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## Global Wheat Trade and Market Disruptions: Income and Food Security Effects for Rwanda

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### 1. Introduction

The Russian war on Ukraine raises several concerns about trade in grain as the two countries are major producers and exporters of wheat and other staples in the world. Rwanda is highly dependent on imports from the global market to satisfy its domestic needs. Furthermore, Ukraine is a major trading partner of Rwanda, contributing to 44 percent of the country's total wheat imports in 2020<sup>1</sup>. Wheat supply disruptions and spiking prices caused by the Ukraine crisis can have considerable implications on the wheat sector, food price inflation, and thus food security in Rwanda. Wheat products are intermediate inputs used mainly by the processing industries – i.e., milling and baking. When the import prices of wheat go up, they not only affect the prices of cereals and other substitute products but also increase the costs of input and prices of wheat-related products in the domestic markets.

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<sup>1</sup> Africa Agricultural Trade Monitor (AATM) database (AKADEMIYA2063 and IFPRI, 2022)

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## 2. Global Wheat Price Shocks Under the Russia-Ukraine Crisis

Global wheat prices were projected to decline by 21 percent between 2021 and 2022 before the start of the Russia-Ukraine crisis (Table 1). The crisis has increased wheat prices by 37 percent between 2021 and 2022. Although wheat prices are projected to decline slightly in 2023 and 2024, they will remain high with the sharp increase experienced in 2022.

**Table 1: Changes in Global Prices of Wheat (Percentage)**

Forecasts	2022	2023	2024
Before the start of the crisis, average annual change	-20.6	-2.0	0.8
After the start of the crisis, average annual change	36.5	-4.7	-1.2

**Source:** Computation from the Commodity Markets Outlook published by the World Bank (2021 and 2022)

The following section looks at the effects of the disruptions of global wheat prices on gross incomes, food prices, and food consumption levels under two sets of scenarios: the Baseline scenario and the Ukraine scenario. The Baseline scenario assumes the absence of war and is based on projections for 2022-2024 of the commodity prices by the World Bank and key economic variables by the International Monetary Fund (IMF), both released in October 2021, i.e., before the start of the Russia-Ukraine crisis. The Ukraine scenario captures the impacts of the global wheat trade and market disruptions on Rwanda's economy. It is based on the projections for 2022-2024 of the global prices of wheat released by the World Bank in October 2022, after the start of the crisis.

## 3. Food Security Effects of Wheat Trade and Market Disruptions

Higher global prices of wheat are translated into high income for wheat producers and factors used in wheat production. Indeed, rural household incomes are projected to increase under the Ukraine crisis scenario compared to the baseline scenario (Table 2). However, the magnitude of the income increase remains very modest and is consistent with the economic contribution of wheat to the agricultural sector (1.2% of GDP) and to the entire economy (0.3% of GDP) in 2018. Household incomes are projected to decline in 2023 and 2024, driven by the contraction of the overall economy, which faces high inflationary pressure caused by the global wheat trade and market disruptions. Indeed, higher global wheat prices will have a significant impact on rising food prices. The rise in global wheat prices will likely trigger a generalized increase in food prices in all areas of Rwanda over 2022-2024 (Table 2). Like the income effects, food price increases are expected to be modest, with the small share of wheat products in household food budgets, i.e., little more than 1 percent in 2018. The rise in food prices relative to incomes is likely to affect household consumption negatively. Indeed, all categories of households will experience a drop in food consumption over the period 2022-2024 (Table 2).

**Table 2: Percentage Changes in Gross Income, Food Consumption Price Index, and Food Consumption by Household Categories, Ukraine Scenario Compared to Baseline Scenario**

Household Category	Household Income	Food Price Index	Food Consumption
2022			
Rural	0.2	0.3	-0.1
Urban	0.0	0.3	-0.2
All	0.1	0.3	-0.2
2023			
Rural	0.0	0.2	-0.2
Urban	-0.1	0.2	-0.2
All	-0.1	0.2	-0.2
2024			
Rural	-0.3	0.2	-0.4
Urban	-0.1	0.3	-0.2
All	-0.2	0.2	-0.3

Source: Simulation results (2022)

#### 4. Contagion through Regional Re-export Markets

Like many African countries, Rwanda is engaged in wheat re-exportation to its neighbors, exposing them indirectly to global wheat market shocks. The Democratic Republic (DR) of Congo is highly exposed to wheat re-exports from Rwanda (Table 3). To a lesser extent, Rwanda has been re-exporting wheat to Kenya, also contributing to expose the latter country to the global wheat market shocks. Thus, Rwanda is not exposed to wheat re-exports from the neighboring countries, but the country indirectly exposed DR Congo and Kenya to the global wheat trade and market disruptions.

**Table 3: Wheat re-exportation within the Common Market for Eastern and Southern Africa (COMESA) in 2020, million USD**

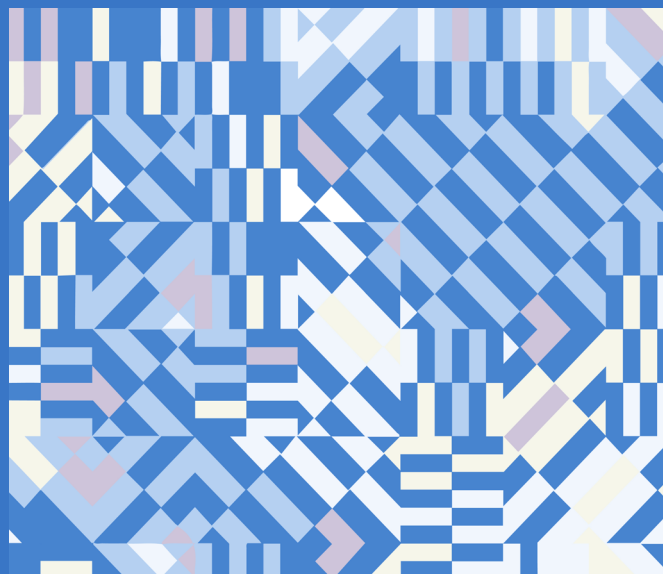
Exporter	COMESA Importer									
	Comoros	DR Congo	Eswatini	Kenya	Madagascar	Malawi	Mauritius	Rwanda	Seychelles	Zimbabwe
Burundi		10,702		0,094				0,039		
Botswana										0,038
Mozambique			0,394		0,143	0,427				0,686
Mauritius	1,330				0,563				0,989	
Malawi							0,021			0,180
Namibia		0,001								
Rwanda		29,399		0,161						
Uganda	0,011			1,502				0,002		





Source: AATM 2022 Database

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