more likely that higher wheat prices will erode purchasing power among the poorest and contribute to broader food price inflation. The results of our analysis indicate negative income effects among rural and urban households. The negative income effects tend to be higher among low-income urban and rural farm households and high-income rural non-farm households. Higher wheat prices have also resulted in generalized food price increases across urban and rural households. Like the income effects, food price inflationary pressures tend to be more pronounced among low-income households. This explains the decline in food consumption among poor rural and urban households. The effects of disruptions to the vegetable oils sector are less pervasive than those observed in the wheat sector. Nevertheless, the impacts could be severe for certain segments of the population, particularly among the higher income brackets in urban areas and rural, non-farm households.

Suggested Citation: Suggested Citation: Fofana, I., L.M. Sall, and R. Mabugu. 2023. *Exposure and Vulnerability to Global Wheat and Vegetable Oils Trade and Market Disruptions: Malawi Case Study*. AKADEMIYA2063 Ukraine Crisis Brief Series, No. 24. Kigali, Rwanda: AKADEMIYA2063. <https://doi.org/10.54067/ucbs.24>

AKADEMIYA2063 is supported financially by the United States Agency for International Development (USAID), the Bill and Melinda Gates Foundation (BMGF), the German Federal Ministry for Economic Cooperation and Development (BMZ), the African Development Bank (AfDB), the UK's Foreign, Commonwealth & Development Office (FCDO), the Global Center on Adaptation (GCA), and the Food and Agriculture Organization of the United Nations (FAO). The views expressed in this publication do not necessarily reflect those of the funders.



-  AKADEMIYA2063 | Kicukiro/Niboye KK 341 St 22 | 1855 Kigali-Rwanda
-  +221 77 761 73 02 | +250 788 315 318 |
-  hq-office@akademiya2063.org
-  www.akademiya2063.org

    @AKADEMIYA2063