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INNOVATION LAB FOR FOOD SECURITY POLICY RESEARCH, CAPACITY, AND INFLUENCE (PRCI)

Experiences and Policy Responses in Zimbabwe to Price Shocks Stemming from the Russia-Ukraine War and Other Global Crises

March 2024

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1. Introduction

In recent years, Zimbabwe has faced a myriad of natural, economic, and global shocks. For example, Zimbabwe has faced an upsurge in climate-change-related events in the form of droughts, floods, and cyclones, and since 2000, the country experienced at least 6 major droughts. Over the same period, major flood events have occurred, including Cyclone Idai in 2019. These natural events resulted in human fatalities and injuries, infrastructure damage, landslides, loss and damage to crops, soil erosion, and other forms of environmental degradation. Estimates of losses due to natural hazards put the value close to US$1 billion. For smallholder farmers who largely rely on natural rainfall, the effects of climate change have been severe.

In 2020, the world was shaken by the Covid-19 pandemic, which brought devastating impacts for global agro-food systems. In the Zimbabwean context, the pandemic resulted in the disruption of market activities for agricultural supply chains, particularly fresh produce. As a result, smallholder farmers experienced losses in income, with consequent declines in household resilience. This period was also associated with an increase in food prices. Subsequently, geopolitical developments in Russia and Ukraine since 2022

Key Messages

1. In recent years, Zimbabwe has faced a myriad of natural, economic, and global shocks, including droughts, floods, and cyclones; the Covid-19 pandemic; and geopolitical developments in Russia and Ukraine.

2. Prices of maize meal and bread began to rise in late 2019 due to macroeconomic instability. In May 2020, prices spiked due to the Covid-19 pandemic, and they again rose sharply in February 2022 in response to the Russia-Ukraine war.

3. With newly committed government support for domestic wheat production, Zimbabwe was able to produce enough wheat for national consumption by 2023.

4. Stakeholders conveyed that the Russia-Ukraine war revealed a need for the country to rely more on locally-produced food.

5. Despite efforts to enhance domestic production of some fertilizer components, Zimbabwe cannot be self-sufficient in fertilizer production. However, regional (within Africa) trade may present valuable opportunities for regional self-sufficiency.

have affected the supply of critical agricultural inputs, mainly fuel and fertilizer. Due to Zimbabwe's large fertilizer import requirement, fertilizer prices have been volatile in recent years. Likewise, Between 2020 and 2022, the average price of fuel increased from about ZWL18 to ZWL900 per liter, mainly driven by the effects of the Russian-Ukraine conflict, coupled with economic instability within the country. These developments increased the costs of production and brought a reduction in farm profitability, particularly for smallholders.

The main aim of this study is to perform a country-level assessment of the effect of exogenous shocks on the availability and price of food, fertilizer, and fuel in Zimbabwe. Subsumed in the overall objective are the following specific objectives:

i. To assess the effects of the Russia-Ukraine war and other recent shocks on prices and availability as it relates to the food, fuel, and fertilizer sub-sectors.
ii. To document and assess the government policy responses to the shocks emanating from the Russia-Ukraine war and other recent events.

2. Data and Methods

Data analyses undertaken included trend analyses of price and availability data for key foods, fertilizers, and fuel prices, mainly from 2017 to 2023, which coincided with prominent shocks such as drought, floods, economic shocks, and global crises such as the Russia-Ukraine war. This analysis is based on a dataset obtained from the Zimbabwe Statistical Agency (ZimStat). To evaluate policy responses, we developed policy timelines, applied a standardized classification of policy responses, and conducted interviews with policymakers and other stakeholders. In total, 18 stakeholders from government ministries and departments, research institutes, farmers' unions, the consumers' council, and the private sector participated in interviews.

3. Key Findings

Availability of Key Foods, Fertilizers, and Fuels (2017–2023)

Figures 1–4 show trends for wheat, maize, fertilizer, and fuel between 2017 and 2023. Domestic wheat output saw a substantial increase in the years 2020, 2021, and 2022 (Figure 1) due to Government import substitution intervention in the wheat subsector, which resulted in greater availability of fertilizers and electricity for irrigating the crop during winter. Consequently, national imports decreased from 221,000 tons in 2020 to 150,000 tons in 2022. When Covid-19 struck in 2020, it evidently did not affect local production of wheat, which increased from 170,000 tons in 2020 to 230,000 tons in 2021 and 468,000 tonnes in 2023.

In terms of maize production, domestic output was 2.156 million tons in 2017 (Figure 2). However, it fell to 0.7 million tons in 2019. This low output was maintained in 2020 with the Covid-19 pandemic which affected fertilizer imports, and in turn, limited yields. Drought also affected maize yields in 2020.

Fertilizer is an important input in agriculture despite the relatively low level of per hectare use in Zimbabwe. Zimbabwe produced about 120,000 tons of NPK in 2012 (Figure 3). This increased by two-fold to approximately 250,000 tons in 2016. Further output gains were observed from 2018 to 2021, and in 2021, the country produced over 350,000 tons of NPK. At the same time, the productive capacity for top dressing improved dramatically from 2014 to 2017 before declining in 2018 and 2019. In 2020, the government supported local fertilizer production through the acquisition of inputs for fertilizer

companies. Nonetheless, the fertilizer supply chain was negatively affected by the Russia-Ukraine war, as evidenced by declines observed in imports and domestic top dressing production in 2021 and 2022.

Fuel consumption was generally on an upward trend from 2009 to 2013 due to increasing economic activity in the country (Figure 4). While decreases were evident from 2014 to 2016, this was followed by an increasing trend from 2017 until 2019. In 2020, a sharp decrease in fuel consumption can be attributed to the Covid-19 pandemic, which brought most economic activities to a halt. It appears the Russia-Ukraine war did not have an effect on fuel consumption in Zimbabwe, given that fuel consumption increased in 2022 relative to 2021.

Prices of Maize Flour, Bread, Fertilizer, and Fuel

Between January 2017 and October 2018, the price of a loaf of bread was approximately US$1, which was also the equivalent price in Zimbabwe dollars (ZWL) during that period. Prices of bread were fairly stable through September 2019 (Figure 5). High inflation, and then hyperinflation, occurred beginning in May 2020, and this resulted in a dramatic price increase of bread; this was compounded by the Covid-19 pandemic in 2020 and the Russia-Ukraine war in 2022, which further destabilized the economy.

The price of maize meal, just like bread, was stable from 2017 through September 2019, at which point prices began to rise due to macroeconomic instability. In May 2020, maize meal prices spiked due to the Covid-19 pandemic, and prices again rose sharply beginning in February 2022 in response to the Russia-Ukraine war, which exacerbated the macroeconomic environment. For example, the price of a 10 kg bag of maize roller meal rose from ZWL 694 in January 2022 to ZWL 3031 in August 2022—a 337% price spike, which left most Zimbabwean households compromised in terms of their food security status.

Fertilizer price patterns are similar to those of the food sector. Stability is evident from 2017 until September 2019, at which point fertilizer prices began to rise. Fertilizer prices rose sharply from May 2020, due to the border closures initiated during the Covid-19 pandemic. For example, the price of fertilizer rose from ZWL 551 in March 2020 to ZWL 1,820 in July 2020, a 230% increase. The sharpest increases were observed at the beginning of 2022 upon the start of the Russia-Ukraine war.

Zimbabwe does not locally produce petrol and diesel. As a result, the country is an importer of both commodities and is exposed to international shocks in the petroleum market. In United States dollar terms, the prices of both petrol and diesel were between US$1.2 and US$1.5 per liter from January 2017 to September 2018. As evidenced in other markets, the price fell in January 2019, though this was not sustained owing to unstable exchange rate differentials. The price of diesel rose from ZWL 25 in March 2020 to ZWL 89 in September 2020. This sharp increase is due to the Covid-19 pandemic and the associated border closures and trade declines. Fuel prices increased sharply at the beginning of 2022 due to the Russia-Ukraine war. This had the impact of further destabilizing the fragile Zimbabwean economy and worsening livelihoods among the population, especially for the poor. For example, the price of diesel rose from ZWL 218 in January 2022 to ZWL 881—a 304% spike.

Figure 1: Wheat production and availability in Zimbabwe

Figure 2: Maize production and availability in Zimbabwe

Figure 3: Fertilizer production and availability in Zimbabwe

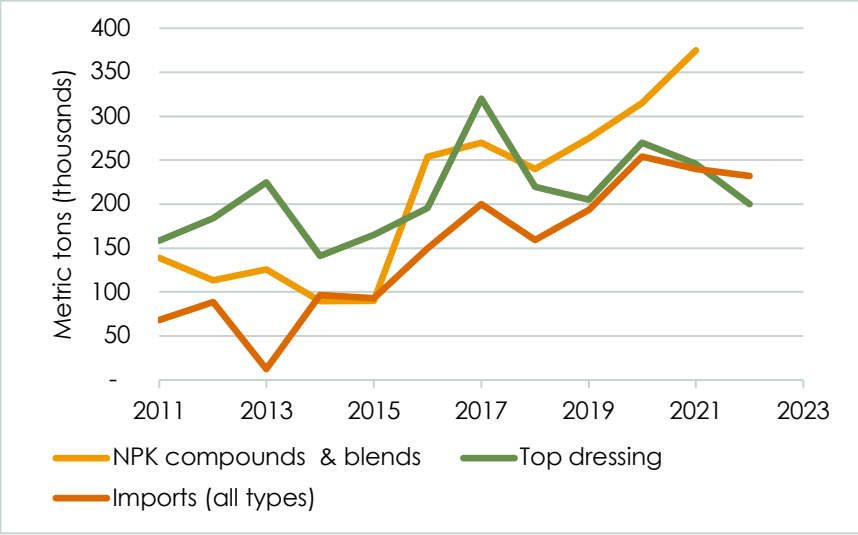


Figure 4: Petrol and diesel availability in Zimbabwe

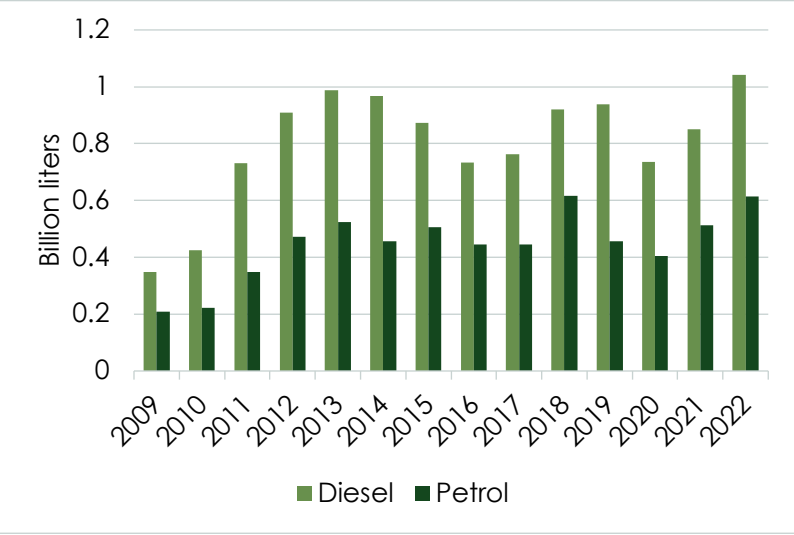


Figure 5: Bread price variations in Zimbabwe

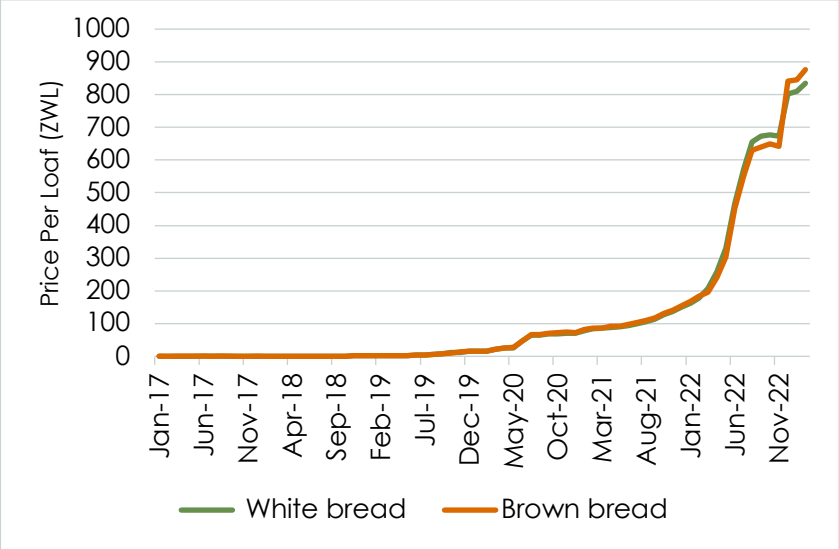


Figure 6: Maize flour price variations

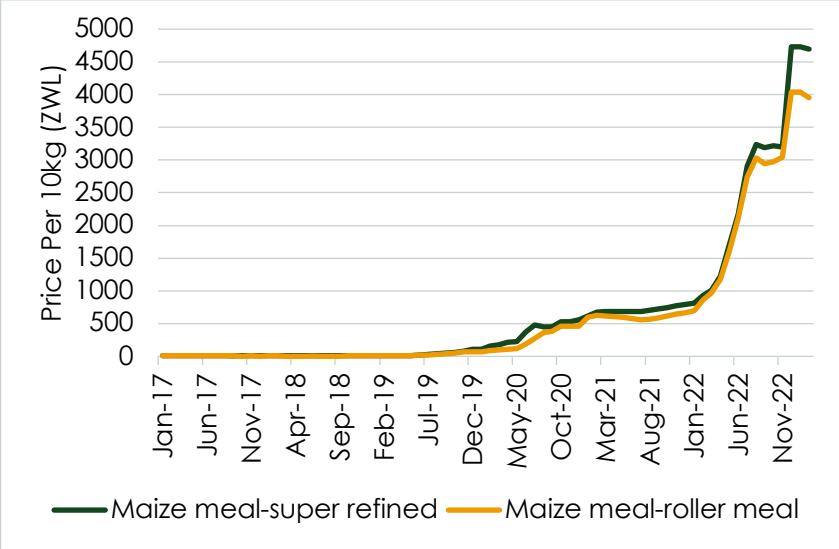


Figure 7: Fertilizer price variations in Zimbabwe

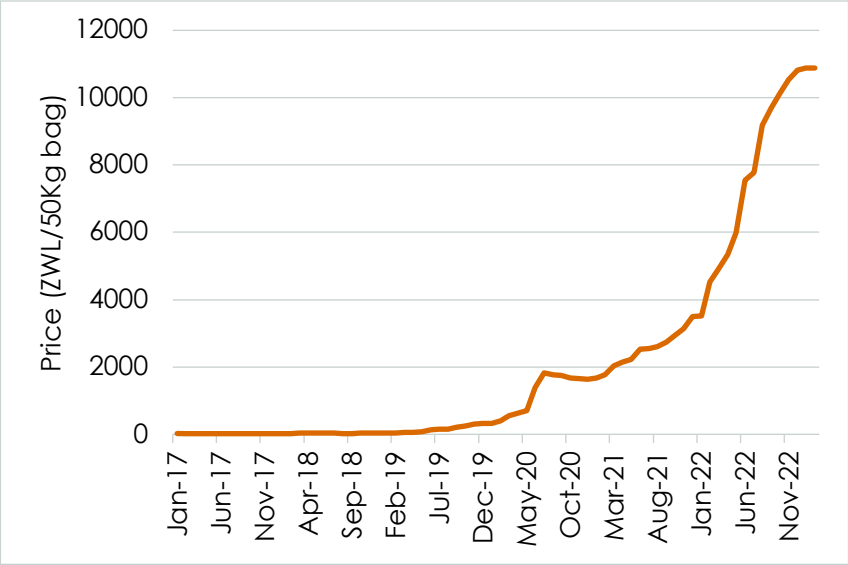
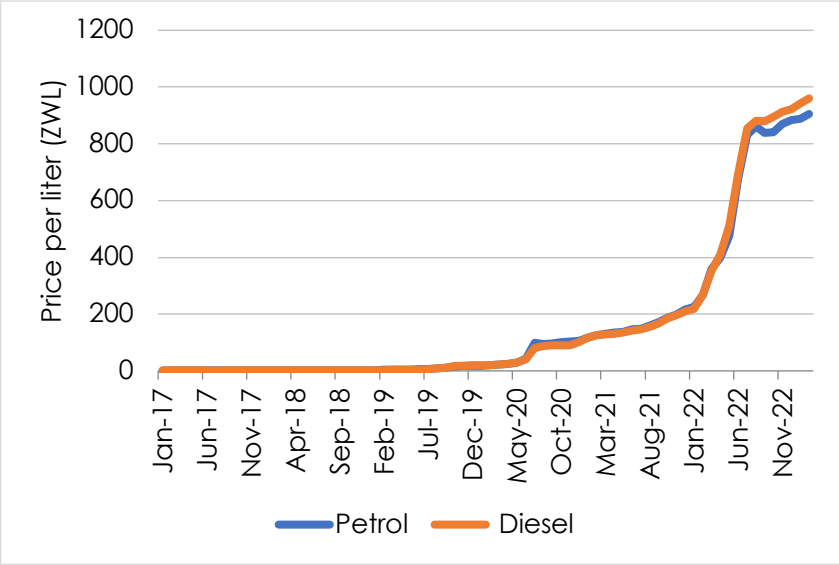


Figure 8: Fuel price variations in Zimbabwe



4. Policy Responses by the Government of Zimbabwe

Among its policy responses to these various shocks, the government of Zimbabwe unveiled a ZWD 18.2 billion ($50.3 million) Covid-19 Economic Recovery and Stimulus Package, valued at 9% of the GDP (Table 1). The aim of the package was to improve the country's economic performance and ensure recovery from Covid-19-induced shocks, and to provide relief to individuals, families, and businesses affected by Covid-19. This also precipitated the national Covid-19 vaccination program launched in 2020. Vaccinations were made compulsory for State employees to reduce the risk of spreading Covid-19 in the community.

Table 1: A snapshot of key government policy responses to external shocks

Global Crises	Policies, Plans and Programs	Timelines				
		2019	2020	2021	2022	2023
Covid-19	Financing for farmers affected by Covid-19 pandemic		■	■		
	Input support programme		■	■		
	Vaccination programme		■	■		
	Food aid		■	■		
	Education Programmes		■	■		
High fertilizer prices	Presidential climate-proofed Input Scheme (Pfumvudza)		■	■	■	■
	National Enhanced Agriculture Productivity Scheme (CBZ Agro-Yield)		■	■	■	■
Russian-Ukraine Conflict	Government capacitating local manufacturers				■	■
	Farmers accessing cheaper fertilizers through subsidized fertilizers in the Pfumvudza				■	■
	Import duty removal on fertilizer imports and raw materials			■	■	■
High fuel Prices	Petrol/ethanol blending from E5 to E10	■	■	■		■

The government also began the implementation of a Five-Year Fertilizer Import Substitution Roadmap (2020–2024). The objective is to increase local production of phosphates and ammonium nitrate to reduce fertilizer imports. Along these lines, the Industrial Development Corporation of Zimbabwe (IDC) invested in the local fertilizer value chain, from the extraction of phosphates to the granulation of basal fertilizers. This has contributed to the implementation of Pfumvudza/Intwasa program. The government's Pfumvudza/Intwasa conservation farming program from 2020 to 2021 distributed agricultural inputs to 1.8 million smallholder farmers. Just over half (51%) of all households have participated in the Pfumvudza program. (This is predominantly in rural and peri-urban areas, although the program also operates in some urban areas.) Of these households, 84% received extension services and training, and 80% reported higher yields.

For the fuel sector, the government has mandated the blending of petrol and ethanol, with an adjustment to the ratio from E5 to E10. The conversion of petrol fuel from E5 to E10 has benefitted consumers when petrol prices fell lower than diesel fuel. However, the benefits were short-lived given the macroeconomic instability.

5. Assessment of Some Policy Responses

Wheat Input Support Scheme

The Government of Zimbabwe's wheat input support program is a response to the Russia-Ukraine war, as a significant amount of the world's internationally traded wheat supply emerges from the region of conflict. Zimbabwe now aims to be self-sufficient in wheat production and potentially unlock wheat export markets. The Wheat Input Support Scheme encompasses the provision of water for irrigation, power, wheat seed, fertilizer, and advisory services, among others. According to key informants, the private sector contributed a considerable share (estimated at 40%) of the financing for this scheme. This crowding-in of the private sector is viewed as a strength. While the program is overall seen as a success, some key informants reported that much of the wheat that was produced was not purchased in a timely manner by the Grain Marketing Board. Key informants also cautioned that, after just one successful season, it is too early to conclude that Zimbabwe is self-sufficient in wheat.

"The joint ventures between the business community and the agricultural sector are now bearing fruit for the first time."

Support for the Domestic Fertilizer Value Chain

In response to rising fertilizer prices, the government began implementing the Five-Year Fertilizer Import Substitution Roadmap (2020-2024) with an objective to increase local production of phosphates and ammonium nitrate and reduce fertilizer imports. Because Zimbabwe already had a fertilizer industry that was operating below capacity, increased production could be attained in the short term, and following the revival of dolomite mining in Rushinga, Zimbabwe was expected to have sufficient locally-sourced lime for the 2023/2024 agricultural season. This instance of import substitution was perceived by key informants to effectively preserve foreign currency. Moreover, because there remains potential to further develop the local fertilizer value chain, this response is also viewed as a medium- to long-term policy response to recent shocks.

Suspension of Duties

In May 2023, the Government of Zimbabwe announced a six-month suspension of import licenses, import duties, and import taxes on a set of widely consumed commodities. The policy was implemented with immediate effect, such that stakeholders were generally caught unaware. While this policy was perceived by key informants to have many "winners," it also undercut the viability of local manufacturers who had to compete with cheap imports. Moreover, it necessarily reduced government revenue, such that this is viewed as a short-duration response to price shocks.

Petrol Blending from E5 to E10

Ethanol blends indicate the amount of ethanol as a percentage mixed with petrol. To alleviate fuel shortages and high petrol prices, the government introduced mandatory blending of anhydrous ethanol and unleaded petrol at levels of 10% ethanol and 90% unleaded petrol. According to key informants, while this policy could benefit consumers in the short term by lowering the retail price of petrol, this benefit was very much overshadowed by the unstable exchange rate which hurt consumers who receive their salaries in Zimbabwean dollars but have to buy petrol in United Sates dollars.

6. Conclusions and Policy Implications

Russia and Ukraine have been major wheat producers at the global scale, at and the conflict brought severe disruption of food supplies. The Russia-Ukraine war revealed a need for the nation to rely more on locally-produced food as espoused in "Nyika inovakwa nevene vayo/Ilizwe Lakiwa Ngabanikazi Balo" ("A country is built by its own people"), a concept that has been translated to "food sovereignty." With government support for domestic wheat production, Zimbabwe was able to produce enough wheat for national consumption during the Covid-19 pandemic and Russia-Ukraine war.

Agro-food system stakeholders—including the Government, private sector, development partners, and others—should continue to work together in a coordinated manner to ensure that value chain linkages are strengthened. and to take advantage of an import substitution strategy for the value chains in which the country has a comparative advantage.

As for supporting the fertilizer value chain in Zimbabwe, the government has intervened in an effort to ensure that the country produced phosphates and ammonium nitrate fertilizers. This was done to reduce fertilizer imports. However, it should be noted that Zimbabwe cannot be self-sufficient in fertilizer production due to lack of absolute and comparative advantage when compared to other countries. This is because the country does not have all the raw materials for all types of fertilizers. The country will still need to rely on the importation of raw materials and fertilizers to improve local farmer profitability. In this regard, it is anticipated that the Africa Continental Free Trade Area (AFCFTA) will provide valuable opportunities for inter-regional and intra-continental commodity exchange. Efforts to get the AFCFTA "off the ground" should be vigorously pursued.

This paper was prepared by the Feed the Future Innovation Lab for Food Security Policy, Research, Capacity and Influence (PRCI) with funding from the United States Agency for International Development (USAID) under Grant No. 7200AA19LE00001. The contents are the responsibility of the authors of this repor (i.e., PRCI team) and do not necessarily reflect the views of USAID, the United States Government, Michigan State University, IFPRI, Cornell University, ReNAPRI, University of Ghana, Kasetsart University, or Research and Information System for Developing Countries (RIS).