

ERF

Policy Research Report

The Socioeconomic Impact of the Russia-Ukraine Crisis on Vulnerable Families and Children in Egypt:

Mitigating Food Security and Nutrition Concerns

May Gadallah and Nesma Mamdouh

Table of Contents

| | |
|---|-----------|
| Summary | 4 |
| 1. Introduction | 6 |
| 2. The Russia-Ukraine Crisis and the Egyptian Economy | 7 |
| 3. The Impact of the Crisis on Food Security Globally and in Egypt | 9 |
| The impact on food security globally | 9 |
| The impact on food security in Egypt | 10 |
| The inflation rate for food groups and some food items | 11 |
| The implication of the inflation rate on children in Egypt | 13 |
| Change in food consumption patterns in households with children | 14 |
| 4. An Overview of the Situation of Migrants, Refugees, and Asylum Seekers in Egypt | 16 |
| 5. Government Measures and Mitigating the Effects of the Crisis on Vulnerable Households | 16 |
| The Takaful and Karama Program (TKP) | 17 |
| Ration cards | 17 |
| The National School Feeding Programm (NSFP) | 17 |
| 6. Policy Recommendations | 19 |
| Recommendations for the short term | 19 |
| Recommendations for the medium term | 20 |
| References | 21 |

List of Figures and Tables

List of Figures:

| | |
|---|----|
| Figure 1. The volume of imported wheat (January 2021 to June 2022) | 8 |
| Figure 2. Inflation rates for January-December 2022 compared to the corresponding month in 2021, by region | 8 |
| Figure 3. Annual inflation rate and poverty rate, 2011 to 2020 | 9 |
| Figure 4. Inflation rates and food inflation rates in 2022 | 12 |
| Figure 5. Inflation rates for food groups in December 2022 compared to December 2021 | 12 |
| Figure 6. Percentage of households with children under 18, by region and year | 14 |
| Figure 7. Poverty status distribution for individuals living in households with children, by region and year | 14 |
| Figure 8. Percentage of households with children within each poverty status, by region and year | 14 |
| Figure 9. The average per capita share of food in poor households with children, by region and year | 15 |
| Figure 10. Average monthly per capita expenditure (in real value 2015=100) on food in poor households with children, by region and year | 15 |
| Figure 11. Average monthly per capita expenditure (in real value 2015=100) on vegetables in poor households with children, by region and year | 15 |
| Figure 12. Average monthly per capita expenditure (in real value 2015=100) on milk, eggs, and dairy products in poor households with children, by region and year | 15 |
| Figure 13. Average monthly per capita expenditure (in real value 2015=100) on fruits in poor households with children, by region and year | 15 |
| Figure 14. Percentage of households with children under 18 years of age receiving TKP, by poverty status and year | 17 |
| Figure 15. Percentage of households that have children and are ration cards beneficiaries, by poverty status, region, and year | 18 |
| Figure 16. Percentage of enrolled children in schools providing SFP, by poverty status, region, and year | 19 |

List of Tables:

| | |
|--|----|
| Table 1. Percentage change in the CPI in December 2022 compared to December 2021 | 13 |
|--|----|

Summary

Russia's invasion of Ukraine in February 2022 added fuel to the fire for a global economy already suffering from the COVID-19 pandemic's slowdown of the global flow of commodities and the disruption of supply chains (Santacreu and LaBelle, 2022).

While the Russia-Ukraine crisis has left its mark on the world economy as inflation rates rise and debts increase, its negative impacts have been even more pronounced for low- and middle-income countries. This report highlights the severe consequences of the crisis on food security in Egypt and the likelihood that it will lead to higher risks of child malnutrition.

Egypt has historically had strong economic ties and deep-seated trading relationships with both Russia and Ukraine. Due to its vulnerable economic position – with low foreign exchange reserves, high interest payments, quickly rising inflation rates and an unstable tourism sector – Egypt's economic struggles are expected to worsen with the continuation of the crisis. The economic impact of the crisis has affected already high inflation rates, imports of wheat and other necessary products, and resulted in the dwindling influx of tourists that traveled to Egypt from Russia and Ukraine.

Furthermore, the threat of food insecurity is particularly noticeable as Egypt is highly dependent on food imports. In the five years before the crisis, Egypt sourced an average of approximately 85% of its wheat imports from Ukraine and Russia (UN Comtrade, in: Abay et al, 2022). As the main ingredient of traditional Egyptian Baladi bread, which households rely heavily on for their daily food consumption, wheat is an important and strategic crop.

In addition, the global increase in food prices and the frequent rise in domestic inflation have raised concerns about food security among the country's most vulnerable households. Shortly after the crisis began, in March 2022, the inflation rate in Egypt increased to 12.1% compared with March 2021. The rate continued to escalate, reaching a peak of 15.3% in May 2022. After the devaluation of the Egyptian pound in late October 2022, the rate again rose, reaching 21.9% by December 2022.

The number of poor households increases when inflation rates rise, especially when net incomes remain stagnant or increase at lower rates. The rise in poverty rates usually implies a decrease in spending on, and consumption of, essential food and non-food items, which is indicative of food insecurity.

During previous economic crises, vulnerable households in Egypt frequently resorted to reducing food consumption to cope with financial difficulties (CAPMAS, 2020a, 2020b, 2022a). The inflation of food prices, and the resulting reductions in food consumption, are difficult for children of poor households, leading to malnutrition and affecting physical and cognitive development. Based on previous data, the rising inflation rates caused by the crisis are likely to lead to changes in food consumption patterns.

Summary

Escalations in inflation rates from January 2022 to December 2022 mostly affected the prices of bread and cereal, which increased by 58.3%. The prices of milk, cheese and eggs also increased by 48.9% in December 2022. These ingredients are crucial for children's growth. According to a 2022 telephone survey (CAPMAS, 2022a), food price increases led 74% of households to limit their food consumption, 93% to reduce their protein consumption, and about two-thirds of households to reduce their consumption of eggs, vegetables, and fruits.

Given that more than 92% of poor households in Egypt have children (HIECS 2019), declines in food consumption are likely to affect child nutrition, and increase the risk of food insecurity for children. While government protection programs such as Takaful and Karama Program (TKP), food subsidies, and the National School Feeding Program (NSFP) have had a major impact on protecting and supporting children in vulnerable households, there is a need for additional interventions in the short to medium term.

In the short term, officials should ensure that TKP benefits reach extremely poor households, especially those with children. Officials should expand school meal programmes to ensure that more vulnerable children receive the nutrition they need for healthy growth.

Concerned government officials can also develop a child-focused, national, multisectoral action plan to prevent a rise in malnutrition rates. It is important to diversify sources of wheat imports while considering wheat alternatives for affordable staple foods. In addition, experts can implement social behavior change interventions to promote a diversified diet and the consumption of locally available nutritious foods to replace wheat.

In the medium term, social protection programmes such as the TKP, school meals and the ration card system need to be evaluated and developed to reach broader segments of the population. Additionally, each stage of the bread supply chain needs to be effectively managed to reduce food waste. Finally, Egypt would benefit tremendously from investing in more food fortification programmes.

1. Introduction

The Russia-Ukraine crisis in February 2022 came as another global economic setback during a time when the world was already struggling to recover from the effects of the COVID-19 pandemic. The pandemic slowed down (and occasionally stopped) the flow of commodities, thereby causing supply chain disruptions (Santacreu, 2022). Given the constraints on mobility due to COVID-19, it was difficult for firms to expand production domestically and internationally. This slowdown in the movement of goods and the disruption of supply chains both led to a rise in inflation rates, which in turn led to rising levels of global food insecurity during the pandemic (Nasir et al., 2022).

For over a decade, starting with the January 2011 uprisings, the Egyptian economy has endured a series of shocks. One of the most distressing of those shocks took place in November 2016, when the Central Bank of Egypt (CBE) announced the liberalization of the exchange rate. This move led to a 59 percent loss in the value of the Egypt Pound (EGP), whereby one US dollar became equivalent to 18.8 EGP compared to 7.8 EGP at the beginning of the year. In 2020, with the outbreak of the COVID-19 pandemic, the global economy faced a new challenge with the onset of rising inflation rates, as some sectors were either fully or partially shut down. This crisis took its toll on Egypt's economy and people as well.

While wars have always had a negative impact on the global economy, primarily in the form of rising inflation rates, restrictions of services, increases in debt, more obstacles to daily economic life, and general devastation, the negative impacts of the Russia-Ukraine crisis have been even more pronounced.

Global food prices were already skyrocketing due to the supply chain disruptions caused by the COVID-19 pandemic and related restrictions. However, the crisis immediately added to the predicament and posed a significant risk to global food security because of the massive spike in the prices of food and fertilizer in the world market (IFPRI, 2022a). The escalation of the crisis and its impacts are particularly alarming for developing countries that rely heavily on food imports. Additionally, the increase in food prices constitutes an even greater threat to poor and vulnerable households in those developing countries. In other words, these countries are more dependent on imported goods and food, and poor households in these countries spend a large portion of their income on food (WB, 2022b).

Egypt has been heavily affected by these global economic shocks, including the economic implications of the Russia-Ukraine crisis. The crisis has left its mark on trade exchange, rising inflation rates, and the import of wheat and other necessary products, in addition to the tourist influx.

Nine months after the start of the Russia-Ukraine crisis, the Central Bank of Egypt liberated the exchange rate for the third time in less than a decade.¹ The successive shocks weighed heavily on the Egyptian economy and, by extension, on households, particularly the most vulnerable ones. In parallel, global prices have continued to rise and the consumer price index for almost all goods turned strongly positive in the months before and immediately after the crisis.

This report focuses on the implications of the Russia-Ukraine crisis both globally and on Egypt's economy and people, with a particular focus on the concerning impact the crisis is expected to have on children's holistic development. The report reviews existing global and local evidence to determine these potential effects and reviews existing policies and programs that could play a role in mitigating the impact within the Egyptian context.

The second section of the report explores the impact that the crisis has had on Egypt's economy. The third section reviews the impact of the crisis on food security globally and in Egypt, particularly for children from vulnerable households. In the absence of domestic data since the start of the Russia-Ukraine crisis, this section relies on data from Household, Income, Expenditure, and Consumption Surveys (HIECS) implemented in 2015, 2017/18, and 2019/20 to estimate the potential impacts of the crisis on Egyptian families.² To make a case for the possible consequences that the crisis could have on poor Egyptian families and their children, this section also builds on studies that analyzed how the spikes in inflation rates in 2017 affected Egypt's poverty rate, as well as the consumption patterns of vulnerable households with children. Moreover, it investigates how the stability in prices, in tandem with different social protection programs, was concurrent with a reduction in poverty rates. The fourth section describes the situation of another group of vulnerable households in Egypt,

¹ On 27 October 2022, the Egyptian Central Bank announced the floating of the Egyptian pound, whereby one USD became equivalent to 24.5 EGP.

² Only 50 percent of the HIECS data (2015, 2017/18, and 2019/20) were released by CAPMAS.



namely migrants, refugees, and asylum seekers, who are likely to be more affected by the crisis. The fifth section addresses the importance of social protection programs in mitigating the effects of the crisis to reduce the risk of falling into poverty, or into even deeper poverty, and food insecurity. Finally, the report presents short- and medium-term policy recommendations to address or alleviate the economic devastation that vulnerable households and children in Egypt are likely to face.

2. The Russia-Ukraine Crisis and the Egyptian Economy

Egypt's economic relationship with Russia and Ukraine relies on three main channels: trade, tourism, and Foreign Direct Investment (FDI). In the following section, the report elaborates on how these dimensions of the Egyptian economy have been affected by the crisis.

Historically, Egypt has had a strong trading relationship with both Russia and Ukraine. Wheat is an extremely strategic crop for the country because it is a main component of the bread that Egyptian households depend on in their day-to-day food consumption. In the five years before the crisis, Egypt sourced around 85 percent of its wheat imports, on average, from Ukraine and Russia (UN Comtrade in Abay et al., 2022). Furthermore, Egypt was considered the primary destination for wheat exports from both countries. Data collected just before the crisis reveals that Egypt imported around 22 percent and 17 percent of Russia and Ukraine's wheat exports, respectively (Nasir et al., 2022). The impact of the Russia-Ukraine crisis on Egyptian households is evident when considering that the total value of imports that Egypt imported in 2021 amounted to USD 74 billion, of which 2.4 billion was for wheat.³ According to the Ministry of Supply and Internal Trade, Egypt imported around 5.5 million tons of wheat in 2021, including about 3.1 million tons from Russia and 1.9 million tons from Ukraine. These figures mean that Egyptian households will continue to be affected by the wheat shortage caused by the crisis if no alternative sources are found.

Egypt has also been heavily dependent on tourism from both Russia and Ukraine. Russians and Ukrainians have accounted for approximately 30 percent of the flow of tourists coming into Egypt, a main source of foreign currency. Due to the conflict and the sanctions that have been imposed on Russia, this percentage has declined,

dealing another blow to Egypt's tourism sector while it is still reeling from the effects of the COVID-19 pandemic.

FDI constitutes another channel through which Egypt relies on Russia. Egypt holds a position as one of Russia's most important destinations for investments in coal, oil, and gas. Russia's FDI accounts for approximately 30-60 percent of Egypt's total FDIs in energy. This dependence has made matters more complicated for the Egyptian economy (Ruta, M., 2022). Egypt's economy is already in a vulnerable position, struggling with low foreign exchange reserves, high interest payments, an unstable tourism sector, the threat of food insecurity, and rising inflation. These difficulties are expected to worsen due to the Russia-Ukraine crisis.

The series of economic downturns in Egypt have led to a continuous increase in inflation rates, which peaked with the devaluation of the Egyptian pound in 2017, exceeding 30 percent. After 2017, annual inflation rates declined rapidly, reaching five percent in 2021 (Figure 3).

In 2022, as the Russia-Ukraine crisis began, the inflation rate continued to rise in Egypt. Shortly after the crisis, the inflation rate increased to around 12.1 percent in March 2022, compared to prices in the same month of the previous year. The rate continued to escalate until it reached a peak of 15.3 percent in May 2022. After the devaluation of the Egyptian pound in late October 2022, the inflation rate reached 21.9 percent in December 2022.

As shown in Figure 2, inflation rates remained higher in rural areas (22.5 percent) than in urban areas (21.3 percent). In the peak period of inflation, the rural-urban gap widened and only slightly narrowed thereafter.

As Figure 3 shows, high prices and rising inflation rates are usually accompanied by an increase in the number of poor households, especially when net incomes are not increasing or are increasing at a lower rate. In turn, the increase in the poverty rate usually implies a decrease in spending or the consumption of essential food and non-food items, which can therefore be seen as indicative of, or as a warning for, food insecurity.

According to the available data, the poverty rate increased by 4.7 percentage points between 2015 and 2017/18, with the percentage of poor people in Egypt increasing to 32.5 percent in 2017/18 from 27.8 percent in 2015. In 2019/20, the poverty rate decreased to 29.7 percent, although the CPI index increased slightly in 2019 compared to 2018. The decrease in the poverty rate in 2019/20 could be due to the Egyptian government

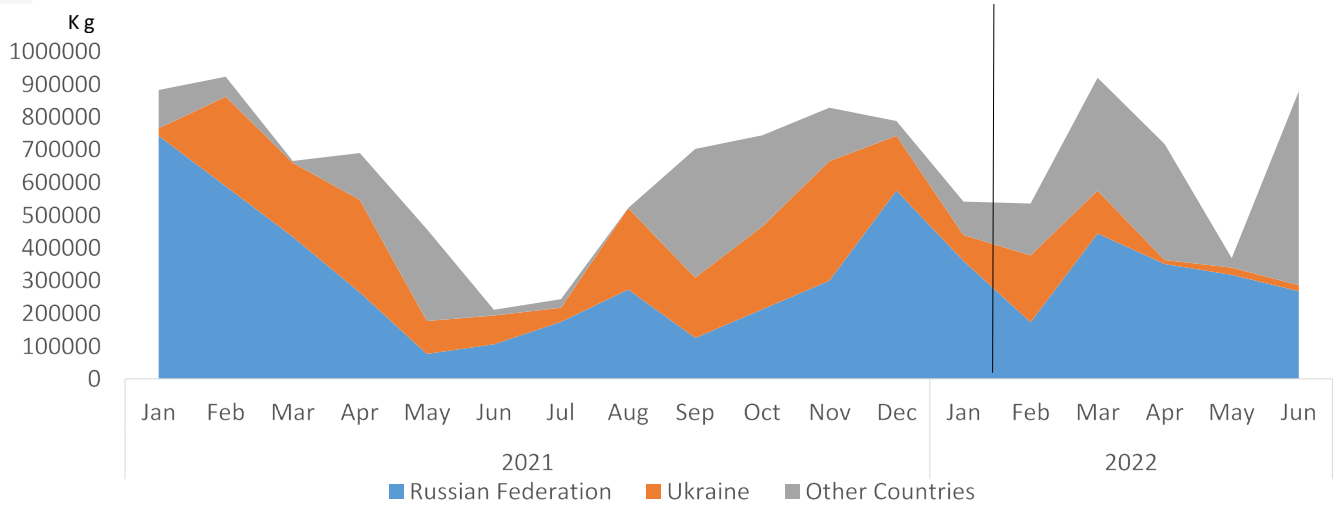
³ <https://comtradeplus.un.org/>



increasing minimum wage requirements and expanding the Takaful and Karama Program (TKP) to cover more

poor households. Nevertheless, the poverty rate was still higher in 2019/20 than in 2015 or earlier.

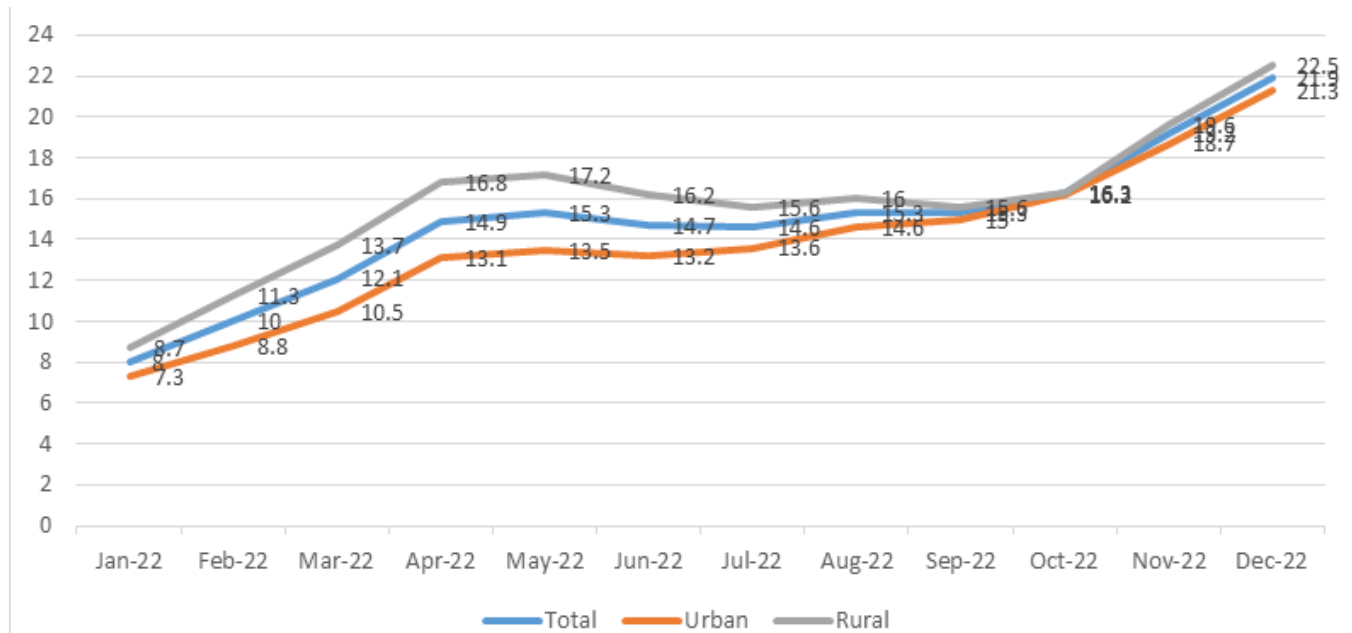
Figure 1. The volume of imported wheat (January 2021 to June 2022)



Source: <https://comtradeplus.un.org/>

Notes: Authors estimated the months with missing data by the average of the former and the following months.

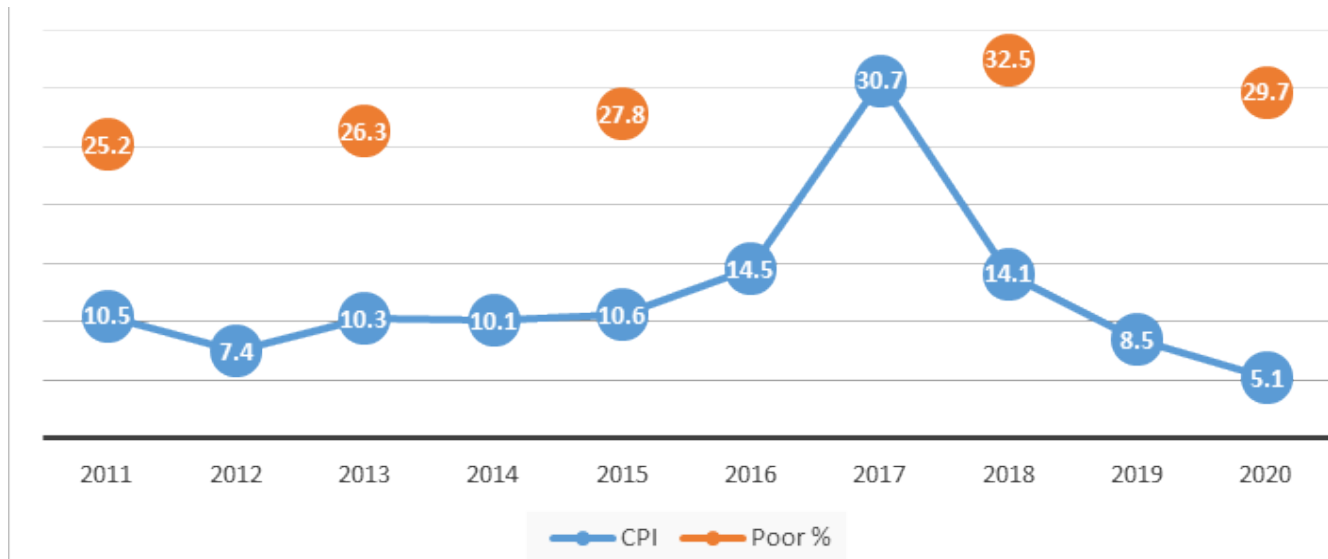
Figure 2. Inflation rates for January-December 2022 compared to the corresponding month in 2021, by region



Source: CAPMAS Monthly Bulletin of Consumer Price Index (CPI) December 2022, January 2023; Monthly Bulletin of CPI January 2022, February 2022.



Figure 3. Annual inflation rate and poverty rate, 2011 to 2020



Source: CAPMAS.

Notes: CAPMAS, 2022. *Monthly Bulletin of Consumer Price Index (CPI) Aug 2022*. Available online: https://www.capmas.gov.eg/Pages/Publications.aspx?page_id=5107&Year=23352. <https://www.sis.gov.eg/Story/159611/CAPMAS-Poverty-rates-in-Egypt-decline-to-29.7%25-within-year?lang=en-us>

3. The Impact of the Crisis on Food Security Globally and in Egypt

The Russia-Ukraine crisis has impacted different countries to varying degrees depending on each country's vulnerability and dependence on imported food and other commodities. The rise in food and fuel prices is expected to have dire consequences on food security, especially in developing countries that heavily rely on imports of strategic food items, such as wheat. This is particularly the case for many countries in the Middle East and North Africa region (Abu Hatab, 2022; Ben Hassen, 2022).

The impact on food security globally

Several studies have investigated the impact of the crisis on poverty and food insecurity globally and in developing countries. Rising food prices primarily affect access to the quantity and quality of food, especially for vulnerable households. This is because, during times of crisis, poor households tend to resort to negative coping mechanisms such as eating less, skipping meals, reducing menu diversity, and increasingly resorting to unhealthy diets, thereby leading to malnutrition in both rural and urban areas.

In 2021, Russia and Ukraine were among the top three global exporters of wheat, barley, corn, canola and rapeseed oil, sunflower seeds, and sunflower oil. The two countries hold a particularly important position in the grain sector as their contribution to the global production of barley, wheat, and maize is especially large.

The two countries accounted, on average, for 18 percent of the global production of these crops between 2016/17 and 2020/21, with Russian and Ukrainian production accounting for 14 percent and four percent, respectively (FAO, 2022c). Both countries are also the main suppliers of wheat and edible oil and together account for a quarter of global exports.

Between 2016/17 and 2020/21, they accounted for more than half of the global production of sunflower seeds, an important oilseed crop. Their average share of total global production of rapeseed and soybean is lower, as Russian production accounted for six percent and Ukrainian production accounted for two percent. In addition, Russia is ranked as the world's top exporter of nitrogen fertilizers, the second leading supplier of potassic fertilizers, and the third largest exporter of phosphorous fertilizers (FAO, 2022c).

Furthermore, energy prices have soared, increasing about three- to four-fold as a result of the crisis and the sanctions that have been imposed on Russia, given its role as a primary supplier of gas to Europe (Jagtap et al., 2022). The increase in fuel and gas prices has, in turn, led to an increase in global food prices.

Another factor that led to high food price inflation in most countries was the recent increase in energy and fertilizer costs as a result of the crisis, with many countries experiencing year-on-year surges of up to 10 percent to 30 percent. Food inflation exceeded five percent in nearly 89 percent of low-income countries and 90 percent of lower-middle-income countries. Moreover,



food price inflation in real terms exceeded headline inflation in nearly 83 percent of 166 countries worldwide (WB, 2022b).

In April 2022, the World Food Program (WFP) estimated that the number of people suffering from acute hunger due to the Russia-Ukraine crisis would increase by around 47 million people across 81 countries, bringing the total number to 323 million. These estimates include six million people in the MENA region (WFP, 2022b). Meanwhile, the European Commission (EC) estimated that the number of undernourished people had risen to around 860 million in August 2022; of these, 345 million people across 82 countries were deemed acutely food insecure or severely vulnerable (EC, 2022).

In addition, the World Bank estimates that for every one-point increase in food prices, 10 million people will fall into extreme poverty. If food prices remain flat for one year, the number of poor people worldwide will increase by 100 million. These estimates came after a 0.9-point increase in global extreme poverty due to the COVID-19 pandemic (from 8.4 percent in 2019 to 9.3 percent in 2020). The economic crisis caused by the pandemic led to the fall of around 70 million people into extreme poverty in 2020 (WB, 2022a).

Children and pregnant and lactating women are most at risk in the context of increasing food insecurity and malnutrition, and they are more likely to experience health and productivity impacts that may affect future generations (EC, 2022). The WFP projects that 60 million children worldwide will be acutely malnourished in 2022, up from 47 million in 2019, before COVID-19 (WFP, 2022a).

While the impact of the Russia-Ukraine crisis has not yet been extensively studied in Egypt, there is growing literature on how the crisis is impacting food security in middle-income and low-income countries.

A study in Pakistan finds that there is a direct relationship between high rates of poverty and high inflation rates as a result of the crisis. The researchers underline the vulnerability of Pakistani households to global price shocks and reaffirm the pivotal role that petrol prices have had in impoverishing rural agricultural households, as well as how increasing food prices (wheat and vegetable oil prices) have contributed to the deterioration of food security in urban areas (Ayaz et al., 2022).

Rwanda has experienced a similar phenomenon of food insecurity in the aftermath of the crisis. According to the International Food Policy Research Institute (IFPRI), the fuel shock is the largest contributor to the

decline in Rwanda's national GDP. Households in Rwanda are particularly impacted by rising prices and falling incomes, which led to a significant decline in household consumption that has, in turn, had an even worse impact on GDP (IFPRI, 2022c).

Scholars have also studied how Ethiopia has experienced a drastic increase in the prices of key commodities since the outbreak of the crisis. In addition to its direct impact on the import bill, the crisis has also affected production and consumption.⁴ The researchers simulated the economic shocks resulting from the increase in the international prices of five major import commodities/groups (wheat, edible oil, metals and metal products, fertilizers, and petroleum), to analyze the direct and indirect impacts on the Ethiopian economy. Their simulation shows that oil prices in Ethiopia would increase by 86 percent compared to their value in 2021/22. Similarly, the prices of wheat, edible oil, fertilizer, and metal products in the country would increase by 100 percent, 11 percent, 108 percent, and 82 percent, respectively. In a similar vein, Mengoub et al. (2022) examine the impact of the crisis on food (in)security in Morocco. Morocco relies heavily on food imports. In 2020, the country imported around USD 6.5 billion worth of agricultural products, while its exports averaged approximately USD 4.2 billion. Morocco's vulnerability suggests that the impact of the crisis might increase the risks of food insecurity and malnutrition. As this paper details below, Egypt's vulnerable position is similar to that of Pakistan, Rwanda, Ethiopia, and Morocco, so the crisis is likely to have similar repercussions on them.

The world price shocks have also impacted the GDP of different countries to varying extents, but the overall changes have been generally modest. For example, the real GDP fell by less than one percent in Bangladesh, Ghana, and Kenya. As for Egypt, a country that exports natural gas and refined petroleum, the impact of the crisis on the GDP was estimated to be close to zero (IFPRI, 2022b). On the other hand, the impact on the agri-food system GDP is a little higher, with an estimated fall of -0.7 percent, mainly due to the rise in food prices, rather than the increased fuel prices.

The impact on food security in Egypt

This section details how the impact of the Russia-Ukraine crisis on the heightening inflation rates is expected to affect food security in Egypt, particularly in terms of the risks it poses for children.

⁴ A computable general equilibrium (CGE) model (IGC, 2022) was used to simulate the impact on production and consumption, using a recursive dynamic stochastic computable general equilibrium (DSCGE) model.



Given the lack of available released data on the impact of the Russia-Ukraine crisis on the Egyptian economy, this paper draws its conclusions from recent HIECS survey data (2015, 2017/18, and 2019/20). Using these surveys, this paper explores the relationship between inflation and food consumption patterns to identify the possible future outcomes of the crisis for vulnerable families and their children in Egypt.

According to two consecutive phone surveys conducted by CAPMAS in May 2020 and September 2020, the COVID-19 pandemic was accompanied by various changes in the employment status of household members, which led to several changes in the households' consumption patterns. Coupled with the spikes in prices and inflation rates, many households had to reduce their consumption of meat, fish, and vegetables, while increasing their consumption of sugar, oil, and rice (CAPMAS, 2020a, 2020b).

The results show that households coped by resorting to cheaper food options (92.5 percent) and reducing their weekly consumption of meat, poultry, and fish (90 percent). In addition, one in every three households had to reduce their food portions within meals, and one in every five households had to reduce the number of daily meals.

A few months after the onset of the COVID-19 pandemic, the Egyptian population witnessed a slight recovery. In September 2020, a significant improvement of 10 percentage points was observed compared to May 2020 in the percentage of households that reported that their income was sufficient to meet their needs (from around 67 percent to around 77 percent). However, the survey found that households continued to rely on cheaper food options and consumed less meat, poultry, and fish (CAPMAS, 2020b).

Similarly, in 2022, CAPMAS conducted a phone survey to investigate the impact of the Russia-Ukraine crisis on Egyptian households. It found that most of the surveyed households had to change their food consumption patterns in order to cope with the rise in inflation rates in general, and the food inflation rate in particular. While three-quarters of households had to reduce their food consumption (74 percent), most of the households reduced their protein consumption (93 percent). In addition, more than two-thirds of households reduced their egg consumption (69 percent), and 57 percent and 69 percent reduced their consumption of vegetables and fruits, respectively. Households in rural regions were more likely to change their consumption patterns in response to inflation compared to households in urban

regions (56 percent versus 44 percent, respectively) (CAPMAS, 2022a).

This means that the increase in prices, especially food prices, plays a major role in determining a household's food consumption behavior, as many families resort to reducing food consumption as a coping strategy to deal with economic crises. These food consumption reductions, which in some cases lead to food poverty, are particularly strenuous for children in poor households.

The rise in food prices not only affects access to food but also the food consumption pattern (CAPMAS, 2020a, 2020b, 2022a), and both have a great impact on nutrition, especially among children. Malnutrition in early childhood can be particularly detrimental, impacting a child's cognitive and physical development and resulting in negative consequences later in life.⁵ Therefore, it is important for children to have access to diverse foods and healthy food groups (vegetables, meat, bread, cereals, and dairy products), rather than only food that is high in carbohydrates. A diverse, nutritious diet affects various aspects of children's lives and contributes to better academic performance, a greater ability to perform in the future, and, ultimately, a better life for these children. Therefore, an increase in food prices that isn't accompanied by an increase in income might cause a decrease in food consumption or a cheaper unhealthy diet, and it puts children at risk of irreversible malnutrition diseases (Meerman and Aphane, 2012).

The inflation rate for food groups and some food items

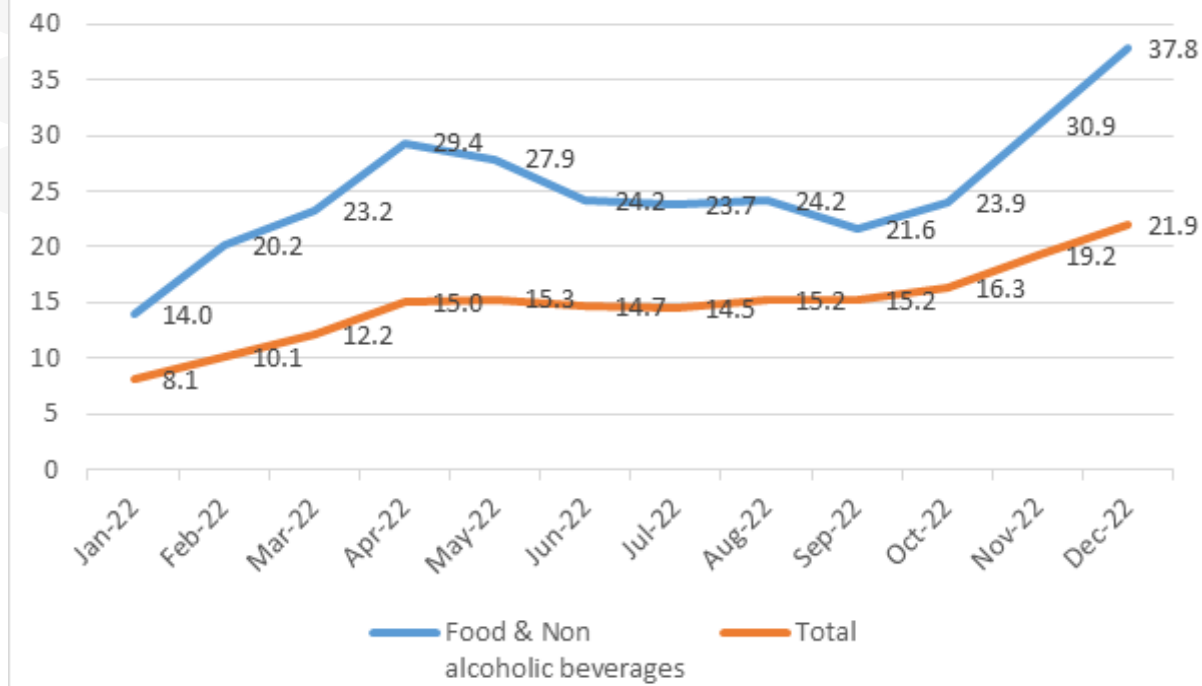
From January to December 2022, Egypt suffered from escalating food inflation rates, as shown in Figure 4. There was a general increase in prices and a particular increase in food prices that may have led to a decline in food consumption.

Figure 4 shows that in December 2022, inflation could be observed across all food groups compared to the same month in 2021. The highest changes were in the price of bread and cereals, which increased by 58.3 percent since December 2021. More specifically, this included a 49.9 percent increase in urban areas and a 65.0 percent increase

⁵ According to UNICEF, the first 1,000 days of life - between a woman's pregnancy and her child's second birthday - is a unique period of opportunity when the foundations for optimum health and development across the lifespan are established. The right nutrition and care during this 1,000-day window influence not only whether the child will survive, but also his or her ability to grow, learn, and rise out of poverty. As such, it contributes to society's long-term health, stability, and prosperity.

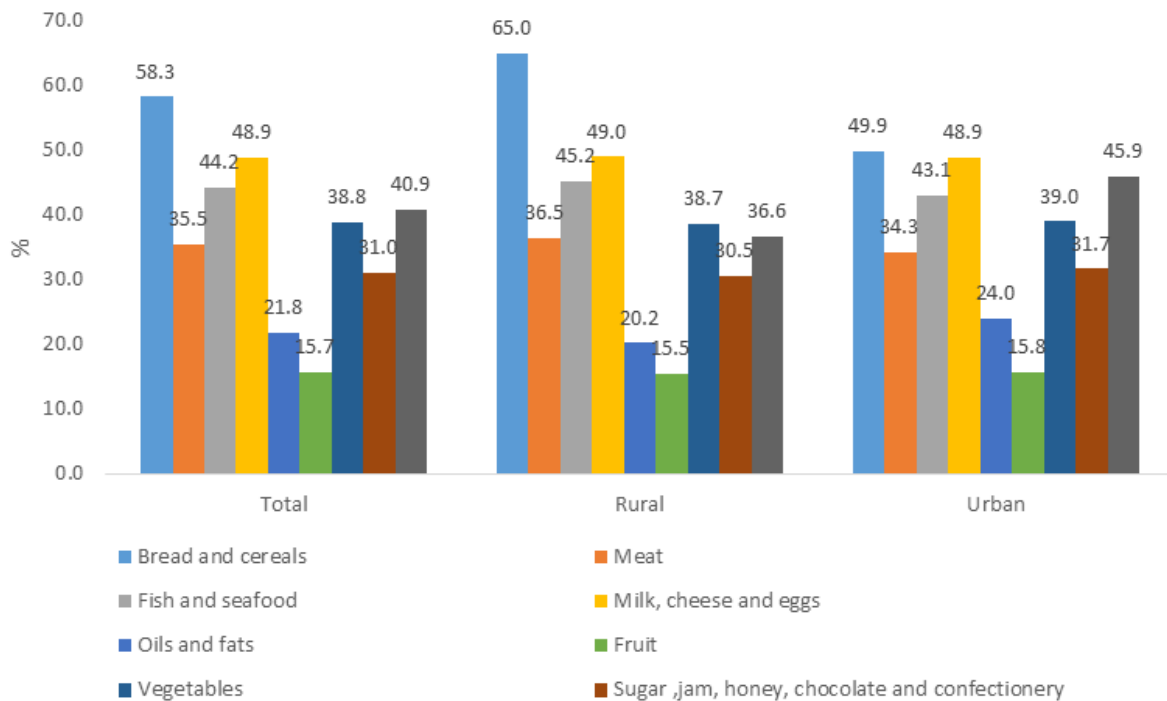


Figure 4. Inflation rates and food inflation rates in 2022



Source: CAPMAS Monthly Bulletin of Consumer Price Index (CPI), December 2022, January 2023; Monthly CPI Bulletin, January 2022, February 2022.

Figure 5. Inflation rates for food groups in December 2022 compared to December 2021



Source: CAPMAS Monthly Bulletin of Consumer Price Index (CPI), December 2022, January 2023.



in rural areas. The milk, cheese, and eggs group ranked second, whereby prices increased by 48.9 percent in December 2022 compared to December 2021. The fish and seafood group also showed a significant change in the CPI index between December 2022 and December 2021. The rate of change in the CPI index for this group was 43.1 percent in urban areas, while it was 45.2 percent in rural areas. Fruits were the least affected by the increase in inflation rates at a change of 15.7 percent between December 2022 and December 2021.

The table below shows the percentage changes in the CPI for some selected foods and fuel in December 2022 compared to December 2021. These specific food items were selected because they are considered the most important and basic products for children's growth (Beckerman-Hsu et al., 2020). Any increase in the price of these essential items will affect families' ability to purchase them, which, in turn, will affect children's consumption patterns. Fuel is also highlighted because food prices are highly dependent on fuel prices, as the cost of transporting food from producers to consumers increases. Therefore, rising fuel prices may also have an indirect impact on poor and vulnerable households and the children of these households. As shown in Table 1, fuel prices increased 14.1 percent between December 2022 and December 2021.

Table 1. Percentage change in the CPI in December 2022 compared to December 2021

| Selected items | Percentage change in August 2022 compared to August 2021 | | |
|-----------------|--|-------|-------|
| | Egypt | Rural | Urban |
| Rice | 84.3 | 96.3 | 65.7 |
| Baladi bread | 6.6 | 3.9 | 8.9 |
| Wheat flour | 80.3 | 78.4 | 87.2 |
| Fresh meat | 22.5 | 22.2 | 22.9 |
| Eggs | 60.8 | 63.9 | 57.3 |
| Milk | 34.2 | 33.1 | 35.1 |
| Fuel (gasoline) | 14.1 | 14.1 | 14.1 |

Source: CAPMAS – Monthly Bulletin of Consumer Price Index (CPI), December 2022, January 2023.

Table 1 also shows an increase in the price of eggs, a crucial ingredient for child growth. The table records a percentage change of 60.8 percent in the CPI between December 2022 and December 2021. The percentage change in the CPI of wheat flour and Baladi bread, the main food component in every meal for Egyptians, was

80.3 percent and 6.6 percent during the referred period,⁶ respectively. While the CPI for fresh meat increased by 22.5 percent between December 2022 and December 2021, the CPI for rice increased by 84.3 percent within a year.

The next sub-section discusses how the increase in the food inflation rate may affect the food consumption patterns of Egyptian households and increase the risk of child malnutrition.

The implication of the inflation rate on children in Egypt

Due to the lack of data specifically addressing the impact of the Russia-Ukraine crisis on the economic well-being of children in Egypt, this paper relies on previous surveys to explore the expected outcomes of the crisis on vulnerable households, especially those with children. By looking at data from 2015, 2017/18, and 2019/20, this study outlines how similar determinants could affect the status of children in the country.

Around two-thirds of Egyptian families have children under 18 years of age, according to the HIECS 2015, 2017/18, and 2019/20 (Figure 6).

Notably, poverty prevalence increases in households with children.⁷ While the national poverty rate was 32.5 percent in 2017/18 and 29.7 percent in 2019/20, it was 42.4 percent and 36.1 percent, respectively, for households with children (Figure 7). According to HIECS data, when the inflation rate reached 31 percent in 2017 (Figure 3), the percentage of poor individuals living in households with children increased from around 39 percent in 2015 to more than 41 percent in 2017/18.

In 2019/20, the inflation rate was only 6.1 percent since there was more stability in overall prices and food prices in particular. At the national level and in the same period, the percentage of poor people living in households with children declined to 36.1 percent.

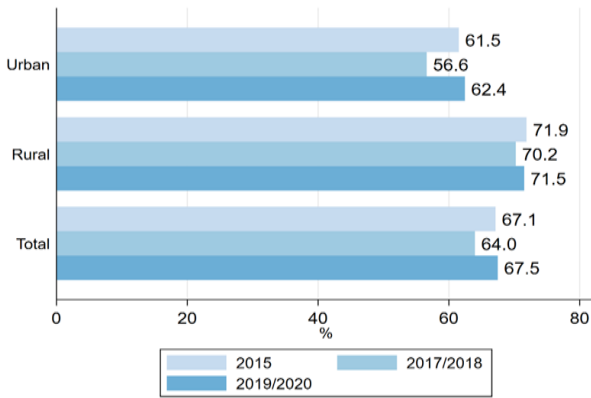
Figure 7 shows that the urban poverty rate increased from 27.1 percent in 2015 to 34.5 percent in 2017/18, but decreased again to 29.4 percent in 2019, which coincided with the expansion of the TKP and the slight stability of the CPI. The launch of the TKP in 2015 targeting the poor in rural areas may have thus contributed to the decrease in

⁶ The Baladi bread category might include subsidized bread as well.

⁷ Henceforth, the age category for children is under 18.

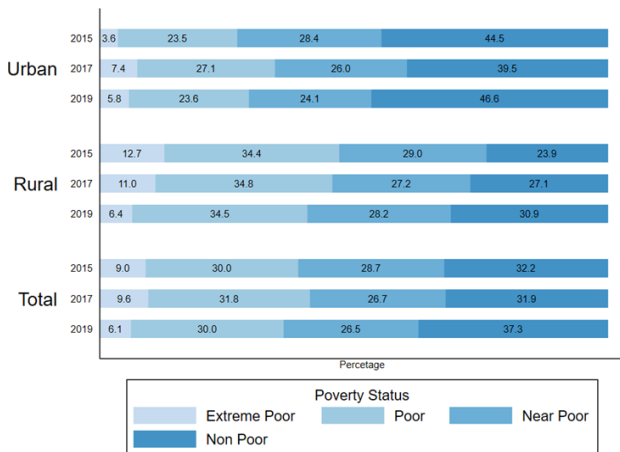


Figure 6. Percentage of households with children under 18, by region and year



Source: Authors' calculations based on HIECS 2015, 2017/18, and 2019/20 datasets (only 50% of the data have been released by CAP-MAS).

Figure 7. Poverty status distribution for individuals living in households with children, by region and year



Source: Authors' calculations based on HIECS 2015, 2017/18, and 2019/20 datasets (only 50% of the data have been released by CAP-MAS).

the proportion of the poor; rural poverty rates declined from 47.1 percent in 2015 to 45.8 percent in 2017/18, and to 40.9 percent in 2019. The decline in the percentage of the extreme poor category was significant in rural areas, where it dropped by almost half, from 12.7 percent in 2015 to 6.4 percent in 2019.

Almost all extremely poor households have children; the percentage ranges from 95 percent to 97 percent in the three HIECS surveys. The percentage decreases as household status improves, falling to about half for non-poor households, as shown in Figure 8.

Change in food consumption patterns in households with children

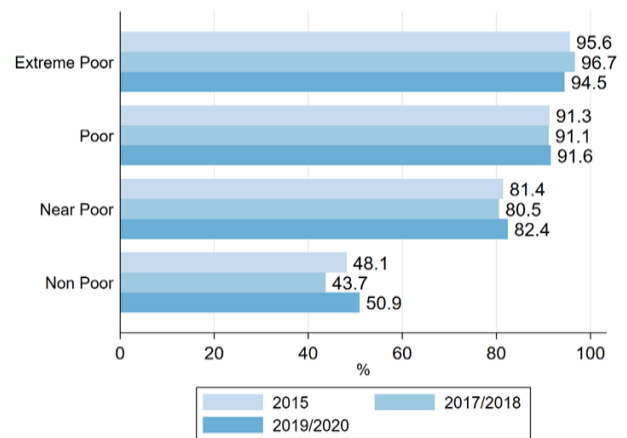
In addition to the change in poverty status from 2015 to 2019/20, the food consumption pattern of poor households with children has also changed. The data show that for poor households with children, food shares, or food expenditures as a percentage of actual expenditures, decreased from 43.7 percent in 2015 to 43.1 percent in 2017/18 and then to 39.1 percent in 2019/20. Although the percentage of poor households with children in 2017/18 was higher than in 2019/20, the food shares were also higher in 2017/18 than in 2019/20. This is because poor households often try to forgo some of their food expenses to cover education costs, health fees, and other expenses.

As shown in Figure 7, the consumption pattern or share of selected food groups in the food expenditures of poor households with children increased overall in 2019/20 compared to 2017/18, with the exception of meat.

Although the shares of the dairy, vegetable, and fruit food groups in total food expenditures increased in 2019/20, the average per capita value of food expenditures for each group per month for poor individuals in households with children decreased in real terms in 2019/20 compared to 2017/18, as shown in Figures 10 to 13.

To conclude, the high inflation rate directly affected households with children in 2017/18, resulting in an increase in the number of poor households and a decrease in the consumption of healthy food.

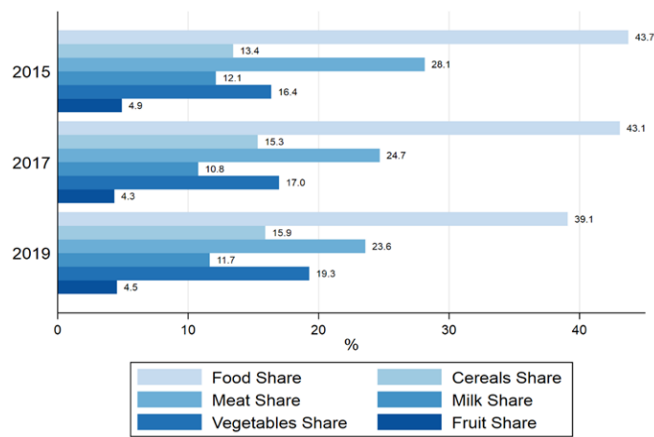
Figure 8. Percentage of households with children within each poverty status, by region and year



Source: Authors' calculations based on HIECS 2015, 2017/18, and 2019/20 datasets (only 50% of the data have been released by CAP-MAS).

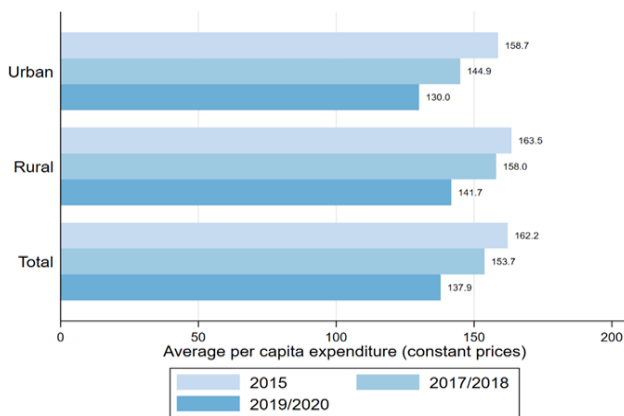


Figure 9. The average per capita share of food in poor households with children, by region and year



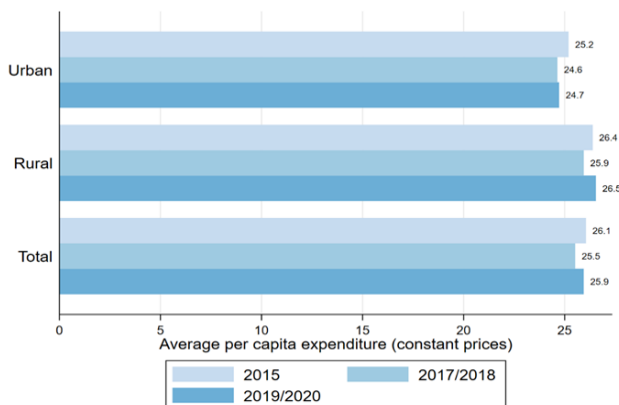
Source: Authors' calculations based on HIECS 2015, 2017/18, and 2019/20 datasets (only 50% of the data have been released by CAPMAS).

Figure 10. Average monthly per capita expenditure (in real value 2015=100) on food in poor households with children, by region and year



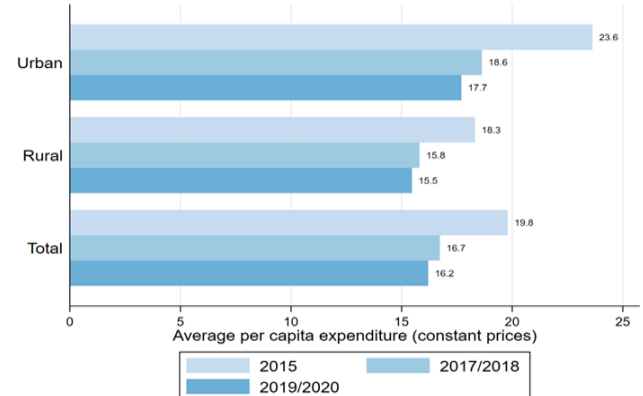
Source: Authors' calculations based on HIECS 2015, 2017/18, and 2019/20 datasets (only 50% of the data have been released by CAPMAS).

Figure 11. Average monthly per capita expenditure (in real value 2015=100) on vegetables in poor households with children, by region and year



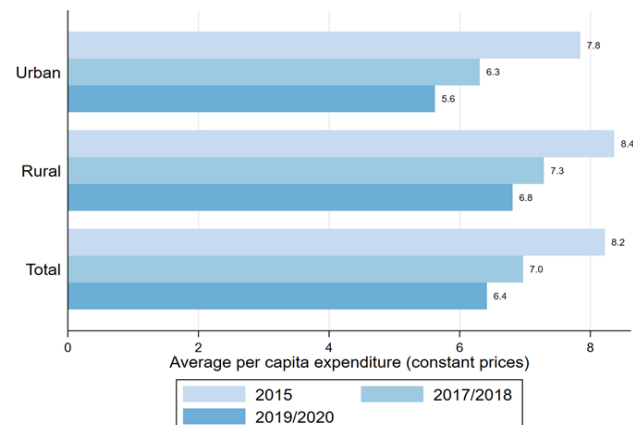
Source: Authors' calculations based on HIECS 2015, 2017/18, and 2019/20 datasets (only 50% of the data have been released by CAPMAS).

Figure 12. Average monthly per capita expenditure (in real value 2015=100) on milk, eggs, and dairy products in poor households with children, by region and year



Source: Authors' calculations based on HIECS 2015, 2017/18, and 2019/20 datasets (only 50% of the data have been released by CAPMAS).

Figure 13. Average monthly per capita expenditure (in real value 2015=100) on fruits in poor households with children, by region and year



Source: Authors' calculations based on HIECS 2015, 2017/18, and 2019/20 datasets (only 50% of the data have been released by CAPMAS).

In contrast, when the inflation rate decreased and the government increased minimum wages in 2019/20, the proportion of poor households with children decreased and the consumption of healthy food increased. Based on the evidence so far, it can be concluded that the rising inflation rates caused by the Russia-Ukraine crisis are likely to lead to a change in consumption patterns due to high prices. The fact that poor households are unable to spend money on essential food is directly related to child malnutrition.



4. An Overview of the Situation of Migrants, Refugees, and Asylum Seekers in Egypt

Due to its geographical location, Egypt plays an important role as both a destination country and a transit hub for migrants, refugees, and asylum seekers coming from other parts of Africa and the MENA region. Over the last decade, political instability increased in the region, particularly as the conflicts in Sudan, Syria, and Yemen led to an upsurge in the number of refugees coming to Egypt. As of 2019, almost two-thirds of international migrants were refugees and asylum-seekers (UNICEF, 2021).

As of October 2022, the United Nations High Commissioner for Refugees (UNHCR) reported that there are 288,173 registered refugees and asylum-seekers in Egypt, almost half of whom are Syrian, and more than 28 percent of whom are from North and South Sudan. Children constitute around 37 percent of the refugees and asylum seekers in Egypt (UNHCR Fact Sheet, October 2022).

In addition to registered refugees, Egypt also hosts an estimated nine million migrants⁸ who are even more vulnerable and face higher risks and challenges (Andrade et al., 2021). As a MENA country, Egypt was not affected by the movement of Ukrainian refugees (an estimated eight million people⁹ who have been seeking sanctuary in Europe). However, the impact of the inflation rates and price hikes will not only impact Egyptian households; it will also negatively affect all migrants, particularly those who are unregistered.

While there is no data about refugees' status following the COVID-19 pandemic and the Russia-Ukraine crisis, the UNHCR conducted the Egypt Vulnerability Assessment for Refugees (EVAR) in 2018 (UNHCR, 2020) to collect information and identify the vulnerabilities of refugees and asylum-seekers living in Egypt.

The study found that around 27 percent of refugees in Egypt had poor access to food, with six out of ten vulnerable to food insecurity due to inadequate food consumption.¹⁰ The study results also showed that refugees who were receiving WFP food vouchers to assist them with buying

food were less likely to be food insecure. It also concluded that only 21 percent of the sampled refugees had access to UNHCR multipurpose cash assistance. Those who did not have access had to reduce the number of meals per day and/or limit food portions. Around half of those who received cash assistance reported that the cash amount was not sufficient to meet urgent needs.

Data that describe the current status of refugees in Egypt after the crisis are not yet available, but marginalized populations, such as poor households and refugees, are more vulnerable to shocks and are at a higher risk of facing severe food insecurity and falling into even greater poverty. Poor and/or migrant children are additionally vulnerable.

5. Government Measures and Mitigating the Effects of the Crisis on Vulnerable Households

The government has taken various measures to address the impacts of the crisis, especially on the most vulnerable households. A new social protection package worth EGP 67 billion was approved by the cabinet in October 2022 to help support households.¹¹ This includes:

- Raising the minimum wage of public employees from EGP 2,700 to EGP 3,000.
- Providing an exceptional bonus of EGP 300 to public employees and pensioners. This is expected to benefit 10.5 million pensioners.
- Extending the social package for ration cards, which currently covers 10.5 million families, until 30 June 2023. The package includes additional funds of EGP 100 to 300 at a total cost of EGP 8.5 billion.
- Raising the tax exemption limit from EGP 24,000 to EGP 30,000 annually, whereby citizens whose income reaches EGP 2,500 will no longer be required to pay taxes.
- Refraining from raising electricity prices until 30 June 2023.

Using the latest data from HIECS 2017/18 and 2019/20, the section below explores how such social protection measures can serve as protective factors for poor households and poor children. The focus is specifically on the national TKP, the food ration cards, and national school food programs.

⁸ <https://reliefweb.int/report/egypt/iom-egypt-estimates-current-number-international-migrants-living-egypt-9-million-people-originating-133-countries> (accessed on 9 Jan 2022)

⁹ [Situation Ukraine Refugee Situation \(unhcr.org\)](https://www.unhcr.org/situation-ukraine-refugee-situation)

¹⁰ Registered refugees.

¹¹ <https://alalameyoum.co/79010/>



The Takaful and Karama Program (TKP)

Recipients of the Takaful pension receive around EGP 325 per month, in addition to EGP 60 for a primary school student, EGP 80 for a middle school student, and EGP 100 for a secondary school student.

With the initiation of the TKP, the proportion of people living in poor or extremely poor households with children has decreased in all regions between 2017/18 and 2019/20, especially in urban areas. A UNICEF study (UNICEF 2020) confirms that TKP is a protective factor that prevents households from slipping back into poverty, where a household with at least one TKP beneficiary is less likely to fall back from vulnerable status to poverty status.

In 2017/18, around 22 percent of extremely poor households and about 13 percent of poor households with children under 18 years of age received TKP, while these proportions increased to 26 percent and 16.8 percent, respectively, in 2019/20 (Figure 14). TKP coverage was more pronounced among extremely poor households in rural areas; in 2019, more than 30 percent of extremely poor households with children received TKP, compared to around 18 percent in urban areas.

This could mean that the government has a role in targeting these extremely poor households or setting new priorities to support the extremely poor households more effectively. This is especially the case in rural areas where poverty rates are higher than they are in urban areas. However, approximately 74 percent of extremely poor households with children under 18 years of age still did not receive any support from the TKP in 2019/20. Currently, the program benefits over 4.5 million households.

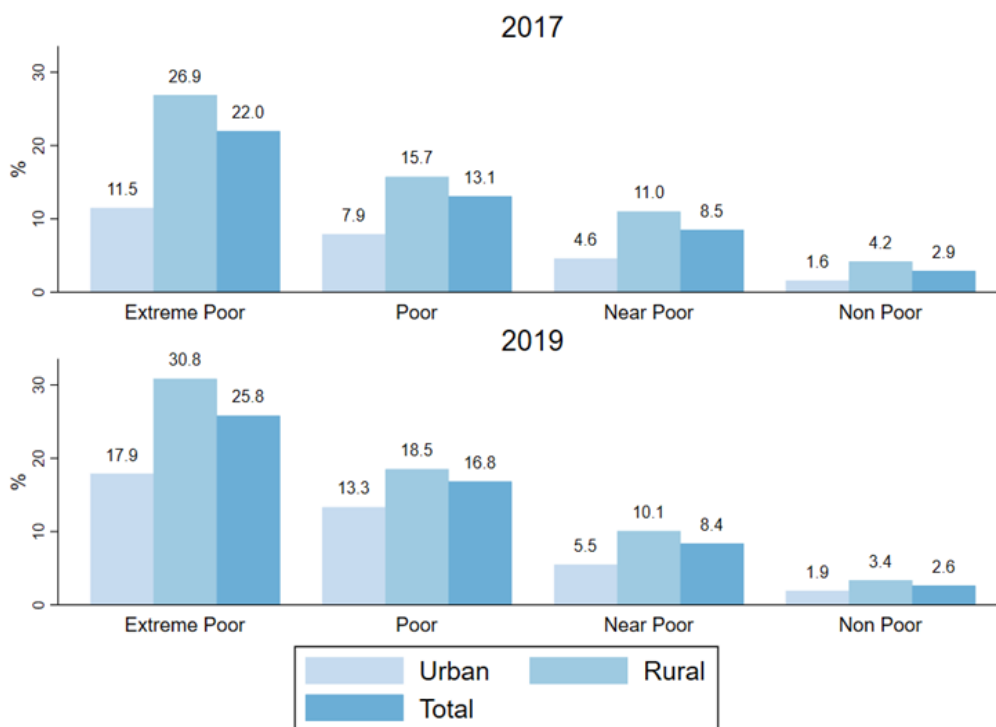
Ration cards

Food subsidies are one factor that contributes to the reduction of food poverty; 92.3 percent of extremely poor households with children in HIECS 2017/18 were beneficiaries of food cards, while the percentage was 91.6 percent in 2019/20. For non-poor households, the percentage decreased between 2017/18 and 2019/20.

The National School Feeding Programm (NSFP)

Malnutrition and nutrition-related illnesses are prevalent among Egyptian children. In 2014, the percentages of stunted and wasted children under the age of five were 21

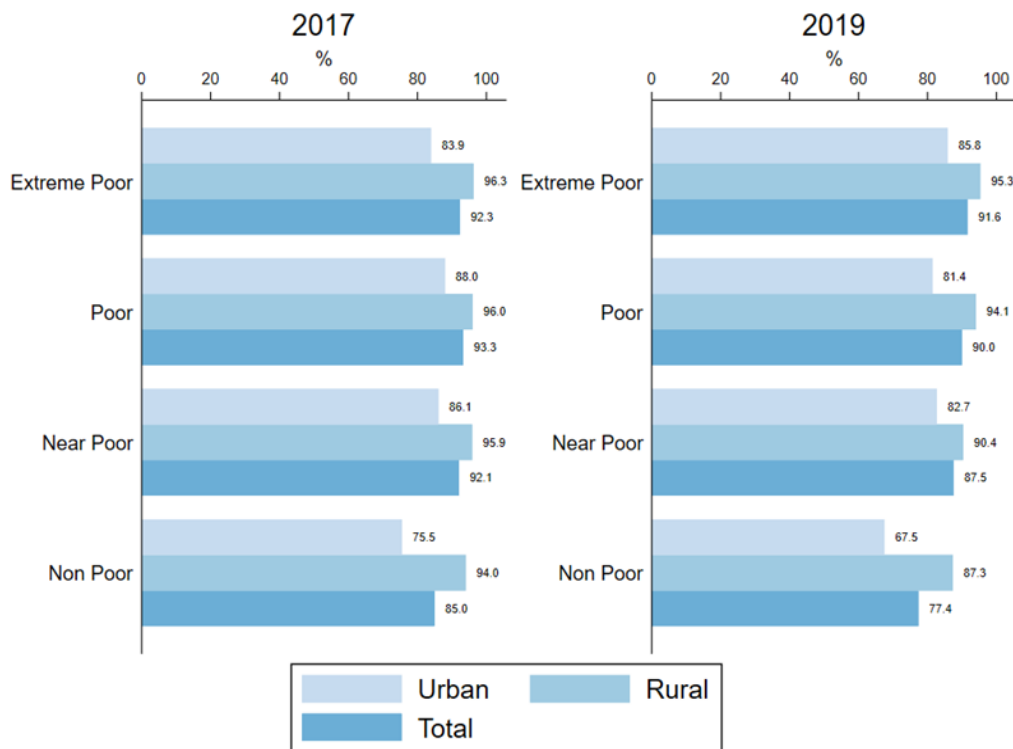
Figure 14. Percentage of households with children under 18 years of age receiving TKP, by poverty status and year



Source: Authors' calculations based on the HIECS 2019/20 dataset (only 50% of the data have been released by CAPMAS).



Figure 15. Percentage of households that have children and are ration cards beneficiaries, by poverty status, region, and year



Source: Authors' calculations based on HIECS 2017/18 and 2019/20 datasets (only 50% of the data have been released by CAPMAS).

percent and 13 percent, respectively, and by 2021, their prevalence dropped to 13 percent and three percent. However, the percentage of children with any type of anemia increased from around 27 percent in 2014 to 43 percent in 2021 (CAPMAS, 2022c).

In order to improve children's nutrition and promote school enrollment, the SFP was expanded in 2016 to reach all public schools. In addition, the government announced a nationwide increase in bread prices in August 2021, with the intention to allocate the additional funds to support the 12.2 million students receiving school meals.¹² These meals are considered a subsidy for poor families, allowing them to save on the cost of their children's lunch. The meals are fortified with the

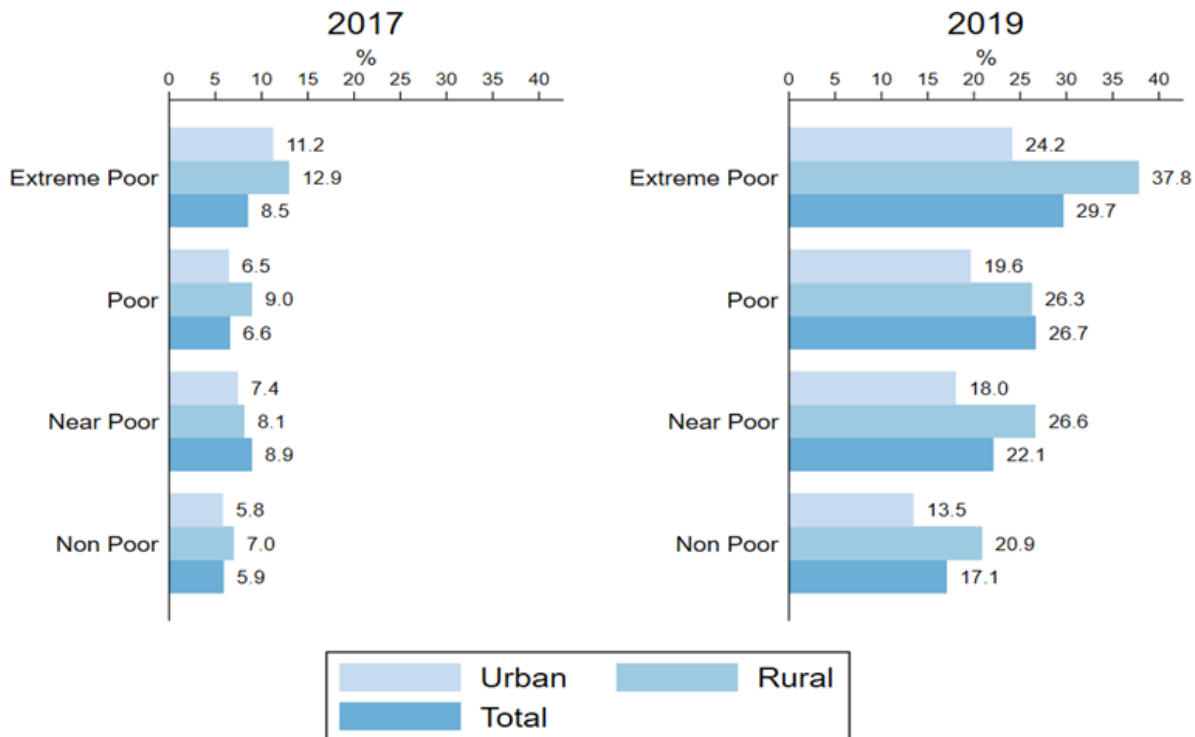
necessary vitamins and minerals that help prevent or treat nutrition-related diseases.

While the enrollment rate of children (ages five to 17) remained stable at around 88 percent between 2017 and 2019, the percentage of children in schools receiving the meal tripled from around 7.8 percent to 21.8 percent. Over the two years, the school feeding program expanded to reach about 16.5 percent and 25.7 percent of enrolled children in urban and rural areas, respectively. The expansion of the program in 2019 reached about two-fifths of extremely poor children and more than 26 percent of poor and near-poor children in rural areas. Although coverage in urban areas was lower than in rural areas, the program significantly expanded within the two years (Figure 16). The impact of school meals on children became clear when Metwally et al. (2020) compared children who participated in SFP meals to those who did not and concluded that the former group performed better in school.

¹² School Feeding Program in Egypt Improves Youth Nutrition and Food Security (nycfoodpolicy.org) <https://www.nycfoodpolicy.org/food-policy-snapshot-egypt-school-feeding-program/>



Figure 16. Percentage of enrolled children in schools providing SFP, by poverty status, region, and year



Source: Authors' calculations based on HIECS 2017/18 and 2019/20 datasets (only 50% of the data have been released by CAPMAS).

Notes: The question in the survey investigated whether the school is providing school meals, and not whether the child benefits from a school meal

6. Policy Recommendations

As the Russia-Ukraine conflict continues, and while the world is still suffering the consequences of the COVID-19 pandemic, the risk of a food and nutrition crisis is increasing. In developing countries, the risk of a food crisis and malnutrition is even greater, especially in countries that rely heavily on food imports.

Egypt heavily relies on food imports, especially wheat, which is considered a strategic food for Egyptians. The devaluation of the Egyptian currency and the Russia-Ukraine conflict have worsened the economic situation in Egypt and have caused a surge in the inflation rates, especially in food items.

Children living in vulnerable households are at risk of bearing the brunt of this, as their holistic development, especially in the early years, is intricately linked to an adequate and diversified diet. This crisis risks reversing the improvements that were noted in Egypt's health surveys between 2014 and 2021 in regard to reducing emaciation and growth decline among children under five years of age (CAPMAS, 2022d).

The Egyptian government is trying to take measures to curb inflation, increase local production and exports, reduce dependence on imports, and attract foreign

investment and foreign exchange reserves. Throughout 2022, the government also increased domestic wheat production and built wheat silos as part of a national project.¹³

However, to address the detrimental effects of the crisis, there is a need for additional interventions in the short- and medium-term. The section below provides recommendations to support vulnerable households and address wider food system challenges.

Recommendations for the short term

- **Urgently ensure** that TKP benefits reach extremely poor households, especially those with children. Both the horizontal and vertical expansion of the TKP should be considered in order to protect these households from the food and nutrition crisis. It should be noted that the increase in the conditional cash transfer should be aligned with the increase in consumption costs/inflation rates.
- **Cooperate and coordinate** with international

¹³ <https://www.sis.gov.eg/Story/229525/%D8%A7%D9%84%D9%85%D8%B4%D8%B1%D9%88%D8%B9-%D8%A7%D9%84%D9%82%D9%88%D9%85%D9%89%D9%84%D9%84%D8%B5%D9%88%D8%A7%D9%85%D8%B9?lang=ar>



organizations to provide emergency assistance to poor refugees and asylum seekers (documented and undocumented). International migration can transform societies for the better when migrants have their human rights respected, can enjoy minimum standards during the migration process, can access comprehensive and shock-responsive social protection systems, have accessible regular migration channels, and effectively participate in the labor market and pay taxes.

- **Review** the legal and administrative barriers to accessing social protection provided by the government for people in the informal economy and/or migrants, refugees, and asylum seekers to facilitate access.
- **Promptly expand** school meal programs to ensure that more children, especially the most vulnerable, are reached. School meals are an effective means to directly reach vulnerable children and can have a positive effect on nutrition, health, and education outcomes.
- **Develop** a child-focused national, multisectoral action plan to prevent the rise in malnutrition rates and reduce undernutrition. Addressing food security and nutrition requires an integrated response across relevant sectors with a wide range of interventions at both the household and systemic levels.
- **Swiftly diversify** sources of imports for wheat, and consider wheat alternatives in the long term. In the months following the crisis, this measure was taken immediately by the country at a higher cost to avoid a shortage of wheat supply.¹⁴ For three months after the crisis, Egypt also banned the export of five foods that are heavily consumed by Egyptians.
- **Promptly implement** social behavior change interventions to promote a diversified diet, including through the consumption of locally available nutritious foods to replace wheat. On average, Egyptians consume twice as much wheat as the world average. It should also be noted that the increase in inflation rates for fruits was the lowest among the different food items, which could help households include more fruits in their diets. The same was true for vegetables, even if to a lesser extent.
- Similarly, and with a strong focus on children, **carry out** social behavior change interventions to promote

improved food and feeding practices for a diversified and adequate diet. The crisis risks having irreversible effects on children's holistic development, and parents must be made aware of this.

Recommendations for the medium term

- **Promptly evaluate and assess** existing social protection measures such as the TKP, school meals, and the ration card system. In addition, the process of switching from food subsidies to social safety nets/conditional cash transfer programs should be evaluated. The layering of additional interventions on top of cash benefits must also be reviewed.
- **Facilitate** the issuance of required documents and identity papers for Egyptians and unregistered migrants to facilitate access to social protection interventions. Consider immediately waiving fees for poor persons, unregistered persons, and migrants.
- **Strengthen** the resilience of social assistance recipients through stronger linkages between social protection services and labor market interventions. For example, the immediate scale-up of the Forsa economic inclusion program should be explored.
- **Invest** in public works programs to create access to employment. For example, infrastructural improvements under the Haya Karima initiative are an opportunity to link households to work in exchange for cash- or food-based payments.
- **Reduce** food loss and waste through the efficient and effective management of each stage of the bread supply chain. If Egypt succeeds in eliminating wheat-based food loss and waste, a 37 percent reduction in wheat imports can be achieved (Yigezu et al., 2021).
- **Invest** in food fortification programs. Food fortification programs are an effective way to address sub-optimal diets and prevent and control micronutrient deficiencies. The fortification of wheat flour, which is widely consumed in Egypt, is an effective way to reach vulnerable households and children.
- **Introduce** earmarked taxation for the expansion of targeted social protection programs, such as the TKP. This would bolster fiscal space and reduce dependence on foreign financing, especially in the medium run.
- **Enhance** the availability and accessibility of evidence and data to facilitate accurate and reliable studies that could result in useful and applicable recommendations for policymakers. Disaggregated data in particular are important to identify inequities across regions, gender, and other dimensions that are critical for the development of targeted interventions.

¹⁴ <https://www.skynewsarabia.com/business/1514554-%D8%B1%D8%B3%D9%85%D9%8A%D8%A7-%D9%85%D8%B5%D8%B1-%D8%AA%D8%B9%D8%AA%D9%85%D8%AF-%D8%AF%D9%88%D9%84%D8%A9-%D8%AC%D8%AF%D9%8A%D8-AF%D8%A9-%D9%84%D8%A7%D8%B3%D8%AA%D9%8A%D8%B1%D8%A7%D8%AF-%D8%A7%D9%84%D9%82%D9%85%D8%AD>



References

- Abay, K., Abdelradi, F., Breisinger, C., Diao, X., Dorosh, P., Pauw, K., Randriamamonjy, J., Raouf, M., and Thurlow, J. (2022). Egypt: Impacts of the Ukraine and Global Crises on Poverty and Food Security. International Food Policy Research Institute (IFPRI), Washington, DC. Retrieved from <https://doi.org/10.2499/p15738coll2.136321>.
- Abu Hatab, A. (2022). Africa's Food Security under the Shadow of the Russia-Ukraine Conflict. *The Strategic Review for Southern Africa* 44, no. 1: 37-46. Retrieved from <https://doi.org/10.35293/srsa.v44i1.4083>.
- Andrade, M., Sato, L., Hammad, M. (2021). Improving social protection for migrants, refugees and asylum seekers in Egypt: An overview of international practices. Research Report No. 57. Brasilia and Cairo: International Policy Centre for Inclusive Growth and the United Nations International Children's Emergency Fund (UNICEF). Retrieved from <https://www.unicef.org/egypt/reports/improving-social-protection-migrants-refugees-and-asylum-seekers-egypt>.
- Ayaz, M., Sers, C. F., Maisonnave, H., and Mughal, M. (2022). Echo of the Cannons? Economic Impact of the Ukraine War on Pakistan-A macro-Micro Simulation Analysis. hal-03718240, HAL. Retrieved from <https://ideas.repec.org/p/hal/wpaper/hal-03718240.html>.
- Beckerman-Hsu, J. P., Kim, R., Sharma, S., and Subramanian, S. V. (2020). Dietary variation among children meeting and not meeting minimum dietary diversity: An empirical investigation of food group consumption patterns among 73,036 children in India. *The Journal of Nutrition*, 150(10), 2818-2824. <http://doi:10.1093/jn/nxaa223>
- Ben Hassen, T., and El Bilali, H. (2022). Impacts of the Russia-Ukraine war on global food security: towards more sustainable and resilient food systems? *Food*, Vol. 11(15), 2301. <https://doi.org/10.3390/foods11152301>
- Central Agency for Public Mobilization and Statistics (CAPMAS) (2016). Households Income, Expenditure and Consumption Survey 2015. Retrieved November 20, 2022, from https://www.capmas.gov.eg/Pages/Publications.aspx?page_id=5109&Year=23629.
- CAPMAS (2019). Households Income, Expenditure and Consumption Survey 2017/2018. Retrieved from https://www.capmas.gov.eg/Pages/Publications.aspx?page_id=5109&Year=23629.
- CAPMAS (2020a). The Impact of COVID-19 on Egyptian Households till May 2020. Retrieved from https://www.capmas.gov.eg/Pages/StaticPages.aspx?page_id=7233.
- CAPMAS (2020b). The Impact of COVID-19 on Egyptian Households till September 2020. Retrieved from https://www.capmas.gov.eg/Pages/StaticPages.aspx?page_id=7233.
- CAPMAS (2021). Households Income, Expenditure and Consumption Survey 2019/2020. Retrieved from https://www.capmas.gov.eg/Pages/Publications.aspx?page_id=5109&Year=23629 (accessed on 20 Nov 2022).
- CAPMAS (2022a). The Impact of Russia - Ukraine Crisis on Egyptian Households 2022. Retrieved February 13, 2023, from https://www.capmas.gov.eg/Pages/Researchs.aspx?page_id=5031.
- CAPMAS (2022b). Monthly Bulletin of Consumer Price Index (CPI) Aug 2022. Retrieved February 13, 2023, from https://www.capmas.gov.eg/Pages/Publications.aspx?page_id=5107&Year=23352.
- CAPMAS (2022c). Monthly Bulletin of Foreign Trade Data May 2022. Retrieved February 13, 2023, from https://www.capmas.gov.eg/Pages/Publications.aspx?page_id=5107.
- CAPMAS (2022d). Egypt Family Health Survey 2021. Retrieved from https://www.capmas.gov.eg/pdf/%D9%85%D8%B3%D8%AD%20%D8%B5%D8%AD%D9%89%20_%20%D8%B9%D8%B1%D8%A8%D9%89.pdf
- Europe Commission (EC) (2022). The impact of Russia's war against Ukraine on global food security – KC-FNS review October 2022. Retrieved November 20, 2022, from https://knowledge4policy.ec.europa.eu/publication/impact-russia%E2%80%99s-war-against-ukraine-global-food-security-%E2%80%93-kc-fns-review-%E2%80%93-october-2022_en.
- Food Agriculture Organization (FAO) (2022a). Food balances database. Food and Agricultural Organization of the United Nations Statistics (FAOSTAT). Retrieved November 20, 2022, from <https://www.fao.org/faostat/en/#data/FBS>.
- FAO (2022b). The Importance of Ukraine and the Russian Federation for Global Agricultural Markets and the Risks Associated with the War in Ukraine. Retrieved November 20, 2022, from <https://www.fao.org/3/cb9013en/cb9013en.pdf>.
- FAO (2022c). FAO Food Price Index. Food and Agricultural Organization of the United Nations. Retrieved November 20, 2022, from <https://www.fao.org/worldfoodsituation/food-pricesindex/en/>.
- International Food Policy Research Institute (IFPRI) (2022a). Russia-Ukraine War and the Global Crisis: Impacts on Poverty and Food Security in Developing Countries. Retrieved November 20, 2022, from <https://ebrary.ifpri.org/digital/collection/p15738coll2/id/136382>.
- IFPRI (2022b). The Russia-Ukraine Crisis: Implications for Global and Regional Food Security and Potential Policy Responses. Retrieved November 20, 2022, from <https://ebrary.ifpri.org/digital/collection/p15738coll2/id/135913>.
- IFPRI (2022c). Rwanda: Impacts of the Ukraine and global crises on poverty and food security. Retrieved November 20, 2022, from <https://www.ifpri.org/publication/rwanda-impacts-ukraine-and-global-crises-poverty-and-food-security>.
- International Growth Center (IGC) (2022). Blog Post: Impact of the Russia-Ukraine war on Ethiopia. Retrieved November 20, 2022, from <https://www.theigc.org/blog/impact-of-the-russia-ukraine-war-on-ethiopia/>.
- Meerman J. and Aphane J. (2012). Impact of High Food Prices on Nutrition. FAO Nutrition Division (ESN). Retrieved from https://www.fao.org/fileadmin/user_upload/agn/pdf/Meerman_Aphane_ICN2_FINAL.pdf.
- Mengoub, F. E., Dabush, U., Ali, A. A., and Tsakok, I. (2022). The Russia-Ukraine war and food security in Morocco. *Policy Br*, 34, 1-15. Policy Center for the New South, Rabat, Morocco. Retrieved from: <https://www.policycenter.ma/publications/russia-ukraine-war-and-food-security-morocco>
- Metwally, A. M., El-Sonbaty, M. M., El Etreby, L. A., Salah El-Din, E. M., Abdel Hamid, N., Hussien, H. A., Hassanin, A. M. and Monir, Z. M. (2020). Impact of National Egyptian school feeding program on growth, development, and school achievement of school children. *World J Pediatr*. 2020 Aug;16(4):393-400. doi: 10.1007/s12519-020-00342-8. Epub 2020 Feb 13. PMID: 32056148



- Nasir, M. A., Nugroho, A. D., and Lakner, Z. (2022). Impact of the Russian–Ukrainian Conflict on Global Food Crops. *Foods*, 11(19), 2979. <https://doi.org/10.3390/foods11192979>
- Jagtap, S., Trollman, H., Trollman, F., Garcia-Garcia, G., Parra-López, C., Duong, L., Martindale, W., Munekata, P. E. S., Lorenzo, J. M., Hdaifeh, A., Hassoun, A., Salonitis, K. and Afy-Shararah, M. (2022). The Russia-Ukraine Conflict: Its Implications for the Global Food Supply Chains. *Foods*. 2022; 11(14):2098. Retrieved February 13, 2023, from <https://doi.org/10.3390/foods11142098>.
- Ruta, Michele (ed.) (2022). *The Impact of the War in Ukraine on Global Trade and Investment*. Washington, DC. © World Bank. Retrieved February 13, 2023, from <https://openknowledge.worldbank.org/handle/10986/37359> License: CC BY 3.0 IGO.
- Santacreu, A. and LaBelle, J. (2022). Global Supply Chain Disruptions and Inflation During the COVID-19 Pandemic. *Federal Reserve Bank of St. Louis Review*, Second Quarter 2022, 104(2), pp. 78-91. Retrieved from <https://doi.org/10.20955/r.104.78-91>
- United Nations High Commissioner for Refugees (UNHCR) (2020). *Vulnerability Assessment for Refugees in Egypt*. Cairo: United Nations High Commissioner for Refugees. Retrieved from: <https://www.unhcr.org/eg/wp-content/uploads/sites/36/2020/09/EVAR18.pdf>
- UNHCR (2022). *Egypt Fact Sheet*. Retrieved February 13, 2023, from <https://www.unhcr.org/eg/wp-content/uploads/sites/36/2022/11/Egypt-Factsheet-October-2022.pdf>.
- United Nations International Children's Emergency Fund (UNICEF) (2020). *In and out of Poverty: An Analysis of Egyptian Poverty and Vulnerability Dynamics Between 2015 and 2017/2018*. (Internal Report).
- Yigezu, Y. A., Moustafa, M. A., Mohiy, M. M., Ibrahim, S. E., Ghanem, W. M., Niane, A. A., Abbas, E., Sabry, S. R. S. and Halila, H. (2021). Food Losses and Wastage along the Wheat Value Chain in Egypt and Their Implications on Food and Energy Security, Natural Resources, and the Environment. *Sustainability* 2021, 13, 10011. Retrieved from <https://doi.org/10.3390/su131810011>.
- World Bank (2022a). *Food Security Update (October 2022)*. Retrieved November 23, 2022, from <https://thedocs.worldbank.org/en/doc/40ebbf38f5a6b68bfc11e5273e1405d4-0090012022/related/Food-Security-Update-LXXI-October-13-2022.pdf>
- World Bank (2022b). *Food Security Update (November 2022)*. Retrieved November 23, 2022, from <https://thedocs.worldbank.org/en/doc/40ebbf38f5a6b68bfc11e5273e1405d4-0090012022/related/Food-Security-Update-LXXIII-November-10-2022-145741.pdf>.
- World Food Program (WFP) (2022a). *War in Ukraine Drives Global Food Crisis*. Retrieved November 22, 2022, from https://docs.wfp.org/api/documents/WFP-0000143034/download/?_ga=2.168003489.1229065662.1664866288-224292151.1659695629.
- World Food Program (WFP) (2022b). *Projected Increase in Acute Food Insecurity Due to War in Ukraine*. Retrieved November 20, 2022, from <https://docs.wfp.org/api/documents/WFP-0000138289/download>.



About the Authors

May Gadallah is an Associate Professor at Cairo University, Faculty of Economics and Political Science. And currently is the Statistics Manager at the Economic Research Forum. She holds a PhD in Biostatistics from University of California, Los Angeles, and a Master's degree in Statistics from Cairo University. She is also a Research Fellow at ERF. Her research interests include labor market, education, poverty and child poverty, gender studies, impact evaluation, nutrition, and other topics focused on poverty and youth-related policies.

Nesma Mamdouh is a Senior Statistician at the Economic Research Forum. She received her PhD degree in Statistics from Faculty of Graduate Studies & Statistical Research, Cairo University and she received a Bachelor degree in Mathematical Statistics and Computer Science from Faculty of Science, Ain Shams University. Her research interests are in the areas of mathematical statistics and also socio-economic research.

