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# UKRAINE CRISIS BRIEF SERIES

# Growth and Employment Effects Among Selected African Countries

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THE UKRAINE CRISIS AND AFRICAN ECONOMIES

## 1. Impact Channels of Global Market Disruptions

The Russia-Ukraine war has affected nearly every global market, not just agriculture and food-related markets. 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. Disruptions are transmitted 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. An 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 suggests 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.

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 (tradable) goods relative to prices of non-tradable goods. This in turn affects the domestic demand for and supply of goods and factors of production. The extent to which the productive sectors respond by expanding or contracting output determines the final effects 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 terms of trade and its real exchange rate. For example, in the case of fertilizers, substantial changes in price and availability will be felt mainly in high-consuming countries and sectors such as fruits and vegetables. The effects on traditional staples, with the exception of maize in certain countries, will be more limited. Similarly, the effects of 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 economywide ramifications.

Nonetheless, many of the above changes are likely to affect local sectors and consumption significantly, and they will be the subject of a separate report. They will not be addressed in this report. In this first installment of the analysis on the economywide effects of the Ukraine crisis, we focus on the impact of the combined effects of changes in global commodity prices on the rate of economic growth and employment creation over the next three years in selected African countries.

## 2. Assessing the Economywide Impact of the Crisis

The impacts on growth, employment, poverty, and food security are assessed by comparing their respective levels between 2022 and 2024 to what they would have been, had the countries' economies continued on their pre-war trajectories, undisturbed by the changes in global commodity markets and related TOT shocks. The World Bank's commodity price estimates before and after the start of the crisis are compared, and the difference between the two sets of projections is used to calculate changes in global commodity prices (Figure 1 and Figure 2).

Two sets of simulations are carried out for that purpose: i) a "Baseline" scenario assuming no major changes in the economies' trajectories, yielding growth, employment, poverty, and food consumption levels in the absence of the crisis for the period 2022–2024; and ii) a "Ukraine" scenario, which captures the disruptions to the individual country economies resulting from the changes in global commodity markets and their effects in the same areas of economic growth, employment, poverty, and food security.

**Figure 1:** *Projected changes in global prices by the World Bank, October 2021, %.*

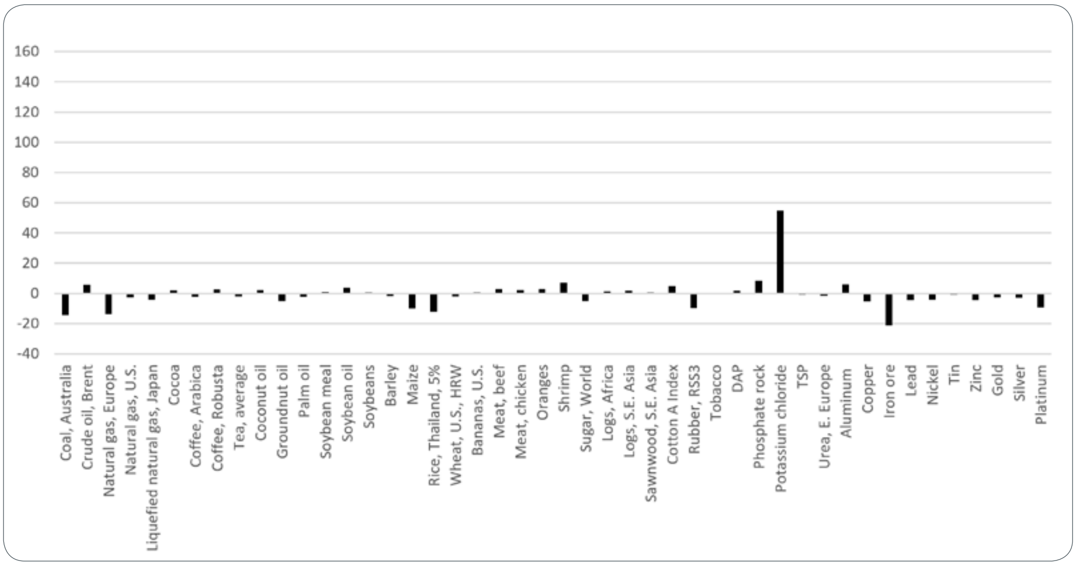
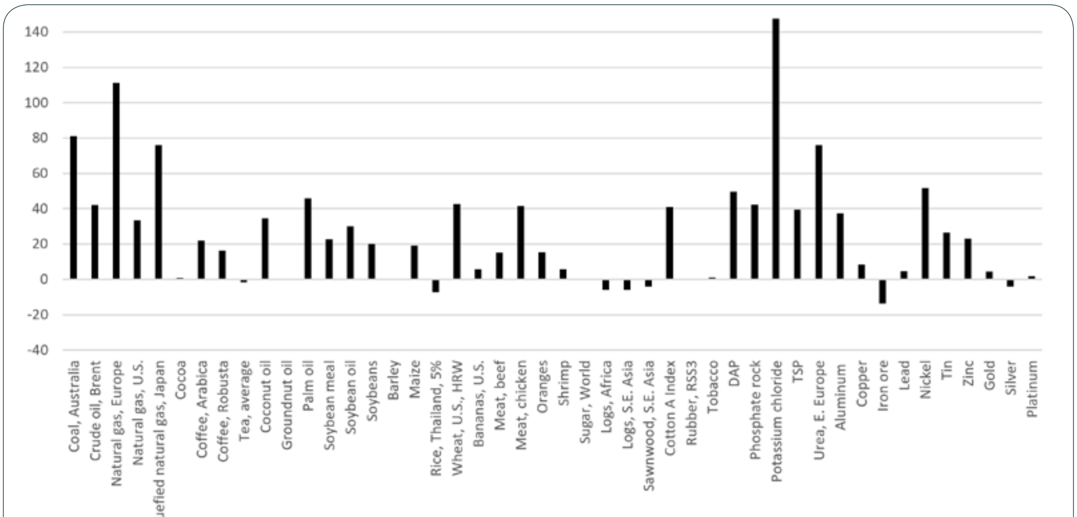


**Figure 2:** *Projected changes in global prices by the World Bank, April 2022, (%)*




*World Bank, commodity markets outlook. Retrieved April 2022.*

A total of 46 globally traded commodities are covered, including metals, energy, and fertilizers, in addition to food and agriculture. The findings presented here discuss the projected growth and employment outcomes over the next three years compared to what they would have been in the absence of the war and the consequent disruption of global commodity markets.

## 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 shares 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 true for countries facing higher increases in export prices than import prices, which tend to be affected positively.

*The results of the analysis of the changes in TOT and their economywide impact indicate four categories of countries:*

1. **A group with negative terms of trade effects, or TOT losers (TOTL), further subdivided into two sub-groups:**
   a. countries that recover relatively early (by 2024) from the effects of deteriorating terms of trade (Early-TOTL);
   b. countries that will not have recovered from the TOT deterioration by 2024 (Late-TOTL).

2. **A group with positive terms of trade effects, or TOT winners (TOTW), subdivided into two subgroups:**
   a. countries with positive terms of trade effects but negative poverty and food security outcomes (TOTW-);
   b. countries with both positive terms of trade and poverty and food security outcomes (TOTW+).

The grouping of countries into 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 clusters of countries to enable better visibility of the diverging nature of the economywide ramifications of the war.

## 4. Commodity Market Disruptions and Trade Effects Among African Countries

### *Countries facing deteriorating terms of trade*

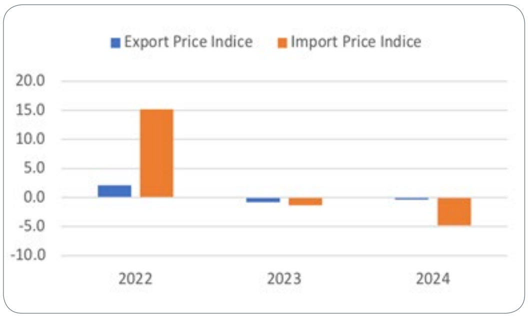
The cluster of countries facing deteriorating TOT includes Kenya, Malawi, Senegal, Tanzania, and Uganda. These countries tend to experience a sharp decline in imports in 2022 relative to the baseline scenario, raising concerns about rising prices and domestic supply shortages (Figures 3). The observed decline in exports suggests that these economies are facing constraints that limit their capacity to respond to rising prices to boost exports. One reason is that it takes time to increase supplies. Another is that rising export prices relative to import prices tilt domestic incentives in favor of import-competing sectors.

Assuming no further shocks, global prices are projected to return slowly to baseline trends in 2023 and 2024, and imports will start to recover by 2024 for most countries. Exports are still projected to be below their levels in the baseline scenario, with the exception of Senegal and Tanzania. The difference in import and export price changes is less dramatic for Senegal, meaning a less serious deterioration of terms of trade. Exports and imports recover faster for the country. Uganda faces the steepest deterioration in terms of trade, next to Kenya and Malawi, as shown by the large gap between the changes in the country's export and import price indices in 2022 (Figures 3: K1, Ma1 and U1). Uganda is suffering the most from trade shocks, as neither exports nor imports are likely to recover by 2024 (Figures 3: U2).

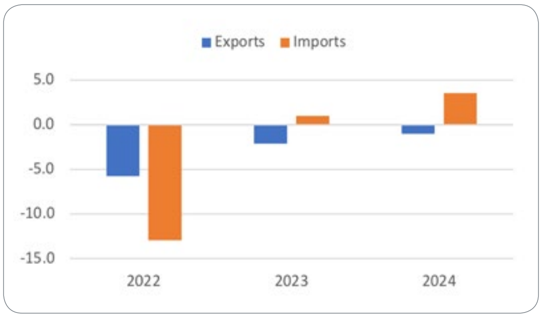
**Figures 3:** *Trade Effects in Countries Facing Deteriorating TOT*

**Kenya**

**K1:** Changes in Price Indices, percentage points



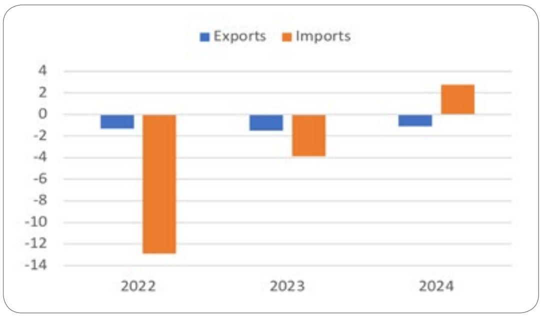

**K2:** % Changes in Imports and Exports vs Baseline




**Malawi**

**Ma1:** Changes in Price Indices, percentage points

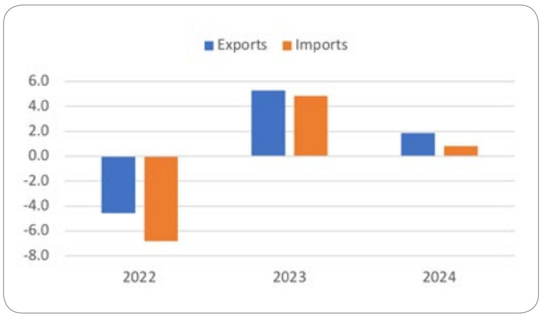

**Ma2:** % Changes in Imports and Exports vs Baseline



## Senegal

**Se1:** Changes in Price Indices, percentage points

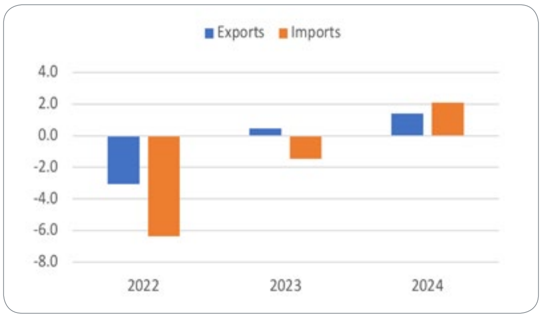

**Se2:** % Changes in Imports and Exports vs Baseline




## Tanzania

**T1:** Changes in Price Indices, percentage points

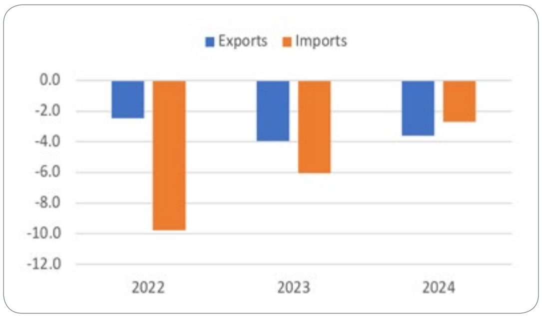

**T2:** % Changes in Imports and Exports vs Baseline




## Uganda

**U1:** Changes in Price Indices, percentage points


**U2:** % Changes in Imports and Exports vs Baseline




*Source: Authors' simulation results*

## *Countries anticipating improvement in terms of trade*

The constellation of changes in global commodity prices has resulted in positive TOT changes for Benin, Ghana, Mozambique, Nigeria, and South Africa, which all face a much steeper increase in the prices they receive for their respective exports than those they pay for their imports (Figures 4). The positive jump in TOT lingers on but weakens gradually over the next two years, with a faster decline in Ghana and, to a lesser extent, in Benin and South Africa (Figures 4).

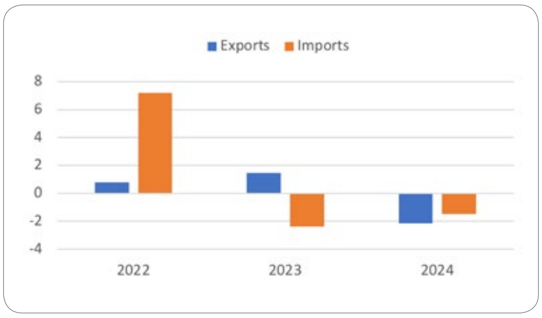
As in the first group of countries, individual economies here also respond differently to changes in global commodity prices. In 2023, Mozambique and Nigeria will have significant export growth, with South Africa following suit to a lesser extent (Figures 4: Mo1, N2 and So2). In contrast, Benin shows a modest increase in exports beginning in 2022 and continuing through 2023 (Figures 4: B2). A delayed and relatively weak response is projected for Ghana, with exports falling first in 2022 before rising only moderately in 2023 (Figures 4: G2). Nigeria is the only country with sustained export expansion going into 2024 (Figures 4: N2).

**Figures 4:** *Trade Effects in Countries Anticipating Improving TOT*

## Benin

**B1:** Changes in Price Indices, percentage points

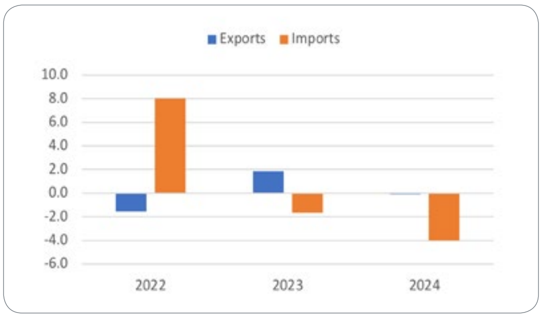

**B2:** % Changes in Imports and Exports vs Baseline




## Ghana

**G1:** Changes in Price Indices, percentage points

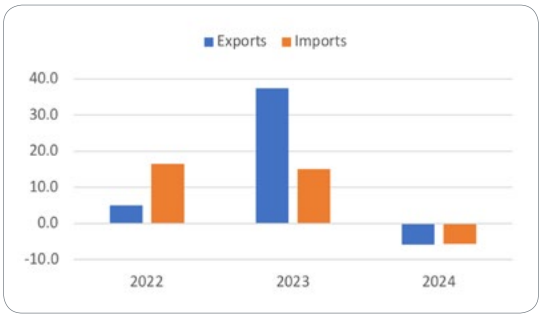

**G2:** % Changes in Imports and Exports vs Baseline




## Mozambique

**M01:** Changes in Price Indices, percentage points

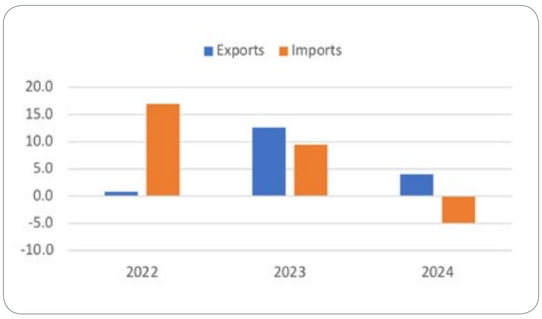

**M02:** % Changes in Imports and Exports vs Baseline




## Nigeria

**N1:** Changes in Price Indices, percentage points

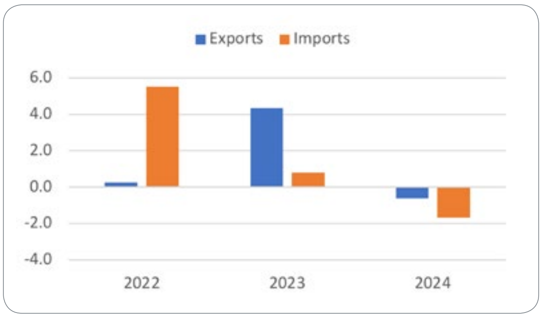

**N2:** % Changes in Imports and Exports vs Baseline



## South Africa

**S01:** Changes in Price Indices, percentage points


**S02:** % Changes in Imports and Exports vs Baseline




*Source: Authors' simulation results*

## 5. Economic Growth Effects

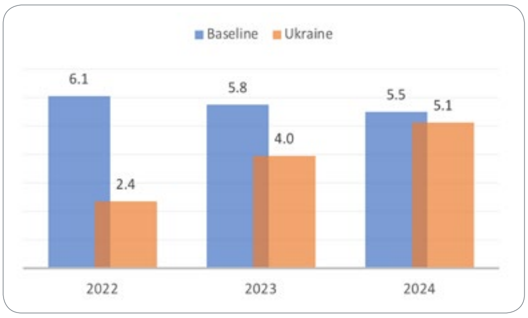
### *Countries facing deteriorating terms of trade*

The economies in this group are projected to contract significantly in 2022, to less than half of the baseline GDP rate of growth that would prevail without the disruptions from the Ukraine crisis (Figures 5). Malawi's economy, which was already growing at a slower pace before the crisis, is expected to enter a recession with a negative growth rate in 2022, before gradually recovering to positive territory over the next two years (Figures 5: Ma3). The economies are all expected to recover by 2024, but the sharp decline in 2022 will put them on a lower growth trajectory than in the absence of the global commodity market disruption caused by the war (**Figures 5**).

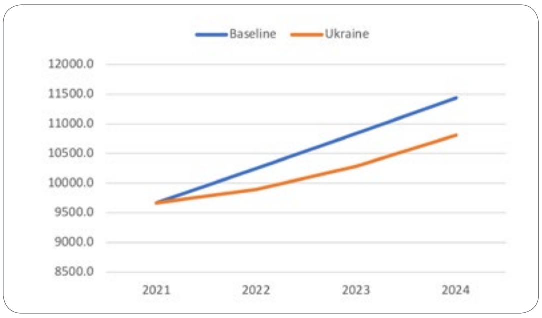
**Figures 5:** *Growth Effects in Countries Facing Deteriorating TOT*

## Kenya

**K3:** Gross Domestic Product (%)

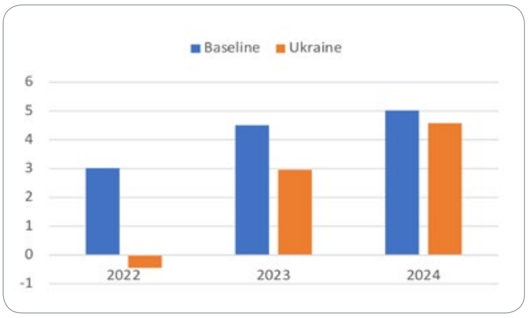



**K4:** Gross Domestic Product (Bn. KSh.)

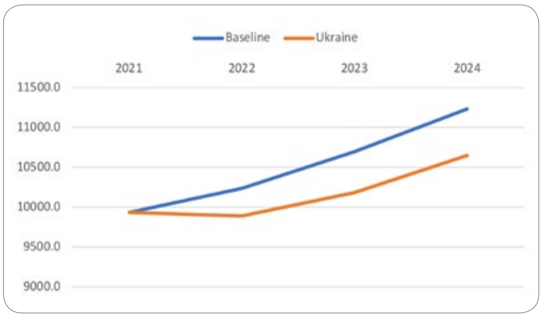



## Malawi

**Ma3.** Gross Domestic Product (%)

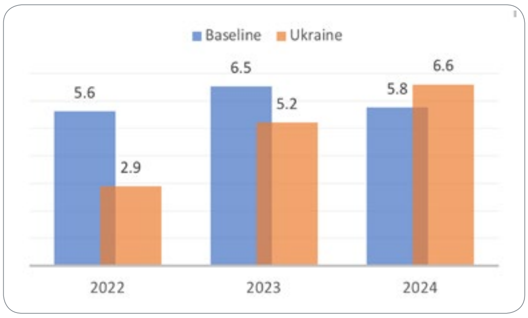



**Ma4.** Gross Domestic Product (Bn. Kwacha.)

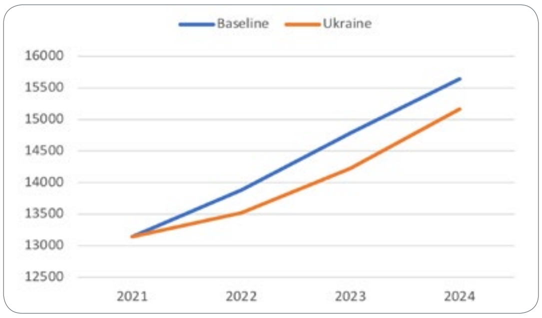


## Senegal

**Se3.** Gross Domestic Product (%)

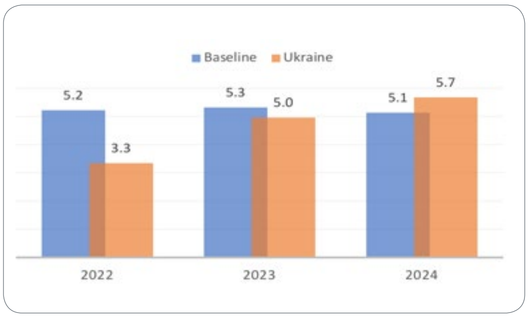



**Se4.** Gross Domestic Product (Bn. CFA)

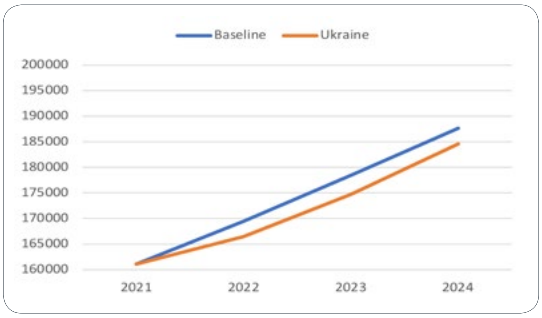



## Tanzania

**T3.** Gross Domestic Product (%)

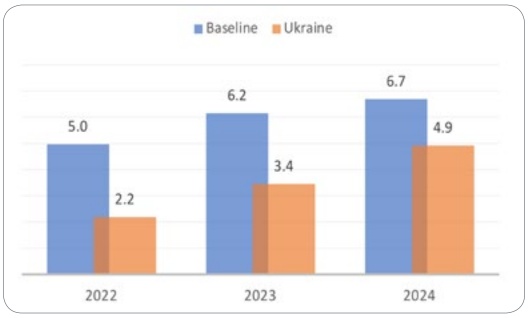



**T4.** Gross Domestic Product (Bn. TSh.)

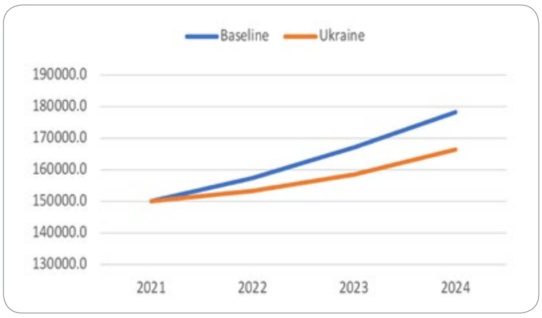



## Uganda

**U3.** Gross Domestic Product (%)




**U4.** Gross Domestic Product (Bn. USh.)




*Source: Authors' simulation results*

For all these countries, the resulting gap in growth between the baseline and Ukraine crisis scenarios will take years of sustained growth to make up (Figures 5). Even in the case of Senegal, where the pace of GDP growth in 2024 is expected to rebound above the baseline level, the gap resulting from the sharp contraction in 2022 will linger a bit longer (Figures 5: Se4). Like Senegal, Tanzania's economy is anticipated to recover to its initial growth rate (Figures B: T3). The country's economy contracted less in 2022 and is poised to return to its baseline growth trajectory sooner than the other countries (Figures 5: T4). Just as it experienced the most severe trade impact (Figures 5: U2), Uganda's economy is projected to contract severely in 2022, with no sign of recovery by 2024, and a GDP growth rate that is still approximately 25% below the baseline (Figures 5: U4).

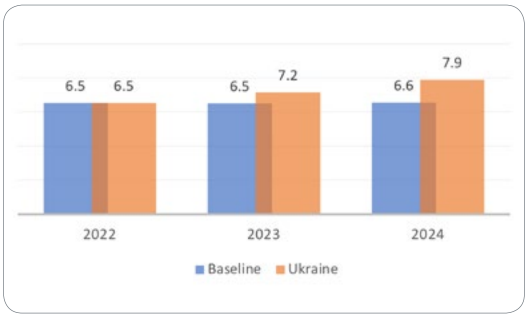
## *Countries anticipating improving terms of trade*

The improvement in TOT boosts growth across this group of countries in 2023 and 2024 above baseline levels (Figures 6). Mozambique and Nigeria experience the largest increases in GDP growth rates compared to the baseline (Figures 6: Mo3 and N3). The economies of Benin and Nigeria are expected to experience no contraction in 2022 (Figures 6: B3 and N3). On the other hand, Ghana and South Africa are the only countries in this cluster with markedly slower growth in 2022 under the Ukraine scenario than under the baseline scenario (Figures 6: G3 and So3). However, growth accelerates in both countries in 2023, and in South Africa, the improvement in TOT is projected to avert or delay an apparent economic slowdown under the baseline scenario (Figures 6: So3). The same is observed in the case of Nigeria, where baseline growth rates were also expected to decline from 2022¬ to 2023, albeit to a lesser extent (Figures 6: N3). Benin is the country that benefits the least from its improving TOT in terms of accelerated economic growth (Figures 6: B3). The stronger response of the economies of Mozambique and Nigeria to the rising TOT is projected to put both economies on a faster growth trajectory than in the baseline situation (Figures 6: Mo4 and N4). The same holds for South Africa, but to a lesser extent (Figures 6: So4). Ghana and Benin see no marked change in growth trajectory (Figures 6: B4 and G4).

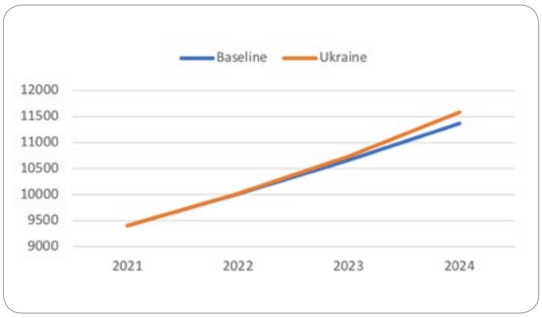
**Figures 6:** *Growth Effects in Countries Anticipating Improving TOT*

### Benin

**B3.** Gross Domestic Product (%)

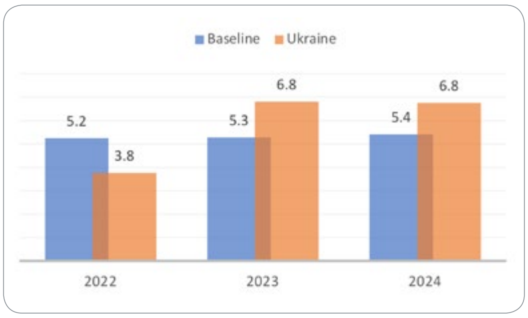



**B4.** Gross Domestic Product (Bn. CFA)

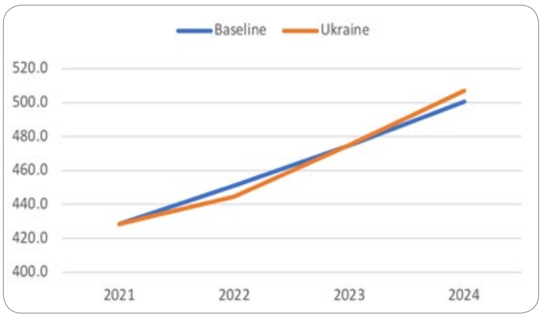



### Ghana

**G3.** Gross Domestic Product (%)

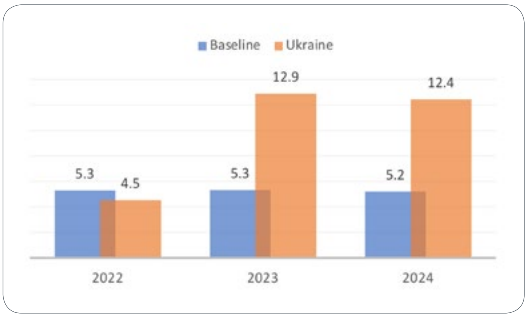



**G4.** Gross Domestic Product (Bn. cedi)

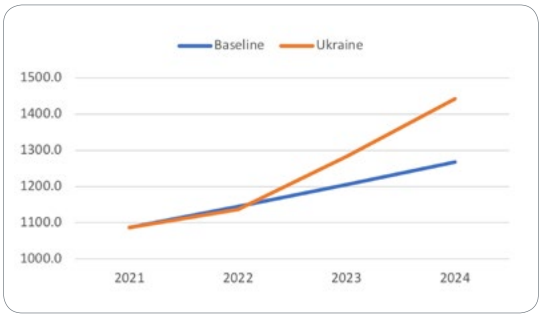



### Mozambique

**Mo3.** Gross Domestic Product (%)

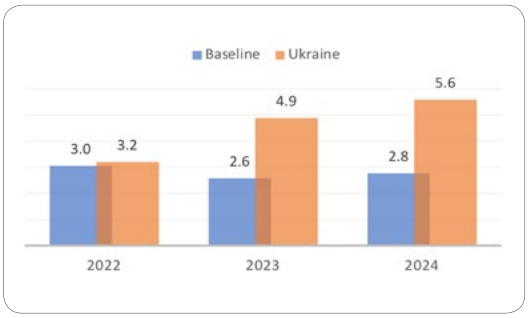



**Mo4.** Gross Domestic Product (Bn. metical)

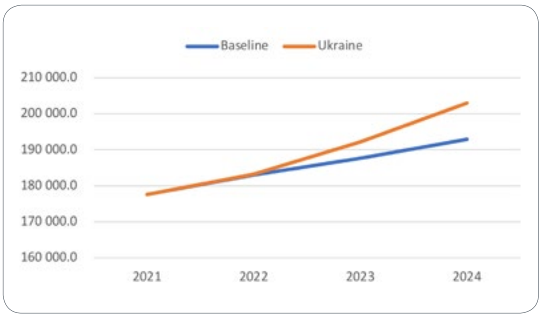


## Nigeria

**N3.** Gross Domestic Product (%)

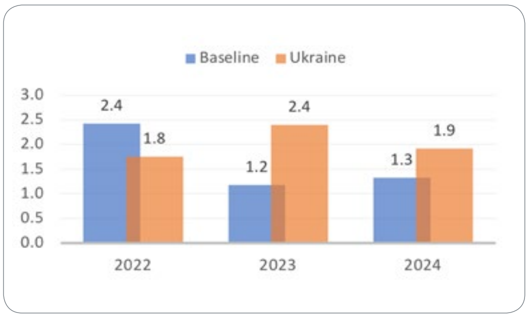



**N4.** Gross Domestic Product (Bn. naira)

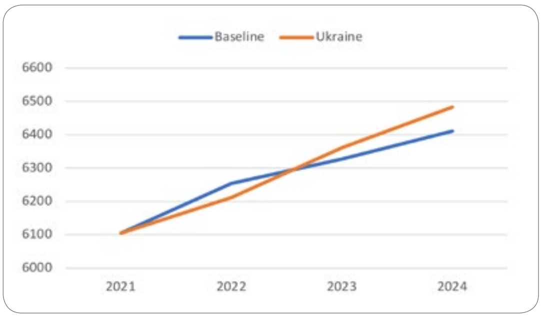



## South Africa

**So3.** Gross Domestic Product (%)




**So4.** Gross Domestic Product (Bn. rand)




*Source: Authors' simulation results*

## 6. Employment Effects

### *Countries facing deteriorating terms of trade*

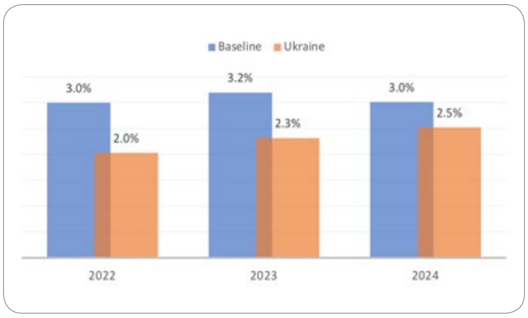
The observed contraction in growth and economic activity in these countries, particularly in 2022 and 2023, is reflected in slower employment growth compared to the baseline (Figures 7). Employment growth in Kenya is expected to decline by one-third relative to the baseline scenario in 2022 and 2023 and will still be about 16% lower in 2024 (Figures 7: K5). The decline in employment growth in 2022 is much steeper at 70% in Malawi (Figures 7: Ma5). In line with its faster and stronger recovery, Senegal's labor market is expected to recover with employment growth rates returning to and even exceeding baseline levels (Figures 7: Se5). Despite a stronger labor market rebound, the country is not expected to recover from the significant negative impact of the crisis on employment creation in 2022 (Figures 7: Se5), leading to a considerable employment gap in 2024 compared to the baseline (Figures 7: Se6).

Employment is expected to rebound strongly in Tanzania by 2024 to entirely make up for the decline in 2022 and 2023 (Figures 7: T5). As a result, the economy will return to its baseline employment trajectory by 2024 (Figures 7: T6). In line with the generally more extensive trade and growth impacts, as well as a slower recovery, employment growth in Uganda will still be below baseline levels in 2024 (Figures 7: U5). This pushes the economy down to a slower job creation trajectory than in the baseline, with a widening employment gap that will take years to make up (Figures 7: U6). The pace of employment creation is also expected to fall below the baseline trend in Kenya and Malawi, albeit less markedly than in the other countries in this cluster (Figures 7: K6 and M6).

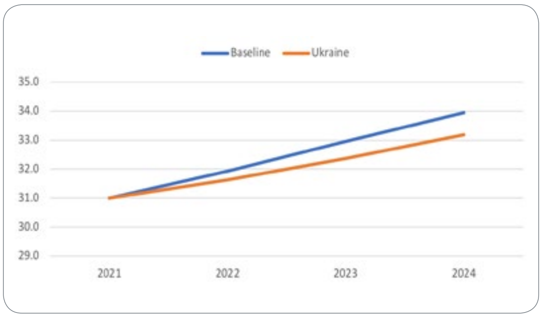
**Figures 7:** *Employment Effects in Countries Facing Deteriorating TOT*

## Kenya

**K5:** Employment (%)

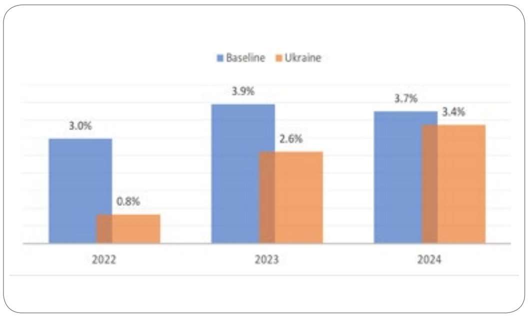



**K6:** Employment (million)

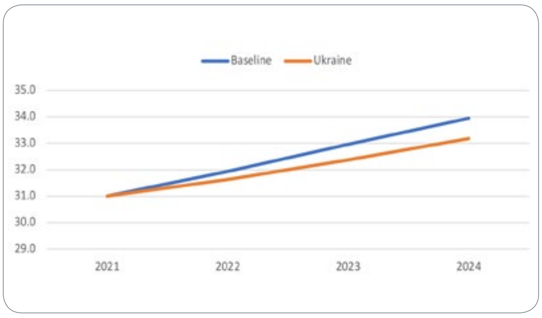



## Malawi

**Ma5**. Employment (%)

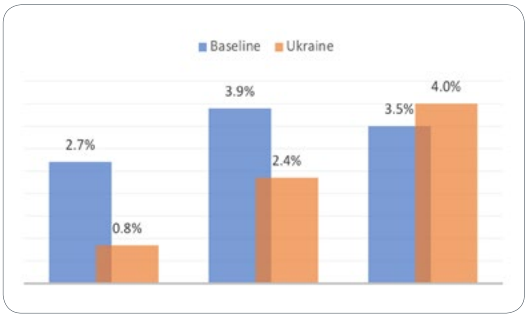



**Ma6.** Employment (million)

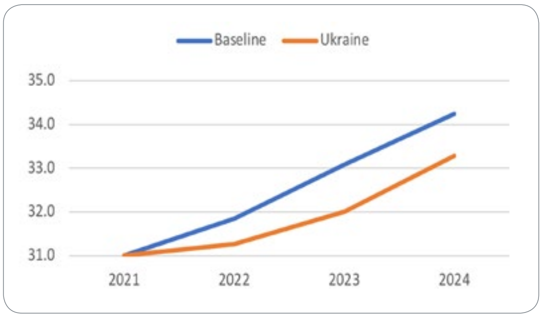



## Senegal

**Se5.** Employment (%)

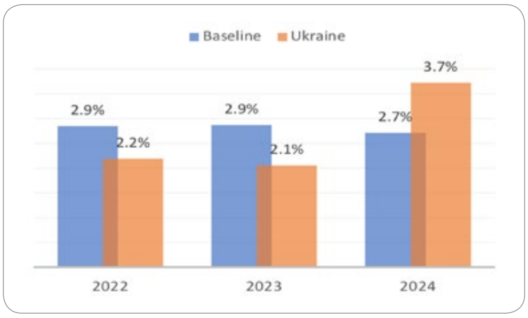



**Se6.** Employment (million)

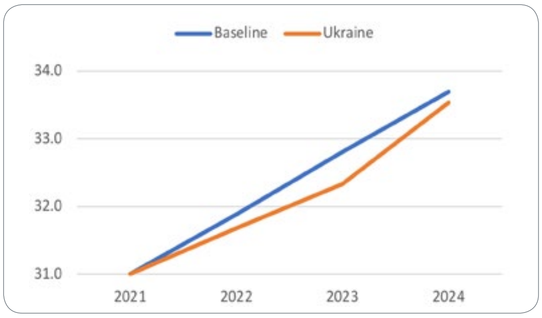



## Tanzania

**T5.** Employment (%)

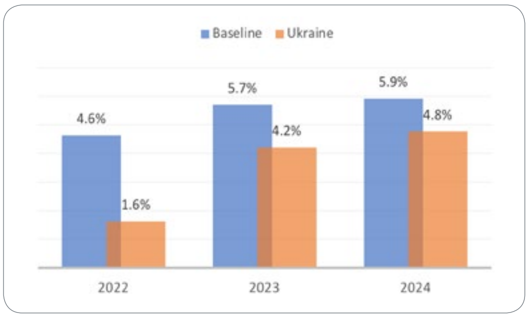



**T6.** Employment (million)

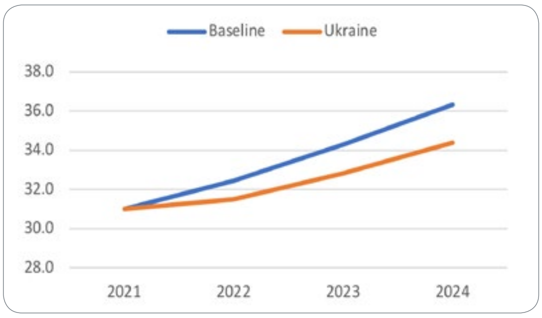


## Uganda

**U5**. Employment (%)




**U6.** Employment (million)




*Source: Authors' simulation results*

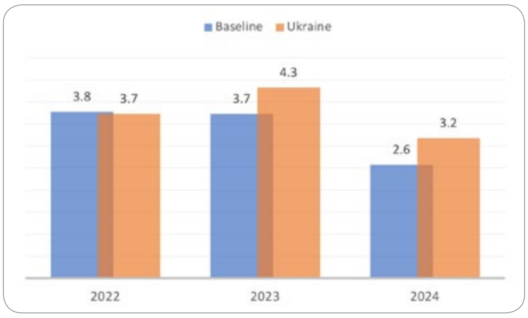
### *Countries anticipating improving terms of trade*

In line with their relatively stronger growth responses (Figures 8: M03 and N3), the improvement in terms of trade for Mozambique and Nigeria is expected to result in stronger labor market expansion in these countries, starting from 2022 and continuing into 2024 (Figures 8: M05 and N5). As a result, the pace of employment creation in these two countries is expected to exceed the pace under the baseline scenario (Figures 8: M06 and N6). South Africa also anticipates a rise in employment creation, especially in 2023 (Figures 8: S05). Benin and Ghana experience the least benefit in terms of labor market expansion resulting from the improvement of terms of trade (Figures 8: B5 and G5). Despite improving terms of trade, Benin, Ghana, and South Africa exhibit no significant change in the pace of employment creation compared to the baseline (Figures 8: B6, G6, and S06). Indeed, this result is consistent with the poorer economic response of these economies to their respective terms of trade improvements (Figures 8: B4, G4, and S04).

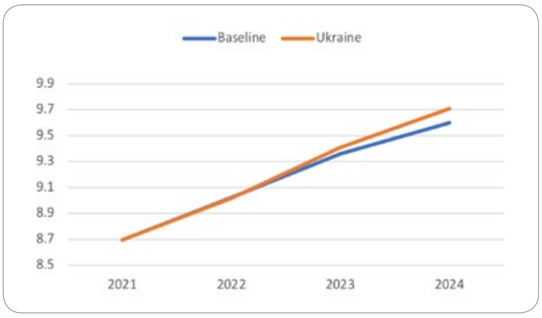
**Figures 8:** *Employment Effects in Countries Anticipating Improving TOT*

## Benin

**B5.** Employment (%)

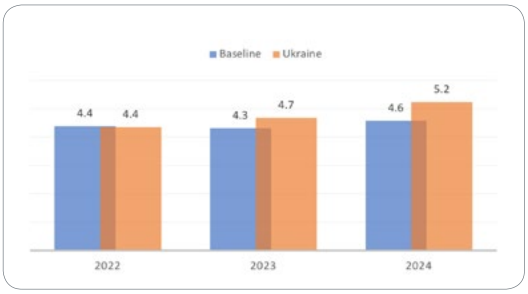



**B6.** Employment (million)

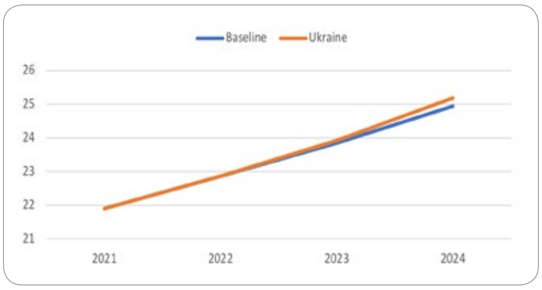



## Ghana

**G5.** Employment (%)

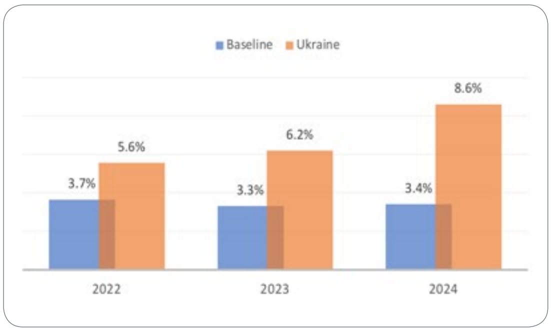



**G6.** Employment (million)

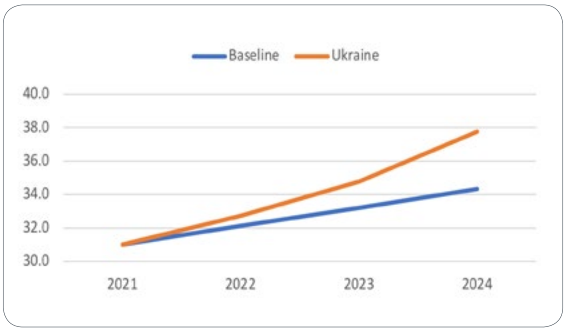


## Mozambique

**M05**. Employment (%)

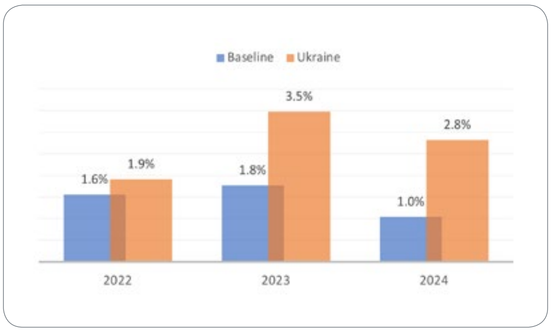



**M06.** Employment (million)

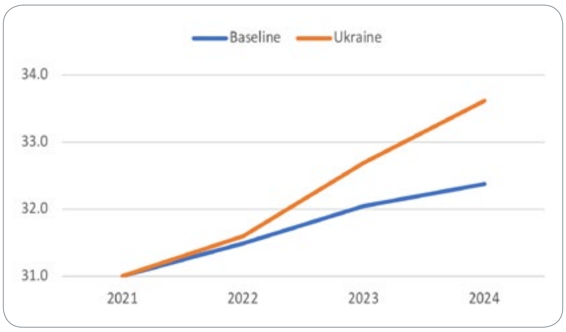



## Nigeria

**N5.** Employment (%)

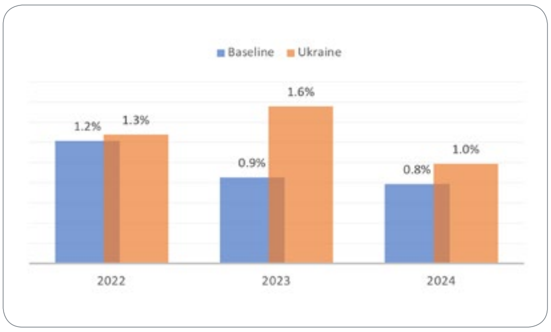



**N6.** Employment (million)

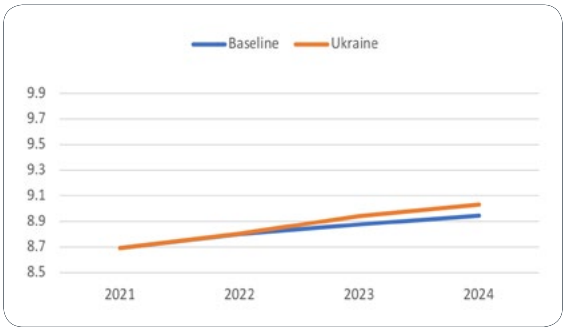



## South Africa

**S05.** Employment (%)




**S06.** Employment (million)




*Source: Authors' simulation results*

## Conclusion

The Ukraine conflict will have strong impacts on trade trends in African countries. Imports among countries in the TOTL group are projected to fall considerably in 2022 relative to the baseline scenario, generating concerns about growing costs and supply constraints. Export decreases highlight countries' inability to respond to rising costs. Uganda, along with Kenya and Malawi, is experiencing the steepest decline in TOT, while Senegal has experienced a less severe decline in TOT. In contrast, countries within the TOTW group respond differently to global commodity price fluctuations. The exports of Mozambique, Nigeria, and South Africa will increase in 2023 relative to the baseline. Benin's exports will increase moderately from 2022 to 2023, while Ghana's exports will fall in 2022 before rising substantially in 2023. Nigeria's exports will increase until 2024.

Economic growth in the TOTL group is expected to decrease severely in 2022, to less than half of the baseline GDP growth rate that would prevail if the Ukraine crisis had not occurred. The economies are all anticipated to recover by 2024. Still, the dramatic dip in 2022 will place them on a poorer growth track than if the war had not disrupted global commodity markets. Closing the growth gap between the baseline and Ukraine crisis scenarios will require years of steady growth for all these countries. In the meantime, the improvement in TOT increases the growth of the TOTW group in 2023 and 2024 above their initial levels.

The stronger response of the economies of Mozambique and Nigeria to the growing TOT is predicted to result in a quicker growth trajectory for both countries than in the baseline scenario. The same remains true, albeit to a lesser extent, for South Africa. Ghana and Benin have no significant shift in their growth trajectories.

The observed decline in growth and economic activity in the TOTL countries, particularly in 2022 and 2023, is reflected in slower employment growth compared to the baseline. Indeed, Kenya's employment growth is expected to decline by one-third in 2022 and 2023 and by 16% in 2024. Malawi's employment growth would decline by 70% by 2022, while Senegal's labor market is expected to recover, with employment growth rates returning to or exceeding baseline levels. Tanzania's employment should have recovered from the dips of 2022 and 2023 by 2024. Due to trade and economic repercussions and a slower recovery, Uganda's employment growth will remain below baseline levels in 2024. In accordance with their higher growth responses, Mozambique's and Nigeria's improved TOT should lead to stronger labor market expansion in 2022 through 2024. In these two countries, job creation is likely to exceed the baseline scenario. Benin and Ghana benefit the least from improved TOT for labor market expansion. Benin, Ghana, and South Africa show no change in employment creation despite increasing TOT.

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