

From Vulnerability to Resilience: Households' Exposure to shocks and Coping Mechanisms in Egypt

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Abstract

Managing risks and reducing vulnerability to shocks affect the welfare of households and resilience of economies. Using two rounds of Egypt's Labor Market Panel Survey (ELMPS), 2018 and 2023, this paper examines different types of shocks experienced by households over the few past years as well as vulnerability to food insecurity. It highlights important factors that contribute to resilience and identifies opportunities for strengthening effective risk management strategies. The findings highlight a remarkable increase in household exposure to shocks, rising from 16 percent in 2018 to 49 percent in 2023. Households who reported exposure to shocks in 2018 and 2023 are primarily from poorer and larger households, indicating a potential chronic vulnerability. Urban households have experienced more shocks compared to rural counterparts in 2023, highlighting the need for strategies that address the specific vulnerabilities of urban households. Higher resilience to shocks and food insecurity was reported by households pertaining to high wealth quintiles and whose heads are more educated or employed in the formal sector. This emphasizes the crucial role of social protection measures and economic opportunities in building resilience. Coping mechanisms primarily included consumption rationing, with a notable decline in reliance on social capital compared to 2018. Around 40 percent of households faced food insecurity in 2023, with those experiencing economic shocks being more susceptible to higher rates of moderate and severe food insecurity. A higher share of female headed households reported severe food insecurity. Expanding access to social insurance programs and ensuring they cover irregular/informal workers can better mitigate the impacts of economic and health-related shocks, ensuring less persistent effect on food insecurity.

Keywords: shocks, food security, economic shock, coping, consumption rationing, Egypt

JEL Classifications: D10, O10, O12.

ملخص

تؤثر إدارة المخاطر والحد من قابلية التأثر بالصدمات على رفاهية الأسر المعيشية ومرونة الاقتصادات. باستخدام جولتين من المسح التتبعي لسوق العمل في مصر (ELMPS)، 2018 و 2023، تدرس هذه الورقة أنواعاً مختلفة من الصدمات التي تعرضت لها الأسر خلال السنوات القليلة الماضية بالإضافة إلى التعرض لانعدام الأمن الغذائي. ويسلط الضوء على العوامل الهامة التي تسهم في المرونة ويحدد الفرص المتاحة لتعزيز الاستراتيجيات الفعالة لإدارة المخاطر. تسلط النتائج الضوء على زيادة ملحوظة في تعرض الأسر للصدمات، حيث ارتفعت من 16٪ في 2018 إلى 49٪ في 2023. الأسر التي أبلغت عن تعرضها للصدمات في عامي 2018 و 2023 هي في المقام الأول من أسر أفقر وأكبر، مما يشير إلى ضعف مزمن محتمل. وشهدت الأسر المعيشية الحضرية المزيد من الصدمات مقارنة بنظيراتها الريفية في عام 2023، مما يبرز الحاجة إلى استراتيجيات تعالج مواطن الضعف المحددة للأسر المعيشية الحضرية. وأبلغت الأسر المعيشية ذات الخمس العالية الثروة والتي يكون رباطها أكثر تعليماً أو يعملون في القطاع الرسمي عن زيادة قدرتها على التكيف مع الصدمات وانعدام الأمن الغذائي. وهذا يؤكد الدور الحاسم لتدابير الحماية الاجتماعية والفرص الاقتصادية في بناء القدرة على التكيف. تضمنت آليات التكيف بشكل أساسي تقنين الاستهلاك، مع انخفاض ملحوظ في الاعتماد على رأس المال الاجتماعي مقارنة بعام 2018. واجهت حوالي 40 في المائة من الأسر انعدام الأمن الغذائي في عام 2023، وكان أولئك الذين عانوا من صدمات اقتصادية أكثر عرضة لمعدلات أعلى من انعدام الأمن الغذائي المعتدل والشديد. وأفادت نسبة أعلى من الأسر المعيشية التي ترأسها إناث بانعدام الأمن الغذائي الشديد. إن توسيع نطاق الوصول إلى برامج التأمين الاجتماعي وضمان تغطيتها للعمال غير النظاميين/غير النظاميين يمكن أن يخفف بشكل أفضل من آثار الصدمات الاقتصادية والصحية، مما يضمن تأثيراً أقل استمراراً على انعدام الأمن الغذائي.

1. Introduction

From health diseases to geopolitical conflicts, the world has been recently exposed to compounded shocks and vulnerabilities. With the outbreak of the COVID-19 pandemic in February 2020 and the Russia-Ukraine conflict in February 2022, the world economies have been experiencing unprecedented challenges in mitigating the risks of these two major shocks. These crises have affected the structure of global trade and aggravated the threats of food insecurity, especially among net food importers such as the Egyptian economy.

These global shocks had a direct impact on international food shortages, intensified food insecurity and trapped more households into poverty (Giovanis and Ozdamar, 2021; Zaki et al., 2023). Egypt is one of the countries that faced economic challenges including high rates of inflation. Additionally, a series of currency devaluation and exchange rate adjustment, that started in March 2022, had affected the purchasing power of households and intensified financial constraints. Following an average of 33.6 percent in Fiscal Year (FY) 2024, up from 24.1 percent in FY2023, headline urban inflation decreased slightly but stayed elevated at 26.2 percent in August 2024. Meanwhile, food inflation reached 54.7 percent in FY2024 (World Bank, 2024).

Though households across all wealth quintiles were affected by these different shocks, poorer households were more likely to be exposed given their limited ability to mitigate the risks and protect their well-being. They are more vulnerable to food inflation as they spend a proportionally higher share of their budget on food products (Ha et al., 2019). Their susceptibility to shocks arises from their low incomes, limited ability to switch to cheaper alternatives, and lack of access to formal coping mechanisms or to a diverse set of financial assets. As inflation persists, poorer households tend to resort to detrimental coping strategies that negate efforts to reduce poverty.

Understanding the nature of shocks and identifying the determinants of vulnerability to shocks and food insecurity is therefore imperative to design interventions that prevent households from falling into poverty or resorting to stressful strategies that affect their resilience. Using two rounds of Egypt's Labor Market Panel Survey (ELMPS), 2018 and 2023, this paper examines different types of shocks experienced by households in Egypt over the past few years with a special focus on household's vulnerability to food insecurity. This paper sheds light on coping mechanisms that were adopted including changes in labor supply and food consumption.

The rest of this paper is organized as follows. Section 2 discusses the theoretical framework on vulnerability to shocks while section 3 highlights data and methods. Section 4 presents the results of the study and Section 5 concludes.

2. Vulnerability to shocks: background and theoretical framework

There are different types of shocks that affect households and weakens their resilience. First, there are three main classes of shocks: micro (or idiosyncratic) shocks that are explicit to individuals or households, such as the illness or sudden unemployment of a household member. The second type relates to meso-shocks that are specific to a group of households or communities, such as heavy rainfall or an epidemic. The third type is macro (or covariant) shocks that affect regions and nations like pandemics and economic shocks. Other dimensions of classification include the nature of the shock (environmental, political, social, economic, or health), its magnitude (global, regional, or subregional), and lifetime (short-lived, long-lived, or recurring) (Haq, 2015; Helmy and Roushdy, 2019; UN 2023). Covariant shocks tend to have a significantly greater impact on household consumption and vulnerability (Temesgen et al., 2022). Such shocks usually affect households through different interrelated channels and in different forms.

2.1. Transmission channels

The COVID-19 pandemic marked a significant global health shock that had immediate and profound implications on health systems, economies, and societies at large.³ As morbidity levels drastically increased, healthcare systems around the world were unprepared and overwhelmed by the number of cases they had to treat. This forced governments to redirect fundamental resources to alleviate the burden of the overloaded health system (Mandour, 2021; Upton et al., 2021). At the same time, the absence of universal healthcare systems in many developing countries meant that households faced substantial out-of-pocket expenses for medical care (ECA, 2022; Alam and Mahal, 2014).

One of the major channels through which the pandemic affected households' wellbeing and resilience is through disruptions in the labor supply and demand. These disruptions uniformly led to income loss and widespread temporary unemployment (Upton et al., 2021). This was particularly drastic among households of casual and informal workers who lack any job securities and usually rely on informal daily wages (ECA, 2022; Upton et al., 2021; Alam and Mahal, 2014).

Furthermore, the pandemic affected households' ability to access markets, specifically intensifying issues of food security (Castet and Ramadan, 2023). The shock hindered the flow of commodities and resulted in major delays in both global and local supply chains, disrupting the availability of goods in the market and incurring inflationary pressures (Gadallah and Mamdouh, 2023; ECA,

³ According to the ECA (2023), the pandemic resulted in around 15 million deaths worldwide.

2022).⁴ This was especially detrimental to households in food-importing communities as the availability and affordability to food became a major concern.

While the pandemic originated as a health crisis, precautionary measures to curb the spread of the virus have triggered widespread economic disruptions, affecting businesses, employment, and the livelihoods of households. For instance, in the wake of the pandemic's immediate repercussions, around 35.6 percent households across 34 developing countries suffered from job loss, and a majority, exceeding 60 percent, experienced a drop in income (Bundervoet et al., 2021). In the MENA region, it was estimated that around 10 million full-time jobs were lost during the pandemic (Giovanis and Ozdamar, 2021). In Egypt, the workforce was hit hard, with around 56 percent working reduced hours or days, 18 percent working irregularly, and 26 percent facing unemployment (Giovanis and Ozdamar, 2021). In Jordan and Egypt, 28 percent and 20 percent respectively reported income loss by more than 25 percent in February 2021 compared to the year before (El-Shal et al., 2022).

Subsequent geopolitical conflicts have disrupted trade flows and exacerbated inflationary pressures, disproportionately burdening the most vulnerable populations in food-importing nations.⁵ This increase in prices directly imposes on households' welfare. Consequently, households tend to witness their purchasing power diminish as elevated prices drive up the cost of essential goods and exacerbates their financial constraints by diminishing their real and disposable incomes (Zaki et al., 2023; ECA, 2022; Ha et al., 2019). Food and energy prices, in particular, tend to exhibit heightened volatility amidst such periods of rapid inflation. Even though households that are net sellers of food products can benefit from a rise in their real earnings in the face of the escalating food prices, price shock in such critical commodities intensify the strain on low-income families, who are net consumers of food products (Laborde et al., 2019).

2.2. Food security

Food security is a complex and multifaceted issue that is defined by four main dimensions: availability, access, utilization, and stability. These dimensions are interconnected and are all necessary to ensure food security for individuals and households. The Food and Agriculture Organization of the United Nations (FAO) defines food security as the state “when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”.

⁴ According to Castet and Ramadan (2023), the disruptions to global (and domestic) value chains and productive activities did not induce much pressure on food prices in MENA countries during the pandemic, when compared to other regions, due to the existing food subsidies and vital government support during the pandemic.

⁵ Wheat prices increased by around 60 percent in Africa since the start of the Russia-Ukraine conflict (Zaki et al., 2023).

During the pandemic, food security was affected by households' restricted access to food, whether physical (proximity to food) or economic access (having the financial means to purchase/afford food) (El-Shal et al., 2022; Castet and Ramadan, 2023). Research by Youssef and Prenaj (2022) highlighted that job-losers in Egypt, Tunisia, and Morocco were 14 percentage points more likely to struggle with affording food and 11 percentage points more likely to reduce meal consumption compared to those who retained their employment. In Egypt, around 44 percent of households reported a reduction in meal size or frequency due to income loss, higher food costs (43 percent), market scarcities (21 percent), and movement restrictions (10 percent) (Assaad et al., 2022). In Tunisia and Morocco, approximately half of the households reported decreased food intake, with around 70 percent of households in both countries experiencing income reductions (Krafft et al., 2022; Marouani et al., 2022).

With the onset of the Russia-Ukraine conflict, household's food security was affected by insufficient supply of food to meet the demands of the population (El-Shal et al., 2022; Castet and Ramadan, 2023). Unlike the pandemic, which had an uneven effect on the availability of food across countries,⁶ the consequences of the conflict have markedly affected the availability of main food staples (wheat, cereals, and grains) across the world. Food-importing countries in Africa and the MENA region were among some of the most impacted by this issue due to their high reliance on these commodities, mostly imported, in their consumption basket. For example, wheat, which dominates MENA's dietary intake, is heavily imported with approximately 50 percent of supply arriving from the two countries in conflict (Arafeh and Meddeb, 2024). A recent proxy to measuring the degree of a country's vulnerability to food imports (Food Import Vulnerability Index FIVI) showed that the MENA region's vulnerability to higher wheat prices ranges between medium to high.⁷ While GCC countries, Egypt, and Algeria were falling in the former category (scoring between 30 – 39 percent), other countries in the region scored between 40-49 percent, that is falling in the high vulnerability category.

With Russia and Ukraine responsible for more than a quarter of global wheat exports, Egypt represents a major arrival destination. In addition to other key agricultural products, Egypt imports around 80 percent of its wheat and sunflower oil from both countries (Tanchum, 2022). As previously witnessed in the 2008 global financial, food, and fuel crisis, the transmission of international food prices to inflation and living expenses in Egypt is highly affected especially due to its status as a net food importer (Abouleinein et al., 2010). In the beginning of 2022, Egypt

⁶ Some of the literature on food security during the pandemic suggest that the pandemic's effect on the availability dimension was more evident in high-income developing countries than low-income countries where the affordability pillar was more affected (Mandour, 2021). Castet and Ramadan (2023) also confirm this conclusion, affirming that the main issue that confronted the populations of Egypt, Jordan, Morocco, Sudan, and Tunisia was highly related to the affordability aspect of food security rather than the availability pillar.

⁷ The degree of each country's vulnerability depends on a number of factors, including: (i) the extent of the pass-through from international to local food prices, (ii) the availability of substitutes to the imported commodity, (iii) its importance to (poor) households' diet, (iv) the level of income and food security of the nation which generally reflects its resilience to food price shocks (Minot et al., 2024).

experienced a surge in food inflation, with year-on-year figures soaring to double digits,⁸ averaging around 20 percent between February and March 2022.⁹ This inflationary trend, derived by global shocks and exchange rate adjustment, peaked at 73.6 percent in September 2023¹⁰ and real food inflation standing at approximately 18 percent in January 2024.¹¹ Overall, it is important to note that food price inflation does not only undermine food security but also affects nutrition and health (FAO et al., 2023).

Linking the earlier discussion to the upcoming analysis, this paper aims to explore the changes in patterns of exposure to shocks and food insecurity among Egyptian households between 2018 and 2023, considering the global shocks previously mentioned.

3. Data and Methods

This paper uses data from the Egyptian Labor Market Panel Survey (ELMPS) in 2018 and 2023 (OAMDI 2023). The 2023 wave included 17,806 households (70,716 individuals). The survey tracks households and individuals that were previously interviewed in 2018 and adds a refresher sample of households in 2023. ELMPS 2023 collected information on a variety of individual and household characteristics, including employment, sources of household income, skills, health, education, job characteristics, marriage, and fertility (see Assaad & Krafft, 2024 for more details). Moreover, similar to the previous wave in 2018, the survey included a module on exposure to food insecurity and shocks during the year preceding the survey.

The exposure to shocks module in the 2023 wave begins with questions about households' experiences of food insecurity during the year leading up to the ELMPS interview. This differs from the 2018 wave, which used a shorter recall period of one month before the interview. Additionally, the 2023 questions employed a new metric developed by the Food and Agriculture Organization (FAO): the Food Insecurity Experience Scale (FIES). This scale is based on respondents' answers to eight questions that reflect varying levels of food insecurity severity, ranging from mild to moderate and severe (FAO, 2017). Unlike 2018, the 2023 round did not include questions on frequency-of-occurrence. Hence, we were not able to develop and analyze the food insecurity access scale score following Coates, Swindale and Bilinsky (2007).

⁸ According to Tanchum (2022), the price of wheat and sunflower oil immediately increased by around 44 percent and 32 percent.

⁹ World Bank – Food Security Update series starting from November 2022 to February 2024 Source: <https://www.worldbank.org/en/topic/agriculture/brief/food-security-update>

¹⁰ Food inflation in Egypt reached a new peak in September 2023 based on CAPMAS and CBE official data, breaking what was a record high of around 30-35 percent during the 2008 crisis (Abouleinein et al., 2010). Source: https://www.cbe.org.eg/-/media/project/cbe/listing/publication/2023/september/in_september_2023_en---final.pdf

¹¹ Real food inflation is measured based on year-on-year change in the overall CPI. It is calculated by subtracting food inflation from overall inflation. Source: <https://www.worldbank.org/en/topic/agriculture/brief/food-security-update>.

Similar to 2018, the second part of the module focuses on households' exposure to shocks in the year before the interview. These shocks include health-related events (such as high levels of human disease, serious illness or accidents, and death), environmental events (like droughts and water shortages), and economic events. In 2023, the economic events introduced an additional item that is 'increased prices of food and other necessities,' while retaining other factors from the 2018 questionnaire such as loss of employment, reduced income, and high costs of agricultural inputs. Accordingly, in our analysis, we group shocks into three main categories: economic, environmental, and health. In addition, the survey enquired about various formal and informal coping mechanisms (Annex I). Descriptive analysis is used to analyze the data in this paper.

To clarify the dynamics of shock exposure and coping mechanisms, this paper provides a comparative analysis. We will specifically compare cross-sectional data from 2018 and 2023, emphasizing the changes in the types of shocks experienced by households and the coping strategies they adopted in each year. Additionally, we will analyze panel data to track changes in shock exposure over time, providing insights into evolving trends.

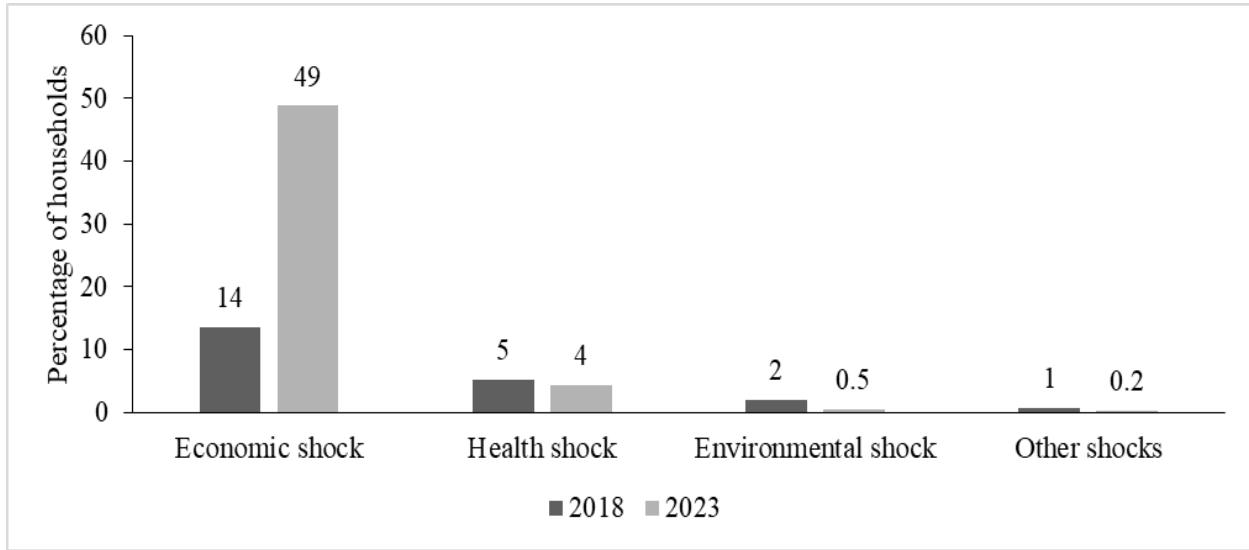
4. Results

This section is divided into three main parts. The first part examines the different types of shocks encountered, the characteristics of households exposed to these shocks, and coping mechanisms employed. The second part delves into experiencing food insecurity, highlighting the characteristics of households that reported food insecurity and their coping strategies. Additionally, the characteristics of food-secure households and those who were resilient to different types of shocks are highlighted. The third part discusses exposure of households to shocks in 2018 and 2023 using panel data.

4.1. Shocks experienced by Egyptian households

While 16 percent of the Egyptian households were exposed to at least one type of shock in the year preceding the 2018 survey, this number increased to around 50 percent in the year preceding the ELMPS survey in 2023. Experiencing an economic shock was the most common type of shock in both 2018 and 2023 (Figure 1). However, while only 14 percent of households encountered such a shock in 2018, by 2023, this figure has increased to 49 percent of households, reflecting the effect of the global and national economic shocks detailed in Section 2 of this paper. For instance, exposure to shocks in 2023 would decrease remarkably to 6 percent of households, excluding the effects of increased food price sub-shock. About 4 percent of households reported health shocks in 2023, that is almost similar to 2018 standing at 5 percent. Less than 1 percent reported environmental or other shocks in 2023, down from 3 percent in 2018 (Figure 1).

Figure 1. Percentage of households who were exposed to shocks during the year preceding the survey, by wave and type of shock (2018-2023)

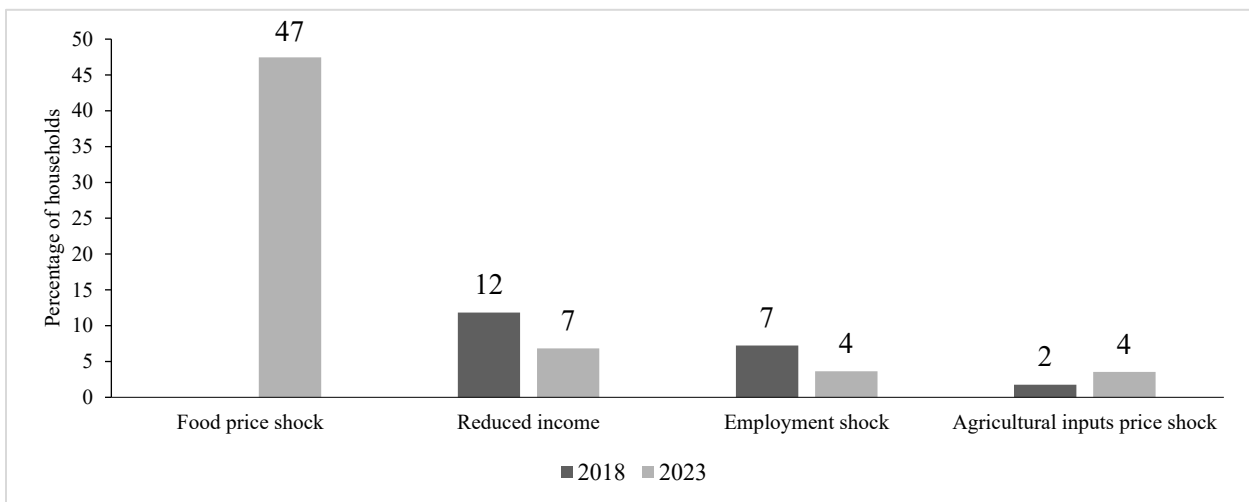


Notes: Multiple shocks are possible. N=15,746 in 2018 and N=17,783 in 2023.

Source: Authors' calculation based on ELMPS 2018 and 2023.

In 2023, the most prevalent types of economic shocks among Egyptian households, as shown in Figure 2, were exposure to high prices of food and other necessities (47 percent) followed by reduced income (7 percent), loss of employment and higher prices of agriculture inputs (4 percent). Health shocks varied slightly between exposure to serious human disease (2 percent), death of household member/head (2 percent) and accidents (1 percent).

Figure 2. Percentage of households who were exposed to different economic shocks during the year preceding the survey, by type of economic shock (2018-2023)

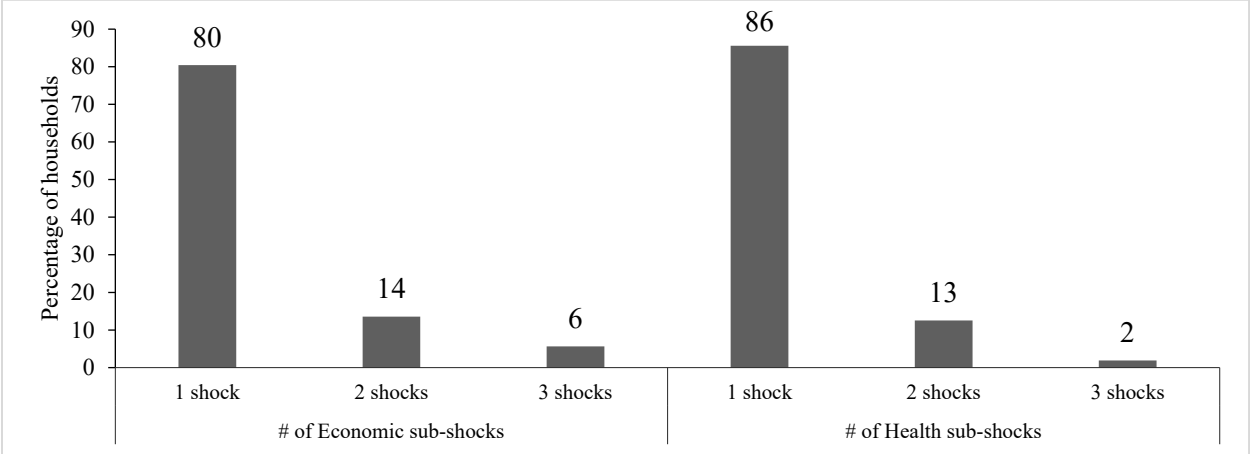


Notes: Multiple economic shocks are possible. N=2,358 in 2018 and N=8,706 in 2023. The 2018 questionnaire did not include 'increased food prices' among types of economic shocks.

Source: Authors' calculation based on ELMPS 2018 and 2023.

To assess the extent of households’ exposure to multiple shocks, the majority of households who encountered shocks experienced only a single shock that is an economic shock (90 percent), with fewer households facing multiple shocks simultaneously, namely 7 percent experiencing both a health and an economic shock (Figure A1). Figure 3 also shows that among households who were exposed to an economic shock, 80 percent experienced only one type of economic shock. Around 14 percent experienced two economic shocks simultaneously, and 6 percent were exposed to three. A similar pattern emerged among households experiencing health shocks: around 86 percent were exposed to one type of health shock while 13 percent were exposed to two health-related shocks (Figure 3).

Figure 3. Percentage of households who experienced one, two, or three or more shocks during the year preceding the survey, among those exposed to a shock in 2023

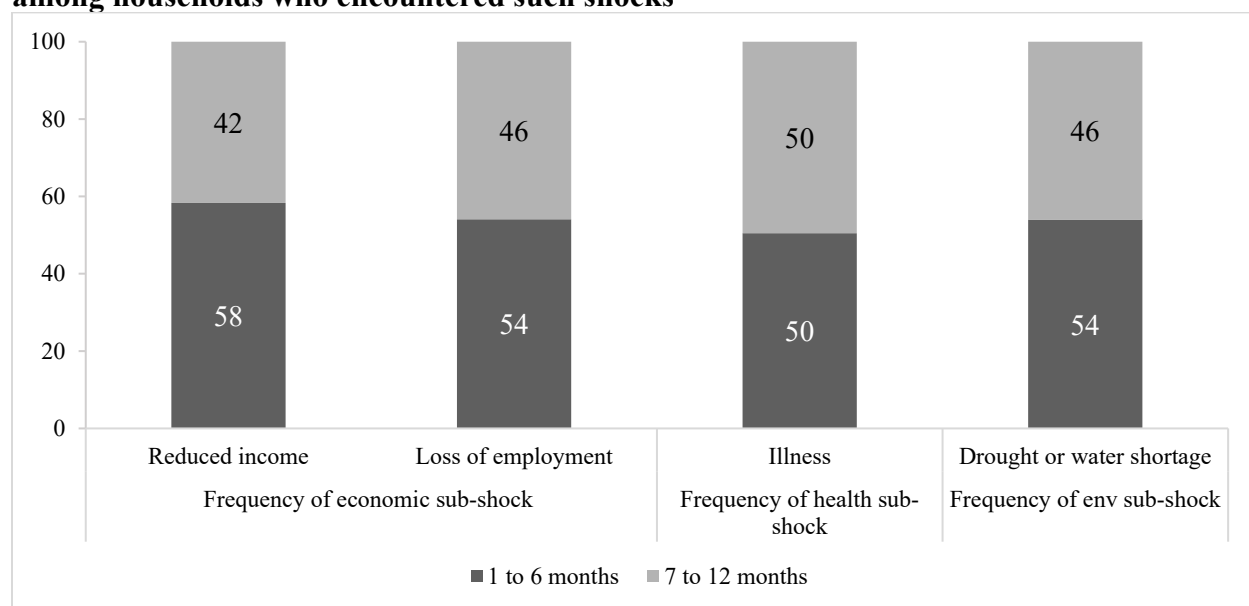


Notes: N=8,706 for economic shocks and N=800 for health shocks.

Source: Authors’ calculation based on ELMPS 2023.

For selected types of shocks, shown in Figure 4, the survey enquired about how long the shock has affected households. The results indicated that half of households affected by a serious illness or accident in the year preceding the survey experienced a prolonged impact lasting from 7 to 12 months, whereas the other half reported being affected for 1 to 6 months. In contrast, households affected by reduced income typically reported a shorter duration of the shock of one to six months (58 percent), relative to other shocks.

Figure 4. The distribution (in percentage) of the duration of exposure to selected economic or health shocks experienced by households during the year preceding the survey in 2023, among households who encountered such shocks



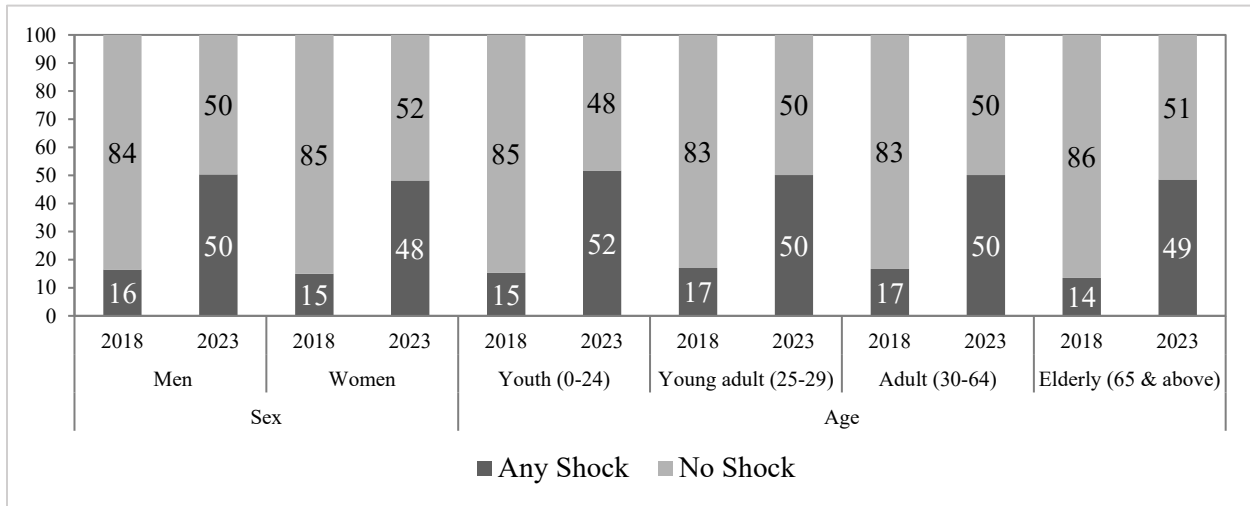
Notes: N=1,438 for reduced income shock, N=770 for loss of employment, N=256 for serious illness and N=102 for drought and water shortage shocks.

Source: Authors' calculation based on ELMPS 2023.

4.2. Determinants of exposure to shocks

Exposure to shocks in 2023 was widespread, with certain demographic groups being particularly vulnerable. Notably, households headed by individuals who are younger than 25 years old in 2023 were more likely to experience shocks in 2023, with 52 percent reporting exposure (Figure 5). In contrast, in 2018, youth-headed households were 2 percentage points (p.p.) less likely to be face shocks compared to those headed by adults aged 30-64 or young adults aged 25-29. Similarly, as in 2018, vulnerability to shocks varied slightly by the sex of the household head, as male-headed households were 2 p.p. more likely (50 percent) to experience shocks compared to female-headed households (48 percent) (Figure 5).

Figure 5. Percentage of households who experienced any type of shock during the year preceding the survey, by age and sex of household head (2018-2023)

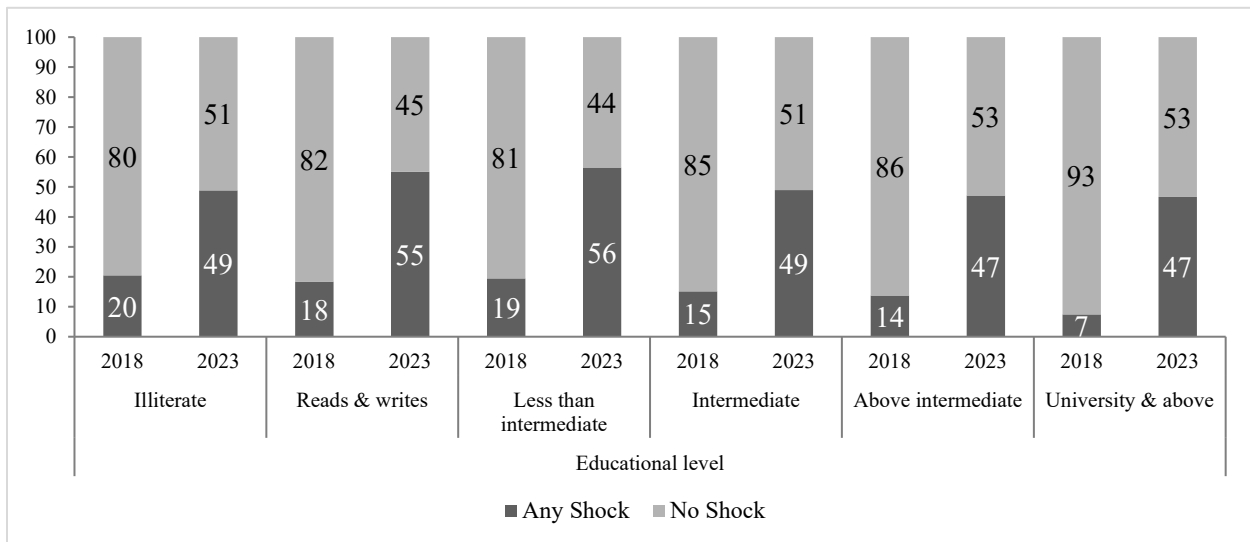


Notes: Multiple shocks are possible. N= 15,746 in 2018 and N=17,783 in 2023.

Source: Authors' calculation based on ELMPS 2018 and 2023.

Households whose head had an education level below the intermediate level or who were only able to read and write were the most susceptible to experience shocks in 2023, with 56 and 55 percent reporting such exposure, respectively (Figure 6). While attaining a university degree by the household head's parents was associated with lower exposure to shocks in 2018, it had little association with reported shocks in 2023 (Figures A2 and A3).

Figure 6: Percentage of households who experienced any type of shock during the year preceding the survey, by the education level of household head (2018-2023)

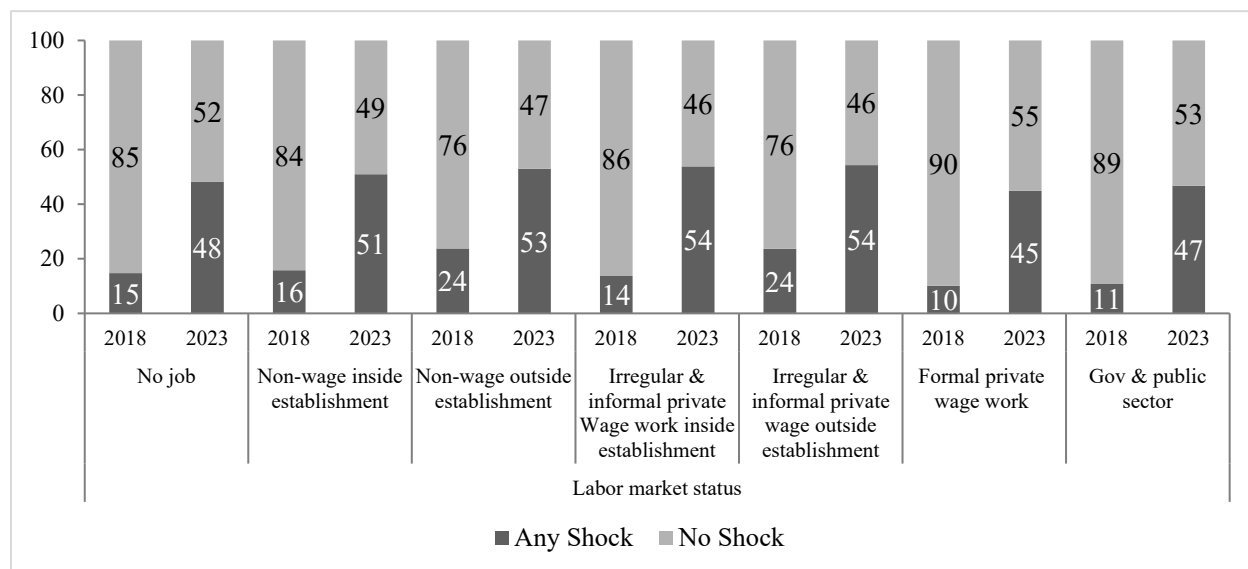


Notes: Multiple shocks are possible. N= 15,746 in 2018 and N=17,783 in 2023.

Source: Authors' calculation based on ELMPS 2018 and 2023.

The labor market status of the household head appears to play a role in the household’s exposure to shocks. We distinguish between different labor market statuses including no job (out of labor force or unemployed), non-wage inside establishment, non-wage outside establishment, irregular & informal private wage work inside establishment, irregular & informal private wage outside establishment, formal private wage work, government & public sector. In 2023, exposure to shocks was around substantially higher among households whose heads worked as irregular or informal private sector wage workers inside or outside of establishments (at 54 percent) or non-wage work outside of establishments (at 53 percent) than among households whose heads were in the formal private wage work (at 45 percent) or those working at government or public sector (at 47 percent) (Figure 7). Households with heads working in formal private wage employment remain the least exposed to shocks across both waves.

Figure 7. Percentage of households who experienced any type of shock, by the labor market status of the household head (primary job- work definition) (2018-2023)



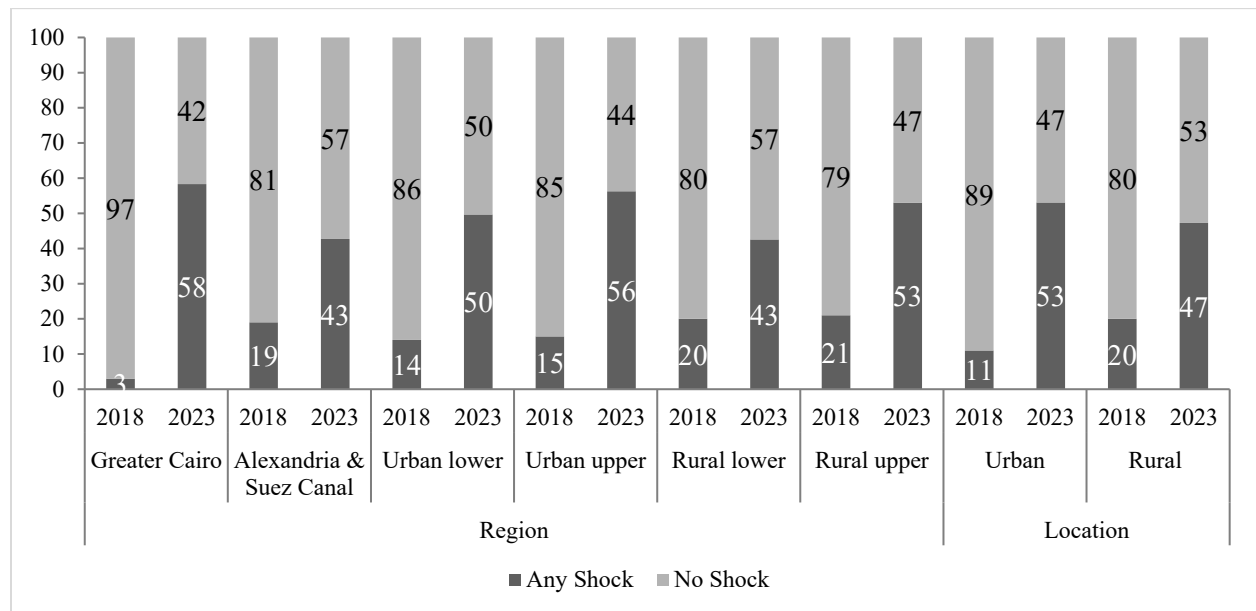
Notes: Multiple shocks are possible. N= 15,746 in 2018 and N=17,783 in 2023.

Source: Authors’ calculation based on ELMPS 2018 and 2023.

A different regional pattern was noticed between 2018 and 2023. In 2018, exposure to shocks was higher in rural areas, including rural Upper Egypt (21 percent) and rural Lower Egypt (20 percent), followed by Alexandria and Suez Canal cities (19 percent). In 2023, exposure to shocks was higher by 6 p.p. in urban areas (53 percent) compared to rural areas (47 percent). Accordingly, households residing in Greater Cairo (58 percent) were the most exposed to shocks in 2023 followed by urban Upper Egypt (56 percent) (Figure 8). Overall, our findings suggest that, in 2023, poor households residing in urban areas could have been more affected by the recent economic shocks compared to the poor in rural areas. This is despite the fact that the average rate of inflation in 2022 was higher in rural areas (16 percent) compared to urban areas (14 percent). One potential explanation for the

higher exposure to economic shocks in urban areas is the greater reliance of rural households on subsistence farming and self-production. This reliance can buffer rural households against fluctuations in the market, thereby reducing their vulnerability to economic shocks compared to urban households. Another potential factor could be related to the larger reach of non-contributory cash transfers (Takaful and Karama) and social assistance programs, food smart cards to poor households in rural areas which might have slightly cushioned the effect of recent shocks relative to their urban counterparts (Figure A4). Further investigation is needed to understand the various factors that contribute to the reduced exposure to shocks in rural areas. Analyzing the dynamics of these protective measures will provide valuable insights into how rural households manage economic challenges compared to their urban counterparts.

Figure 8. Percentage of households who experienced any type of shock, by households' location and the region of residence (2018-2023)

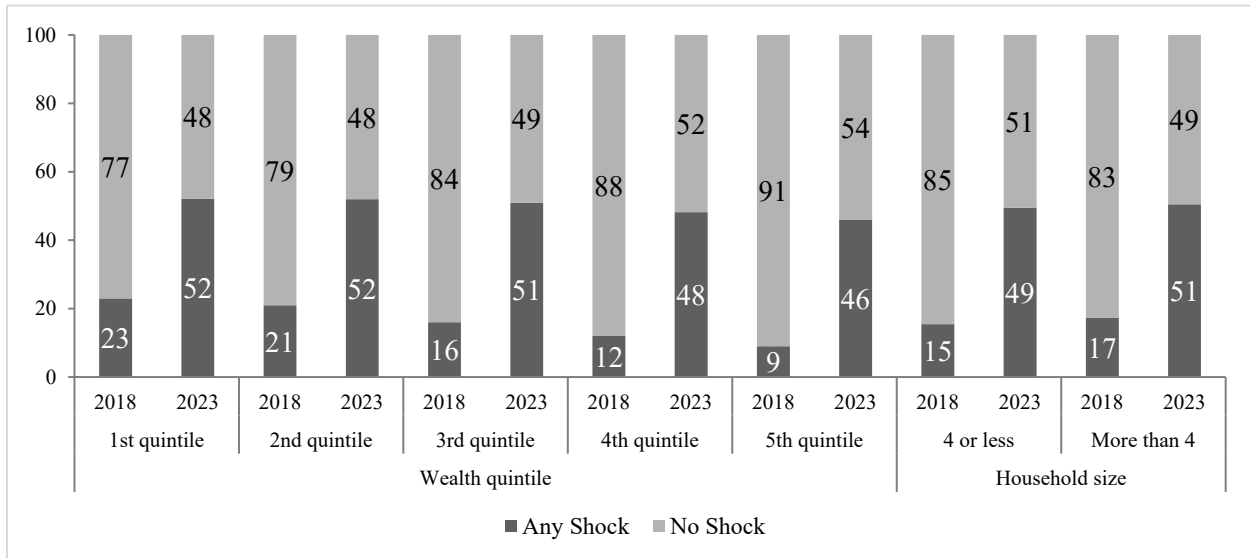


Notes: Multiple shocks are possible. N= 15,746 in 2018 and N=17,783 in 2023.

Source: Authors' calculation based on ELMPS 2018 and 2023.

Households in the first (poorest) wealth quintile were consistently more likely in both 2018 and 2023 to experience a shock in the preceding year, compared to those in the fourth and fifth wealth quintiles (Figure 9). Nevertheless, these results are associations and not causations, because of the potential endogeneity between exposure to shocks and household wealth status.

Figure 9. Percentage of households who experienced any type of shock, by wealth quintile and household size (2018-2023)



Notes: Multiple shocks are possible. N= 15,746 in 2018 and N=17,783 in 2023.

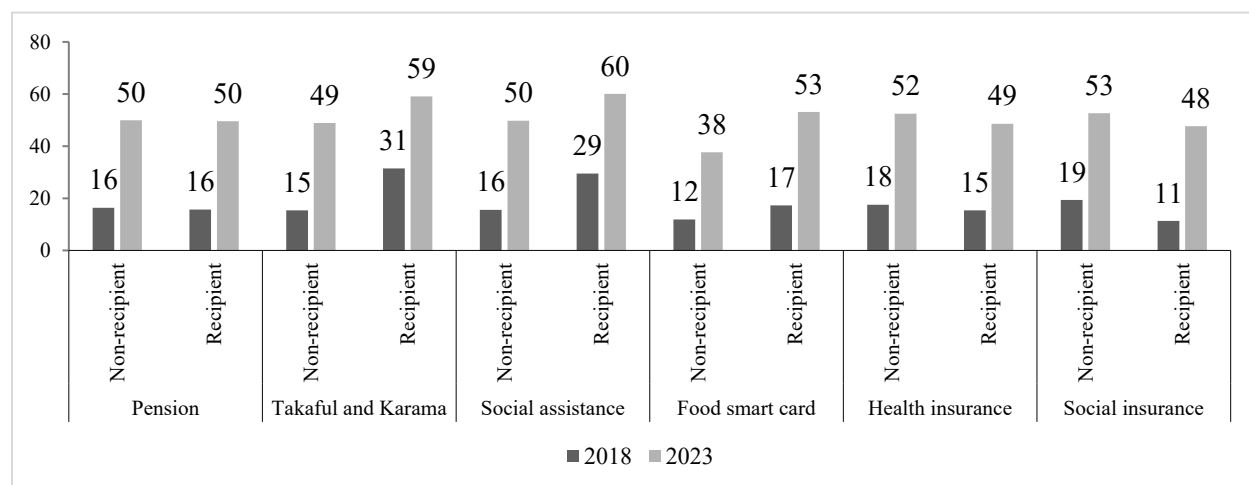
Source: Authors' calculation based on ELMPS 2018 and 2023.

Exploring the exposure to shocks by social protection coverage status, Figure 10 shows that households with at least one member receiving non-contributory cash transfers (whether Takaful or Karama, or other forms of social assistance¹²) reported higher exposure to shocks compared to households without such benefits. Specifically, in 2023, households receiving Takaful, Karama or other non-contributory cash transfers¹³ in 2023 were 10 p.p. more likely to experience shocks (at 59 and 60 percent, respectively) than non-recipient households (49 and 50 percent, respectively). This is likely because households receiving non-contributory cash transfers are already among the poorest and most vulnerable, thus making them more susceptible to shocks. While this pattern is consistent with trends observed in 2018, the gap in exposure to shocks between recipient and non-recipient households of non-contributory transfers was much wider in that year. In 2018, the rate of exposure to shocks among households receiving non-contributory transfers was nearly double that rate of non-recipient households (29-31 percent vs. 15-16 percent). By 2023, however, the gap had narrowed substantially, with shock exposure among non-recipients rising sharply to nearly 50 percent, closing the gap between the two groups. Similar results are observed for households who have food smart cards who were 15 p.p. more likely in 2023 to report being exposed to shocks (53 percent) than those who do not have those cards. In contrast, households with at least one member with health insurance coverage or social insurance coverage (i.e., working in a formal job according to the 21st ICLS (ILO, 2023)) appear to be more resilient to experiencing a shock in the year preceding the survey, in both 2018 and 2023.

¹² For more details on social protection programs and their distribution, please check Selwaness, I., & Sholkamy, H. (2024). The Evolution of Social Protection in Egypt, 2006-2023. *Economic Research Forum Working Paper Series (Forthcoming)*.

¹³ Other non-contributory social assistance includes untargeted cash transfers received from government (like Daman) and from non-governmental organizations (NGOs).

Figure 10. Percentage of households who experienced shocks during the year preceding the survey, by social protection coverage (2018-2023)



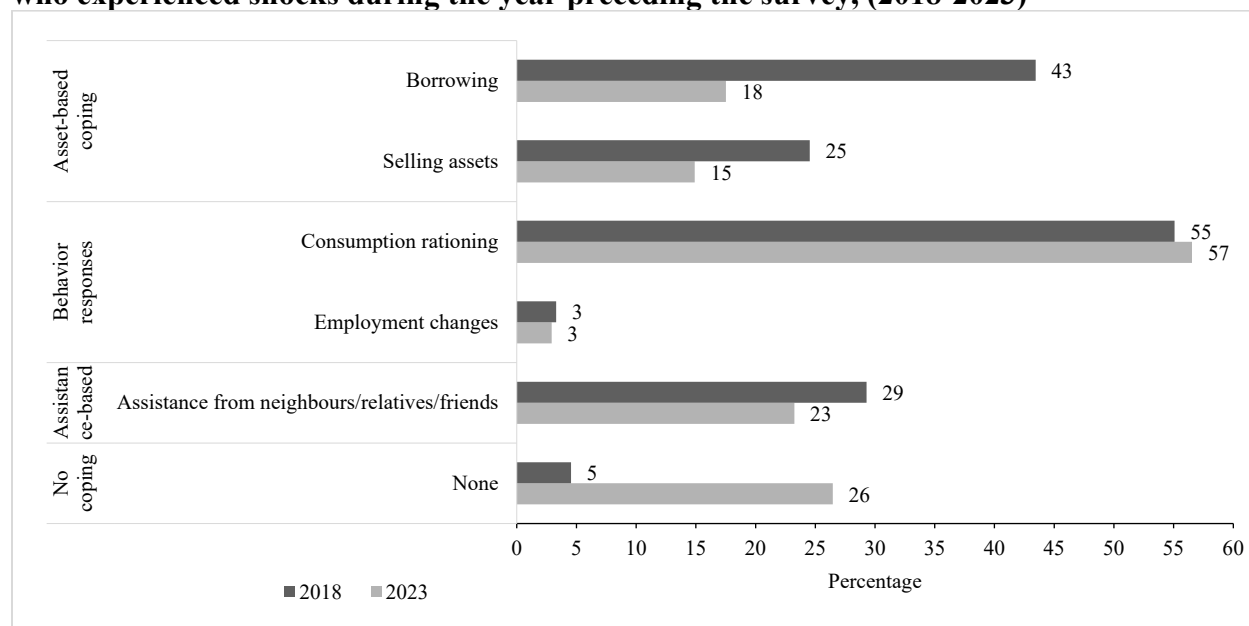
Notes: Coverage for at least one member. In 2018, N=3,631 for pension; 958 for T&K; 707 for social assistance received from government (other than T&K) or NGOs; 12,679 for food ration cards; 9,421 for health insurance; 3,971 for social insurance. In 2023, N=4,467 for pension; 2,009 for T&K; 187 for social assistance; 14,020 for food ration cards; 11,496 for health insurance; 4,135 for social insurance.

Source: Authors' calculation based on ELMPS 2018 and 2023.

4.3. Coping mechanisms

This section sheds light on how households responded to shocks and how their response varies by household characteristics. The percentage of households who did not respond to shocks by using any coping mechanism has remarkably increased from 5 percent in 2018 to 26 percent in 2023. Similar to 2018, the most common coping mechanism, reported by more than half of the households exposed to shocks, was consumption rationing, accounting for 57 percent in 2023 (Figure 11). Eating less food increased to 69 percent of households who experienced shocks in 2023 compared to 37 percent in 2018. On the other hand, reducing spending on health and education as a mechanism to cope with shocks decreased from 39 percent (24 percent) in 2018 to 25 percent (15 percent) in 2023 (Figure A5). Additionally, reliance on social capital was an important safety net for Egyptian households, with around 23 percent seeking assistance from relatives/friends and non-governmental organizations in response to a shock (Figure 11). Nevertheless, reliance on social capital has decreased compared to 2018 where 29 percent of households reported such coping mechanism. Similarly, households relied more on borrowing (43 percent) and selling assets (25 percent) in 2018 than in 2023 (18 percent and 15 percent, respectively) indicating more limited options of coping mechanisms in 2023.

Figure 11. Percentage of households using different coping mechanisms among households who experienced shocks during the year preceding the survey, (2018-2023)

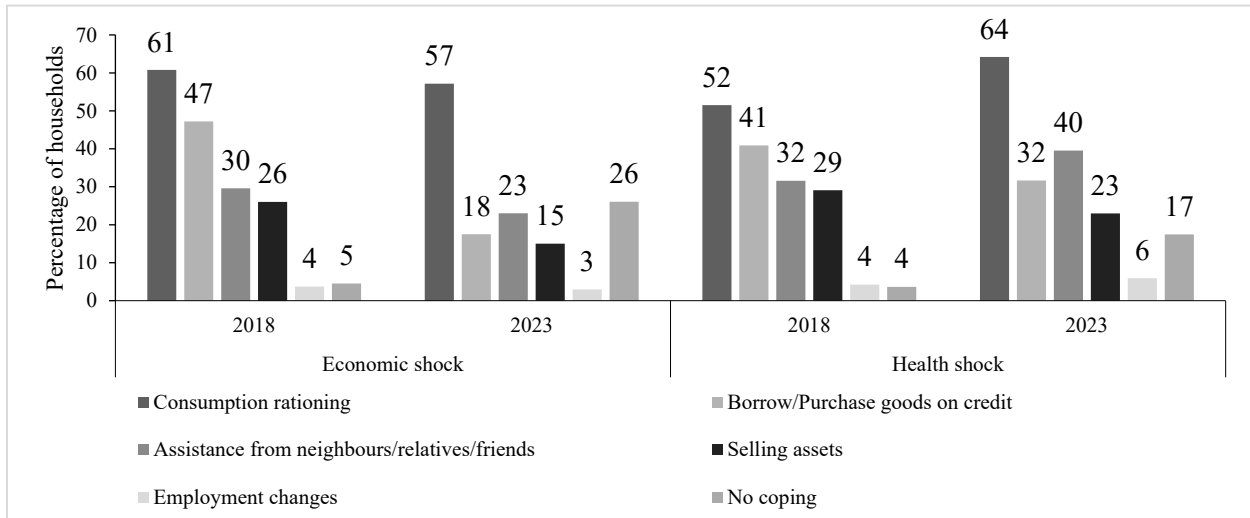


Notes: Multiple strategies are possible. N= 2,723 in 2018 and N=8,887 in 2023.

Source: Authors' calculation based on ELMPS 2018 and 2023.

The pattern of coping strategies by type of shocks is different across the two waves. Specifically, in 2018, consumption rationing followed by borrowing/ purchasing on credit and receiving assistance were the two most common strategies regardless of the type of shock households endured (Figure 12 and Figure 13). In 2023, coping strategies differed according to the type of shock. For instance, households exposed to economic and health shocks, reduced food and non-food consumption as a coping strategy, followed by assistance (Figure 12). On the other hand, to cope with environmental and other shocks, households relied more on consumption rationing followed by borrowing and selling assets including livestock than receiving assistance from social capital (Figure 13).

Figure 12. The rate of using different coping mechanisms among households who experienced shocks during the year preceding the survey, by type of shock (2018-2023)

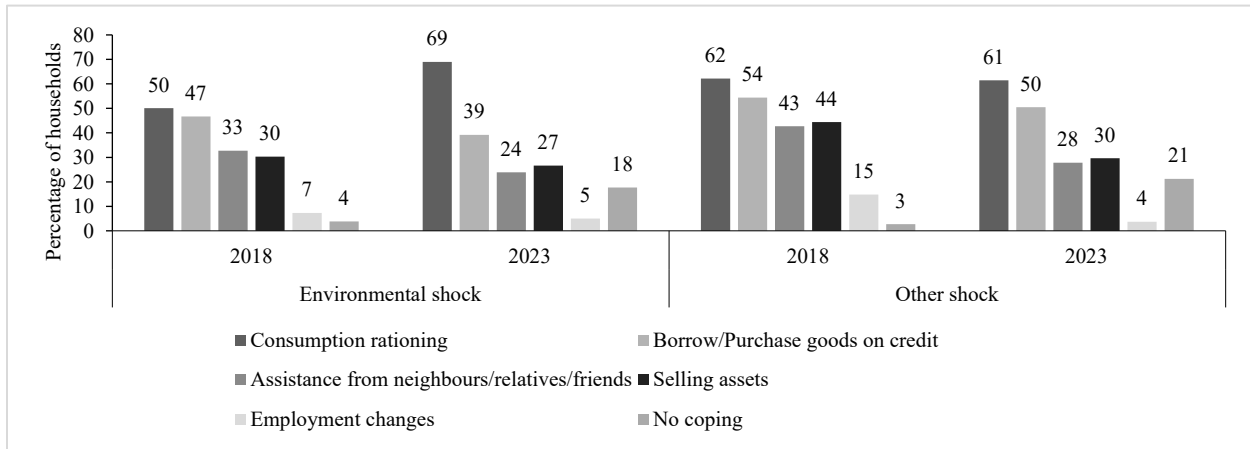


Notes: Multiple shocks and strategies are possible. In 2018, N=2,358 for economic shock and N=805 for health shock. In 2023, N=8,706 for economic shock and N=800 for health shock.

Source: Authors' calculation based on ELMPS 2018 and 2023.

In 2023, approximately 26 percent of households exposed to economic shocks reported not utilizing any coping strategies (Figure 12). Notably, a higher percentage among households led by individuals with a university degree or higher, 37 percent, reported not using coping mechanisms (Figure 14). Similarly, 34 percent of households in the highest wealth quintile (Figure 15), 31 percent of those employed in the government or public sector (Figure A6), 30 percent of those covered by insurance schemes, and 29 percent of pension recipients also indicated a lack of coping strategies despite facing shocks (Figure 16). These findings could be indicating a potentially lower effects of shocks on better-off households. On the other hand, among households in the lowest wealth quintile, around 21 percent reported not employing coping strategies, while 25 percent in the second wealth quintile indicated the same (Figure 15). This could reflect their limited capacity to respond to different types of shocks.

Figure 13. The rate of using different coping mechanisms among households who experienced shocks during the year preceding the survey, by type of shock (2018-2023)

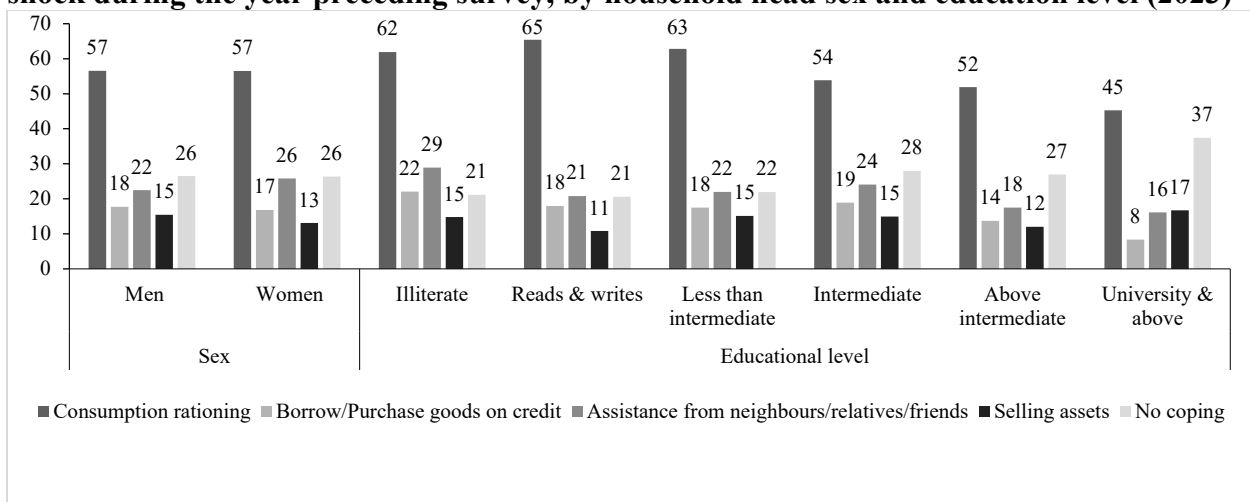


Notes: Multiple shocks and strategies are possible. In 2018, N=314 for environment shock and N=120 for social shock. In 2023, N=109 for environment shock and N=51 for other shocks.

Source: Authors' calculation based on ELMPS 2018 and 2023.

Our findings also indicate that receiving assistance was more frequently reported by female headed households (25 percent) than by male headed households (22 percent). On the contrary, borrowing was very slightly higher among male headed households (Figure 14). As education level increased, households relied less on consumption rationing and more on selling assets. Similarly, households pertaining to the fourth and fifth wealth quintiles tend to favor selling assets over both consumption rationing and borrowing; with these two strategies being more commonly used among the bottom two quintiles (Figure 15).

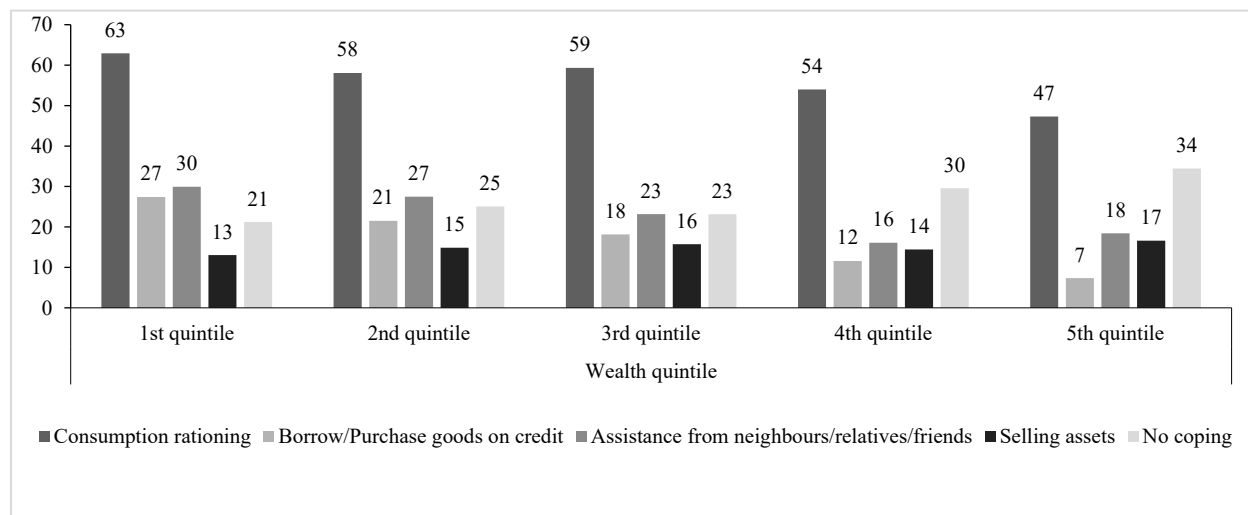
Figure 14. Percentage of households using different coping mechanisms after experiencing a shock during the year preceding survey, by household head sex and education level (2023)



Notes: Multiple strategies are possible. N=8,887.

Source: Authors' calculation based on ELMPS 2023.

Figure 15. Percentage of households using different coping mechanisms after experiencing a shock during the year preceding survey, by household wealth quintiles (2023)

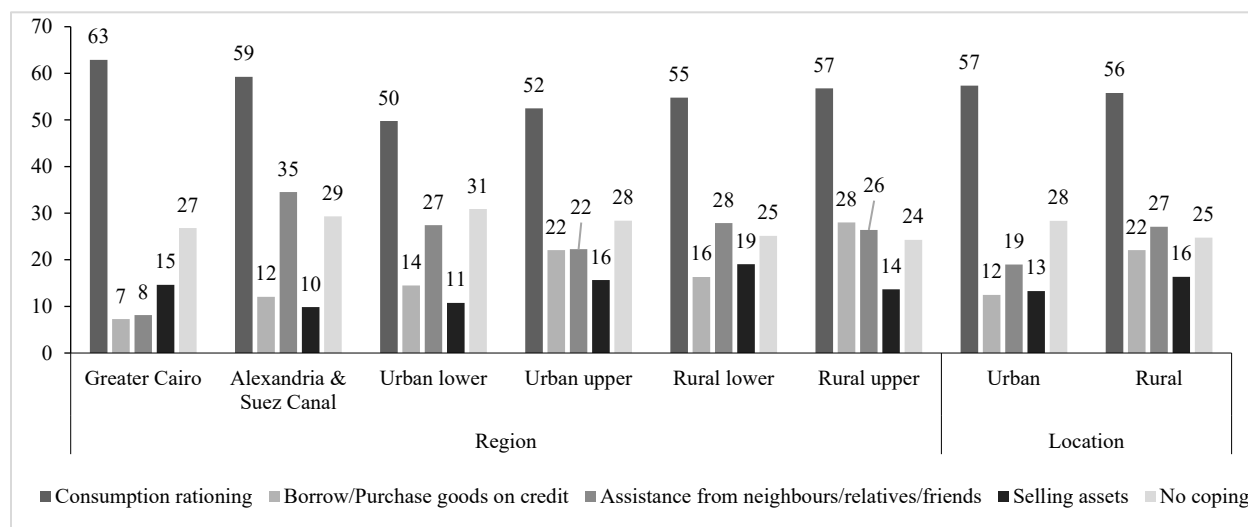


Notes: Multiple strategies are possible. N=8,887.

Source: Authors' calculation based on ELMPS 2023.

The pattern of coping strategies also varies substantially by household location. For instance, households in Greater Cairo relied more often on reducing consumption which signals the potential severe outcomes of reduced consumption in this urban region. Households in rural Upper Egypt relied more on borrowing/purchasing goods on credit which reflects the different nature of regions (Figure 16).

Figure 16. Percentage of households using different coping mechanisms after experiencing a shock during the year preceding survey, by location and region (2023)

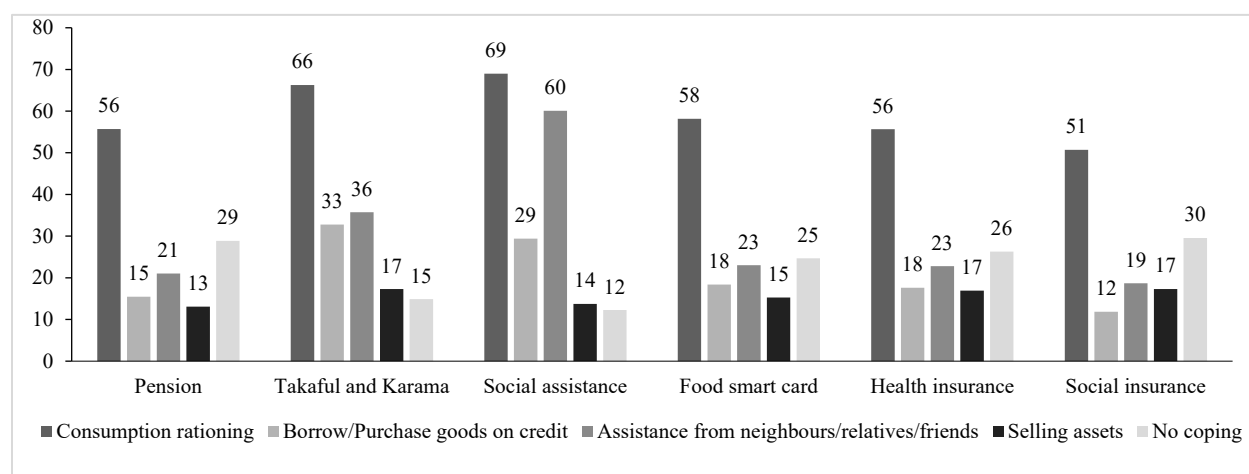


Notes: Multiple strategies are possible. N=8,887.

Source: Authors' calculation based on ELMPS 2023.

While the general pattern of coping mechanisms remained the same across recipients of different types of social protection program, consumption rationing was highly reported among those receiving non-contributory schemes including social assistance (69 percent) and Takaful and Karama (66 percent) indicating they are most vulnerable households targeted by these programs. Similarly, this coping mechanism is less used among those covered by social insurance or receiving pension (Figure 17).

Figure 17. Percentage of recipient households using different coping strategies after experiencing a shock during the year preceding survey, by type of social protection (2023)



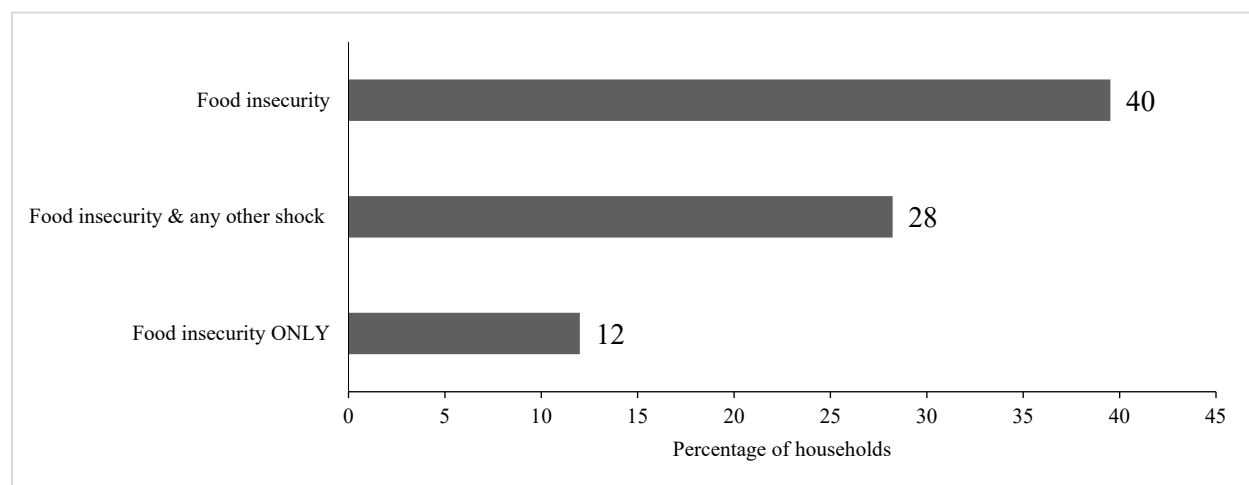
Notes: Multiple strategies are possible. Coverage for at least one member. N=2,200 for pension; 1,205 for T&K; 112 for social assistance; 7,390 for food ration cards; 5,689 for health insurance; 2,019 for social insurance.

Source: Authors' calculation based on ELMPS 2023.

4.4. Food insecurity

In the year preceding the survey interview in 2023, approximately 40 percent of households experienced some form of food insecurity (Figure 18). The percentage drops to around 12 percent if households experienced food security alone, without any other types of food shocks. When comparing the results to 2018, it is crucial to take into consideration the different reference periods and questions structure in the two waves of the survey that hinder a direct comparison due to using changed scales. However, a notable increase in food insecurity among Egyptian households is evident between both periods. In 2018, around 25 percent of households experienced some form of food insecurity during the month preceding the survey. About 15 percent specifically experienced anxiety or uncertainty about food supply, 24 percent had insufficient quality of food, and 13 percent had insufficient food intake.

Figure 18. Percentage of households who experienced food insecurity during the year preceding the survey in 2023



Notes: Multiple domains are possible. N=17,783.

Source: Authors' calculation based on ELMPS 2023.

4.4.1. Food insecurity experience scale (FIES)

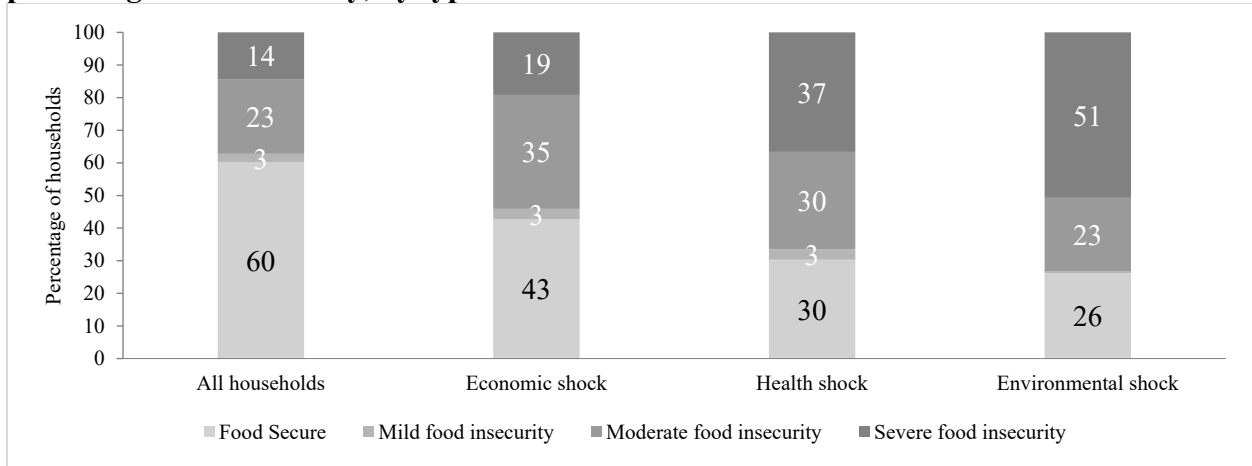
The Food Insecurity Experience scale discussed in this section assigns each respondent a raw score between zero and eight based on the sum of affirmative responses given to the eight questions included in the survey. The scale allows for the classification of respondents into different levels of food (in)security ranging from food secure to mild, moderate and severe food insecurity categories. Households experiencing mild food insecurity were worried about running out of food while moderate food insecure households compromised on food quality, reduced quantities, or even skipped meals. In contrast, those facing severe food insecurity experienced hunger and went without eating for at least an entire day due to the lack of money or other resources to obtain food.

The findings indicate that the majority of Egyptian households (60 percent) were food secure, reporting a raw score of zero, in the year preceding the survey in 2023. The average score is 2 and the mode score for food insecure households is 3 (Figure A7). The classification of food insecure households into categories of food insecurity shows that 3 percent of households reported mild food insecurity while 23 percent reported moderate level of food insecurity and 14 percent were severely insecure (Figure 19).

Food insecurity was much higher among households who experienced economic shocks. Figure 20 indicate that around 57 percent of households who experienced economic shocks experienced some form of food insecurity in the year preceding the survey in 2023 (35 were moderately food insecure while 19 percent experienced severe food insecurity). Households who were exposed to a health shock or an environmental shock were substantially more food insecure than households experienced an economic shock (70 percent and 74 percent, respectively). Specifically, around 37

percent of households experiencing a health shock and 51 of those experiencing an environmental shock suffered severe food insecurity in 2023 (Figure 19).

Figure 19. Distribution (in percentage) of degrees of food insecurity based on the classification of FIES, among all households and those who experienced shocks in the year preceding the 2023 survey, by type of shock

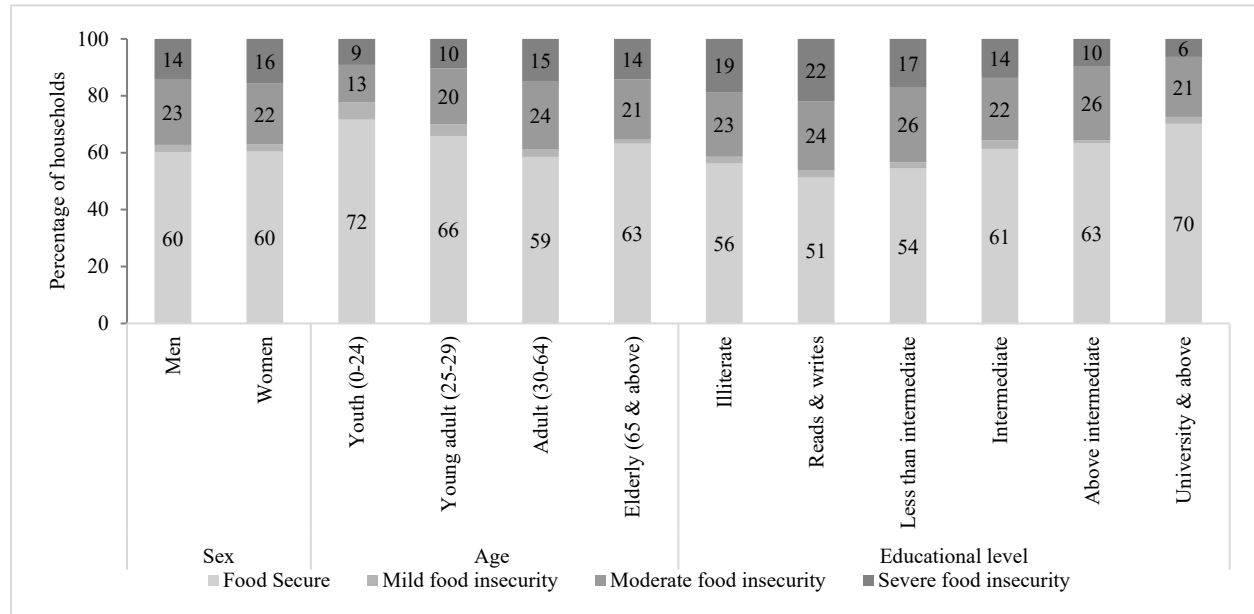


Notes: N=8,577 for economic shocks, N=786 for health shocks, and N=106 for environmental shocks.

Source: Authors' calculation based on ELMPS 2023.

Exploring the characteristics of households experiencing the different degrees of food insecurity also provides valuable insights. Figure 20 shows comparable results between male and female headed households with a slightly higher rate of severe food insecurity reported by female heads (16 percent) compared to male heads (14 percent). Moderate and severe food insecurity was highest among households headed by adults aged 30-64 years and elderly aged 65 and above. Expectedly, it largely decreases with the household head's educational attainment. For instance, 19 percent of households with illiterate heads had reported severe food insecurity compared to 6 percent of households whose heads had university or above education.

Figure 20. Distribution (in percentage) of degrees of food insecurity (based on the classification of FIES) during the year preceding the survey in 2023, by household head characteristics

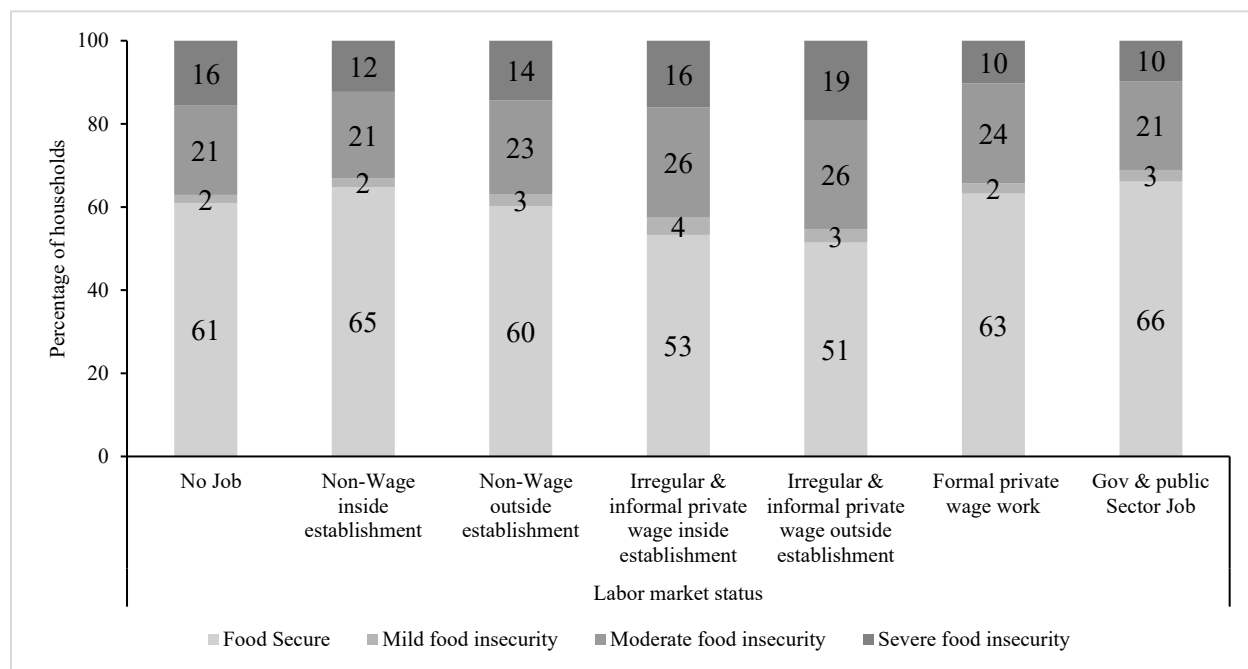


Notes: N=17,475.

Source: Authors' calculation based on ELMPS 2023.

Food insecurity is affected by labor market status of household head (Figure 21). Around half of households whose heads had an irregular or informal private waged job inside or outside of establishments reported a degree of food insecurity, as opposed to 34 to 37 percent of households whose heads held a formal private wage job or work in government or public sector. Specifically, only 10 percent of the latter reported severe insecurity, compared to 19 percent of households whose heads worked in irregular or informal private wage work outside of establishments.

Figure 21. Distribution (in percentage) of degrees of food insecurity (based on the classification of the FIES) during the year preceding the survey in 2023, by labor market characteristics of the head of household (primary job- work definition)

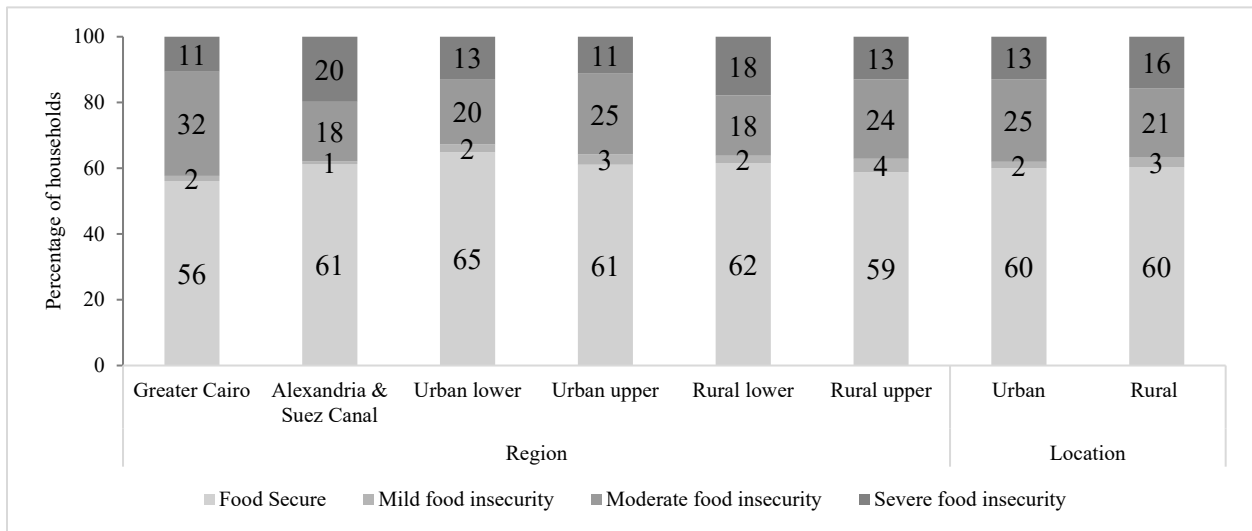


Notes: N=17,475.

Source: Authors' calculation based on ELMPS 2023.

The degree of food insecurity varied across different regions. Rural households experienced higher rates of severe food insecurity, with 16 percent reporting such conditions, compared to 13 percent of urban households. However, urban households faced more moderate food insecurity, with 25 percent indicating moderate levels, while only 21 percent of rural households reported the same. Greater Cairo had the highest percentage of households reporting food insecurity, followed by rural areas in Upper Egypt. Notably, households in Alexandria and the Suez Canal region were among the most severely food insecure, followed by those in rural Lower Egypt. (Figure 22).

Figure 22. Distribution (in percentage) of degrees of food insecurity (based on the classification of the FIES) during the year preceding the 2023 survey, by region of residence and location

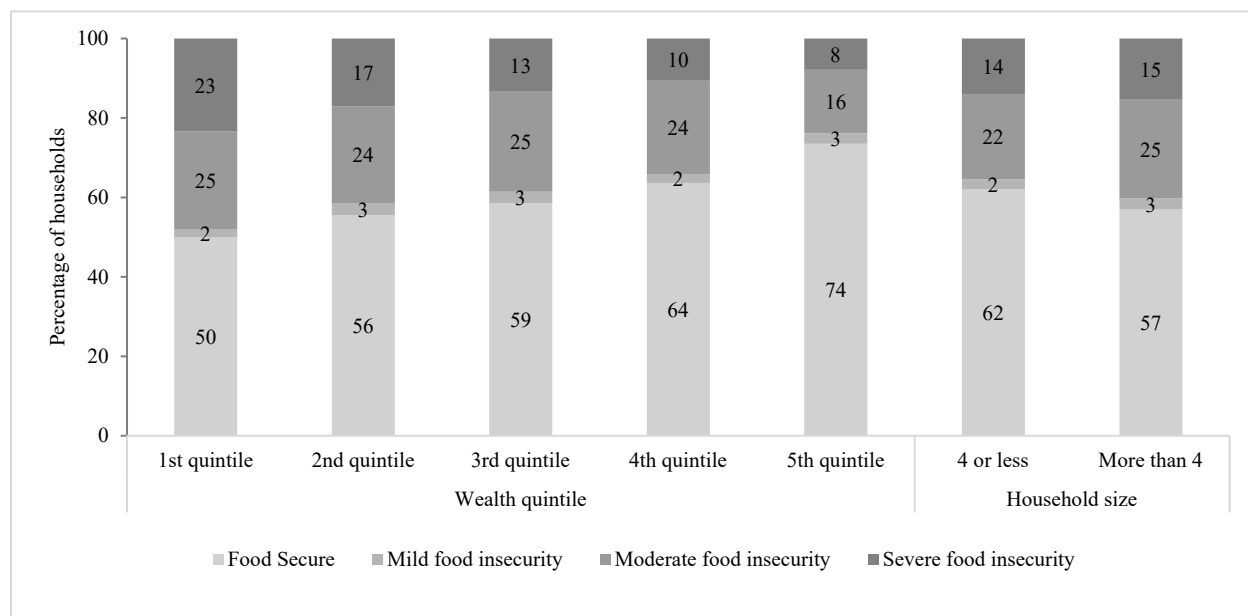


Notes: $N=17,475$.

Source: Authors' calculation based on ELMPS 2023

Similar to shocks exposure, experiencing food insecurity substantially decreases with household wealth status and education level of head's parents. Figure 23 shows that about half of households the first (poorest) wealth quintile were food insecure compared to nearly a quarter of households in the fifth (richest) wealth quintile. Large households of more than four members were more food insecure (43 percent) than smaller households (38 percent). Experiencing severe food insecurity also decreases among households whose heads' parents attained a high education level (Figure 24).

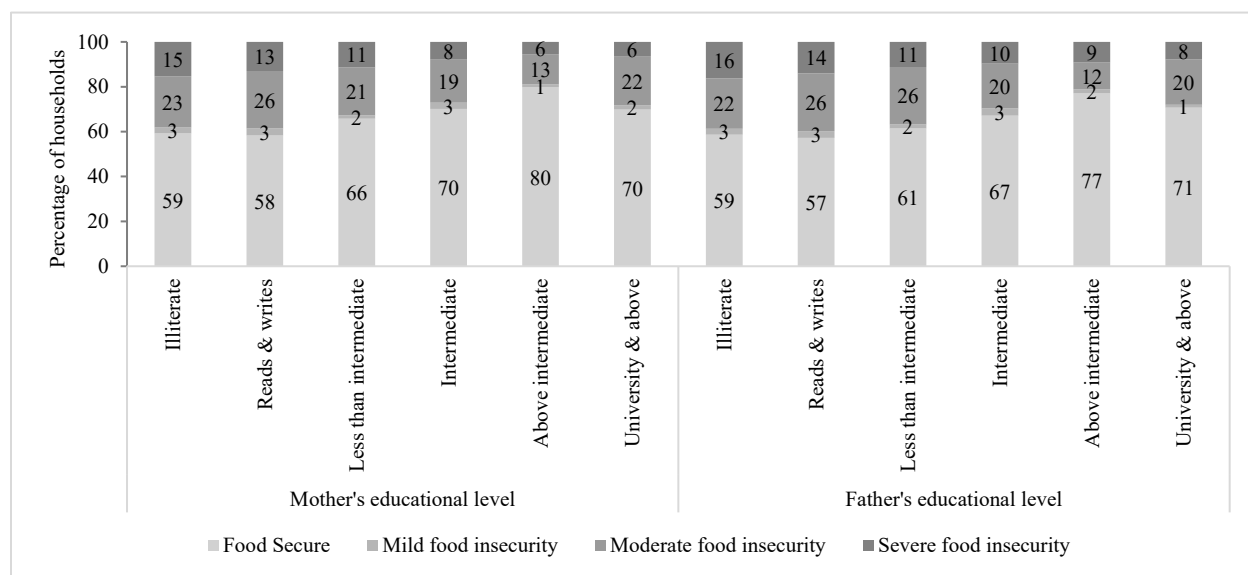
Figure 23. Distribution (in percentage) of degrees of food insecurity (based on the classification of the FIES) during the year preceding survey in 2023, by household wealth quintiles and household size



Notes: N=17,475.

Source: Authors' calculation based on ELMPS 2023.

Figure 24. Percentage of households who experienced any degree of food insecurity (based on the classification of the FIES) during the year preceding the 2023 survey, by education of head's parents

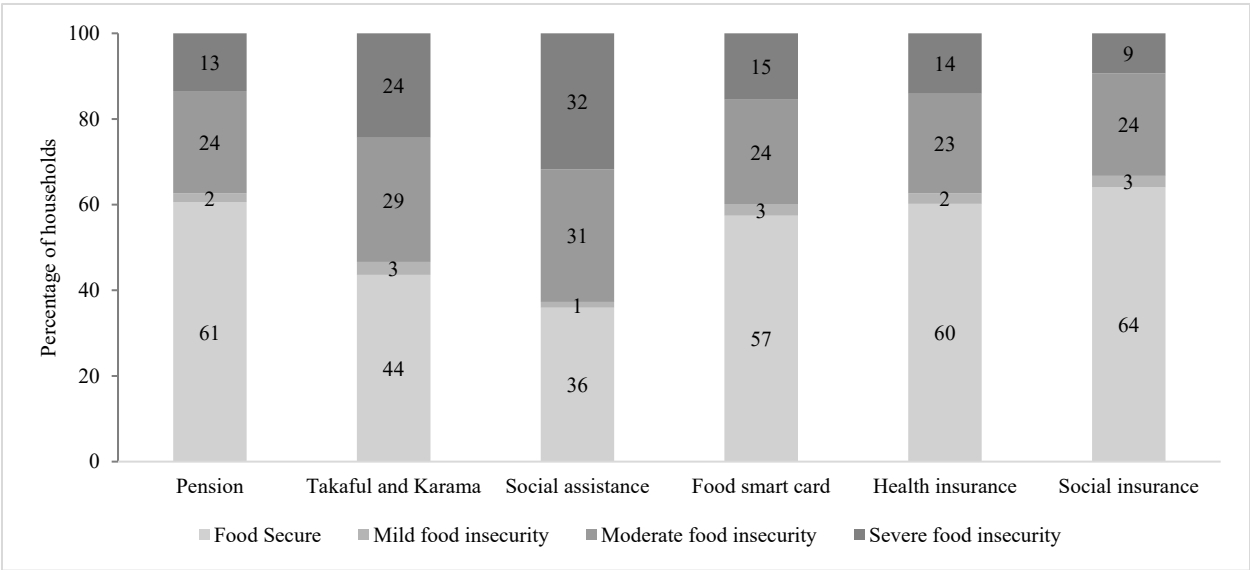


Notes: N=17,475.

Source: Authors' calculation based on ELMPS 2023.

In line with exposure to shocks, Figure 25 shows that the highest share of moderate and severe food insecurity was observed among those receiving social assistance (around 32 percent) followed those receiving Takaful and Karama (29 percent for moderate food insecurity and 24 percent for severe food insecurity), while the lowest rates of severe food insecurity were observed among households that had a member with social insurance coverage (9 percent). In fact, more than half of households with access to food smart cards reported being food secure in the year preceding the survey.

Figure 25. Distribution (in percentage) of degree of food insecurity (based on the classification of the FIES) during the year preceding the 2023 survey, by type of household’s social protection coverage

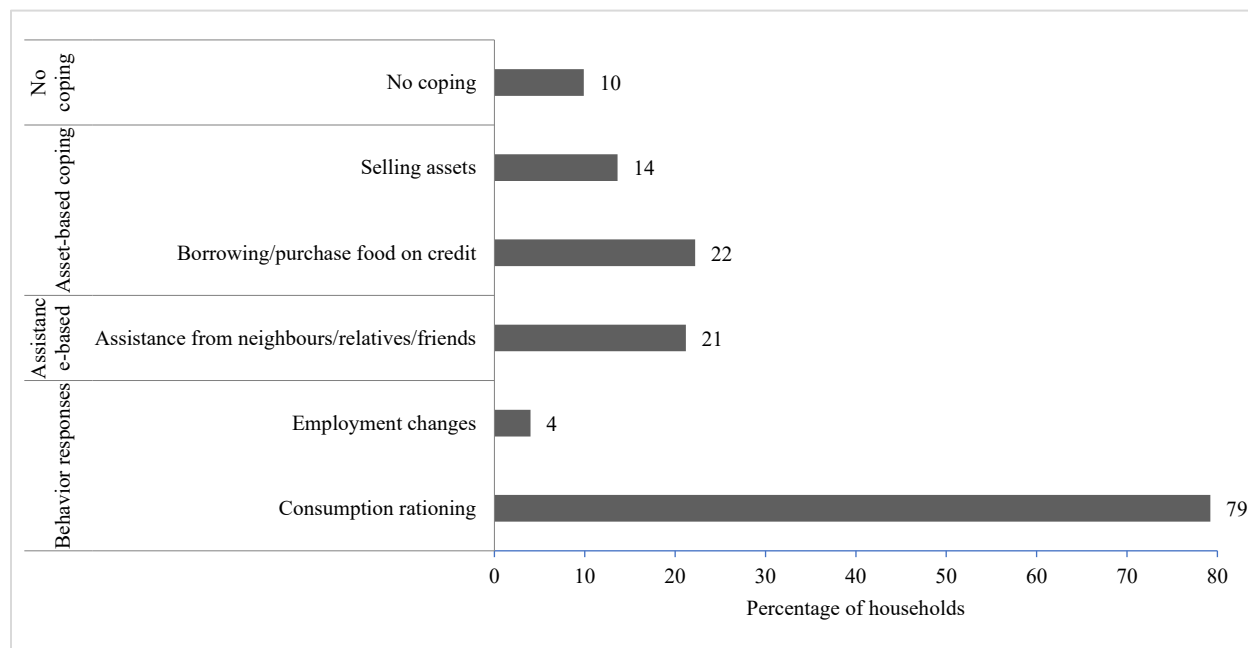


Notes: Coverage for at least one member. N=4,467 for pension; 2,009 for T&K; 187 for social assistance; 14,020 for food ration cards; 11,496 for health insurance; 4,135 for social insurance.

Source: Authors’ calculation based on ELMPS 2023.

Most households also relied on consumption rationing (79 percent) to cope with food insecurity followed by reliance on borrowing/buying food on credit and getting assistance from relatives/neighbours and friends (Figure 26).

Figure 26. Percentage of households using different coping mechanisms among those experiencing food insecurity in the year preceding survey in 2023



Notes: Multiple strategies are possible. N=7,292.

Source: Authors' calculation based on ELMPS 2023.

5. Conclusion

This paper underscores the increasing vulnerability of Egyptian households to various shocks. The findings show a remarkable rise in the proportion of households exposed to shocks between 2018 and 2023. Poorer households, those headed by individuals with lower educational attainment, and those with heads working in irregular/informal private wage work were disproportionately affected by shocks in 2023. Urban households faced more economic shocks, while rural counterparts could be somewhat shielded by social assistance programs or subsistence farming. Moreover, food insecurity remains a pressing issue, with around 40 percent of households experiencing varying degrees of food insecurity. Higher food insecurity was reported by households in Greater Cairo while a higher percentage of households who reported severe food insecurity were living in Alexandria and Suez Canal region.

Consumption rationing remained the most common coping strategy, utilized by most households facing shocks and experiencing food insecurity. On the other hand, reliance on social capital, as captured by seeking assistance from friends and/or neighbors, decreased in 2023. Households not employing coping strategies were typically wealthier, whom heads were more educated or employed in formal private sector jobs, as they are covered by social insurance also reporting less reliance on coping mechanisms.

To effectively address these challenges, policies should prioritize targeted assistance for poorer households, particularly those with lower education levels and irregular/informal employment. Tailoring these programs to address specific urban challenges will be essential. Programs that provide skill development and decent job opportunities can help these households build resilience against future shocks. Expanding access to social insurance programs and ensuring they cover irregular and informal workers can better mitigate the impacts of economic and health-related shocks, ensuring less persistent effect on food insecurity.

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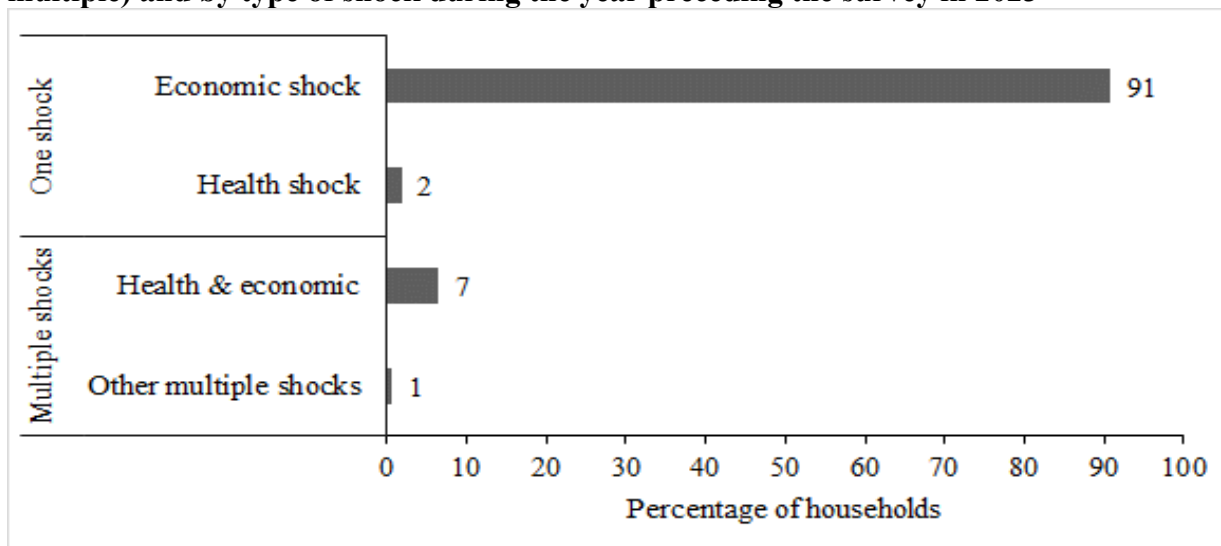
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Annex I: Key concepts and definitions

Variable	Description
Food insecurity	Experienced either a) anxiety and uncertainty about household food supply, b) insufficient quality, c) insufficient food intake during the past four weeks
Shocks	
Environmental Shock	Experienced drought or water shortage during the past 12 months
Economic Shock	Experienced increase in price of food and other necessities, high cost of agricultural input or loss of employment or reduced income during the past 12 months
Health Shock	Experienced high level of human disease, serious illness or accident, death of working member or death of a household member during the past 12 months
Other Shocks	Experienced theft, conflict or violence or a fire during the past 12 months
Coping Strategies	
A. Behavior-based coping strategies	
1. No coping	No coping strategy used
2. Consumption Rationing	Coped by reducing food consumption, reducing spending on health, reduced spending on education
3. Employment changes	Coped by engaging in additional income generating activities/changed labor supply/changed labor hours, migrating.
B. Assistance-based coping strategies	
	Coped by receiving cash or in-kind assistance from neighbors/relatives, family/NGO/government
C. Asset-based coping strategies	
1. Borrowing	Coped by formal or informal borrowing (cash or in-kind) as well as purchasing food/goods on credit
2. Use of Assets	Coped by selling assets/jewellery or spent savings or consumed seed stock/livestock
Household characteristics	
Age group-head of household	Youth (≤ 24 years), young adult (25-29), adult (30-64) and elderly (65 years and above)
Wealth	Categorical variable that uses household wealth score to assign each household to five income quintiles

Annex II: Additional Figures

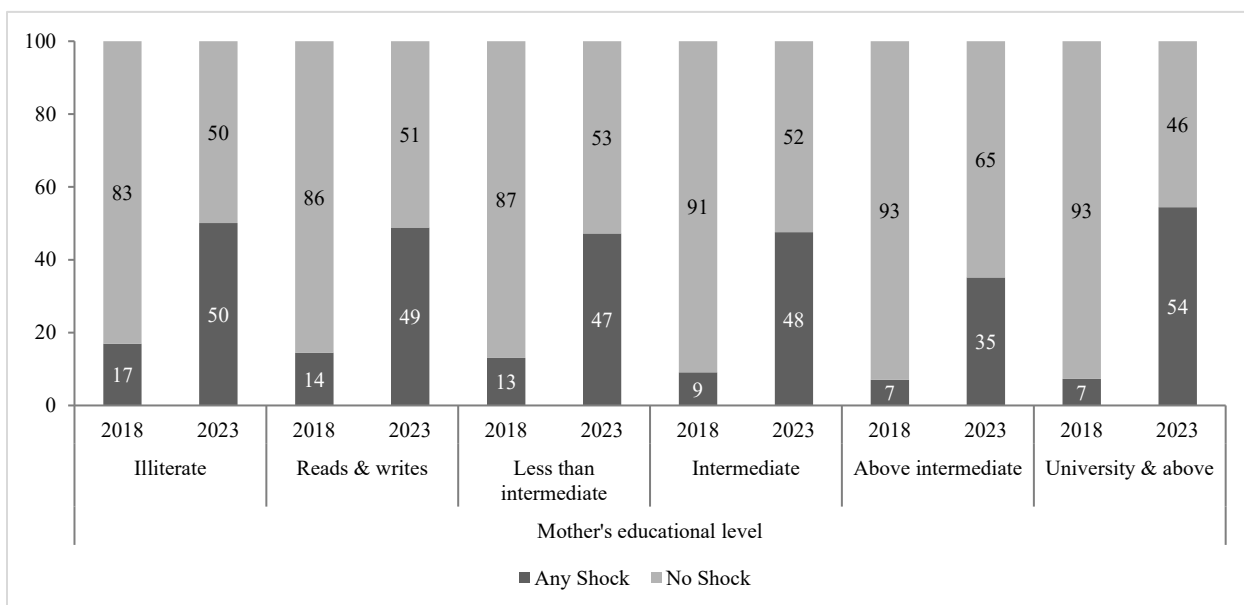
Figure A1: Distribution (in percentage) of households by combination of shocks (single or multiple) and by type of shock during the year preceding the survey in 2023



Notes: N=8,888

Source: Authors' calculation based on ELMPS 2023.

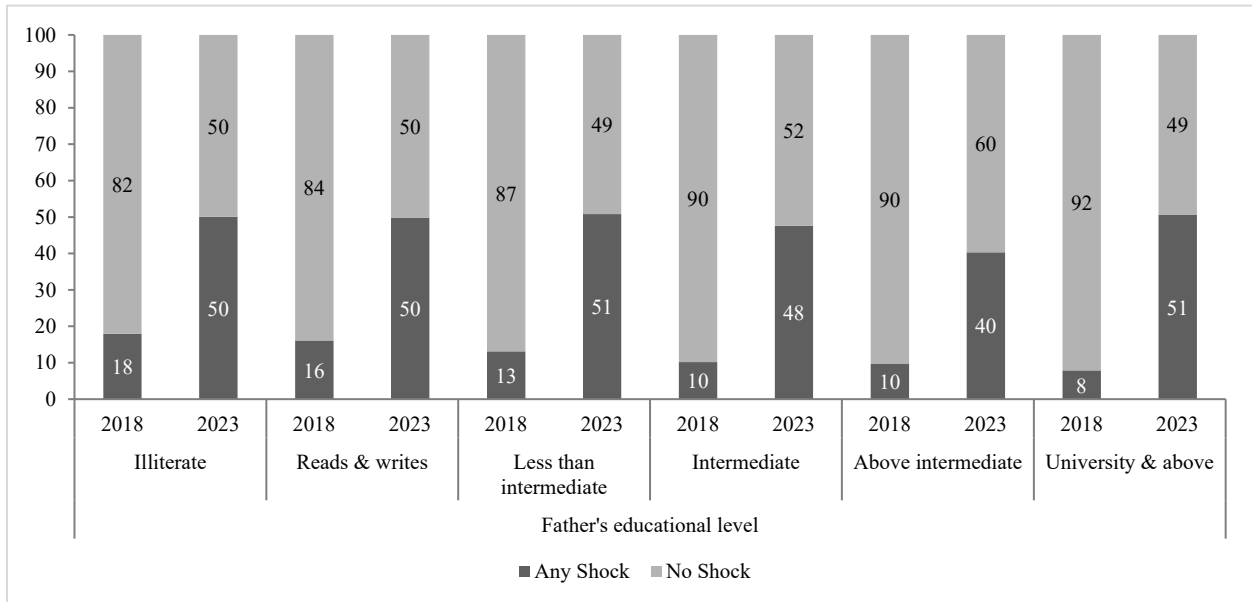
Figure A2: Percentage of households who experienced any type of shock during the year preceding the survey, by the education level of the head's mother (2018-2023)



Notes: Multiple shocks are possible. N= 15,746 in 2018 and N=17,783 in 2023.

Source: Authors' calculation based on ELMPS 2018 and 2023.

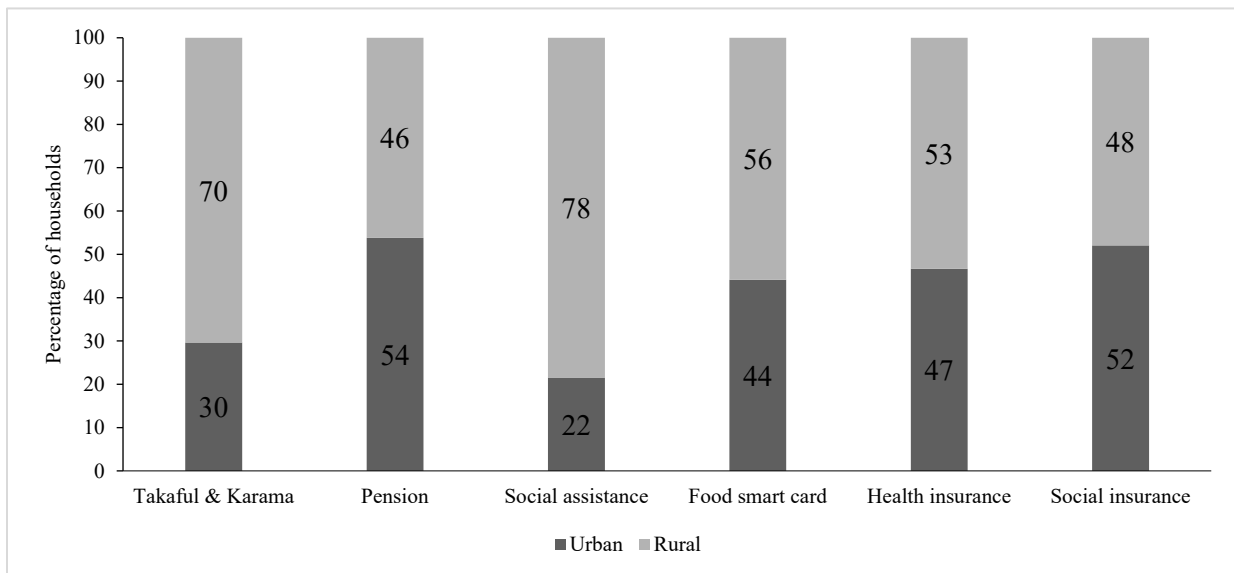
Figure A3: Percentage of households who experienced any type of shock during the year preceding the survey, by the education level of the head's father (2018-2023)



Notes: Multiple shocks are possible. N= 15,746 in 2018 and N=17,783 in 2023.

Source: Authors' calculation based on ELMPS 2018 and 2023.

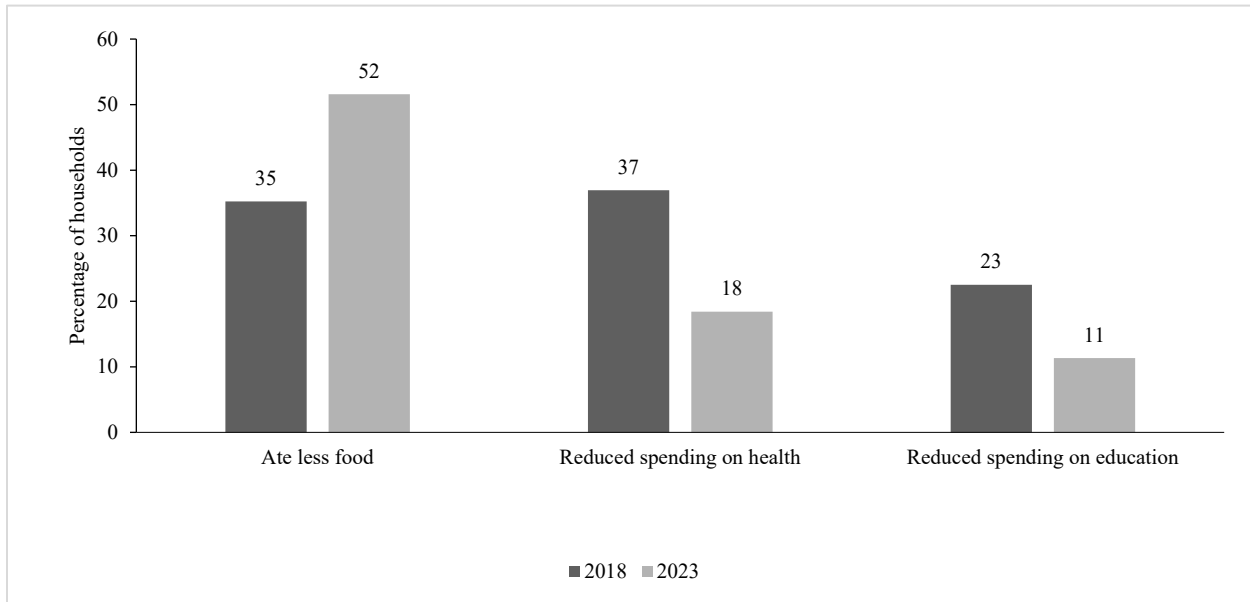
Figure A4: Distribution (in percentage) of households benefiting from social protection, by type of social protection program and by location (2023)



Notes: Coverage for at least one member. N=4,467 for pension; 2,009 for T and K; 187 for social assistance; 14,020 for food ration cards; 11,496 for health insurance; 4,135 for social insurance.

Source: Authors' calculation based on ELMPS 2023.

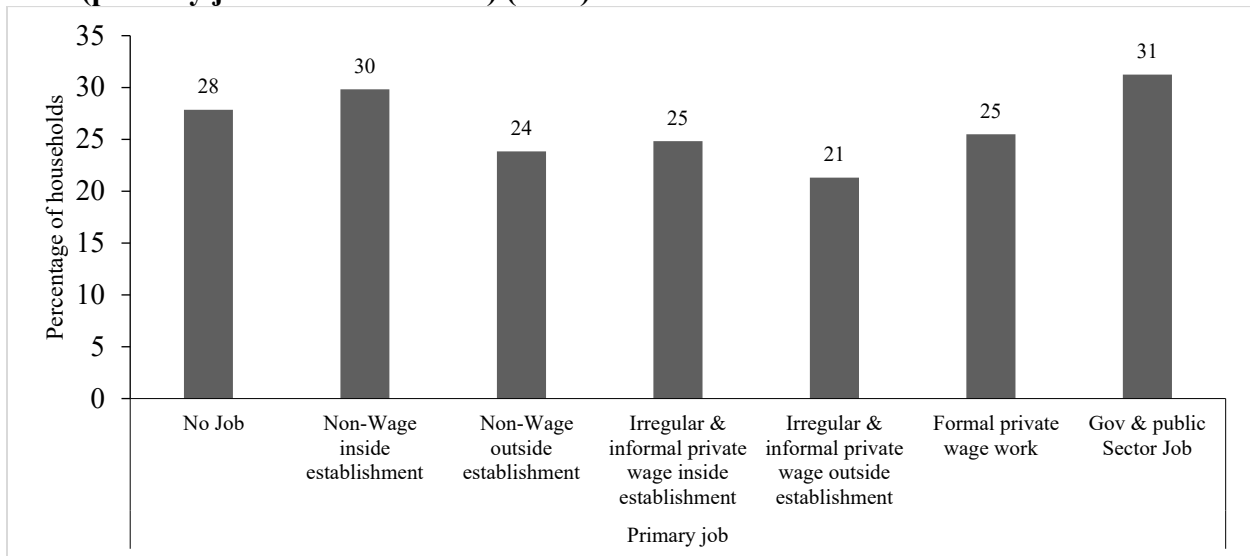
Figure A5. Percentage of households employing specific consumption rationing mechanisms after experiencing a shock during the year preceding the survey (2018-2023)



Notes: Multiple strategies possible. N=2,601 in 2018 and N=6,645 in 2023.

Source: Authors' calculation based on ELMPS 2018 and 2023.

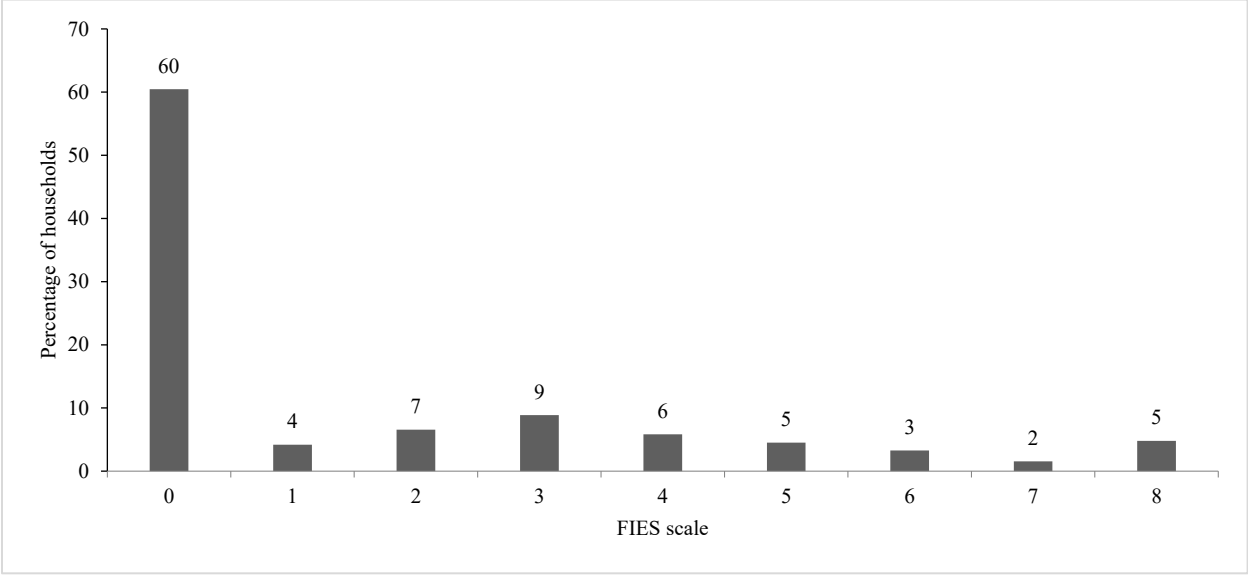
Figure A6. Percentage of households who did not employ any coping mechanism after experiencing a shock in the year preceding the survey, by sector of employment of household head (primary job- work definition) (2023)



Notes: N=2,239

Source: Authors' calculation based on ELMPS 2023.

Figure A7. Distribution of households by food insecurity raw scores, based on the food insecurity experience scale (FIES) (2023)



Notes: N=17.778

Source: Authors' calculation based on ELMPS 2023.