

Price Shocks and Associated Policy Responses Stemming from the Russia-Ukraine War and Other Global Crises: Evidence from Ghana, Kenya, Nigeria, Senegal, Tanzania, and Zimbabwe

Ayala Wineman, Emmanuel Mwakiwa, Andrew Agyei-Holmes, Modou Gueye Fall, Lilian Kirimi,
Zena Mpenda, Edward Mutandwa, Iredele Ogunbayo, and David Tschirley

Presented at

**PARTNERING TO STRENGTHEN CAPACITY FOR APPLIED POLICY RESEARCH WITH
IMPACT: ACCOMPLISHMENTS UNDER PRCI, LESSONS, AND NEXT STEPS**

Washington, DC (Ronald Reagan Building)

March 6-8, 2024



Background

- Recent years have brought a series of **shocks** to agrifood systems.
 - The **Covid-19 pandemic** brought a public health threat, global economic slowdown, and supply chain disruptions.
 - The **Russia-Ukraine war** set off startling global price spikes in fuel, fertilizer, and food (the “3Fs”), resulting in a widespread cost-of-living crisis.
 - Manifestations of **climate change** are becoming increasingly evident (e.g., Horn of Africa drought 2020–23).
- Governments have responded with measures aimed at softening the impact of shocks and making their economies more resilient to future stress. **Policy responses** can be:
 - Reactive or proactive
 - Short-, medium-, or long-term
 - Related to revenue or expenditure (among other options)

Objective

Our aim is to...

- Assess how prices have changed in African countries for fertilizer, fuel, and key foods
- Characterize policy responses to recent global shocks and explain any cross-country patterns observed
- Consider how these patterns in policy responses are alternately encouraging or a cause for concern.

Quantitative analysis of data on prices and availability of the 3Fs (fuel, fertilizer, and foods) since 2019.

Data gathered from relevant ministries in each country.

Qualitative analysis of key informant interviews with policy makers and other relevant stakeholders on each country's policy responses to recent shocks.

Shocks & Policy Responses project

Ghana: Institute of Statistical Social and Economic Research (ISSER), University of Ghana

Kenya: Tegemeo Institute of Agricultural Policy and Development, Egerton University

Nigeria: Innovation Lab for Policy Leadership in Agriculture and Food Security (PiLAF), University of Ibadan

Senegal: Bureau d'analyses macro-économiques (BAME) de l'Institut sénégalais de recherches agricoles (ISRA)

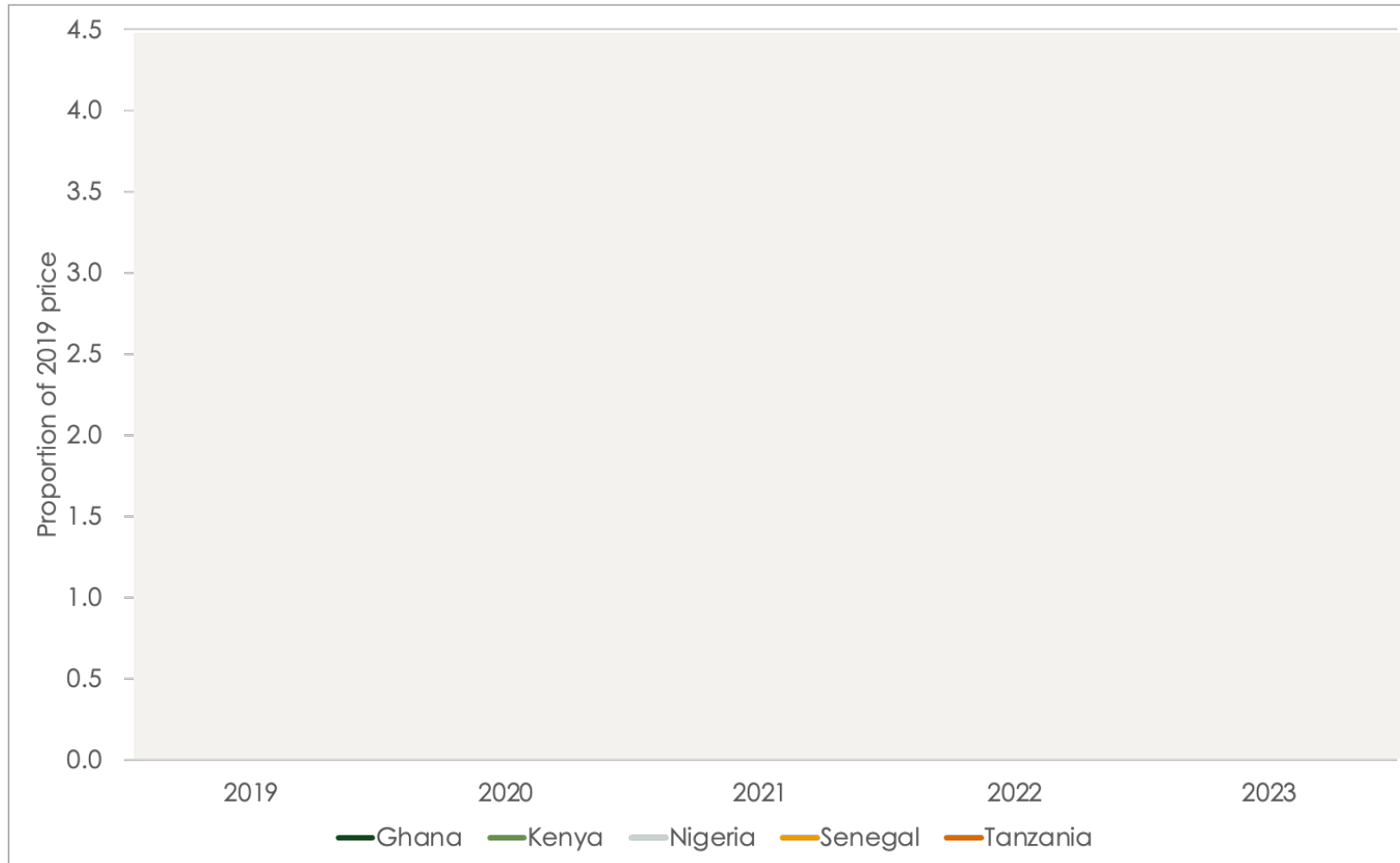
Tanzania: Sokoine University of Agriculture (SUA)

Zimbabwe: University of Zimbabwe



Price Trends: Maize

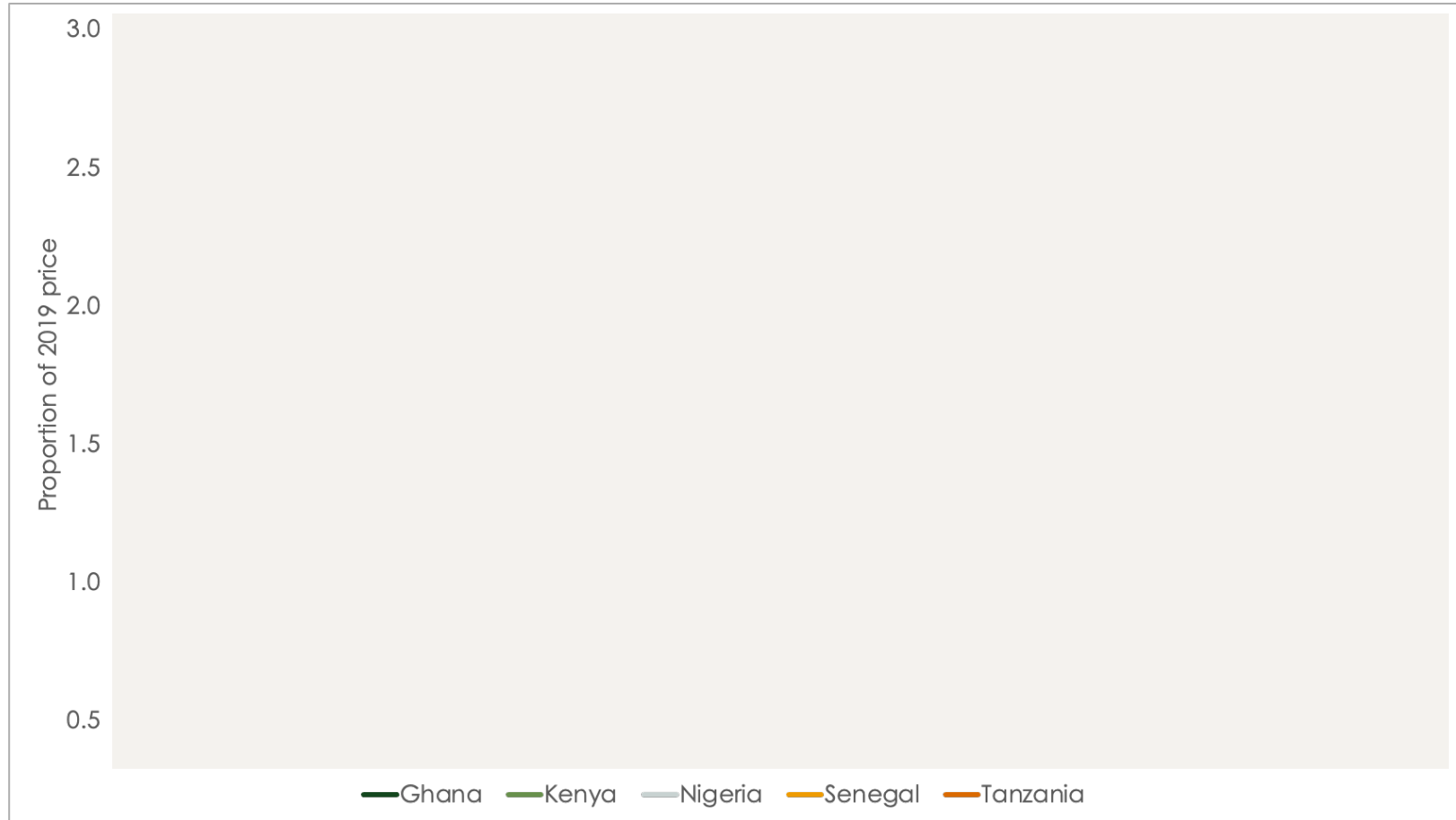
Prices of maize (ratio to 2019 price, nominal)



- By 2023, the price of maize was **71%** higher in Tanzania, **123%** higher in Nigeria, and a shocking **310%** higher in Ghana than the price had been in 2019.
- The greatest price jumps seem to have occurred in 2022 and 2023, suggesting the increases were induced by the delayed (not immediate) impact of the Covid-19 pandemic and the onset of the Russia-Ukraine war.

Price Trends: Rice

Prices of rice (ratio to 2019 price, nominal)



- We see relative stability in most countries through 2021, after which prices began to rise.
- Prices rose most slowly in Senegal (where they were **32%** higher in 2023 than they had been in 2019) and Kenya (**33%**), and they rose most dramatically in Ghana (**175%**) and Nigeria (**190%**).

Price Trends: Urea

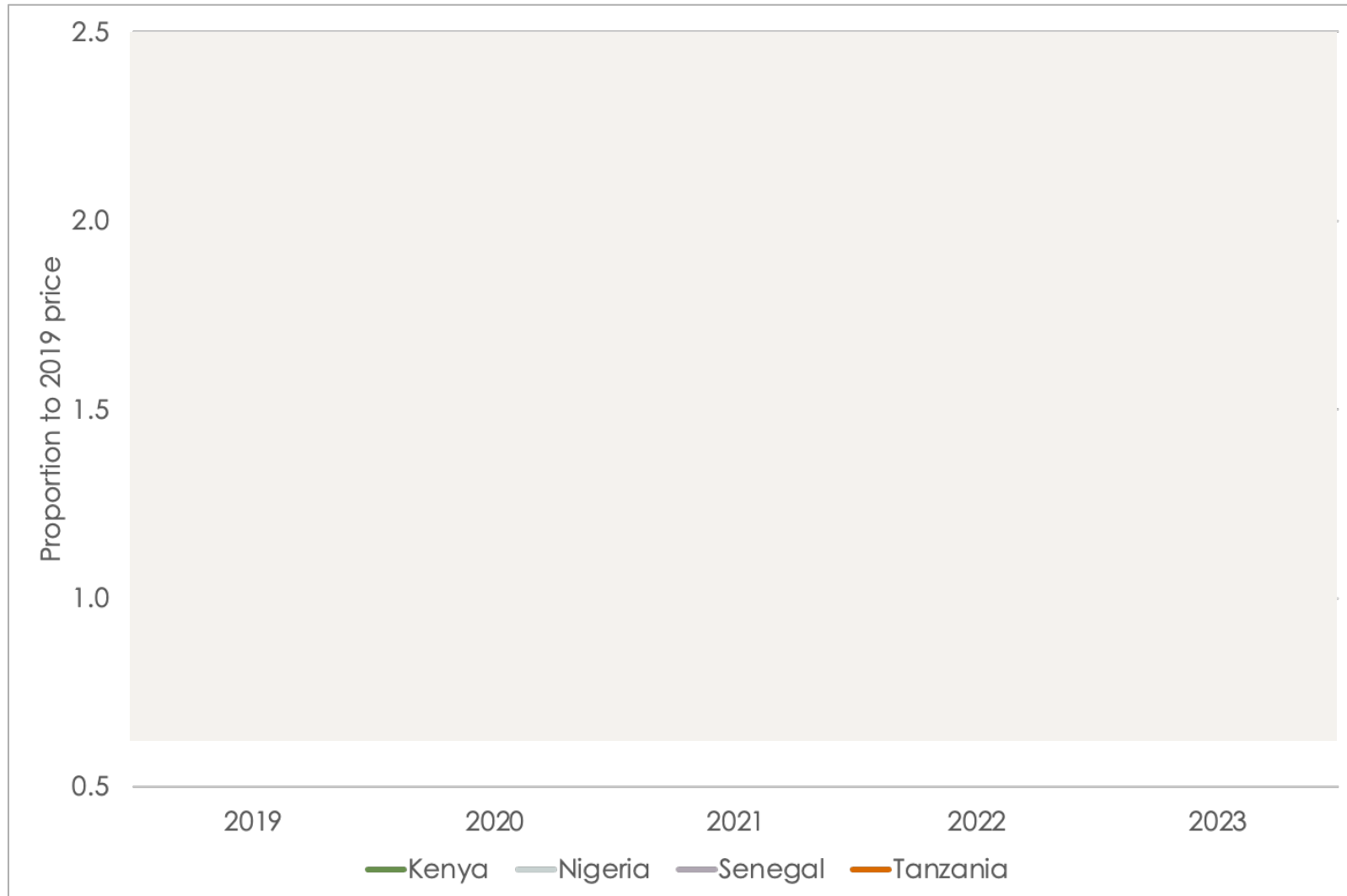
Prices of urea (ratio to 2019 price, nominal)



- The price of fertilizer rose faster in Senegal, Nigeria, and most notably Ghana.
- The high price of fertilizer would logically lead farmers to turn to substitutes, such as organic fertilizer, or apply fewer inputs to their crops.

Price Trends: Petrol

Prices of petrol (ratio to 2019 price, nominal)



- Tanzania seems to have been able to control the price, which remained elevated but did not rise further between 2022 and 2023.
- In Nigeria, the price of petrol skyrocketed in 2023 to reach a value that was **138%** higher than it had been in 2019. The repeal of a fuel subsidy caused prices to surge from their subsidized baseline.
- Prices in Ghana are not displayed for visual clarity—The final ratio in Ghana was **6.84**.

Price Trends: Zimbabwe

Prices of various products (ratio to 2019 price, nominal)



- Zimbabwe experienced hyperinflation during this period, making it challenging to compare trends to other countries.
- The price of wheat rose particularly fast, prompting the country to prioritize wheat self-sufficiency in its policy responses.

Policy Responses

1. Literature review
2. Key informant interviews (semi-structured)
 - Most important policies and policy responses to the recent crises
 - Timeline and background of each policy response
 - Evaluation of the experience of implementation and of its impacts
 - Each policy's strengths and limitations
 - What the country could have done better

Stakeholder category	No. interviews
National government (including government agencies)	44
Regional or local government	2
Private sector	34
Civil society	9
Development partners	7
Research	8
Total	104

Country	No. interviews
Ghana	10
Kenya	25
Nigeria	32
Senegal	8
Tanzania	11
Zimbabwe	18
Total	104

Policy Responses (Themes)

1. Countries exhibit an intensifying emphasis since 2020 on self-sufficiency in food and fertilizer.

- **Ghana:** New efforts directed at domestic manufacture of organic fertilizers.
- **Senegal:** PASAD (Agricultural Programme for Sustainable Food Sovereignty) 2021-2025 and SAS (National Food Sovereignty Strategy) 2024–2028
- **Tanzania:** New efforts to promote domestic production of grains (including wheat) and edible oils to reduce reliance on imports.
- **Zimbabwe:** Strong focus on expanded wheat production through the wheat input support scheme, achieving self-sufficiency in the 2022 season. New efforts to reduce fertilizer imports by producing phosphates, ammonium nitrate fertilizers, and lime.

Policy Responses (Themes)

1 (cont'd). Shift away from wheat in baked goods to include other (local) products.

- **Senegal:** Policy measures to incrementally compel bakers to substitute local grains for wheat in baked goods.
- **Zimbabwe:** Policy measures to incentivize or compel bakers to substitute sweet potato flour for wheat in baked goods.
- Similar story in **Kenya** and **Nigeria**.

Policy Responses (Themes)

2. Though new subsidies and reductions of existing tariffs are a readily available policy response, the fiscal burden can be quite high.

- **Kenya:** The 2022 Emergency Subsidy Program for inorganic fertilizer was universal (not targeted), in departure from what is generally advised.
- **Nigeria:** The removal of a fuel subsidy in mid-2023 amid concerns about the budget deficit has prompted a harsh increase in fuel prices.
- **Tanzania:** Estimates that the country spent 0.3% and 0.1% of its Gross Domestic Product (GDP) on subsidizing fuel and fertilizer, respectively, in 2022.

Policy Responses (Themes)

3. Country responses to shocks sometimes lack coherence, with some policies essentially offsetting the others' impacts.

- **Kenya:** Fuel prices—which are strongly correlated with food prices—dramatically increased due partly to tax reform, with fuel subsidies removed and higher taxes introduced. Consequently, food prices have remained high despite other efforts to ensure lower prices.
- Similar story in **Tanzania** and **Senegal**.

Policy Responses (Themes)

4. While recent shocks triggered some trade realignment, they evidently have not stimulated increased within-Africa (intra-regional) trade.

The AfCFTA did not seem to factor into any country's policy response to recent shocks.

- **Nigeria:** Had been importing potash from Russia, but was able to redirect its business alignment to Canada—thought this longer route brought higher prices.
 - In 2022, a Memorandum of Understanding (MoU) on Agriculture was also signed between Nigeria and Poland.
 - Another in-the-pipeline trade arrangement involving urea produced in Nigeria and phosphorous produced in Morocco was arranged in 2018, prior to the AfCFTA.

Policy Responses (Themes)

5. Countries exhibit an increasing appreciation for organic fertilizer and address climate change in increasingly sophisticated ways.

- **Ghana:** Government enthusiasm for organic fertilizers is partly (though not entirely) driven by its use as a substitute for inorganic fertilizer.
- **Kenya:** Limited benefits of the long-standing NAAIAP inorganic subsidy program has inspired greater attention to soil health as a complement to the input subsidy.
- **Senegal:** Subsidy for organic fertilizers introduced in July 2021
- **Nigeria:** Climate Change Act of 2021 established a legal framework for building resilience to climate change.

Concluding Thoughts

- **Governments increasingly interested in limiting exposure to global shocks. *However...***
 - Need for more discourse on the proper balance between national self-sufficiency and participation in international trade.
 - More attention might be given to the potential role of within-Africa (intra-regional) trade and regional (not national) value chains.
- **Many policy responses have been reactive.**
 - More attention ought to be given to proactive measures aimed at making national economies more productive and resilient to future shocks.

Thank you!