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

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Introduction

This brief analyzes the short-run effects of the Ukraine-Russia crisis on commodity prices across local markets in Kenya. The crisis has caused disruptions in global trade and local commodity markets. Food staple markets are one of the channels through which the disruptions are being experienced by local communities, reaching far beyond major urban centers. Russia and Ukraine are major players in the global grain markets accounting for 25% and 15% of the total exports of wheat and maize, respectively. The two countries are also major players in the fertilizer, oil, and natural gas markets. In 2021, Russia was the fourth largest global exporter of natural gas. The crisis has disrupted trade and commodity flows, and brought about increases in international prices for most primary commodities. Prices of most commodities are expected to be significantly higher in 2022 compared to 2021 and are projected to remain high in the medium term. Some of these changes in global prices will be reflected in local prices depending on the extent of reliance on global markets and local price transmission mechanisms.

In general, many African countries rely on imports to meet domestic demand for food commodities such as wheat, rice, and cooking oil. Most energy needs (fuel and liquified petroleum gas (LPG)) are also met through imports. Because of this dependence on imports, many countries are exposed to global trade shocks.

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THE UKRAINE CRISIS AND AFRICAN ECONOMIES

The ongoing Ukraine-Russia crisis and its consequent disruption of global trade is a classic example of such a shock.

There is evidence that many more African countries are exposed to the ramifications of the crisis than those that are directly involved in global trade. Badiane *et al.,* (2022) provide evidence of a significant contagion effect arising from a dense network of re-exports through cross-border markets by primary importers, which spreads the disruption to many more countries. One can also expect to see contagion effects across commodities, that is, the transmission of shocks from globally traded commodities to local food staples, for instance.

In this brief, the actual weekly price data for selected basic food commodities (rice, wheat flour, sugar, and cooking oil) and fuel (petrol and diesel) and LPG (cooking gas) are analyzed. The weekly price data is collected five times per month and recorded in Kenya Shillings per Kilogram (Kshs/Kg) for rice and wheat flour, and Kenya Shillings per Liter (Kshs/L) for cooking oil, diesel, and petrol. The data covers the period from January to June 2022.

The data was obtained from the Ministry of Agriculture, Livestock, Fisheries and Cooperatives (MoALF&C). The brief focuses on four markets: two urban markets i.e., Kangemi (in Nairobi City County), and Ahero (in Kisumu County); and two rural markets, i.e., Bungoma and Kirinyaga.

The analysis involves tracking price changes from January 2022 to the end of June 2022 and comparing those changes to the observed changes in global prices for the same commodities or their derivatives. The global prices were obtained from the World Bank Commodity Market Outlook data which estimates monthly prices for about 46 commodities in specific markets.[1] The analysis shows how prices in local markets have responded to global changes and the extent to which these changes compare across local markets and with global price movements (World Bank, 2022).

2. Tracking Price Changes across Local Markets

Given the dependence on global and regional imports for some key commodities, the impact of trade disruptions arising from the Ukraine-Russia crisis on local prices will be both direct and indirect through the dense network of transborder imports and re-exports from countries that are trading directly with Russia, Ukraine, or Belarus. In addition, price increases could also be driven by higher shipping and transport costs driven by rising fuel prices. Furthermore, a decline in available supplies due to export restrictions by exporting countries and 'hoarding' by re-exporting countries could also drive prices upwards.

2.1 Price changes for food commodities in urban and rural markets

Since March 2022, price increases for the commodities examined were observed in both rural and urban markets. The urban markets of Kangemi and Ahero showed very similar patterns in terms of prices changes (see Figures 1 and 2). In both markets, the prices of food commodities rose slightly during the March-April period but were flatter during the month of May except for the price of cooking oil which continued to rise. The rise in the price of wheat is expected because Russia is Kenya's major source of wheat. In 2020/2021, imports from Russia accounted for 31% of the total (1,888,900 metric tons) wheat imports into the country (KNBS, 2022). This rise in wheat prices was captured in a blog by the Kenya Institute for Public Policy Research and Analysis (KIPPRA)[2] which reported that as of May 2022, the price of a two-kilogram packet of wheat flour had surpassed the Kshs 200 mark for the first time in at least four years. The price of wheat jumped by 28% from Kshs 158 in February 2022 to approximately Kshs 205 in June 2022. The price of unprocessed wheat also rose from Kshs 61,331 per ton seen in early 2022 to Kshs 78,756 in June 2022 as the market responded to a tightening global supply. Further, the price of an 800g loaf of bread increased by Kshs 30 in the first five months of 2022. This price hike was directly attributed to the Russia-Ukraine crisis and the government was reported to be seeking for alternative sources of wheat imports. Kenya has engaged in bilateral talks with

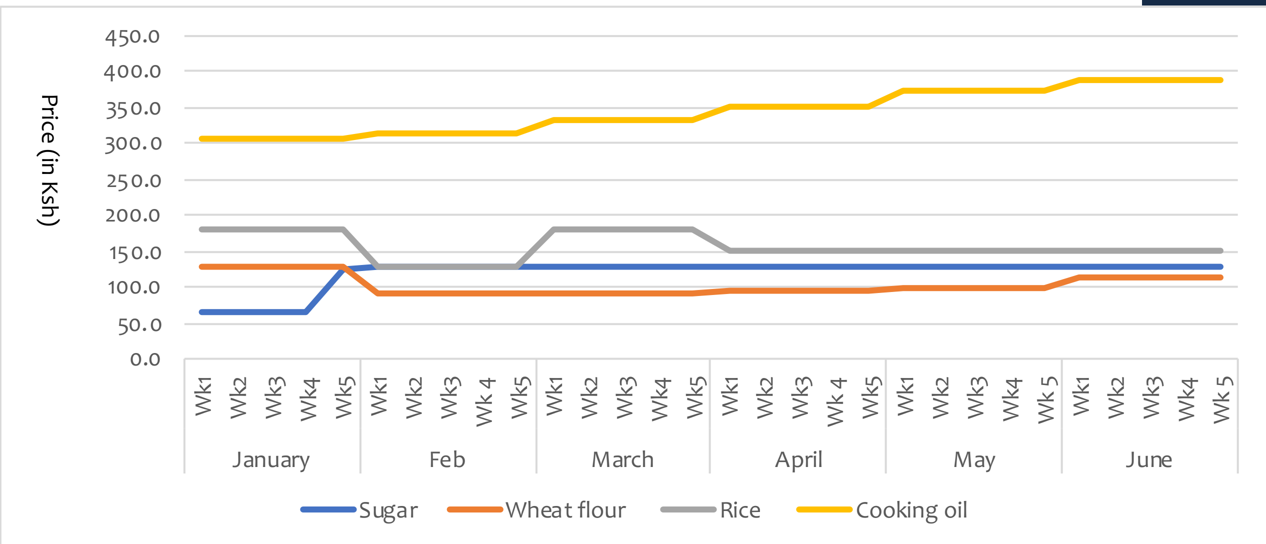
1 https://www.worldbank.org/en/research/commodity-markets

2 https://kippra.or.ke/russia-ukraine-conflict-and-wheat-supply-in kenya/#:~:text=The%20price%20of%20wheat%20has,to%20a%20tightening%20supply%20globally.

the US to increase imports. Specifically, the US-Kenya Trade and Investment Working Group has adopted a phytosanitary protocol for Kenya that would allow US wheat growers in the Pacific Northwest (PNW) to access Kenya's wheat market for the first time in over a decade.[2]

In the urban market of Kangemi, wheat prices increased by 24% between the first week of February and the last week of June, but this was still slightly lower than the price at the start of January (see Figure 1). The Kangemi market is in Nairobi City County and is well connected to all production areas. Prices therefore respond more rapidly to changes in supply after harvest. In the urban market of Ahero, wheat flour prices continued their upward trend through June and were 36% higher in the last week of June compared to the start of January (see Figure 2). There was a notable price rise in early-June in both urban markets, compared to the prices recorded in April and May.

Figure 1: Weekly prices of food commodities in Kangemi market, Nairobi (Jan-Jun 2022)



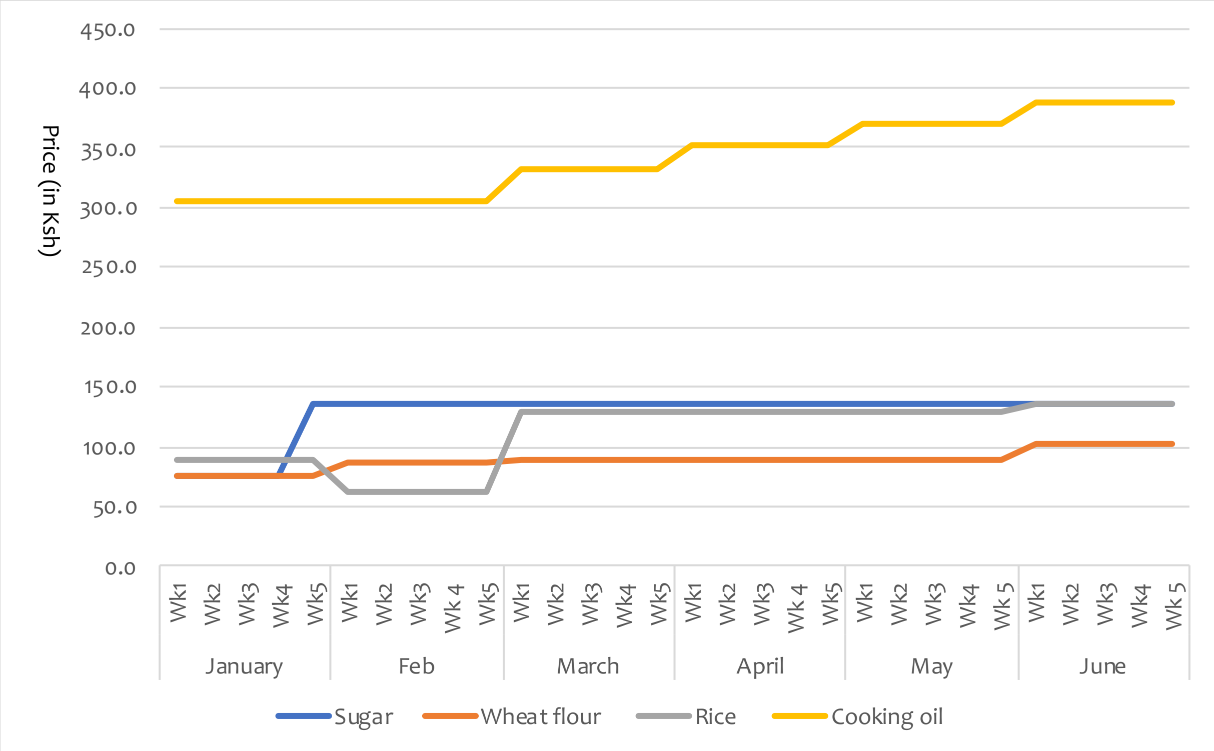
Source: Authors' computation based on MoALF&C data, 2022

A similar trend in wheat price increases was recorded for the rural market of Bungoma (43% increase between January and June 2022). However, a decline of 11.54% in wheat flour prices was recorded in Kirinyaga market from Kshs 130/kg in January to Kshs 112/kg in June 2022. The declining prices in the rural Kirinyaga market though surprising are not unexpected. The Kirinyaga market was shielded from the impact of rising wheat prices due to the localized 'surpluses' from the early harvest that runs from June to December. Overall, there are signs that the rise in global wheat prices was transmitted to local markets in Kenya, in both urban and rural areas, except in situations where local production surpluses shielded the markets from the impacts of price increases.

Kenya largely relies on imports to meet its demand for rice, sugar, and cooking oil. Sugar imports are mainly sourced from the Common Market for Eastern and Southern Africa (COMESA) countries including Malawi, Zambia, Eswatini and South Africa. About 90% of the rice consumed in Kenya is imported. Approximately 50% of the rice is imported from Tanzania while a substantial amount is imported from Asian countries such as Pakistan and India. Similarly, more than 80% of cooking oil is imported. Among the three food commodities, sugar recorded the highest price rise across markets followed by rice. Cooking oil prices maintained a constant rise (26.92%) across all the markets.

The price of sugar had risen significantly in both urban (92.59% in Kangemi, 80% in Ahero) and rural (100% in Kirinyaga, 80% in Bungoma) markets by June compared to January as shown in Figures 1-4. The increase in sugar prices in Kirinyaga is much higher than in the rural Bungoma market. The higher sugar prices seen in rural markets can be explained by the additional transport and logistical costs incurred in delivering sugar to rural areas.

Figure 2: Weekly prices of food commodities in Ahero market, Kisumu (Jan-Jun 2022)



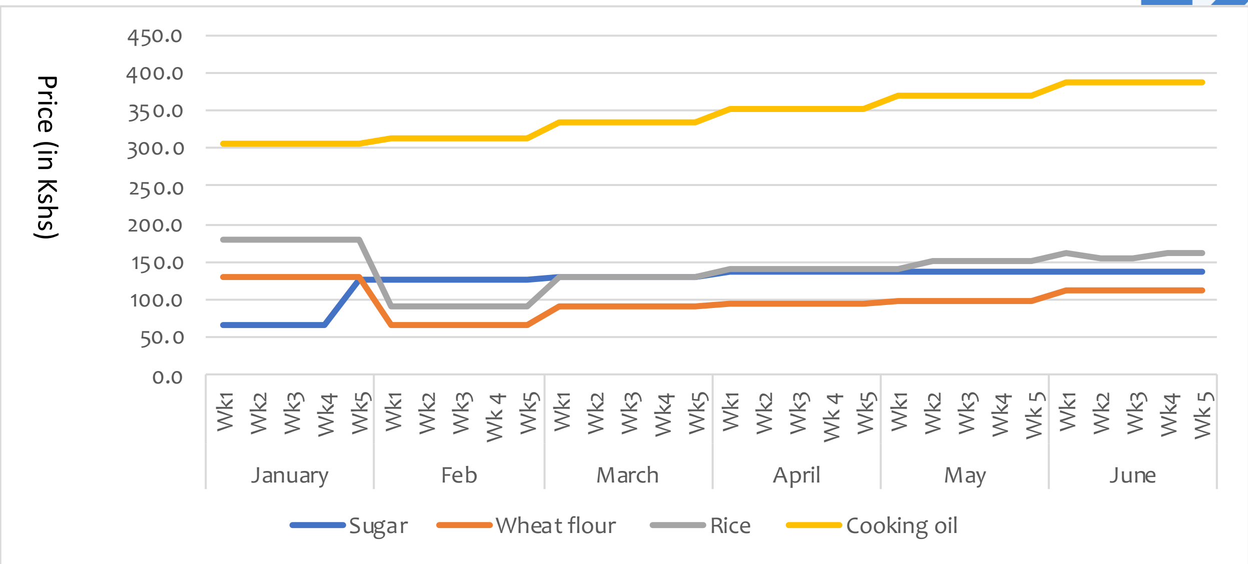
Source: Authors' computation based on MoLF&C data, 2022

The price of sugar appeared to level off during the month of June in all markets after a steady increase in the months of March and April. This levelling off may be explained by the increased quantity of sugar imports into the country during the period when the prices were rising. Rice prices dropped slightly by 16.67% in Kangemi and rose by 50% in Ahero between January and June (Figures 1 and 2). In the rural market of Kirinyaga, rice prices dropped by 11.11% between January and June 2022. Kirinyaga is a rice producing area and the price decline was due to the rice harvest which increased local supplies and lowered prices (Figure 3). In Bungoma which is not a rice producing area, rice prices rose by 44% over the same time (Figure 4). It is important to note that while Kenya produces some sugar and rice, the quantities produced are not enough to meet local demand. On average, the country imports over 400,000 metric tons (MT) of sugar annually. Approximately 400,000 MT of rice is consumed annually in the country while production is between 35,000-50,000 MT annually.[3] Given this dependence on imports, the country is vulnerable to global price fluctuations.

Overall, the price of cooking oil increased by 26.92% in all the urban and rural markets by end of June compared to prices in January. Based on this observation, it is apparent that for the reference period, cooking oil prices in Kenya rose significantly with no substantial price differences between urban and rural markets, despite the cost of transport and other local price dynamics. Kenya's demand for cooking oil is met through imports, mainly from Southeast Asia. In 2020, the country imported about 700,000 MT of vegetable oil, mostly from South East Asia.[4] The Russia-Ukraine crisis has affected the supply of vegetable oils globally with prices rising by a significant 19% between January and June 2022 (see Table 1). Given the country's dependence on imports for cooking oil, the observed sharp price hikes are expected.

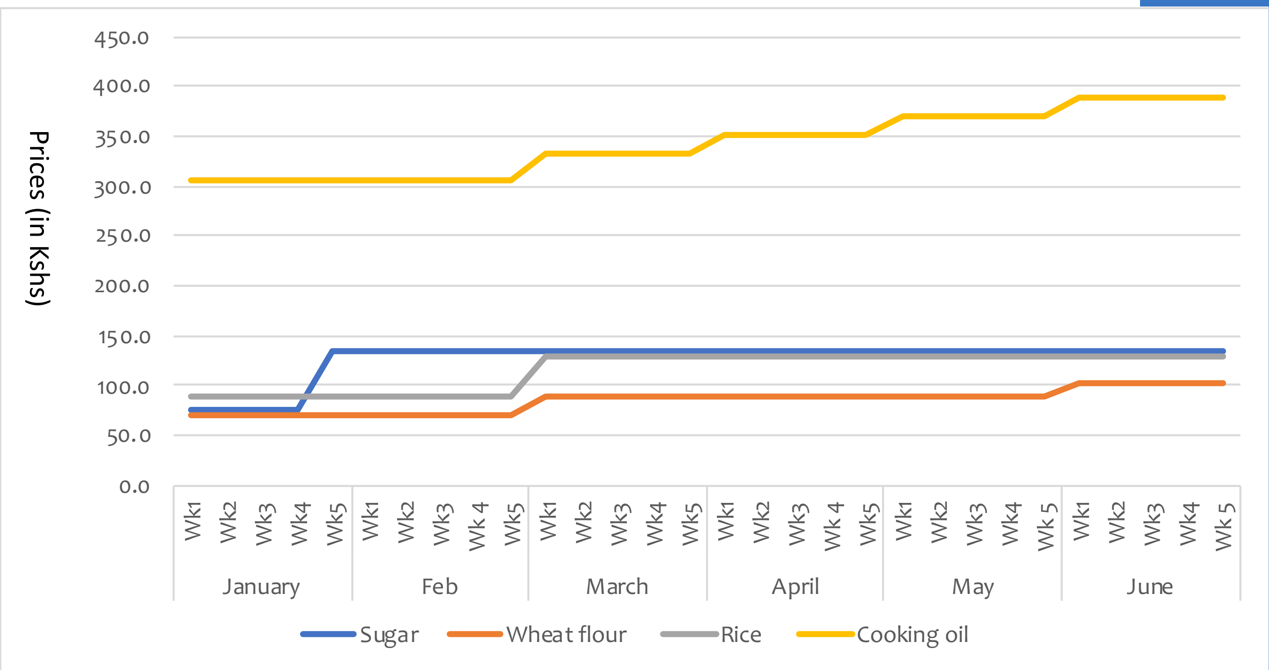
3 https://www.businessdailyafrica.com/bd/economy/rice-imports-up-30pc-meet-rising-demand-3553006
4 https://www.businessdailyafrica.com/bd/markets/commodities/edible-oil-import-cost-rises-global-supply-hitch-3671422

Figure 3: Weekly prices of food commodities in Kirinyaga (Jan-Jun 2022)



Source: Authors' computation based on MoALF&C data, 2022

Figure 4: Weekly prices of food commodities in Bungoma (Jan-Jun 2022)



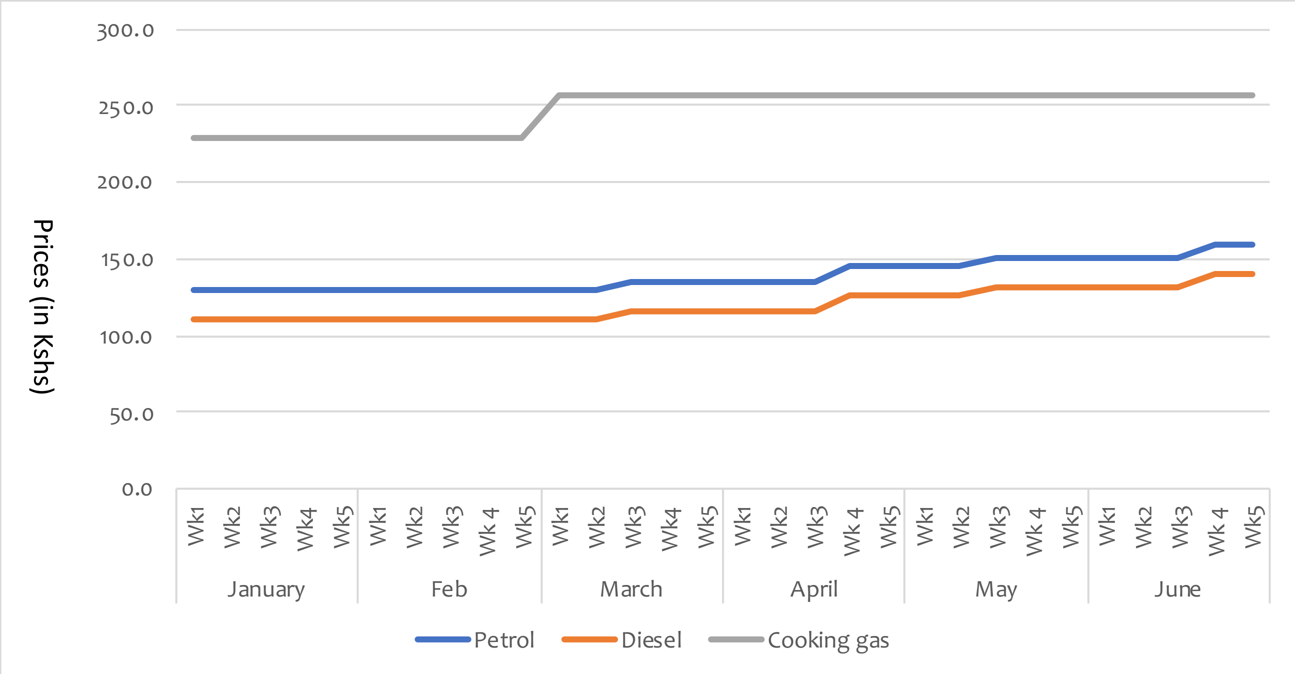
Source: Authors' computation based on MoALF&C data, 2022

2.2 Price changes for energy commodities (fuel and cooking gas) in local markets

The prices of fuel (petrol and diesel) and cooking gas were the same in different markets because prices are regulated nationally by the Energy and Petroleum Regulatory Authority (EPRA) and are only reviewed monthly. For illustrative purposes, we used the prices observed in Kangemi, Kisumu and Kirinyaga to analyze the changes over time from week one in January to week five in June. Figure 5 shows the patterns of price changes in Kangemi. In October 2021, the Government of Kenya introduced the fuel subsidy through the petroleum development levy, to cushion Kenyans from rising global fuel prices prior to the Russian invasion. According to EPRA, the decision was also taken to avoid the negative consequences of high fuel price increases that would cause a generalized price increase (inflation) and therefore decelerate the speed at which Kenya's economy was recovering from the impacts of the COVID-19 outbreak.

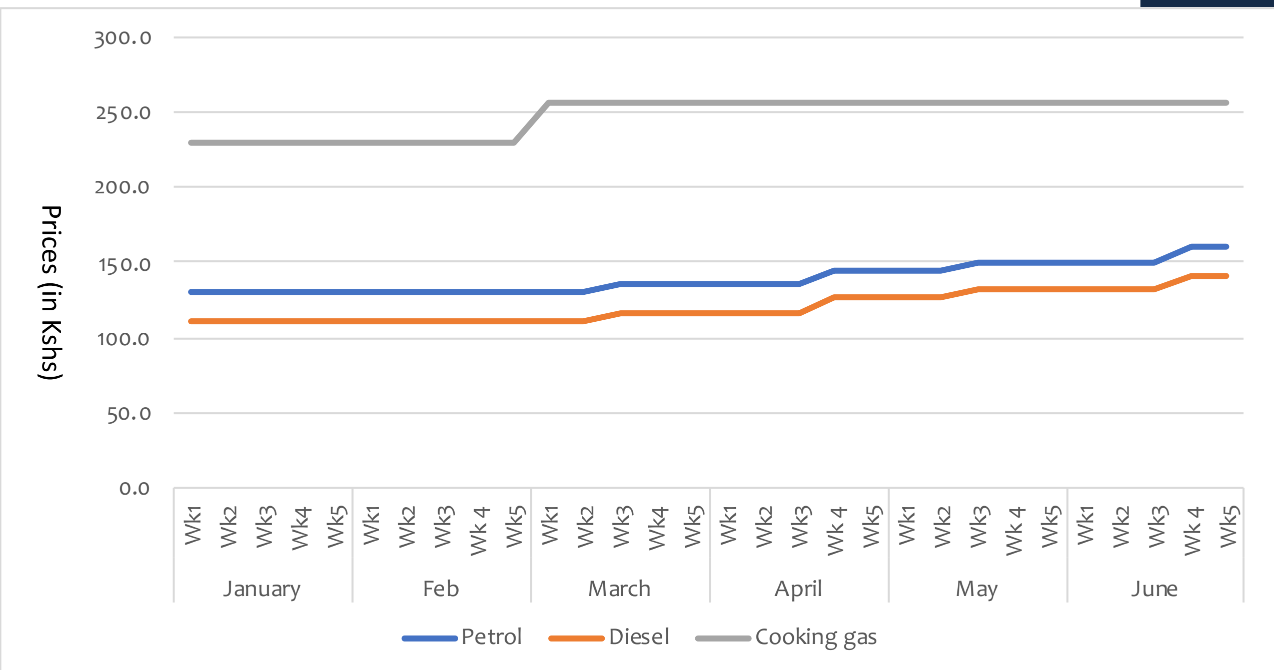
While fuel prices remained relatively stable, there were three instances of price rises (Week 3 of March 2022, Week 4 of April 2022, and Week 3 of May 2022) instituted by EPRA in response to changing oil prices in the global market. Overall, the price of petrol, diesel and cooking gas increased by 22.66%, 26.58% and 11.82% respectively in Kangemi by the last week of June, in comparison to the first week of January 2022.

Figure 5: Weekly energy prices in Kangemi market, Nairobi (Jan-Jun 2022)



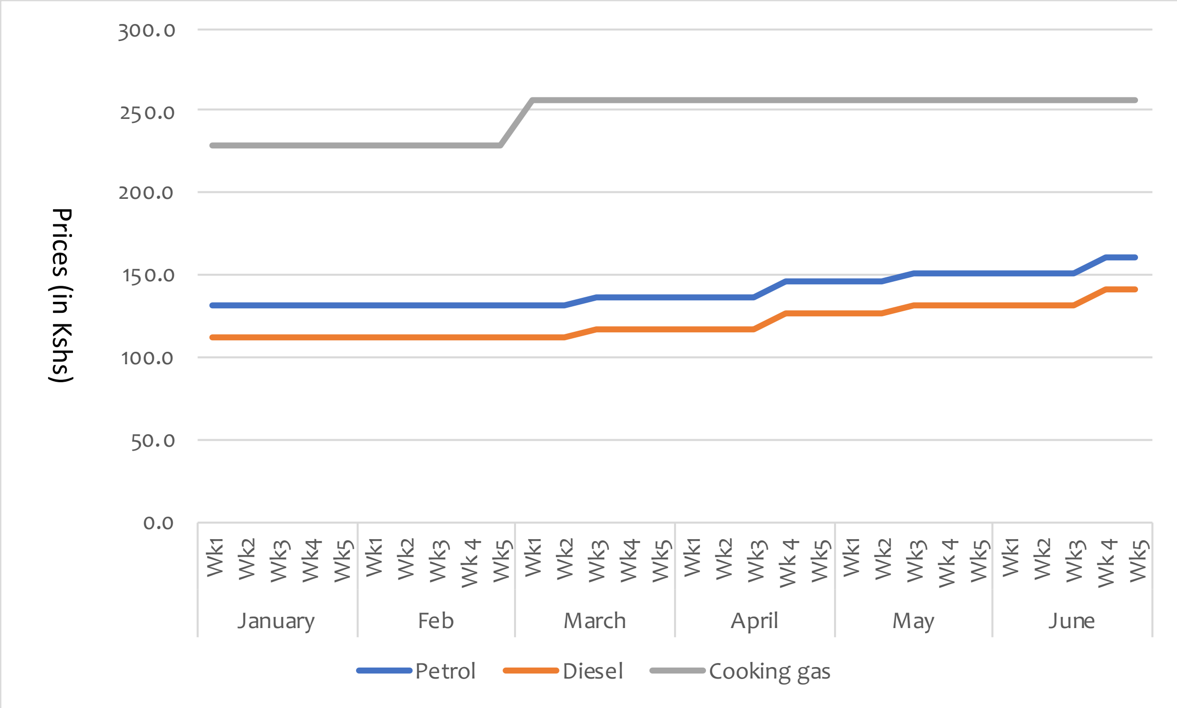
Source: Authors' computation based on MoALF&C data, 2022

Figure 6: Weekly energy prices in Ahero market (Jan-Jun 2022)



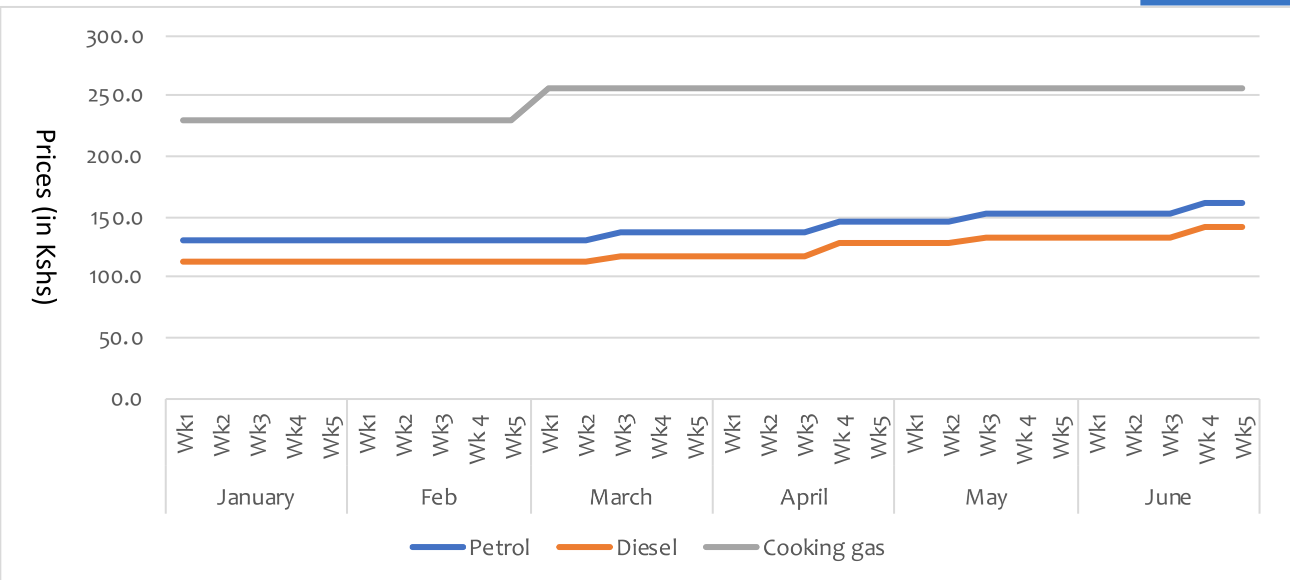
Source: Authors' computation based on MoALF&C data, 2022

Figure 7: Weekly energy prices in Kirinyaga market (Jan-Jun 2022)



Source: Authors' computation based on MoALF&C data, 2022

Figure 8: Weekly energy prices in Bungoma Market (Jan-Jun 2022)



Source: Authors' computation based on MoALF&C data, 2022

Table 1: Price changes for energy commodities in Kenyan Markets (Jan-Jun 2022)

Market	% Change in petrol price	% Change in diesel price	% Change in cooking gas price
Kangemi (Nairobi)	22.7	26.4	11.8
Ahero (Kisumu)	22.6	26.4	11.8
Kirinyaga	22.5	26.3	11.8
Bungoma	22.5	26.2	11.8

Source: Authors' computation based on MoALF&C data, 2022

2.3 Comparing price changes in local markets to global markets

The monthly averages for local prices were computed and changes in average prices were compared to price changes for the same commodities in global markets. The results are summarized in Table 2.

Table 2: Summary of price changes (Jan-Jun 2022): Comparison between local markets in Kenya and global average

Commodities	Global price change (%)	Change in local urban market (Kangemi)	Change in local rural market (Kirinyaga)
Wheat	+40%	-14%	-14%
Sugar	+3%	+93%	+100%
Rice	+10%	-17%	-11%
Cooking oil	+19%	+27%	+27%
Fuel	Crude Oil: +31%	Diesel: +20% Petrol: +11%	Diesel: +27% Petrol: +23%
Liquefied petroleum gas	+28%	+12%	

Source: Authors' computation based on MoALF&C data, 2022

From the results in Table 2, changes in global commodity prices were to a certain extent reflected in local Kenyan markets (both rural and urban), although for some commodities, local dynamics influenced prices in different ways. For rice, overall price declined in the January-June 2022 period while the global prices rose slightly. This is mainly because Kenya produces a substantial quantity of rice, with deficits being met primarily by imports from neighboring Tanzania. The price of wheat in local markets had also declined by June after an initial rise in the March-April period. This was partly driven by local production but was also influenced by government actions to access new import markets which helped dampen the initial price rises. Sugar prices were also much higher than changes at the global level. As noted earlier, Kenya imports most of its sugar from the COMESA region, and it is likely that the source countries may have restricted exports leading to the higher prices. Furthermore, import duties on the sugar coming into the country could have driven the prices even higher.

Energy prices rose in the same direction and a partly similar magnitude. A 31% rise in the global price of crude oil is reflected in the rise of diesel and petrol prices by 20% and 11% respectively in Kangemi, while a 28% price increase for LPG is reflected in a 12% rise in the price of cooking gas, in the same market.

3. Conclusions and Implications

This brief assessed the impact of the Russia-Ukraine crisis on commodity prices in local Kenyan markets and compared them to changes in global prices. The analysis found that there has been a general rise in the price of food and energy commodities in Kenya reflective of similar changes at the global level. There were however some exceptions such as wheat flour in urban areas that declined even as global prices rose. For some commodities like sugar, local prices rose more sharply than global prices with some differences observed in price change patterns between rural and urban areas.

It appears from the above analysis that there is some transmission of changes in global prices to local markets that makes Kenya vulnerable to international shocks. Local policies and strategies that aim to dampen the effects of such shocks to local consumers are therefore required. The price rises are a concern to policymakers because of the negative impacts on the welfare of poor households. Rice, sugar, cooking oil and wheat flour are basic food commodities. One of the short-term solutions is to provide targeted social protection support to the most vulnerable households facing higher food and energy prices, like what Kenya implemented during the COVID-19 crisis. In the long term, measures that facilitate freer intra-regional trade should be adopted and implemented to allow food commodity trade between countries on the continent. In addition, boosting local food production and productivity in the long term is a good strategy for dealing with external shocks emanating from global food markets. Long term investments in energy saving technologies and energy efficiency improvements are also required. The Government of Kenya should continue and intensify funding to agriculture, especially for programs that aim to increase production and productivity. This will strengthen the country's readiness to offset future global shocks on domestic food prices. The government could also subsidize farm inputs by, for instance, providing improved seed varieties and fertilizers that are required by farmers, while also encouraging more farmers in climatically favorable areas to grow crops like wheat and sugarcane.

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