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Exposure to Global Commodity Trade and Market Disruptions: Impacts on Growth, Poverty, and Food Security in Malawi

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1. Introduction

The Russia-Ukraine war has affected the trade and markets for almost all global commodities. Wide-ranging disruptions caused by the war are having complex, cumulative impacts with potentially significant effects on economies worldwide. There are several channels through which global market disruptions are transmitted to individual country economies, ultimately manifesting as impacts on a country's rate of economic growth and employment creation, as well as affecting levels of poverty and food security.

The first channel of transmission is through direct changes to the export and import prices of commodities traded by countries. The degree of exposure to and ultimate size of the shock is determined by the weight of individual commodities in a country's export and import baskets. The magnitude of this shock is measured by the changes in a country's Terms of Trade (ToT), i.e., the difference between the changes in export and import prices.

The second channel of transmission is linked to changes in the real exchange rate, measured by the shift in domestic prices of export and import-competing (tradable) goods relative to the prices of non-tradable goods. This in turn affects the domestic demand for and supply of goods and factors of production.

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The extent to which the productive sectors respond by expanding or contracting output determines the final effects on overall growth, employment creation, income generation, changes in poverty levels, and food security.

The third channel of transmission is through the diffusion of global price changes to individual domestic sectors. This induces changes to the domestic prices of individual commodities such as fertilizers, wheat products, oilseeds, and vegetable oil products, as well as their close local substitutes. The impact of these changes on the entire economy will likely be less than the impact of generalized changes in a country’s ToT and the real exchange rate.

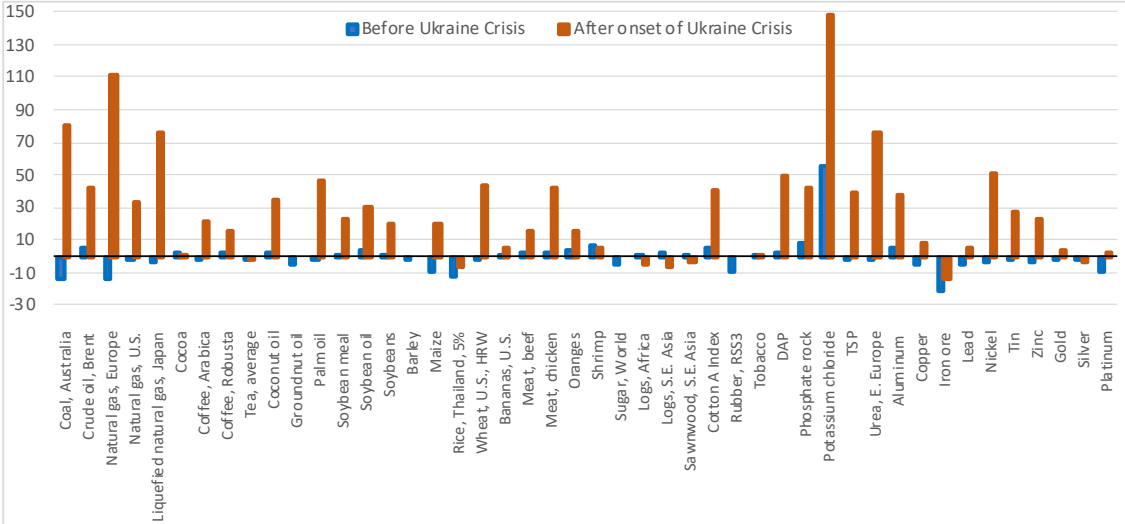
This brief presents a compilation of key findings from an economywide analysis of the global commodity price shocks induced by the Russia-Ukraine war and its resultant effects on Malawi’s economy over a three-year period (2022-2024).

2. Global Commodity Price Shocks Induced by the Ukraine Crisis

The impacts of the commodity trade and market disruptions caused by the Russia-Ukraine war on Malawi’s economy are examined by assessing the country’s growth, poverty, and food security outcomes in comparison to what they would have been, had the economy continued with its pre-war trajectory, i.e., undisturbed by the war-induced market disruptions and changes in global commodity trade.

Projections of 2022 commodity prices released by the World Bank in October 2021 (i.e., before the start of the war) and those in April 2022 (i.e., after the start of the war) are compared to the 2021 estimates of commodity prices. The two sets of projections for 2022 and the estimated values for 2021 are used to calculate changes in global commodity prices between 2021 and 2022 (Figure 1).

Figure 1: Projected Changes in Global Commodity Prices before and after the onset of the Ukraine Crisis (%)



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

A total of 46 globally traded commodities are covered, including, among others, food and agricultural goods, metals, energy products, and fertilizers. Two sets of simulations are carried out: (i) “Baseline scenario” and (ii) “Ukraine scenario”. The “Baseline scenario” uses the commodity price projections for 2022-2024, released by the World Bank in October 2021 (i.e., in the absence of the crisis) and the related changes in Malawi’s economic trajectory, focusing on growth, employment, poverty, and food consumption levels. The “Ukraine scenario” uses

the commodity price projections for 2022–2024, released by the World Bank in April 2022, which capture the disruptions to global commodity trade and markets and their effects on Malawi’s economy in the same areas of economic growth, employment, poverty, and food security.

The findings presented here discuss the projected socioeconomic outcomes in Malawi over the three-year period (2022–2024) compared to what they would have been in the absence of the Russia-Ukraine war and the consequent disruption of global commodity markets.

3. Country Exposure and Impacts on Commodity Trade

The effects of the Russia-Ukraine war on global markets are spread over a wide range of imported and exported commodities. The ultimate effects of the disruptions to global commodity trade and markets on various countries depend on the relative price changes for each of the 46 commodities as well as their shares in each country’s import and export baskets.

- *Country Trading Patterns*

As shown in Tables 1 and 2, Malawi’s export basket has a heavier weighting of primary commodities than its import basket. The country primarily exports agricultural commodities, i.e., tobacco, tea, and sugar, while the major primary commodities imported are petroleum and fertilizers. Changes in the international prices of commodities exported by Malawi have been mainly positive in the wake of the Russia-Ukraine war compared to the baseline scenario (Table 1). However, price increases for Malawi’s main export commodities are projected to be modest, i.e., tobacco (0.5 percentage points or pp), sugar (5.1 pp), and tea (0.4 pp). Export prices are projected to decline in 2023, and then stabilize in 2024. Similarly, international prices of commodities imported by the country are projected to increase (Table 2). Fertilizers will see the largest increase (77.3 pp), followed by palm oil (48.2 pp), wheat (44.9 pp), and petroleum (36.3 pp). Import prices are projected to decline in 2023 and 2024.

Table 1: Malawi, International Prices of Top Export Commodities (Annual Change, %)

Commodity	Share of Total Exports	Baseline Scenario			Ukraine Scenario		
		2022	2023	2024	2022	2023	2024
Tea	9,2	-1,9	-1,9	1,4	-1,5	-3,8	1,2
Groundnuts	3,0	-4,9	2,6	0,8	12,2	-17,4	0,4
Soybeans	1,5	0,9	-6,0	0,9	20,1	-14,3	-0,7
Cane or beet sugar	9,2	-5,1	2,7	0,8	0,0	-2,6	0,0
Tobacco, unmanufactured	52,2	0,6	1,2	0,4	1,1	-2,4	0,4
Gold	2,3	-2,5	-1,1	-0,6	4,4	-9,6	-2,9

Sources: World Bank, commodity markets outlook. Akademya2063 and IFPRI, Africa Agricultural Trade Monitoring Database: Retrieved in April 2022.

Table 2: Malawi, International Prices of Top Import Commodities (Annual Change, %)

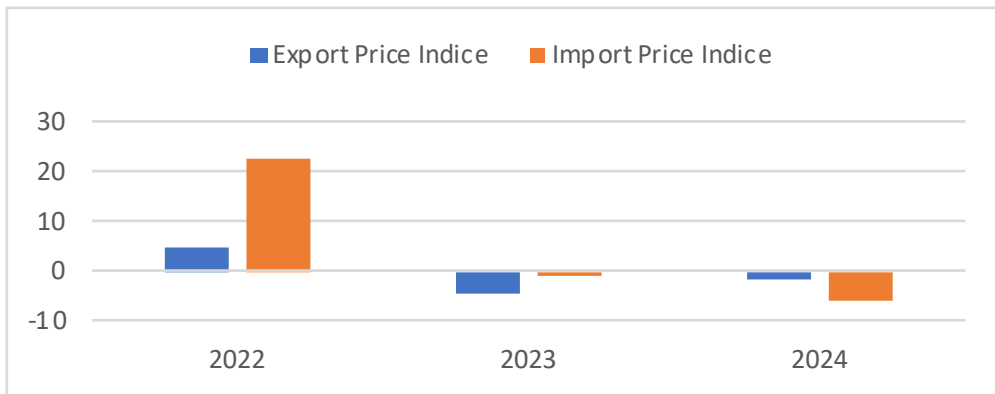
Commodity	Share of Total Imports	Baseline Scenario			Ukraine Scenario		
		2022	2023	2024	2022	2023	2024
Petroleum, not crude	6,9	5,7	-12,2	0,6	42,0	-8,0	-13,0
Palm oil	2,1	-2,3	-2,3	0,4	45,9	-15,2	-2,0
Wheat and meslin	1,5	-2,0	-2,0	0,8	42,9	-15,6	-2,6
Tobacco, unmanufactured	3,6	0,6	1,2	0,4	1,1	-2,4	0,4
Fertilizers, nitrogenous	3,8	-1,3	-20,0	-8,3	76,0	-11,8	-20,0
Iron or non-alloy steel	1,5	-21,2	-7,7	-16,7	-13,6	-25,0	-14,3

Sources: World Bank, commodity markets outlook. Akademya2063 and IFPRI, Africa Agricultural Trade Monitoring Database: Retrieved in April 2022.

- *Shocks to Terms of Trade*

Due to the changing prices of individual commodities primarily exported and imported by Malawi, a sharp increase in import prices (22.6 pp) relative to export prices (5.0 pp) is projected for 2022, suggesting a negative impact on ToT (Figure 2). The ToT are projected to deteriorate further in 2023 as the export price index falls (-4.7 pp), and the import price index remains almost unchanged (-0.3 pp). A slight improvement in the ToT is projected for 2024 as the import price index (-5.6 pp) declines more than the export price index (-1.3 pp).

Figure 2: Malawi Export and Import Price Indices, Ukraine vs. Baseline Scenarios (Percentage Point)

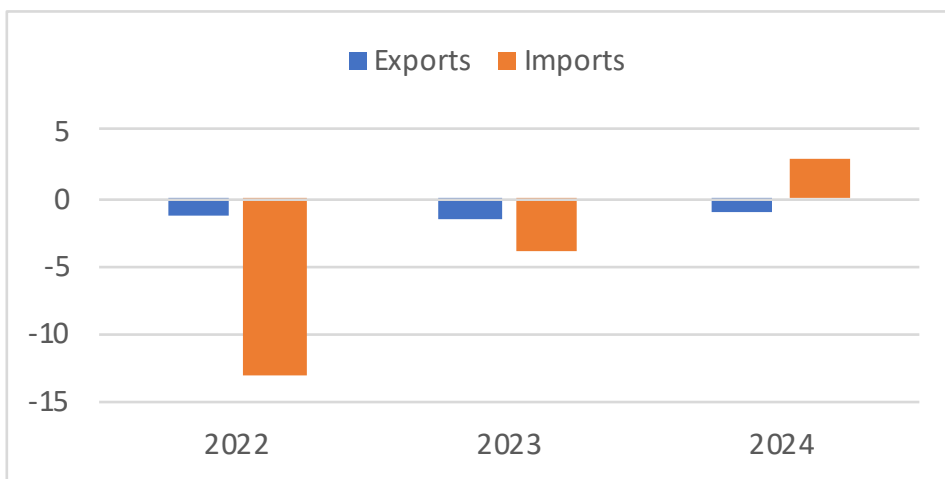


Sources: World Bank, commodity markets outlook. Akademya2063 and IFPRI, Africa Agricultural Trade Monitoring Database. Retrieved in April 2022.

- *Commodity Trade Effects*

Malawi is projected to observe a sharp decline in imports in 2022 relative to the baseline scenario, raising concerns about rising prices and domestic supply shortages (Figure 3). The observed decline in exports suggests that the economy faces constraints which limit its capacity to boost exports in response to rising prices. Exports are still projected to be below their baseline scenario levels in 2023 and 2024, while imports are projected to return slowly to baseline trends in 2023 and recover by 2024.

Figure 3: Malawi, Import and Export Volumes, Ukraine vs. Baseline Scenarios (%)



Source: Compilation from simulation results. Retrieved in April 2022.

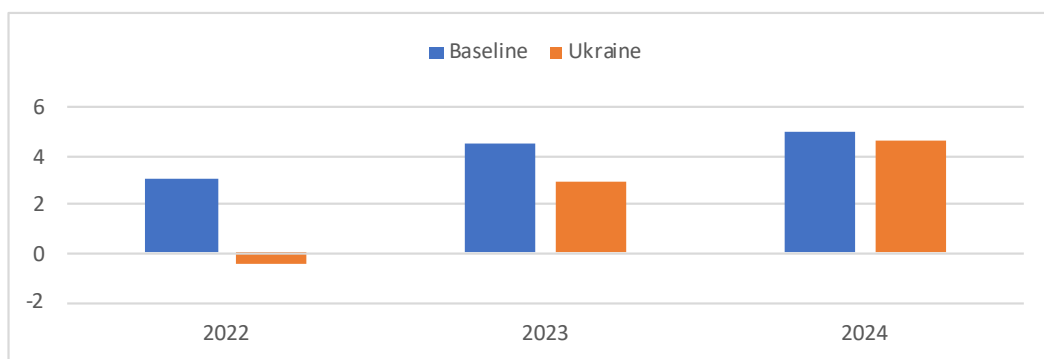
4. Impacts on Growth and Employment

The combined effects of global price changes for a variety of commodities will define the ultimate impacts of the crisis on a particular economy. Generally, the greater the price increases for a country's commodity imports relative to its exports, the more negatively its economy will be affected.

- *Growth Effects*

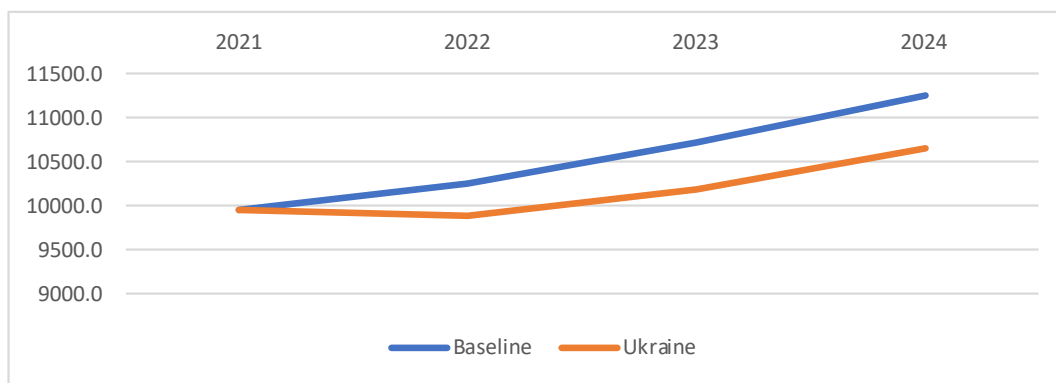
Global commodity price shocks are expected to impact Malawi negatively. The country's economy, which was already growing at a slow pace prior to the crisis, is projected to experience a negative growth rate in 2022 before gradually returning to positive territory over the next two years (Figure 4). The Gross Domestic Product (GDP) is projected to decline by 3.4 pp relative to the baseline scenario, i.e., the scenario that would prevail without the disruptions from the Ukraine crisis. Malawi's economy is expected to recover by 2024, but the sharp decline in 2022 will put it on a lower growth trajectory than it would have been in the absence of the global commodity trade and market disruptions caused by the war (Figure 5).

Figure 4: Malawi, Annual Change in GDP (%)



Source: Compilation from simulation results. Retrieved in April 2022.

Figure 5: Malawi, GDP Level in Billions of Malawian Kwacha

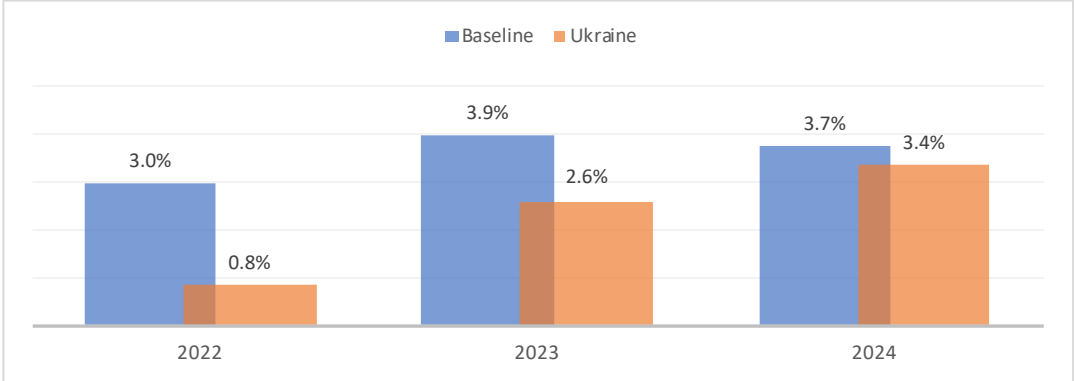


Source: Compilation from simulation results. Retrieved in April 2022.

- *Employment Effects*

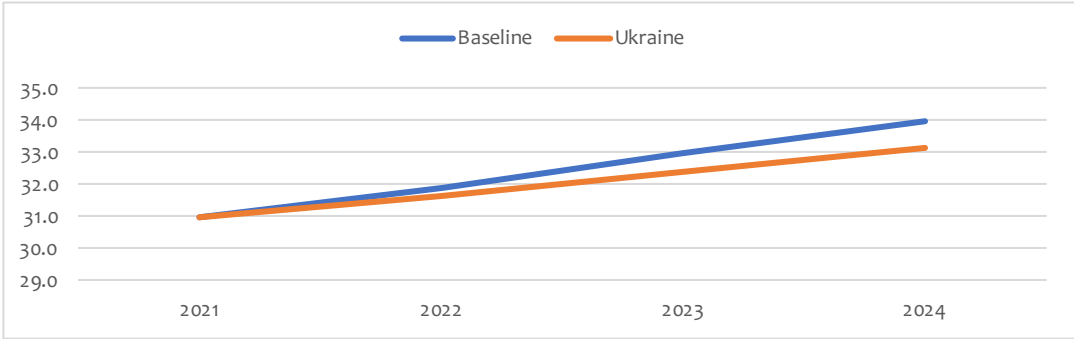
Malawi's projected contraction in economic growth and activity, especially in 2022 and 2023, is reflected in slower employment growth compared to the baseline (Figure 6). The projected decline in employment growth for 2022 is steep. Employment is expected to rebound in 2023 and 2024. Still, the initial labor market shock of 2022 pushes the economy to a slower job creation trajectory than that in the baseline scenario, with a widening employment gap that will take years to rectify (Figure 7).

Figure 6: Malawi, Changes in Annual Employment Levels



Source: Compilation from simulation results. Retrieved in April 2022.

Figure 7: Malawi, Employment Level in Millions of Individuals



Source: Compilation from simulation results. Retrieved in April 2022.

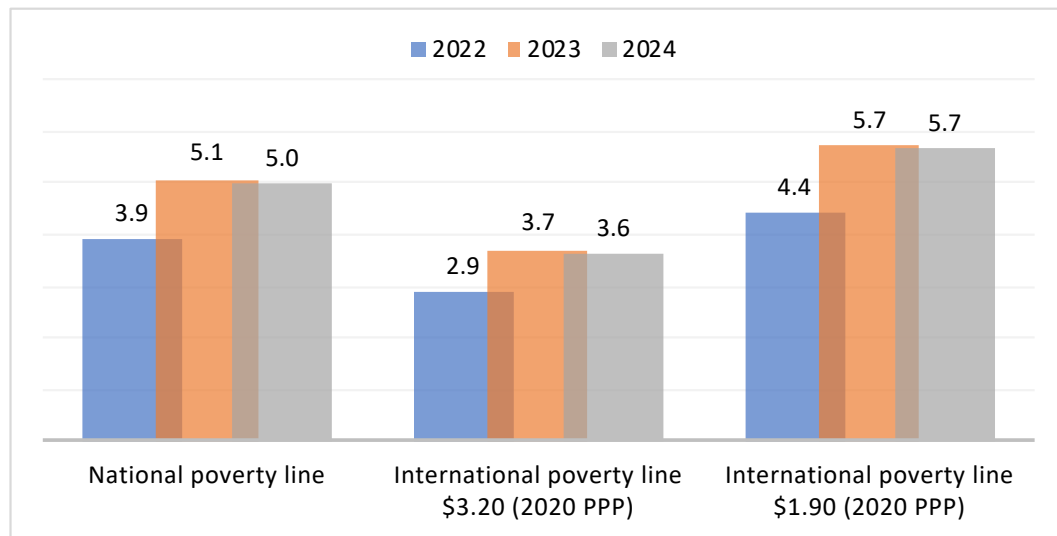
5. Impacts on Poverty and Food Security

The growth and employment impacts emerging from the disruption of global commodity trade and markets lead to changes in income levels and distribution, as well as the general cost of living. In turn, these changes drive poverty outcomes. Changes in income and adjustments to the local prices of both food and non-food items affect food affordability and, ultimately, household demand and consumption. These dynamics determine the impacts of the crisis on food security outcomes. In this brief, poverty effects are measured by the change in the poverty headcount index using three different levels: the country’s national poverty line, and two international poverty lines at US\$ 3.20 daily and US\$ 1.90 daily, both measured at 2020 purchasing power parity (PPP) levels. The food security outcome captures the availability and accessibility domains of food security since it uses the level of food consumption by households as a measurement.

- Income and Poverty Effects*

The global commodity trade shocks brought about higher poverty rates in 2022, in line with the general tendency towards contraction of economic growth and deceleration of employment discussed earlier. The poverty headcount based on all three poverty lines continues to rise into 2023 before stabilizing in 2024 (Figure 8). The ToT analysis shows continued deterioration in 2023 before a slight improvement is seen in 2024, with accompanying consequences on economic growth, employment, and poverty.

Figure 8: Change in Poverty Headcount Index compared to Baseline for Malawi (%)



Source: Compilation from simulation results. Retrieved in April 2022.

- *Inflation and Food Security Effects*

Rising global commodity prices expose countries to general inflationary pressures and the rising cost of food. The strength of these impacts on a country depends on the structure of global price changes and its external trade commodity composition. Changes in household income (Table 4) and the cost of food are reflected in changes in the food price index (Table 3), ultimately shaping the food security outcomes. Changes in the general cost of living, reflected in changes in the overall consumer price index (Table 3), also affect food security through the erosion of household purchasing power.

Malawi faces high inflationary pressures on all commodities, including food products, in both urban and rural areas (Table 3). The convergence of declining incomes and the rising cost of living, including the higher cost of food products, are driving significant negative outcomes in food security. Household food consumption is expected to fall, both among urban and rural households (Table 5). The deterioration in food security is worse in rural households than in urban households. The stronger decline in rural incomes and the higher food price inflation in rural areas drive this difference in food security outcomes between rural and urban households. Prices of food products, such as wheat and palm oil, have soared. Rural households have a higher budget share for food products than urban households, so they are likely to bear a heavier burden in the food security crisis.

Table 3: Malawi, Percentage Change in Consumer Price Index vs. Baseline

	2022		2023		2024		Average 2022-24	
	All	Food	All	Food	All	Food	All	Food
All	2.4	2.2	2.9	1.8	1.8	2.1	2.3	2.0
Rural	2.9	2.5	3.2	2.1	2.3	2.3	2.8	2.3
Urban	1.8	1.7	2.4	1.3	1.2	1.6	1.8	1.6

Source: Compilation from simulation results. Retrieved in April 2022.

Table 4: Malawi, Percentage Change in Household Income vs. Baseline

	2022	2023	2024	Average 2022-24
All	-4.5	-5.3	-5.6	-5.1
Rural	-4.8	-6.3	-7.3	-6.2
Urban	-4.1	-4.2	-3.6	-4.0

Source: Compilation from simulation results. Retrieved in April 2022.

Table 5: Malawi, Percentage Household Consumption, Baseline

	2022		2023		2024		Average 2022-24	
	All	Food	All	Food	All	Food	All	Food
All	-5.2	-3.9	-6.6	-4.5	-6.6	-5.4	-6.1	-4.6
Rural	-5.7	-4.3	2.4	-5.3	1.2	-6.6	1.8	-5.5
Urban	-4.5	-3.0	-5.2	-3.0	-4.1	-2.9	-4.6	-3.0

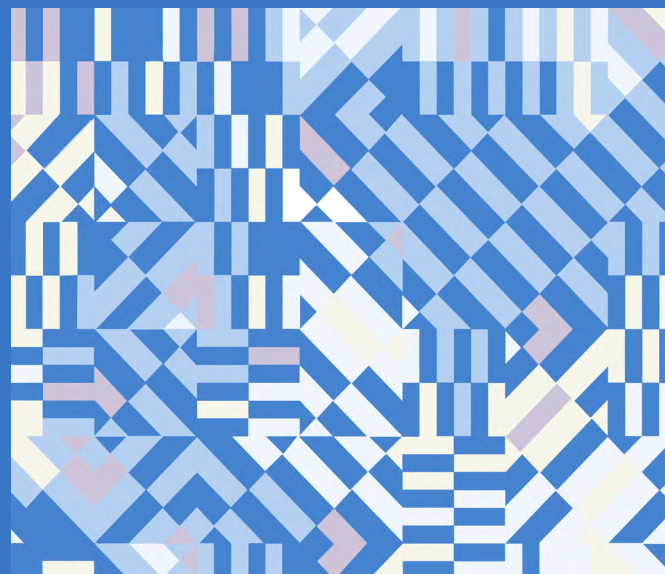
Source: Compilation from simulation results. Retrieved in April 2022.





6. Conclusion

Malawi is projected to face a deterioration in Terms of Trade (TOT) as a result of the Russia-Ukraine war. The decline in growth and employment resulting from the disruption of global commodity trade and markets will lead to negative changes in income levels and distribution and increase the general cost of living in Malawi. In line with the slowdown in economic growth and the higher loss of employment, increases in poverty and food insecurity levels are observed across the country. Urban and rural households experience food consumption declines as their incomes decrease. Notably, while food security for all households worsens, it deteriorates more for rural households as they experience steeper income declines and face much higher food price inflation compared to urban households.

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