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Poverty and Food Security Effects Among Selected African Countries

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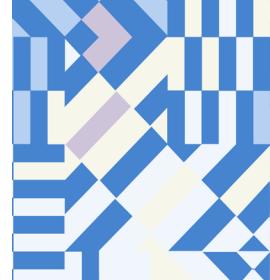


1. Impact Channels of Global Market Disruptions

The Russia-Ukraine war has affected nearly every global market, not just agriculture and food-related ones. The wide-ranging disruptions caused by the war are having a cumulative impact, with potentially significant effects on entire economies.

There are several channels through which global market disruptions are transmitted to individual country economies. One such channel 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 country export and import baskets. The magnitude of this shock is measured by the change in a country's terms of trade (TOT), which reflects the difference between the changes in export and import prices. A relative increase in import prices relative to export prices indicates a deterioration of a country's TOT or its capacity to cover the cost of its imports through its export revenue. The opposite indicates an improvement in TOT. Therefore, changes in TOT translate to changes in the balance of trade and foreign exchange earnings, with further ramifications throughout the economy.

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The second channel of transmission is linked to changes in the real exchange rate, measured by the resulting shift in domestic prices of export and import-competing (tradeable) goods relative to prices of non-tradeable goods. This, in turn, affects the domestic demand for and supply of goods and factors of production, in particular capital and labor. The extent to which the productive sectors respond by expanding or contracting outputs determines the final effects in terms of overall growth, employment creation, income generation, equity, poverty, and food security.

The effects of global market disruptions can also be analyzed through the transmission of global price changes to individual domestic sectors. Such an analysis could examine the impact of induced changes to the domestic prices of fertilizer, wheat products, or local staples, for example. The impact of these changes on the economy as a whole will likely be less than the impact of generalized changes in a country's TOT and its real exchange rate. In the case of fertilizers, for example, changes in price and availability will be felt substantially and primarily in high-consuming countries and sectors such as fruits and vegetables. The effects on traditional staples, except for maize in certain countries, will be more limited. Similarly, the effects of the global wheat market disruption on domestic production may be significant. Still, the size of the wheat sector in African economies is not large enough to trigger changes of macroeconomic magnitude. Finally, compared to the 2008 global food price crisis, the induced rise in the prices of local staples like maize, millet, cassava, yam, and cowpeas may not result in significant supply changes with major economy-wide ramifications. Nonetheless, many of the above changes are likely to have significant effects on local sectors and/or consumption, and they are the subject of a separate report.

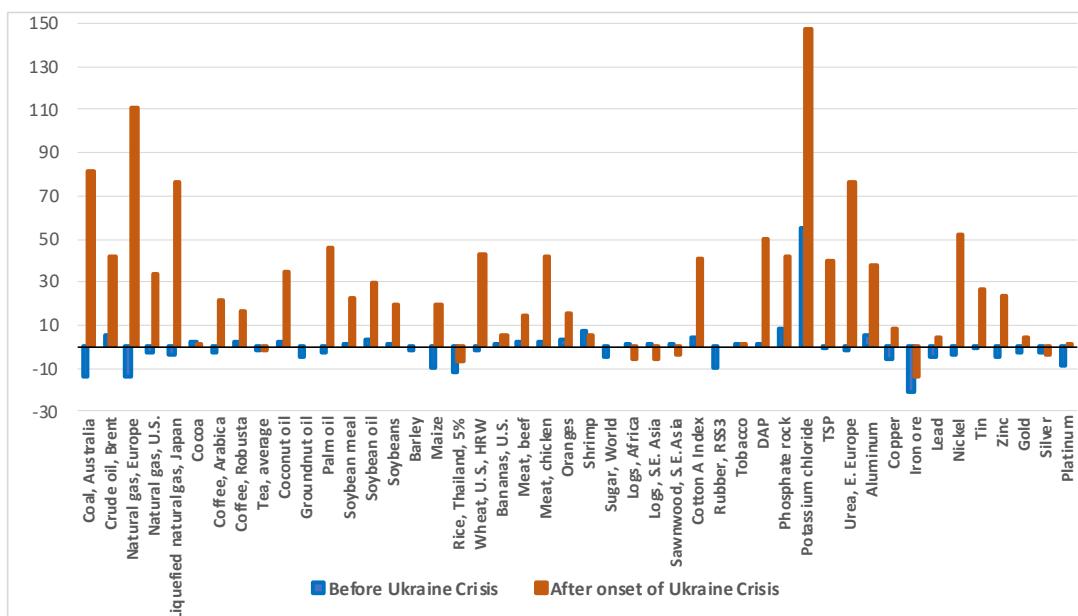
This report assesses the effect of the disruption of global commodity markets on inflation, household incomes, and food security outcomes in selected African countries: Benin, Kenya, Ghana, Malawi, Mozambique, Nigeria, Senegal, South Africa, Tanzania, and Uganda. The main findings are presented below.

2. Assessing the Economywide Impact of the Ukraine Crisis

The growth, employment, poverty, and food security impacts are assessed by comparing their respective levels between 2022 and 2024 to what they would have been had countries' economies continued their pre-war trajectories, undisturbed by the changes in global commodity markets and related TOT shocks. Changes in global commodity prices are calculated as the difference between commodity price projections by the World Bank before and after the onset of the crisis (Figure 1).

Two sets of simulations are carried out for that purpose: (i) a “Baseline” scenario assuming no major changes in economies’ trajectories, yielding growth, employment, poverty, and food consumption levels in the absence of the crisis for the period 2022-2024; (ii) a “Ukraine war” scenario, which captures the disruptions to individual countries’ economies resulting from the changes in global commodity markets and their effects in the same areas of economic growth, employment, poverty and food security. A total of 46 globally traded commodities are covered, including, in addition to food and agriculture, metals, energy and fertilizers. The findings that are presented here discuss the projected effects on incomes, price levels, and food consumption. The poverty and food security outcomes over the next three years are compared to what they would have been in the absence of the war and the resulting disruption of global commodity markets.

Figure 1: World Bank Projection of Changes in Global Commodity Prices before and after the Ukraine Crisis



Source: World Bank, [commodity markets outlook](#). Retrieved April 2022

3. Country Heterogeneity

The ultimate effects of trade disruptions across countries depend on the relative change in the price of each of the 46 commodities as well as their share in each country's import and export baskets.

Indeed, the more a country's import prices rise relative to its export prices, the more adversely its economy will be affected. The opposite holds for countries with higher increases in exports than import prices, which tends to affect the economy positively.

The results of the analysis of the changes in TOT and their economy-wide impact indicate four categories of countries:

- A group with negative TOT effects, or TOT losers (TOTL), is further subdivided into two groups:
 - ✓ countries that recover relatively early (by 2024) from the effects of deteriorating terms of trade (Early-TOTL).
 - ✓ countries that will not have recovered from the TOT deterioration by 2024 (Late-TOTL).
- A group with positive TOT effects, or TOT winners (TOTW), is also subdivided into two groups:
 - ✓ countries with positive TOT effects but negative poverty and food security outcomes (TOTW-).
 - ✓ countries with both positive TOT and poverty/food security outcomes (TOTW+).

The grouping of countries into these four clusters is shown in the table below.

Table 1: Country grouping

Terms of Trade Effects	Clusters	Countries
Negative TOT	Late-TOTL	Kenya, Malawi, Uganda
	Early-TOTL	Senegal, Tanzania
Positive TOT	TOTW-	Mozambique
	TOTW+	Benin, Ghana, Nigeria, South Africa

The discussion of the findings is organized according to the above groups of countries to enable better visibility of the diverging nature of the economy-wide ramifications of the war.

4. Trade Patterns and Distributional Structure of Growth and Poverty Effects

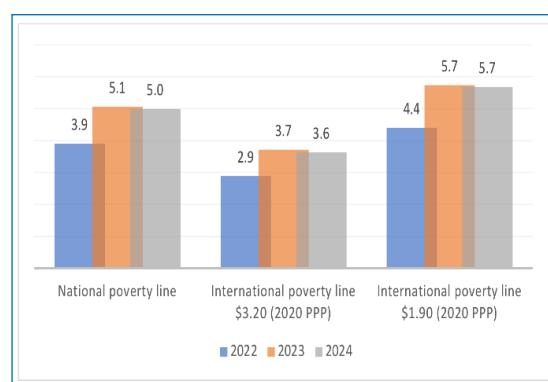
The growth and employment effects resulting from the disruption of global commodity markets among African countries give rise to changes in income levels and distribution, as well as the general cost of living. These changes, in turn, drive poverty outcomes. Changes in income and adjustments to the local prices of both food and non-food items determine food affordability, and ultimately household demand and consumption. This determines the impact of the crisis on food security and nutrition outcomes. Poverty effects in this report are measured by the change in the poverty headcount index using three different poverty lines: each country's own national poverty line, and two international poverty lines at 3.20 USD and 1.90 USD, respectively, per day, both measured at 2020 purchasing power parity (PPP).

Countries facing deteriorating terms of trade

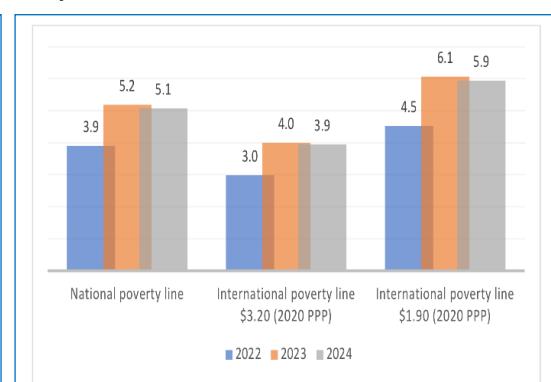
The shocks in global commodity trade have produced an increase in poverty rates in 2022 among the group of countries studied for this report, in line with the general tendency towards economic growth contraction and deceleration of employment shown in Badiane et al. (2022).¹ For Kenya and Malawi, the high poverty growth rates continue into 2023 before stabilizing in 2024 (Figures 2). The rise in poverty rates is lower in Senegal than in Kenya and Malawi but continues its upward trend beyond 2024. Tanzania and Uganda see the smallest increase in poverty rates among this group. In addition to being rather modest compared to other countries, poverty rates in Tanzania start falling again after 2023 (Figures 2). It is the only country in this group to reverse the rising poverty trends back towards baseline levels. Uganda, in contrast, is the only other country, next to Senegal, where poverty rates continue to climb past 2024 although at overall more modest levels.

Figures 2: Change in Headcount Poverty Index compared to Baseline for TOTL countries

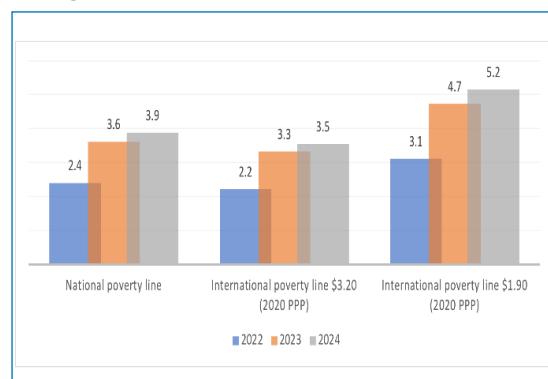
Malawi



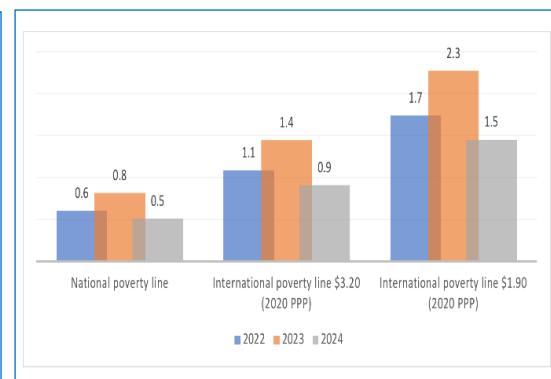
Kenya



Senegal

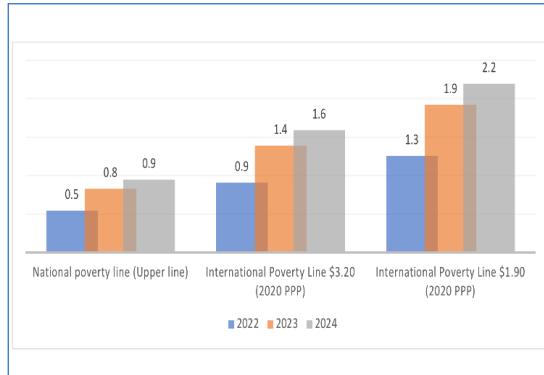


Tanzania



¹Badiane, O., Fofana, I., and Sall, L.M., 2022. Growth and Employment Effects Among Selected African Countries. AKADEMIYA2063 Ukraine Crisis Brief Series, No. 005, AKADEMIYA2063, Kigali, Rwanda.

Uganda



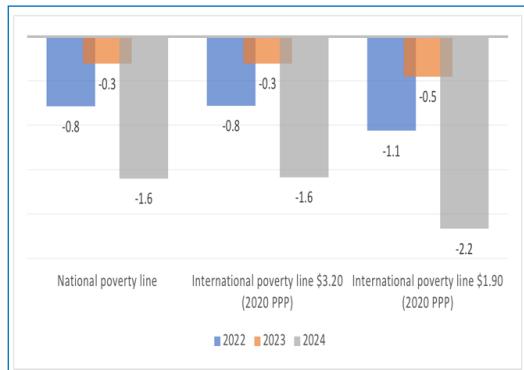
Countries anticipating improvement in terms of trade

Compared to the group of countries facing deteriorating TOT, the changes in global commodity markets tend to be associated with lower poverty levels in this cluster of countries, reflecting the generally more positive growth and employment effects as highlighted by Badiane et al. (2022). Here, too, there are notable differences among countries: a stronger decline in poverty rates is observed, for instance, in Benin and

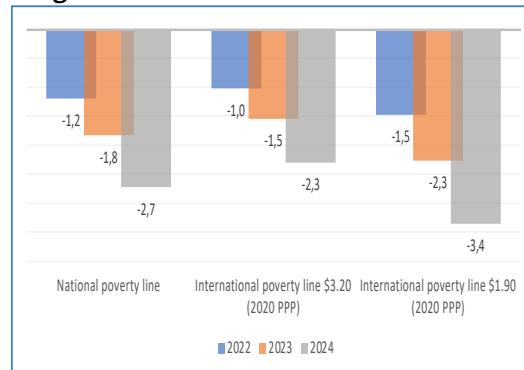
Nigeria, compared to Ghana and South Africa (Figures 3). Mozambique stands out as the only country in this group which registers rising poverty rates, despite showing the highest gains in terms of overall economic growth and employment (Badiane et al., 2022). The reasons for this outcome are discussed in the following section. It is also noteworthy that Ghana, which shows growth and employment gains like Benin, registers more moderate changes in poverty levels, in particular when using the national poverty lines or the lower international poverty line of 1.90 USD.

Figures 3: Change in Headcount Poverty Index compared to Baseline for TOTW countries

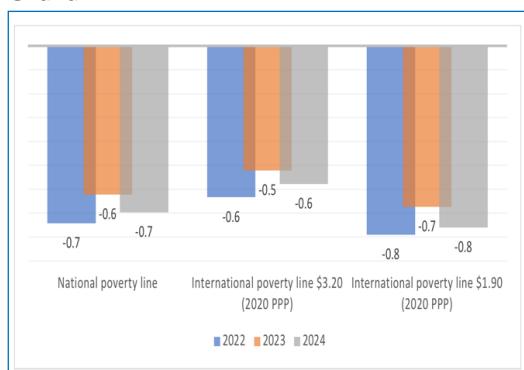
Benin



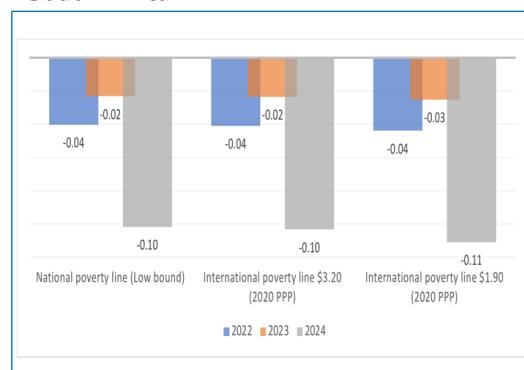
Nigeria



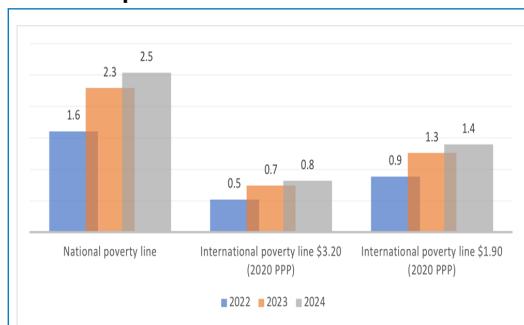
Ghana



South Africa



Mozambique



5. Diversification and Poverty Impact of Changes in Global Commodity Trade

The differences in poverty outcomes within the two country groups are driven by differences in trading patterns which in turn determine which global price changes are transmitted to national economies, the extent of that transmission, and how broadly these changes are spread across the various domestic sectors. In general, the less diversified a country's trading patterns, and the more those patterns are dominated by low labor intensity sectors, the narrower the distribution of employment and income effects and, consequently, the lower the poverty-reducing effects. This is best illustrated by the case of Mozambique. As can be seen in Annex B, Tables B4, the bulk of TOT gains for the country accrues to the energy and mining sectors, which also dominate the country's export basket. These sectors usually tend to be geographically concentrated, with lower labor intensity and less extensive intersectional connections. Under such conditions, the gains in income resulting from the positive growth and employment effects induced by the improvement in TOT do not spread widely enough to generate a substantial reduction in poverty. More importantly, rising TOT in these circumstances is associated with higher inflation rates and appreciation of the real exchange rate, with negative impacts on activity levels and incomes in the rest of the economy. The above constellations explain the rise in poverty in Mozambique despite positive TOT effects resulting from the changes in global commodity markets. The same phenomenon explains why Benin shows much better poverty outcomes than Ghana in Figures 3 despite relatively similar growth and employment outcomes (Badiane et al., 2022). Ghana's trade gains go nearly exclusively to the gold and petroleum sectors (Annex B, Tables B4). In the case of Benin, the presence of cotton – an important smallholder crop – in the mix of leading export sectors, makes the decisive difference.

6. Effects of Global Commodity Price Shocks on Inflation and the Cost of Food

Countries facing deteriorating terms of trade

Rising global commodity prices expose countries to general inflationary pressures and the rising cost of food. The current crisis is no exception. How strongly a country is affected depends again on the structure of global price changes and the commodity composition of its external trade. Amongst the cluster of countries with deteriorating TOT, Malawi and Uganda face the highest inflationary effects, followed by Tanzania (Annex A, Tables A2). In the case of Kenya, inflationary pressures tend to be concentrated in the food sector (Annex A, Tables A2). On the other hand, Senegal shows negative inflationary pressures, although at relatively low levels.

Countries anticipating improvement in terms of trade

Mozambique sees generalized inflationary pressures in food and non-food sectors as well as in rural and urban areas (Annex B, Tables B2). Inflationary pressures in Benin and Ghana tend to be concentrated in the food sector (Annex B, Tables B2). Inflationary pressures in Nigeria are also driven by the increase in the food price index, particularly in rural areas, where the rise in food prices is twice as high as in urban areas. The rural nature of food price inflation is highest in Benin, where the increase in food prices in rural areas is four times higher than in urban areas. South Africa is the only country to experience a relatively low level of induced inflation, both in general and in the food sector.

7. Food Security Effects of Global Commodity Market Disruptions

Changes in household incomes and the cost of food, as reflected in changes in the food price index, drive the ultimate impact on food security and nutrition. Changes in the general cost of living, reflected in changes in the overall consumer price index, also affect food security through the erosion of households' purchasing power.

Countries facing deterioration of terms of trade

The confluence of declining incomes and the rising cost of food are driving significant negative food security effects in Kenya, Malawi, and Uganda (Annex A: Tables A1 vs Tables A2 vs Tables A3). Household food consumption is expected to fall the most in these three countries, both among urban and rural households (Annex A, Tables A3). In Senegal, the effect of a much stronger decline in household incomes (Annex A, Tables A1) in the face of slight decreases in the cost of food (Annex A, Tables A2) results in worsening food security situations among rural as well as urban households (Annex A, Tables A3), albeit less seriously compared to the other three countries above. In Tanzania, a less severe decline in incomes (Annex A, Tables 1) and food inflationary pressures (Annex A, Tables A2) lead to a smaller deterioration of the food security situation compared to other countries in this cluster (Annex A, Tables A3).

In all of these countries, the deterioration of the food security situation is worse in rural households than in urban households (Annex A, Tables A3). This difference in food security outcomes between rural and urban households is driven primarily by the stronger decline in rural incomes (Annex A, Tables A1). Even in cases where rural households face weaker food inflationary pressures, as in the case of Kenya, the fall in rural incomes leads to relatively stronger food security erosion. The urban-rural gap is the most serious in Malawi and Uganda.

Countries anticipating improvement in terms of trade

Except for Mozambique, higher household incomes and moderate inflationary tendencies are expected to contribute to better food security outcomes among this group of countries. The largest gain in household incomes is seen in Nigeria, among both rural and urban households (Annex B, Tables B1). Mozambique, in contrast, faces the strongest deterioration of incomes, across all household groups (Annex B, Tables B1). It is the only country in this group with noticeable food security effects (Annex B, Tables B3). In line with the stronger and more generalized inflationary pressures and falling incomes, food consumption decreases among all household groups in Mozambique. Nigeria, in contrast, sees a moderate increase in food consumption, in both rural and urban areas (Annex B, Tables B3).

8. Conclusion

The growth and employment effects resulting from the disruption of global commodity markets lead to changes in income levels and distribution as well as the general cost of living. These changes, in turn, drive poverty outcomes. In line with the slowdown in growth and loss of employment, higher poverty levels are observed in countries facing a deterioration in terms of trade. Sharper increases in poverty are observed in Kenya and Tanzania. Positive growth and employment outcomes in countries with improved terms of trade lead to lower poverty levels. The big exception here is Mozambique, where the concentration of growth and employment gains in a rather small number of low-intensity sectors (energy and minerals), combined with strong and generalized inflationary pressures, results in rising poverty rates.

ANNEX A

Inflation and Food Security Effects in Countries with Deteriorating Terms of Trade

Tables A1: Household Income, Change vs Baseline (%) for TOTL countries

Malawi					Kenya				
	2022	2023	2024	Average 2022-24		2022	2023	2024	Average 2022-24
All	-4.5	-5.3	-5.6	-5.1	All	-5.0	-6.3	-6.5	-6.0
Rural	-4.8	-6.3	-7.3	-6.2	Rural	-4.4	-5.9	-5.9	-5.4
Urban	-4.1	-4.2	-3.6	-4.0	Urban	-5.5	-6.6	-7.0	-6.4

Senegal					Tanzania				
	2022	2023	2024	Average 2022-24		2022	2023	2024	Average 2022-24
All	-2.4	-3.4	-2.1	-2.6	All	-4.4	-5.9	-5.0	-5.1
Rural	-2.8	-3.5	-2.6	-3.0	Rural	-3.7	-6.5	-6.5	-5.6
Urban	-1.8	-3.2	-1.4	-2.1	Urban	-4.8	-5.7	-4.4	-4.9

Uganda									
	2022	2023	2024	Average 2022-24					
All	-3.0	-3.6	-5.5	-4.1					
Rural	-3.2	-3.9	-5.7	-4.3					
Urban	-2.7	-3.4	-5.2	-3.8					

Source: All data in Tables A1 are based on results from authors' simulations

Tables A2: Consumer Price Index, Change vs Baseline (%) for TOTL countries

Malawi								Kenya								
	2022		2023		2024		Average 2022-24		2022		2023		2024		Average 2022-24	
	All	Food	All	Food	All	Food	All	Food	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	1.1	3.4	1.0	2.0	0.4	0.8	0.8	2.1
Rural	2.9	2.5	3.2	2.1	2.3	2.3	2.8	2.3	1.7	3.3	1.1	1.7	0.4	0.7	1.1	1.9
Urban	1.8	1.7	2.4	1.3	1.2	1.6	1.8	1.6	0.6	3.5	0.8	2.2	0.4	1.0	0.6	2.3

Senegal								Tanzania								
	2022		2023		2024		Average 2022-24		2022		2023		2024		Average 2022-24	
	All	Food	All	Food	All	Food	All	Food	All	Food	All	Food	All	Food	All	Food
All	-0.6	0.6	-1.1	-1.4	-0.4	-0.2	-0.7	-0.3	1.8	1.5	1.6	0.5	1.0	1.5	1.5	1.2
Rural	-0.2	0.9	-1.8	-2.1	-0.3	-0.2	-	-0.5	2.0	1.8	1.6	0.8	1.1	1.4	1.6	1.3
Urban	-0.8	0.4	-	0.7	-0.9	-0.4	-0.2	-0.2	0.6	1.5	1.5	-0.1	0.9	1.6	1.3	0.8

Uganda																
	2022		2023		2024		Average 2022-24		2022		2023		2024		Average 2022-24	
	All	Food	All	Food	All	Food	All	Food	All	Food	All	Food	All	Food	All	Food
All	3.6	3.7	3.8	3.1	2.2	1.7	3.2	2.8	1.8	3.6	4.0	3.1	2.3	1.6	2.7	
Rural	4.1	3.6	4.0	3.1	2.3	1.6	3.5	2.7	2.1	3.9	3.4	3.1	1.9	2.8	3.0	
Urban	3.1	3.9	3.4	3.1	1.9	1.9	2.8	2.0	1.7	3.7	3.8	3.1	1.7	2.6	3.0	

Source: All data in Tables A2 are based on results from authors' simulations

Tables A3: Household Consumption, Change vs Baseline (%) for TOTL countries

Malawi										Kenya							
	2022		2023		2024		Average 2022-24			2022		2023		2024		Average 2022-24	
	All	Food	All	Food	All	Food	All	Food	All	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	All	-5.3	-5.3	-6.9	-5.1	-6.8	-4.5	-6.4	-4.9
Rural	-5.7	-4.3	2.4	-5.3	1.2	-6.6	1.8	-5.5	Rural	-5.4	-5.5	0.8	-5.2	0.4	-4.6	0.6	-5.1
Urban	-4.5	-3.0	-5.2	-3.0	-4.1	-2.9	-4.6	-3.0	Urban	-5.3	-5.0	-7.1	-4.8	-7.2	-4.3	-6.6	-4.7

Senegal										Tanzania							
	2022		2023		2024		Average 2022-24			2022		2023		2024		Average 2022-24	
	All	Food	All	Food	All	Food	All	Food	All	All	Food	All	Food	All	Food	All	Food
All	-3.4	-3.0	-4.8	-2.8	-4.7	-3.2	-4.3	-3.0	All	-3.0	-2.8	-3.9	-2.4	-2.6	-2.6	-3.2	-2.6
Rural	-3.0	-3.2	-0.7	-3.0	-0.4	-4.4	-0.6	-3.5	Rural	-3.8	-3.3	1.5	-2.8	0.9	-3.0	1.3	-3.0
Urban	-3.5	-2.9	-4.8	-2.6	-4.0	-2.4	-4.1	-2.6	Urban	-2.0	-1.7	-3.6	-1.7	-1.7	-2.0	-2.4	-1.8

Uganda									
	2022		2023		2024		Average 2022-24		
	All	Food	All	Food	All	Food	All	Food	
All	-5.2	-3.9	-6.9	-3.9	-7.5	-4.3	-6.6	-4.1	
Rural	-5.6	-4.0	3.4	-4.1	1.9	-4.5	2.8	-4.2	
Urban	-4.7	-3.8	-6.5	-3.6	-7.1	-4.0	-6.2	-3.8	

Source: All data in Tables A3 are based on results from authors' simulations

Tables A4: Change in Global Prices of Top Export Commodities (%) for TOTL countries

Malawi										Kenya							
Commodities		Share Total Exports	Baseline Scenario			Ukraine Scenario			Commodities		Share Total Exports	Baseline Scenario			Ukraine Scenario		
			2022	2023	2024	2022	2023	2024				2022	2023	2024	2022	2023	2024
Petroleum oils; not crude		5.9	5.7	-12.2	0.6	42.0	-8.0	-13.0	Petroleum oils; not crude		5.9	5.7	-12.2	0.6	42.0	-8.0	-13.0
Coffee		3.4	-2.3	-1.2	1.6	22.0	-4.5	-0.4	Coffee		3.4	-2.3	-1.2	1.6	22.0	-4.5	-0.4
Tea		18.7	-1.9	-1.9	1.4	-1.5	-3.8	1.2	Tea		18.7	-1.9	-1.9	1.4	-1.5	-3.8	1.2
Palm oil		1.5	-2.3	-2.3	0.4	45.9	-15.2	-2.0	Palm oil		1.5	-2.3	-2.3	0.4	45.9	-15.2	-2.0
Tobacco		1.5	0.6	1.2	0.4	1.1	-2.4	0.4	Tobacco		1.5	0.6	1.2	0.4	1.1	-2.4	0.4
Iron or non-alloy steel		1.0	-21.2	-7.7	-16.7	-13.6	-25.0	-14.3	Iron or non-alloy steel		1.0	-21.2	-7.7	-16.7	-13.6	-25.0	-14.3
Gold		4.8	-2.5	-1.1	-0.6	4.4	-9.6	-2.9	Gold		4.8	-2.5	-1.1	-0.6	4.4	-9.6	-2.9

Senegal										Tanzania							
Commodities		Share Total Exports	Baseline Scenario			Ukraine Scenario			Commodities		Share Total Exports	Baseline Scenario			Ukraine Scenario		
			2022	2023	2024	2022	2023	2024				2022	2023	2024	2022	2023	2024
Groundnuts		5.8	-4.9	2.6	0.8	12.2	-17.4	0.4	Coffee		2.3	-2.3	-1.2	1.6	22.0	-4.5	-0.4
Petroleum oils; not crude		14.4	5.7	-12.2	0.6	42.0	-8.0	-13.0	Rice		1.9	-12.1	2.5	2.0	-7.2	-2.4	1.9
Fish		7.5	7.1	-3.3	0.8	5.8	2.1	1.6	Fish		1.2	7.1	-3.3	0.8	5.8	2.1	1.6
Prepared or preserved fish		1.3	7.1	-3.3	0.8	5.8	2.1	1.6	Cotton		1.8	4.8	-2.3	0.6	40.9	-6.5	0.0
Molluscs		1.5	7.1	-3.3	0.8	5.8	2.1	1.6	Tobacco		3.1	0.6	1.2	0.4	1.1	-2.4	0.4
Gold		18.3	-2.5	-1.1	-0.6	4.4	-9.6	-2.9	Copper; unrefined		5.8	-5.4	-6.8	-8.5	8.4	-4.0	-7.2
									Copper; refined		1.8	-5.4	-6.8	-8.5	8.4	-4.0	-7.2
									Gold		38.9	-2.5	-1.1	-0.6	4.4	-9.6	-2.9

Uganda									
Commodities		Share Total Exports	Baseline Scenario			Ukraine Scenario			
			2022	2023	2024	2022	2023	2024	
Petroleum oils; not crude		1.3	5.7	-12.2	0.6	42.0	-8.0	-13.0	
Cocoa beans		1.0	2.1	2.0	1.2	0.8	2.0	1.2	
Coffee		9.1	-2.3	-1.2	1.6	22.0	-4.5	-0.4	
Fish; dried, salted or in brine		1.3	7.1	-3.3	0.8	5.8	2.1	1.6	
Cane or beet sugar		1.3	-5.1	2.7	0.8	0.0	-2.6	0.0	
Gold		60.6	-2.5	-1.1	-0.6	4.4	-9.6	-2.9	

Source: All data in Tables A4 are based on results from authors' simulations

ANNEX B

Inflation and Food Security Effects in Countries with Improving Terms of Trade

Tables B1: Household Income, Change vs Baseline (%) for TOTW countries

Benin					Nigeria				
	2022	2023	2024	Average 2022-24		2022	2023	2024	Average 2022-24
All	0.9	1.1	2.1	1.4	All	1.4	3.2	6.2	3.6
Rural	1.3	1.4	2.6	1.8	Rural	1.6	3.6	6.1	3.8
Urban	0.6	1.0	1.8	1.1	Urban	1.2	2.7	6.2	3.4

Ghana					South Africa				
	2022	2023	2024	Average 2022-24		2022	2023	2024	Average 2022-24
All	0.8	1.6	2.3	1.6	All	-0.8	0.1	1.0	0.1
Rural	-0.9	0.9	2.3	0.9	Rural	-0.9	0.5	1.6	0.5
Urban	1.5	1.9	2.3	1.9	Urban	1.2	2.7	6.2	3.4

Mozambique					South Africa				
	2022	2023	2024	Average 2022-24		2022	2023	2024	Average 2022-24
All	-3.0	-3.6	-5.5	-4.1	All	-0.3	0.5	0.3	0.2
Rural	-3.2	-3.9	-5.7	-4.3	Rural	0.1	0.9	0.5	0.5
Urban	-2.7	-3.4	-5.2	-3.8	Urban	-0.7	-0.2	0.1	0.1

Source: All data in Tables B1 are based on results from authors' simulations

Tables B2: Consumer Price Index, Change vs Baseline (%) for TOTW countries

Benin					Nigeria				
	2022	2023	2024	Average 2022-24		2022	2023	2024	Average 2022-24
	All	Food	All	Food	All	Food	All	Food	All
All	-0.2	0.8	1.0	2.4	-0.2	0.1	0.2	1.1	-0.3
Rural	0.5	2.4	0.8	2.2	0.6	1.7	0.6	2.1	0.1
Urban	-0.6	-0.1	1.2	2.4	-0.7	-0.7	0.0	0.5	-0.7

Ghana					South Africa				
	2022	2023	2024	Average 2022-24		2022	2023	2024	Average 2022-24
	All	Food	All	Food	All	Food	All	Food	All
All	-0.5	2.3	0.3	1.9	1.2	2.7	0.3	2.3	-0.5
Rural	-0.1	2.1	0.5	1.6	1.4	2.5	0.6	2.1	0.1
Urban	-0.8	2.5	0.3	2.1	1.1	2.8	0.2	2.5	-0.5

Mozambique					South Africa				
	2022	2023	2024	Average 2022-24		2022	2023	2024	Average 2022-24
	All	Food	All	Food	All	Food	All	Food	All
All	3.6	3.7	3.8	3.1	2.2	1.7	3.2	2.8	-0.5
Rural	4.1	3.6	4.0	3.1	2.3	1.6	3.5	2.7	0.5
Urban	3.1	3.9	3.4	3.1	1.9	1.9	2.8	3.0	0.6

Source: All data in Tables B2 are based on results from authors' simulations

Tables B3: Household Consumption, Change vs Baseline (%) for TOTW countries

Benin									Nigeria								
	2022		2023		2024		Average 2022-24			2022		2023		2024		Average 2022-24	
	All	Food	All	Food	All	Food	All	Food	All	All	Food	All	Food	All	Food	All	Food
All	1.2	0.2	0.4	-0.9	2.6	1.3	1.4	0.2	All	1.6	0.6	2.5	1.5	4.4	2.0	2.8	1.4
Rural	1.1	-0.4	1.2	-0.5	-0.7	0.6	0.0	-0.1	Rural	1.5	0.6	0.1	1.6	0.6	2.0	0.0	1.4
Urban	1.4	0.5	0.0	-1.0	2.7	1.7	1.4	0.4	Urban	1.6	0.8	2.2	1.3	4.5	1.9	2.8	1.3

Ghana									South Africa								
	2022		2023		2024		Average 2022-24			2022		2023		2024		Average 2022-24	
	All	Food	All	Food	All	Food	All	Food	All	All	Food	All	Food	All	Food	All	Food
All	1.4	-0.4	1.1	0.0	1.2	0.2	1.2	0.0	All	0.3	-0.2	0.2	0.2	0.9	0.3	0.5	0.1
Rural	0.0	-0.9	0.3	0.0	1.1	0.3	0.2	-0.2	Rural								
Urban	2.1	-0.1	1.3	0.1	1.2	0.2	1.5	0.1	Urban								

Mozambique									South Africa								
	2022		2023		2024		Average 2022-24			2022		2023		2024		Average 2022-24	
	All	Food	All	Food	All	Food	All	Food	All	All	Food	All	Food	All	Food	All	Food
All	5.2	-3.9	6.9	-3.9	7.5	-4.3	-6.6	-4.1	All								
Rural	-5.6	-4.0	3.4	-4.1	1.9	-4.5	2.8	-4.2	Rural								
Urban	-4.7	-3.8	-6.5	-3.6	-7.1	-4.0	-6.2	-3.8	Urban								

Source: All data in Tables B3 are based on results from authors' simulations

Tables B4: Change in Global Prices of Top Export Commodities (%) for TOTW countries

Benin									Nigeria										
	Share in Total Exports		Baseline Scenario			Ukraine Scenario				Commodities		Share Total Exports		Baseline Scenario			Ukraine Scenario		
	2022	2023	2024	2022	2023	2024	2022	2023	2024		2022	2023	2024	2022	2023	2024	2022	2023	2024
Gold	31.8	-2.5	-1.1	-0.6	4.4	-9.6	-2.9		Petroleum oils; crude	70.6	5.7	-12.2	0.6	42.0	-8.0	-13.0			
Petroleum oils; not crude	2.6	5.7	-12.2	0.6	42.0	-8.0	-13.0		Petroleum oils; not crude	1.5	5.7	-12.2	0.6	42.0	-8.0	-13.0			
Soya beans	9.1	0.9	-6.0	0.9	20.1	-14.3	-0.7		Petroleum gases	13.7	5.7	-12.2	0.6	42.0	-8.0	-13.0			
Wood sawn	1.2	1.2	0.0	0.6	-5.8	7.7	0.5		Cocoa beans	1.1	2.1	2.0	1.2	0.8	2.0	1.2			
Cotton	25.4	4.8	-2.3	0.6	40.9	-6.6	0.0												

Ghana									South Africa										
	Share Total Exports		Baseline Scenario			Ukraine Scenario				Commodities		Share Total Exports		Baseline Scenario			Ukraine Scenario		
	2022	2023	2024	2022	2023	2024	2022	2023	2024		2022	2023	2024	2022	2023	2024	2022	2023	2024
Petroleum oils; crude	21.8	5.7	-12.2	0.6	42.0	-8.0	-13.0		Coal	3.9	-14.3	-25.0	-4.0	81.0	-32.0	-9.0			
Cocoa beans	9.8	2.1	2.0	1.2	0.8	2.0	1.2		Citrus fruit; fresh or dried	2.0	3.0	2.9	1.1	15.4	0.0	0.0			
Cocoa paste	3.1	2.1	2.0	1.2	0.8	2.0	1.2		Petroleum oils; not crude	1.5	5.7	-12.2	0.6	42.0	-8.0	-13.0			
Cocoa butter	2.4	2.1	2.0	1.2	0.8	2.0	1.2		Iron ores	8.5	-21.2	-7.7	-16.7	-15.6	-25.0	-14.3			
Gold	43.3	-2.5	-1.1	-0.6	4.4	-9.6	-2.9		Ferroalloys	2.7	-21.2	-7.7	-16.7	-13.6	-25.0	-14.3			

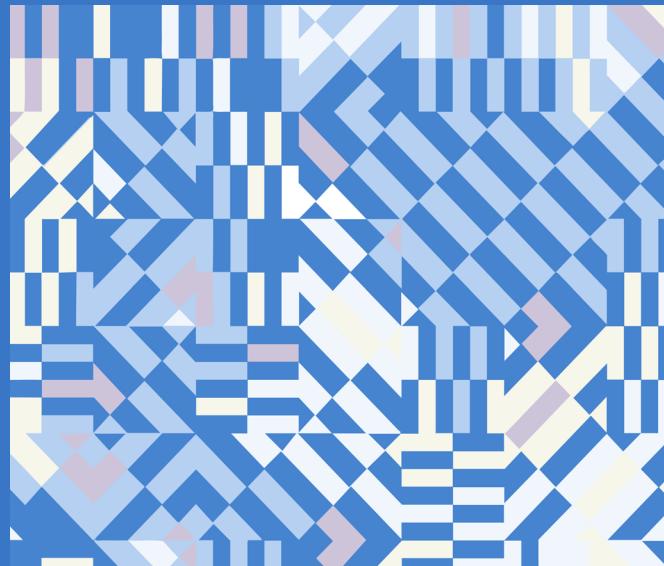
Mozambique									South Africa										
	Share Total Exports		Baseline Scenario			Ukraine Scenario				Commodities		Share Total Exports		Baseline Scenario			Ukraine Scenario		
	2022	2023	2024	2022	2023	2024	2022	2023	2024		2022	2023	2024	2022	2023	2024	2022	2023	2024
Coal	17.9	-14.3	-25.0	-4.0	81.0	-32.0	-9.0		Aluminum; unmanufactured	22.9	5.9	-7.4	-4.0	37.5	-8.8	-3.2			
Petroleum gases	4.8	5.7	-12.2	0.6	42.0	-8.0	-13.0		Aluminum; unwrought	1.6	5.9	-7.4	-4.0	37.5	-8.8	-3.2			
Petroleum oils; not crude	1.2	5.7	-12.2	0.6	42.0	-8.0	-13.0		Copper; unrefined	2.0	-5.4	-6.8	-8.4	-4.0	-7.2				
Wood	1.9	1.2	0.0	0.6	-5.8	7.7	0.5		Gold	4.6	-2.5	-1.1	-0.6	4.4	-9.6	-2.9			
Tobacco; unmanufactured	5.3	0.6	1.2	0.4	1.1	-2.4	0.4												
Aluminum; unrefined	22.9	5.9	-7.4	-4.0	37.5	-8.8	-3.2												
Aluminum; wire	1.6	5.9	-7.4	-4.0	37.5	-8.8	-3.2												
Copper; unrefined	2.0	-5.4	-6.8	-8.4	-4.0	-7.2													
Gold	4.6	-2.5	-1.1	-0.6	4.4	-9.6	-2.9												

Source: All data in Tables B4 are based on results from authors' simulations								
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