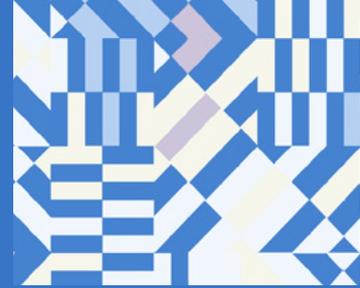




AKADEMIYA

The Expertise We Need. The Africa We Want.



November 2022
No. 15

UKRAINE CRISIS BRIEF SERIES

The Russia-Ukraine Conflict: Impacts on Commodity Markets in Mozambique

Greenwell Matchaya



1. Introduction

The numerous interconnections among nations through trade and politics, business, infrastructure, culture, and other linking mechanisms mean that what may look like a distant event can have significant repercussions that reverberate far and wide. Previous crises, including the ongoing COVID-19 pandemic, provide evidence that countries geographically distant from the epicenters of crises can experience their impacts through international trade disruptions and from protective measures undertaken by countries to limit the negative effects of the crisis¹. It is therefore no surprise that the effects of the Russia-Ukraine conflict are being felt beyond the borders of the warring countries.

These impacts are felt in the following ways: firstly, countries that trade directly with Russia and Ukraine in food and other commodities that must be transported through ports near the epicenter of the conflict experience the effects quickly and directly as trade volumes from the warring countries decline. Secondly, countries that do not trade directly with Russia and Ukraine, but which trade with others that buy commodities from the two countries may also be affected indirectly as stocks decline with use in the absence of replenishment. Thirdly, due to concerns about immediate food shortages, countries often resort to hoarding their own food stocks instead of making them available to the market. Fourthly, increasing fuel, transport and general trade transaction costs put pressure on commodity prices, leading to price hikes. In each of these cases, the induced scarcity would trigger price hikes in the short and medium term for those commodities directly affected, eventually leading to international contagion.²

THE UKRAINE CRISIS
AND AFRICAN ECONOMIES

¹ Matchaya G, Nhlengethwa S, Griffiths J, and Bhekiwe F. 2020. Maize Grain Price trends in food surplus and deficit areas of Mozambique under COVID-19. AKADEMIYA2063. COVID-19 bulletin.

² Chang, R., Majnoni, G. (2001). International Contagion: Implications for Policy. In: Claessens, S., Forbes, K.J. (eds) International Financial Contagion. Springer, Boston, MA. https://doi.org/10.1007/978-1-4757-3314-3_15

If the affected goods are substitutable, the price hikes may be short-lived; instead, the substitute commodities would also experience an increase in prices. However, this effect may be the opposite for complements, such that an increase in the price of one commodity due to the induced scarcity would lead to a decline in demand for the complementary good. It has also been shown that for commodities, the effects of crises on prices are often dependent on several other factors, including market location³. The effects of the Russia-Ukraine war on commodity prices may vary not only depending on the commodity characteristics or trading relationships between the warring countries and the country under study but also on whether the markets examined are rural or urban. Location matters due to the high import dependency and larger incomes in urban centers compared to rural areas.

Mozambique is a net importer of wheat, and in 2020, the country imported wheat worth 264 million USD primarily from Russia (81.9 million

USD), Canada (58.1 million USD), Poland (24.1 million USD), Ukraine (21.1 million USD), and Latvia (14.5 million USD). While Russia and Ukraine are large fuel exporters, neither of the two countries is listed among Mozambique's top import sources of petroleum. In 2018, Mozambique imported 1.34 billion USD in refined petroleum, mainly from the United Arab Emirates (409 million USD), India (201 million USD), China (184 million USD), South Africa (149 million USD), and Oman (122 million USD)⁴. Mozambique is a net sugar exporter, with a trade surplus for sugar worth over 37 million USD in 2020⁵. The country is a net importer of maize, with 39% of the total annual import demand of 423 metric tons (MT) being met by imports from South Africa, while the rest is sourced from India (53%) and Turkey (5%). Russia and Ukraine do not directly participate significantly in maize, sugar, rice and millet trade for Mozambique. Further, millet is not a significant crop in Mozambique compared to maize, rice, and wheat.

2. Tracking Price Changes across Local Markets

This brief used price data for various commodities from four markets in Mozambique to study commodity price dynamics during the conflict period. These four markets include two city markets (Maputo in Maputo and Inhambane in Inhambane) and two rural markets (Marrupula in Nampula and Mutarrara in Tete).

In general, world market prices for these commodities increased at different rates during the period under study (see Table 1).

Table 1: Changes in World Market Prices for Selected Commodities

	Crude oil, average	Liquefied natural gas, Japan	Maize	Rice, Thai A.1	Wheat, US	Beef	Sugar	Sunflower oil
	(\$/bbl)	(\$/mmbtu)	(\$/mt)	(\$/mt)	(\$/mt)	(\$/kg)	(\$/kg)	(\$/mt)
% change (t- t ₋₁)	%	%	%	%	%	%	%	%
2022M01								
2022M02	11,5	1,7	5,8	0,7	4,3	4,0	-2,0	6,2
2022M03	20,2	1,1	14,7	0,3	24,5	0,6	6,7	57,5
2022M04	-8,0	7,8	3,8	0,5	1,8	-1,9	3,2	-3,6
2022M05	6,5	1,5	-1,0	8,3	5,5	-0,8	-1,1	-8,6
Total Change	30,1	12,1	23,3	9,7	36,2	1,9	6,8	51,4

Source: Author's tabulations with World Bank 2022 data. bbl stands for barrel of oil; mmbtu stands for Metric Million British Thermal Unit, MT stands for Metric ton; % is per hundred.

³ Mbaye, Matchaya, Karugia, et al. 2021. The impact of COVID-19 on staple food prices: Location matters. AKADEMIYA2063 and IFPRI. <https://www.ifpri.org/publication/impact-covid-19-staple-food-prices-location-matters>.

⁴ <https://oec.world/en/profile/bilateral-product/refined-petroleum/reporter/zwe#>.

⁵ <https://trendeconomy.com/data/h2/Mozambique/t701>

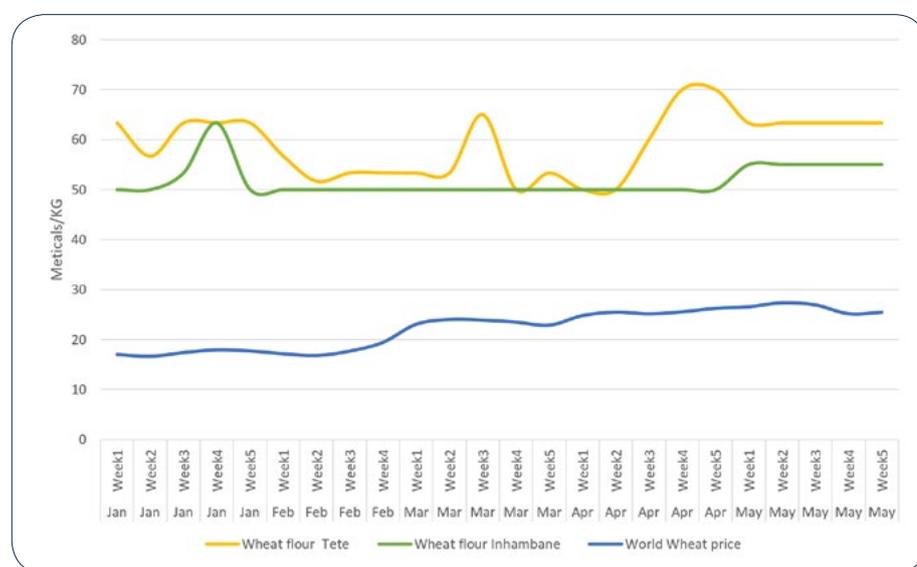


Table 1 shows that except for sugar, the prices of all the commodities under study increased from January to March 2022. This was possibly in reaction to the Russia-Ukraine war, which had just begun triggering panic buying by countries heavily dependent on imports. Although there were some exceptions in April for crude oil, beef, and sunflower oil, as well as in May for maize, beef, sugar and sunflower oil, prices for all these commodities rose worldwide between January and May 2022. Cumulatively, the highest price increases were experienced in sunflower oil (51%), wheat (36%), crude oil (30.1%) and maize (23.3%) in that order. Russia and Ukraine were among the leading exporters of these commodities before the start of the war, and some of these price increases may have resulted from the reduced exports from the two countries. Price increases were lowest for beef (1.9%), sugar (6.8%), rice (9.7%) and liquefied natural gas (12.1%).

a. Wheat

As highlighted earlier, Mozambique is a net importer of wheat, but it also has some limited production domestically. Within Mozambique, key wheat-producing regions include Tete and Manica, among others. Figure 1 shows the price dynamics for wheat since January 2022 and covers the period of conflict. Prices are shown in Mozambique’s currency, Meticals (MT).

Table 1: Wheat Prices in Urban and Rural Markets, (Jan-May 2022)

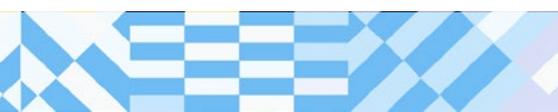


Source: Author’s construction with data from the Ministry of Agriculture, 2022

For a large part (January to the first week of April 2022) of the period under study, the Inhambane market prices for wheat were generally stable at around MT50/KG, while wheat prices in Tete over the same period were generally above MT50/KG. During the entire period, wheat prices were highest in the rural market of Tete, where they averaged around MT59/KG and were lowest in the urban markets of Inhambane, where they averaged around MT51.7/KG. After the fifth week of April 2022, however, wheat prices took an upward turn in Inhambane, reaching a peak of MT55/KG from the previous MT50/KG representing a 10% increase. In Tete, wheat prices increased sharply from MT50/KG to MT70/KG between the first and fifth week of April, representing a 40% increase. Prices in the rural market rose higher and faster compared to urban markets.

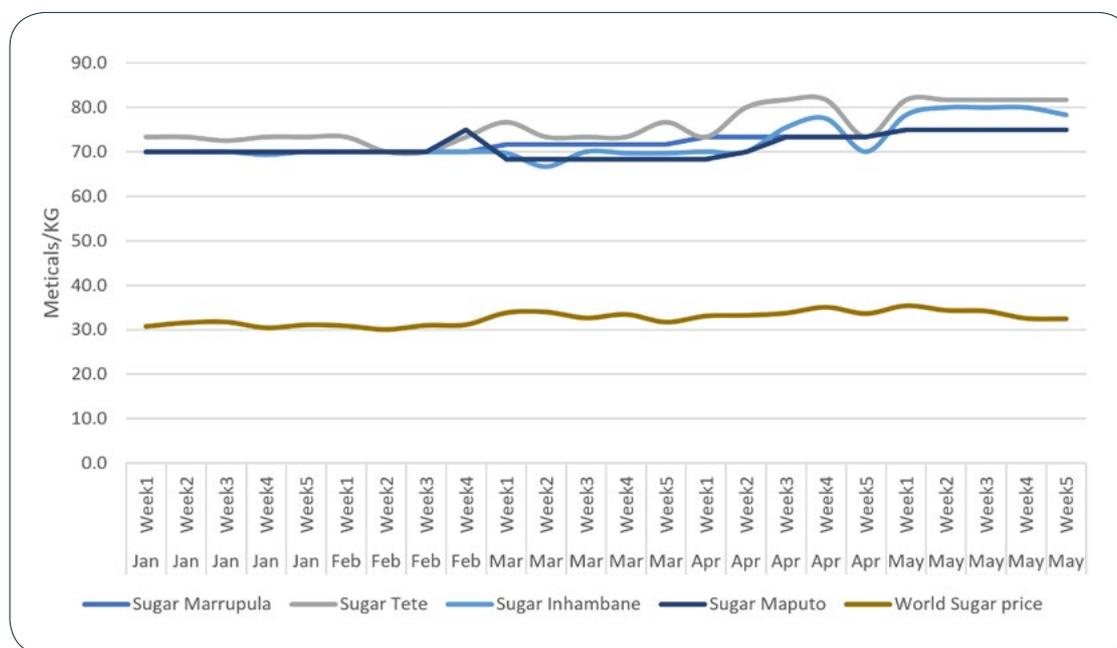
These trends approximately mirror the trends in world wheat prices⁷, which showed a steady increase from USD0.31/KG in the fourth week of February 2022 to a peak of USD0.41/KG in the fifth week of May 2022, representing an increase of about 32% which is comparable to the changes observed in the Tete market. This change is also within the same range as the total change in world wheat prices of 36% as reported in Table 1. The increase may therefore largely be attributed to the scarcity created by the Russia-Ukraine war. Rural markets experienced lower increases due to the availability of their own production and the low speeds at which international price signals typically reach remote places such as rural areas. The price differentials between the world wheat prices and those observed in Mozambique can be attributed to Mozambique’s degree of trade openness.

⁷ <https://markets.businessinsider.com/commodities/wheat-price>



b. Sugar

Figure 2: Sugar Prices in Urban and Rural Markets of Mozambique, (Jan-May 2022)



Source: Author's construction with data from the Ministry of Agriculture, Mozambique, 2022

Figure 2 shows that sugar prices were generally higher (above MT70/KG) in the rural markets of Tete than in the other markets, with the urban market of Maputo showing the strongest price stability as sugar sold at around MT70/KG for a long period. In rural and urban markets, prices increased towards the end of April 2022. In Maputo, prices rose from MT70/KG to MT75/KG between the third week of April and the fifth week of May 2022, representing a 7% increase over the period. In contrast, sugar prices in Tete increased from MT73/KG to MT81/KG over the same period, representing an increase of 11%, while in Inhambane, they rose from MT70/KG to MT78.3/KG, representing a 12% increase.

World sugar prices rose after the fourth week of February when the war began from around USD0.48/KG to as much as USD0.56/KG in the first week of May and have since remained above the USD0.50/KG mark.⁸ This change in world sugar prices represented a 17.4% increase, similar to the 17% increase observed in the Inhambane and Tete markets. Mozambique is a net sugar exporter, but the global panic about the future scarcity of commodities arising from the war pushed prices higher even in net exporting countries. This can also be explained by the fact that some countries (for example, India, Argentina, Turkey, and Egypt, among others)⁹ were already prohibiting international exports to ensure their commodities were reserved for their own populations.¹⁰

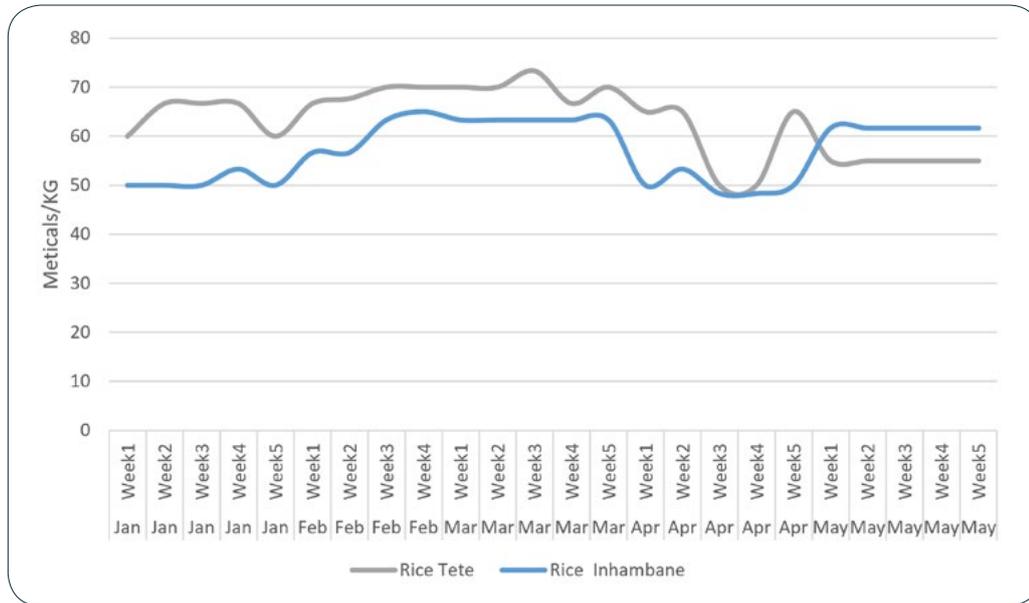
⁸<https://www.isosugar.org/prices.php?pricerange=2022-04-01>

⁹<https://www.firstpost.com/business/india-bans-wheat-export-from-argentina-to-turkey-countries-that-have-stopped-overseas-food-trade-10698441>

¹⁰<https://edition.cnn.com/2022/05/14/business/india-wheat-export-banned/index.html>

c. Rice

Figure 3: Rice Prices across Urban and Rural Markets, (Jan-May 2022)

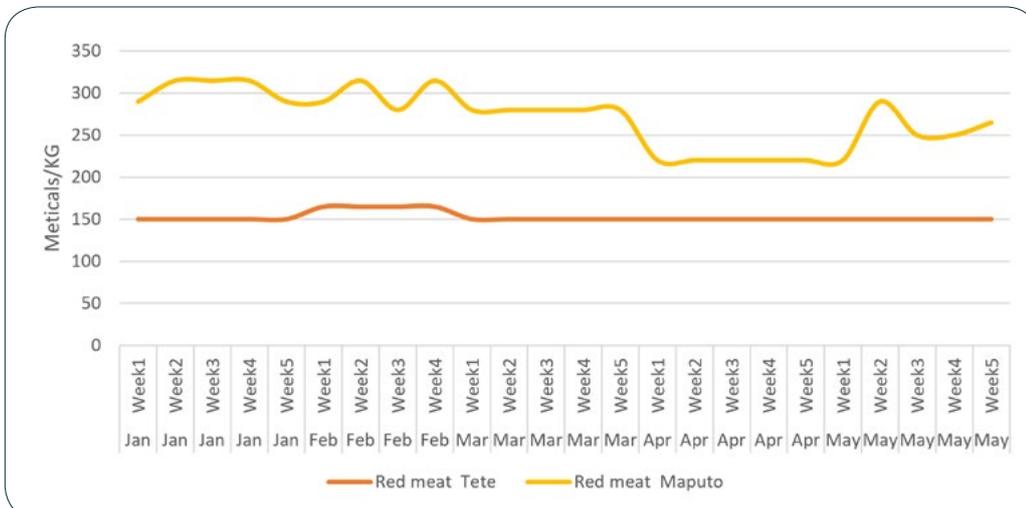


Source: Author's construction with data from the Ministry of Agriculture, Mozambique, 2022

As highlighted earlier, Mozambique is a net importer of rice. However, rice imports are modest relative to wheat as Mozambique produces significant amounts of rice. Rice is not imported from Russia or Ukraine, and so any effect of the war on these commodities would only be indirect. Figure 3 shows that rice prices were generally higher in the rural market of Tete, where average prices remained above MT60/KG in comparison to the urban market of Inhambane, which had an average of MT55/KG before the first week of May 2022. This price disparity may be explained by the fact that imported rice supplies are often more available in urban centers than in rural areas. Notably, rice prices in rural and urban markets declined from the third week of March to the fourth week of April 2022 before stabilizing in May (Figure 3).

d. Red Meat

Figure 4: Red Meat Prices across Urban and Rural Markets, (Jan-May 2022)



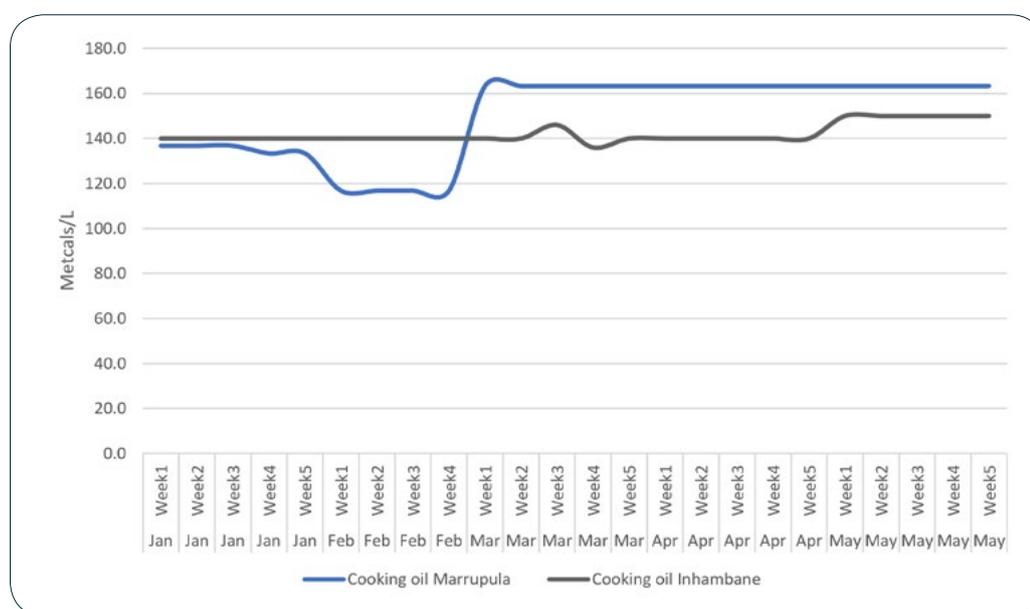
Source: Author's construction with data from the Ministry of Agriculture, Mozambique, 2022



Red meat is generally expensive in Mozambique’s urban markets averaging above MT250/KG in Maputo market in comparison to the price of around MT150/KG in the rural Tete market. The relatively higher prices in the urban market of Maputo may be the result of higher incomes and population, resulting in higher demand in comparison to Tete, for example, where effective demand may be smaller due to the lower incomes associated with rural areas. Beef prices declined in Maputo between the fourth week of February and the first week of May from MT315/KG to MT220/KG, representing a 30% decline. The prices in Tete were generally stable. These trends also mimic those on the world stage, where after a brief rise from USD4.97/KG in January to USD6.25/KG in March 2022, beef prices subsequently declined to around USD6.08/KG in May 2022¹¹. It is also supported by the data in Table 1, which shows that beef prices changed the least and, in fact, declined in April and May 2022.

e. Cooking Oil

Figure 5: Cooking Oil Prices across Urban and Rural Markets, (Jan-May 2022)



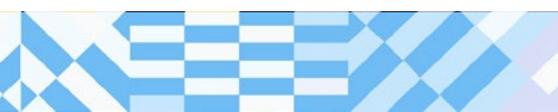
Source: Author’s construction with data from the Ministry of Agriculture, Mozambique, 2022

Figure 5 presents cooking oil prices in Marrupula (Nampula) and Inhambane. During the period in focus, cooking oil prices were higher in the rural market of Marrupula, where the price of one liter (L) was above MT150 and lower in the urban market of Inhambane, where prices averaged around MT140/L. In Marrupula, cooking oil prices increased sharply after Week 4 of February 2022 from MT116/L to as much as MT163/L, representing an increase of 40% over that period. In Inhambane, cooking oil prices increased from MT140/L in the fourth week of February to a peak of MT150/L in the first week of May 2022, representing an increase of 7% over that period.

The rise in cooking oil prices is linked to the increased prices for sunflower oil and soybeans at the international level in response to the scarcity created by reduced trade in those commodities from Russia and Ukraine, which together control more than 75% of sunflower oil trade.¹² Table 1 shows that with an increase of 51.4%, world sunflower oil prices increased the most among the commodities examined, which can largely be explained by the reduction in trade from Russia and Ukraine. Moreover, due to the conflict, other countries went on to ban trade in vegetable oils, thereby exacerbating the global shortage and leading to further price increases internationally. The increase in cooking oil prices in both markets in Mozambique was partly a result of the war in Russia and Ukraine.

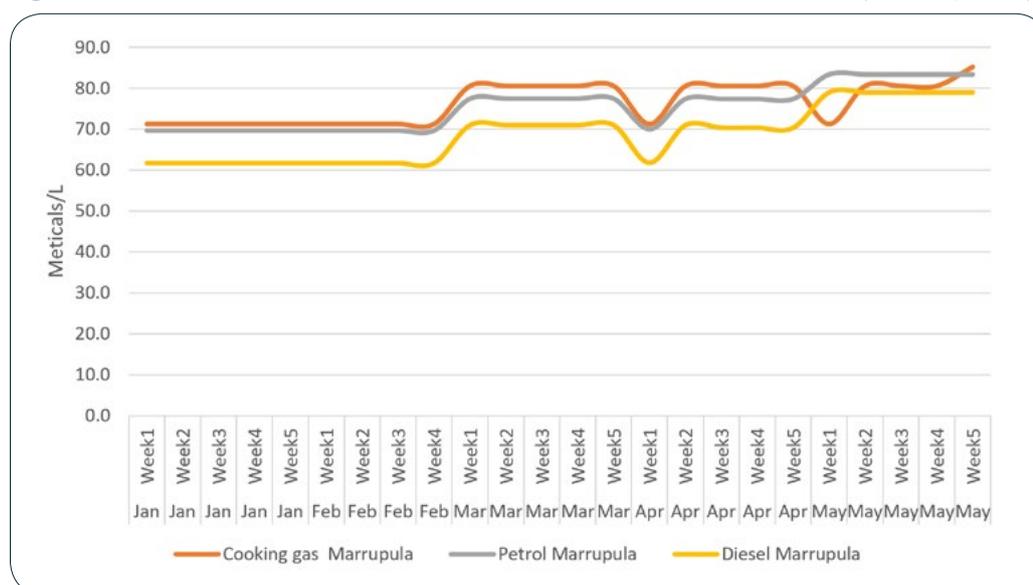
¹¹https://www.theglobaleconomy.com/World/beef_prices/

¹²<https://www.npr.org/2022/04/26/1094770364/russias-invasion-of-ukraine-heats-up-cooking-oil-prices-in-global-squeeze>



f. Energy Prices

Figure 6: Petrol, Gas and Diesel Prices across Urban and Rural Markets, (Jan-May 2022)



Source: Author's construction with data from the Ministry of Agriculture, Mozambique, 2022

Prices for petrol did not show any significant differences across the various markets over most of the entire period and so for this reason, Figure 6 shows changes for the rural market of Marrupula only. In both the urban market of Inhambane and the rural market of Marrupula, prices for petrol increased modestly from around MT69.64/L in the fourth week of February to MT83.3/L in the first week of May 2022, representing an increase of 19.6%. The prices for diesel and gas also rose by a similar amount over the same period. Gas prices increased by about 12%, whereas diesel prices increased by about 27% over the entire period. The 20% increase in petrol prices, as well as the 27% increase in diesel prices appears to be in line with the observed prices increase of 30% in the world crude oil prices. This implies that the war in Ukraine and Russia has influenced fuel price dynamics in Mozambique's local markets as well.

3. Price Changes in Local and Global Markets

Table 2: Changes in Local and World Market Prices for Selected Commodities

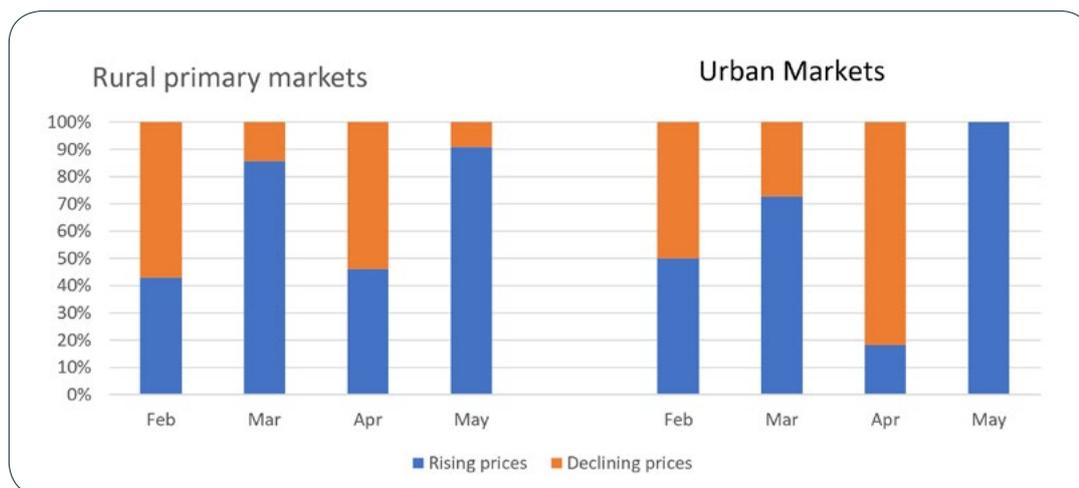
Commodity	Global price change (%)	Change in local rural market (Marrupula)	Change in local urban market (Inhambane)
Maize	+23.3%	+2.7%	0%
Wheat	+36.2%	+45%	+4%
Sugar	+6.8%	+7%	+11.3%
Rice	+9.7%	0%	-13%
Cooking oil	+51.4%	+26.2%	+34.4%
Beef (red meat)	+1.9%	0%	+0.9%
Fuel	Crude oil: +30.1%	Diesel: +26.7%	
Petrol: +19%	Diesel: +27.3%		
Petrol: +19.2%			
Liquefied natural gas (Japan)	+12.1%	+11.2%	+8.4%

Source: Author's construction based on data from Ministry of Agriculture, 2022, Mozambique price monitoring survey, and World Bank, 2022.



As highlighted in Table 2, world prices for all the examined commodities increased significantly between January and May 2022. Similarly, prices in local markets for many of the commodities in focus rose over the same period with the exception of rice prices in the urban market of Inhambane, which declined by roughly 13% between January and May 2022. Prices for the other commodities increased over the same period in Inhambane market. The magnitude of their increase was similar to the increases observed in global markets for the same commodities, with the exception of maize which registered no increase. Commodity prices in the rural markets of Marrupula in Nampula, also generally increased, with the exception of rice and beef, which remained stable. Overall, prices rose higher and faster in rural markets than in urban markets although the fluctuations between months were higher in urban markets (Figure 7).

Figure 7: Changes in Prices for all Commodities³ in Rural and Urban Markets, (Jan-May 2022)



Source: Ministry of Agriculture, Mozambique 2022

Figure 7 shows that prices in rural and urban markets generally increased over the January to May period, with the exception of the month of April which saw many urban markets experiencing price declines. However, the price increases were greater and faster in rural markets, although this distinction is not clear cut. For example, by February 2022, more than 50% of the urban markets were experiencing price increases in comparison to just under 45% of rural markets, but by March, more than 85% of rural markets were experiencing an increase in prices compared to just about 70% of urban markets. By May 2022, almost 100% of the urban markets examined experienced rising prices, although only 20% had experienced rising prices in the previous month. This contrasts with the general increase in the number of rural markets with rising prices in both April and May 2022.

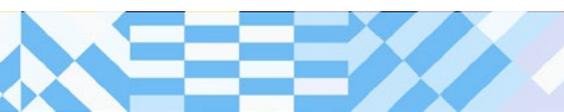
4. Summary of Observations

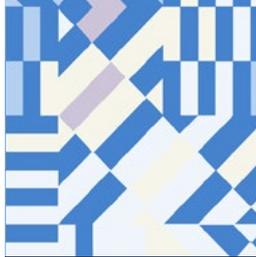
The prices of wheat in Mozambique have been affected by the Russia-Ukraine war. This was expected as Mozambique imports most of its wheat from Russia and Ukraine, and the scarcity created by the war pushed prices higher. These trends were similar to those observed for world wheat prices over the same period. The changes in wheat prices were greater and faster in rural areas compared to urban markets underscoring the importance of internal trade in price determination. Sugar prices went up significantly from March in Mozambique's urban markets, which may partly be a result of the Russia-

Ukraine conflict and its impacts, which included an increase in transport costs and a reduction in international commodity supplies as countries hoarded their stocks to smooth consumption.

While rice prices exhibited a declining trend in urban markets, maize prices rose moderately in the two rural markets examined. Cooking oil prices, on the other hand, rose significantly in both urban and rural markets but more so in urban markets. These price hikes were attributable to the war, as Russia and Ukraine controlled the world's sunflower oil trade, and their own trading volumes plummeted due to the war.

¹³Wheat, rice, maize, cooking oil, sugar, fuels.





There were also significant increases in the prices of petroleum products and gas in rural and urban markets, similar to the increases observed in world prices for these commodities, implying that the war influenced these price changes in Mozambique's local markets. Among the fuels, gas increased the least (8% to 11% in all markets), followed by petrol (19% and above) and diesel prices rising highest (over 26%).

5. Recommendations

As wheat, sugar, cooking oil and fuel prices seem to have been impacted by the war, it is essential to keep food trade open in order to facilitate household access to stocks of those commodities from within and outside Mozambique as well as limit any negative effects of the Russia-Ukraine conflict on the economy in general and the poor more specifically.

It would also be useful to enhance social protections by developing and strengthening programs that support consumers and vulnerable households by providing safety nets, as was done during the most critical period of the COVID-19 pandemic.

To limit the effects of the Russia-Ukraine conflict from persisting for many years, Mozambique could step up programs that support farmers in increasing future production and offset the effects of the war on food prices. In this regard, increasing general funding to agriculture, improving prioritization of the sector, and avoiding pilferage of its allocations, can increase productivity and enhance the dynamic resilience of households in Mozambique.

6. References

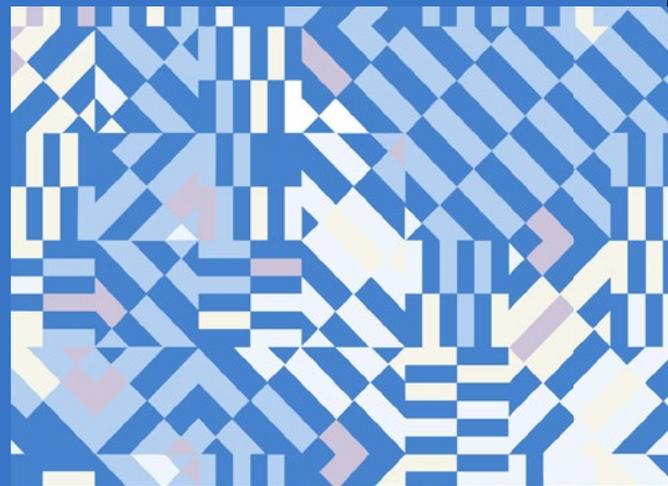
Government of Mozambique. 2022. Price monitoring surveys. Maputo.

World Bank 2019. <https://wits.worldbank.org/trade/comtrade/en/country/ZWE/year/2019/tradeflow/Imports/partner/ALL/product/100110#>.

Suggested Citation: Matchaya, G., 2022. The Russia-Ukraine Conflict: Impacts on Commodity Markets in Mozambique. AKADEMIYA2063 Ukraine Crisis Brief Series, No. 15, AKADEMIYA2063, Kigali, Rwanda.

This work was funded by the UK's Foreign, Commonwealth & Development Office (FCDO) through a grant from the Alliance for a Green Revolution in Africa (AGRA).

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