THE COVID-19 PANDEMIC, POST-PANDEMIC CHALLENGES AND POVERTY DYNAMICS IN BANGLADESH:

EVIDENCE FROM A LONGITUDINAL HOUSEHOLD SURVEY

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The COVID-19 Pandemic, Post-pandemic Challenges and Poverty Dynamics in Bangladesh: Evidence from a Longitudinal Household Survey

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List of Acronyms

BBS	*Bangladesh Bureau of Statistics*
BDT	*Bangladeshi taka*
CBN	*Cost of Basic Needs*
CPD	*Centre for Policy Dialogue*
FAO	*Food and Agriculture Organization*
FIES	*Food Insecurity Experience Score*
FFP	*Food Friendly Programme*
GED	*General Economic Division*
HIES	*Household Income and Expenditure Survey*
LPL	*Lower Poverty Line*
MENA	*Middle East and North Africa*
NEET	*Not in Education, Employment or Training*
NGO	*Non-Governmental Organization*
PIE	*Poverty, Inequality, and Employment*
PPS	*Probability Proportional to Size*
PSUs	*Primary Sampling Units*
SDGs	*Sustainable Development Goals*
SMA	*Statistical Metropolitan Area*
SME	*Small and Medium Enterprises*
SRS	*Systematic Random System*
SSP	*Social Safety Net Programme*
TCB	*Trading Corporation of Bangladesh*
TV	*Television*
UPL	*Upper Poverty Line*
USUs	*Ultimate Sampling Units*
VGD	*Vulnerable Group Development*
8FYP	*8th Five-Year Plan*

Executive Summary

Bangladesh has witnessed remarkable economic growth and development in the last three decades. However, the COVID-19 pandemic, followed by the Russia-Ukraine war and the global energy crisis, has put Bangladesh to the test on several frontiers. There is a growing need to understand the impact of the COVID-19 pandemic and the post-pandemic challenges on poverty, inequality, employment, education, healthcare, and food security in Bangladesh. This study aims to provide insights into these parameters based on a nationally representative household survey.

The 2023 survey is built on the SANEM-GED household survey convened in 2018 across Bangladesh with 10,500 households from 500 Primary Sampling Units (PSUs). The survey was conducted during October/November 2023. Among the 10,500 households, the survey team was able to reach 8,765 households. The 2023 survey questionnaire included questions pertinent to households' basic characteristics, education, employment, assets, COVID-19-led major challenges and coping strategies, social protection, health, vaccination scenario of coronavirus vaccine, migration, and remittances, along with pre-COVID, during-COVID and post COVID household income and expenditure information. Moreover, the questionnaire included a separate section to capture the ongoing inflationary pressure, food insecurity and household coping strategies.

In this study, poverty is measured following two approaches: conventional consumption expenditure-based poverty and multidimensional poverty based on (i) education and (ii) health and standard of living indicators. The poverty line for the consumption expenditure-based approach is measured following the Cost of Basic Needs (CBN) method for each of the 20 strata (eight rural, eight urban, and four metropolitan areas). Using the upper poverty line, the incidence of poverty is estimated at 20.7% at the national level, 21.6% in rural areas, and 18.7% in urban areas. Using the lower poverty line, the incidence of extreme poverty is estimated at 7.9% at the national level, 8.9% in rural areas, and 5.4% in urban areas. At the divisional level, the highest poverty rate was estimated in Rangpur and Barisal, 42.9% and 32.5%, respectively. Notably, while the rural poverty in Bangladesh has decreased from 24.5% in 2018 to 21.6% in 2023, the urban poverty rate has increased from 16.3% to 18.7%.

A similar trend is observed in multidimensional poverty. The rural multidimensional poverty rate has fallen from 30.4% to 27.6%, while in the urban area, it has increased from 16.8% in 2018 to 18% in 2023. The reasons behind the rise in urban poverty, both in terms of the CBN poverty line and the multidimensional approach, are twofold. (i) Urban areas constitute a large proportion of the vulnerable poor who migrated to the cities out of poverty or due to climate shock, etc. Significant shocks, such as the recent price hike, would make these vulnerable people fall below the poverty line. And (ii) the existing social security programmes do not cover urban areas extensively – making many urban households more vulnerable to shocks.

Along with a rising poverty rate, this study also finds rising inequality in the country. Regarding consumption Gini, inequality at the national level grew slightly from 0.31 in 2018 to 0.32 in 2023. However, when observed from the point of the income share of the rich and the poor, i.e. the share of income of the richest 5% of the households compared to the poorest 20%, the ratio has increased from 2.1 in 2018 to 5.4 in 2023. Correspondingly, the ratio of

expenditure shares of the richest 5 per cent to that of the poorest 20 per cent has increased from 1.3 in 2020 to 2.1 in 2023. One critical point to remember is that since most ultra-rich households could not be included in the survey, particularly from the urban areas, the real impact on inequality could be much larger than these findings.

The COVID-19 pandemic has greatly impacted the educational sector, leading to great learning loss due to the education institutions' prolonged closure. On average, the schools in Bangladesh were closed for more than 450 days. During this time, online learning programmes were launched to keep students engaged, as conventional instructions in class were not feasible. However, neither all educational institutes nor all students were able to participate. This study finds that only 20% of the rural and 33% of the urban schools had distance learning programmes. Moreover, participation in the online classes differed widely among households from different income quantiles. Only 8% of the poorest income households participated in online/ distance learning programmes compared to 40.3% in the richest quintile households. Reasons accounted for not participating in online/TV classes include - (i) a lack of classes or distance learning activities, (ii) unavailability of a device such as a phone or television, (ii) a lack of internet access, (iii) slow internet connectivity, (iv) cost of internet, (v) being not accustomed to technology, etc.

In the post-pandemic scenario, this study finds that 15% of the school-going-aged children (aged 5-15) are not attending schools in 2023. This is a 2-percentage point rise compared to 2018. Moreover, this rate has increased among the poorest income households while decreasing in the richest income cohort. As such, almost one-quarter of the children from the poorest 20% of households are not attending school, compared to only 9% of the children from the richest 20% of households.

In terms of healthcare, we observe that only 8.5% of the surveyed population suffered from COVID-19-like symptoms between March 2020 and October/November 2023, while less than one quarter undertook the test. Nevertheless, one of Bangladesh's successes in tackling the COVID-19 pandemic was rolling out the vaccine on time. Bangladesh started administering the COVID-19 vaccines on 27 January 2021. As can be observed, 77% of the males and 80% of the females (aged five years or more) received more than two dosages of the vaccine (Table 26). Another important aspect to note is that there is no difference in the distribution of vaccine rates between rural and urban areas.

One consequence of the COVID-19 pandemic on healthcare could be a large rise in per capita health expenditure between 2018 and 2023. Compared to 2018, the average per capita health expenditure increased by more than threefold in 2023 to BDT 1,704 per month. However, the rise is not symmetrical across all income groups. The rise was just twofold for the poorest 20% of the households, while for the richest 20% of the households, the rise was sixfold.

Most of the employment at the national level comes from the services sector (47%), followed by agriculture (36%) and industry (18%). The concentration of agricultural employment is more prominent in rural areas than in urban areas and among women than men.

When compared to 2018, the overall unemployment rate in Bangladesh slightly increased from 3.2 per cent to 4 per cent in 2023, primarily due to the rise in the male unemployment

rate twofold in both rural and urban areas. A similar trend is observed for the youth male unemployment rate, which has increased from 5.4% in 2018 to 11.6% in 2023.

Between March 2020 and December 2020, in the rural setting, almost all males (96.8 per cent) and most of the females (93.2 per cent) experienced a decrease in salary. A similar situation was observed in the urban counterparts. In April –June 2020, the income was at the lowest for both genders and areas. Among all the divisions, the Rangpur division had the lowest average income in the month of lowest-earning in both the rural and urban settings. Moreover, the average income of rural areas was higher in Barishal, Chittagong and Rajshahi divisions than urban ones. Regarding self-employed (non-agriculture enterprise), the rural counterparts of the Sylhet division remained closed for the longest period during the pandemic. In the rural areas of Barishal and Sylhet division and the urban settings of Rangpur, no businesses were closed for more than six months. Around 19.3 per cent of the urban businesses of the Dhaka division remained closed for more than six months. For the self-employed (non-agriculture non-enterprise), in the rural setting, around 70.1% reported that they had to close business during the pandemic, whereas the percentage was 73.9 in the urban counterparts of the Barishal division. Rangpur division had a notable difference in the closure period in the rural (70%) and urban counterparts (57.1%).

In terms of the impact of the pandemic on wage employment, this study finds that 54% of the males and 44% of the females lost their jobs during the pandemic. Most of these workers remained unemployed for longer than 3-4 months. Almost all these workers faced some cutdown in their wages. More than three-quarters of self-employed workers in the non-farm sector reported business closures during the pandemic. More than half of them had to close the business for a period of 1-3 months. In the case of agriculture, livestock, poultry or fisheries, the households faced challenges related to high input prices, low prices of the produced, shortage of labour, transportation problems, etc., during the pandemic.

This study also observed the impact of the pandemic on migrant households. Since the beginning of the pandemic, many international migrant workers had to return to Bangladesh permanently. As a proportion of the migrant worker stock in 2018, nationally, more than 9% of the international migrant households had a permanent returnee migrant worker during the survey in 2023. At the divisional level, the highest proportion of these returnee migrants (as % of all migrant stock at the divisional level in 2018) is in Mymensingh (20%), Chittagong (11.2%), and Dhaka (10.2%). The major reasons behind these returnee migrants include losing jobs during the pandemic (33%), contractual issues (20%), disputes with the employer (14.7%), false/visa or victim of fraud (4%), amongst others. Moreover, among these permanent returnee migrant workers, nearly one-third remained unemployed at the time of the survey in October/November 2023. Given the high cost of migration and the households' financing strategies for international migration, this phenomenon of returnee migrant workers has important policy implications.

The major shock experienced by the households in both rural and urban areas during October 2022-September 2023 period was the unusually high price level of the essential commodities (78% in the rural and 76% in the urban). Apart from inflationary pressure, other shocks included high prices of agricultural inputs, crop/livestock diseases, reduction in the earnings of the household member, floods, low prices of crops, illnesses of the earning member, etc. In

response to the recent shocks, the primary coping strategy undertaken by the households was changing their dietary patterns involuntarily (59%), followed by depleted savings (45%), obtaining credits (40%), unconditional help from friends or relatives (33%), reduced expenditure on health and education (8%), etc. In addition, in rural areas, households sold animal stock (11%), or changed cropping practices (7%). The proportion of households receiving support from the local governments was around 5% in rural and urban areas.

This study placed particular attention on the impact of the recent inflationary pressure on households. As observed, between April 2023 and October/November 2023, 70% of households reported that their household expenditure had increased. In addition to the price hike, the incomes of a large proportion of households remained unchanged or fell between April and October 2023. As such, the real income of most of the households fell sharply during this period.

In response to the price hike, this study finds that 70% of the households changed their food habits, 35% reduced non-food expenditure, 28% resorted to borrowing, and 17% depleted savings, amongst others. Such a large cut down on food consumption habits puts households on the brink of food insecurity. This study measures food insecurity following FAO guidelines on the Food Insecurity Experience Scale (FIES). Between April and October/November 2023, the food insecurity experience scale (FIES) has worsened for poor and non-poor households across all regions. Among poor households, moderate food insecurity has increased by five percentage points (from 25% in Apr'23 to 30% in Oct/Nov'23), while severe food insecurity has increased by three percentage points (from 4% to 7% of the poor population). Poor from the urban areas are more food insecure than rural: 29% of the rural poor households and 32% of the urban poor households were categorized as moderately food insecure in October/November 2023. In both rural and urban areas, severe food insecurity was found to be 7% among poor households.

Based on the survey findings, this study recommends five key policies. First, the government needs to roll out social security programmes across the nation as stipulated in the National Social Security Strategy (NSSS). Particular attention must be given to the urban poor and new poor households. Second, there should be more budgetary allocation and specific policies for the education sector to address the issue of children missing in education, reduce school dropout rates, and recoup the learning loss impeded during the pandemic. Third, it is high time the government emphasises increasing the tax net and restructuring the existing tax frame. This is because increasing budgetary allocations for the education and social security programmes would require a larger fiscal space. Fourth, the government needs to undertake more active labour market policies to reduce the unemployment rate among men, youth, and permanent returnee migrant workers. And lastly, the government must undertake alternative and complementary policies to reduce the inflationary pressures on households. This should include, more increased monitoring of the market, as well as liberalising the import tariff on many of the staple foods in Bangladesh. An increased supply of essential foods (such as dairy, meat, fruits, etc.) would help Bangladesh to tame down the price level. This should be complemented with supporting fiscal and monetary policies.

Chapter 1: Introduction

1.1 Background

Bangladesh has been an outstanding performer in poverty reduction in the last three decades. Consistent improvements in export performance, a robust domestic market, and an inflow of workers' remittances have contributed to the transformation of Bangladesh from a "basket-case of development" to one of the fastest growing lower-middle-income developing countries. However, in Bangladesh as in the rest of the world, the COVID-19 pandemic represented a substantial challenge to continued development. Moreover, the post-pandemic inflationary pressure resulting from the Russia-Ukraine war is likely to have further increased the incidence of poverty.

Several studies have explored the impact of the COVID-19 pandemic on poverty using both primary and secondary data. From a small sample of 950 observations, the Bangladesh Bureau of Statistics (BBS) reported a rise in poverty rates to 29% in June 2020. In contrast, CPD (2020) estimated a rise in poverty rates to 35% based on a simulation using the Household Income and Expenditure Survey 2016. Given the depth and breadth of the COVID-19 pandemic, findings based on small samples or simulations may produce biased estimates. In contrast to this study, Rahman and Matin (2020) reported a rise in poverty rates by 22 percentage points using panel data with a first wave of in February 2020.[1] However, this study only covered urban slum areas in Bangladesh and did not constitute a nationally representative sample.

The only nationally representative estimates of the impact of the COVID-19 pandemic on employment, household expenditure, and poverty appear in Raihan et al. (2021). Using panel data from 5,600 households from 64 districts, the authors estimate that the poverty rate in Bangladesh has almost doubled since November 2018, reaching 42% in December 2020. According to the study, the urban poverty rate increased from 16% in 2021 to 35% in 2020, while the rural poverty rate increased from 25% in 2018 to 45% in 2020. Underlying these trends is a persistently high proportion of households who are vulnerable to poverty. Although Bangladesh successfully lowered its poverty rates from over 60% in 1980 to 24% in 2016, the share of vulnerable households in the total population remained at around 19% (Bangladesh Planning Commission, 2020). In other words, many of those who have shifted out of poverty are still below the vulnerable-to-poverty line.

One shortcoming of these studies is that they all used poverty measures based on income or expenditure. Income-based poverty measures cannot capture the multifaceted impact of the pandemic on households' overall well-being, which also depends on factors such as education and healthcare. Given the length and duration of the COVID-19 pandemic, it is likely that the pandemic affected households in multiple ways. It is therefore important to measure the dynamics of multidimensional poverty.

[1] The first case of Covid-19 in Bangladesh was reported in March 2020. The first lockdown was imposed by the third week of March 2020.

Against this backdrop, this report aims to understand the impact of the pandemic, the subsequent lockdown policies, and post-pandemic inflationary pressure on multidimensional poverty and vulnerability in Bangladesh. The report is based on SANEM's nationally representative household survey conducted in 2018-19. Using the 2018 survey as a baseline, the SANEM-GDI team carried out a second survey of the households in October-November 2023. This report summarizes the key findings of the survey.

To our knowledge, no previous study has used nationally representative longitudinal data to measure the impact of the pandemic on poverty in Bangladesh. Our study fills this gap and provides evidence for effective policy design.

1.2 Objectives and research questions

Our main research question is 'What are the short and medium-term effects of lockdown policies and district-level / household-level COVID-19 infections on different dimensions of poverty?' These dimensions include per capita household income and consumption, education outcomes (e.g. access to online education), health outcomes (e.g., access to health care), and household assets (e.g., consumer durables). Understanding the answers to the question can inform future policymaking. We construct a multidimensional-poverty that will enable policymakers to understand the mechanisms through which households slip into poverty and identify the dimensions of poverty that should be the focus of policy responses to health shocks resembling the COVID-19 pandemic. We also explore household coping strategies during the pandemic, for example whether the household depleted savings, withdrew children from education, or arranged early marriage for daughters.

1.3 Organization of the report

The report is organized as follows. After this introduction, Chapter Two discusses the survey methodology. Chapter Three reports basic characteristics of the households surveyed. Chapter Four reports findings on poverty, inequality and social safety net programmes. Chapter Five discusses impacts on education and healthcare. Chapter Six discusses impacts on livelihoods, wages, employment, and unemployment. Chapter Seven discusses impacts on migrant households. Chapter Eight discusses evidence on recent household shocks and coping strategies. Finally, Chapter 10 discusses policy recommendations drawn from this study.

Chapter 2: Methodology

The SANEM-GDI Household Survey 2023 is based on a nationally representative household survey conducted by SANEM in 2018, which comprised 10,500 households from 500 Primary Sampling Units (PSUs) distributed across all eight divisions and sixty-four districts. The survey covered sections on poverty, income, and employment along with migration, remittances, and other basic household characteristics with coping strategies in the recent ongoing inflation.

2.1 The sampling framework

In 2023, SANEM attempted to contact all 10,500 households surveyed in 2018 in order to create a panel dataset. Since the 2023 survey is based on same sample as the 2018 survey, the documentation relating to the 2018 survey, which has already been published, is relevant here.[2]The survey team managed to re-survey 8,765 of these households in the 500 PSUs distributed across eight divisions and 64 districts. Some of the households were found to have split, and in such cases both new households were surveyed.[3] In total, including the split households, the 2023 sample comprises 9,065 households.

PSUs are contiguous geographical areas of land with identifiable boundaries. The 500 original PSUs cover all regions in Bangladesh and are representative of the whole population. The 2018 sampling frame was based on the old division into 21 districts used in the Household Income and Expenditure Survey (HIES, 2016): Barishal, Patuakhali, Cumilla, Noakhali, Chattogram, Chattogram Hill Tracts, Dhaka, Tangail, Faridpur, Kishoreganj, Khulna, Jashore, Kushtia, Mymensingh, Jamalpur, Rajshahi, Bogura, Pabna, Rangpur, Dinajpur, and Sylhet. Each district was divided into two parts: urban areas and rural areas. The urban areas were further divided into municipalities and city corporations. Thus, each district was divided into three parts. See Annex Table 43 for more information.

Data were collected by re-visiting each household in person. Trained enumerators visited the households between 1 October and 30 November 2023. In 13% of cases, the survey team failed to locate some or all of the household members. Common reasons for failure included the household having migrated and suitable household members being unavailable when visited. Among the households that were located, the non-response rate in the 2023 survey was just over 1%. This attrition rate is not unexpected. In total, eight of the original PSUs are entirely missing from the 2023 sample, because of problems with e.g. political tension in the PSU or official permission to re-survey households there. However, the proportion of PSUs in rural, urban and city corporation areas in 2023 closely resembles the proportion in 2018: see Table 1.

[2] The methodology underlying the 2018 survey (and of a 2020 telephone survey of a subset of the 2018 households) is discussed in Annex 1.

[3] Split households are a common phenomenon in longitudinal surveys. When a household has split, the 2023 survey includes both new households as long as they have not moved to a different location. In such cases, the new households are given fractional ID numbers, e.g. household 3 in 2018 becomes households 3.1 and 3.2 in 2023.

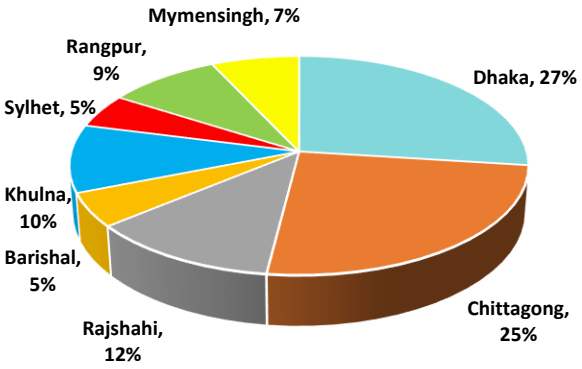
Table 1. Sample distribution of PSUs by area

Area	No. of PSUs in 2018	Percentage in 2018	No. of PSUs in 2023	Percentage in 2023
Rural	325	65%	317	64.4
Urban	90	18%	84	17.1
City Corporation	85	17%	91	18.5
Total	**500**	**100%**	**492**	**100**

The survey was conducted with the household head or other adult members of the household who were part of the previous round of the survey. The survey includes questions about income, employment, education, expenditure, remittances, experiences with the COVID-19 aid, and social safety net programmes. In this way, we capture the overall situation of the household during the pandemic and its coping strategy during the extraordinary inflationary pressure in 2023.

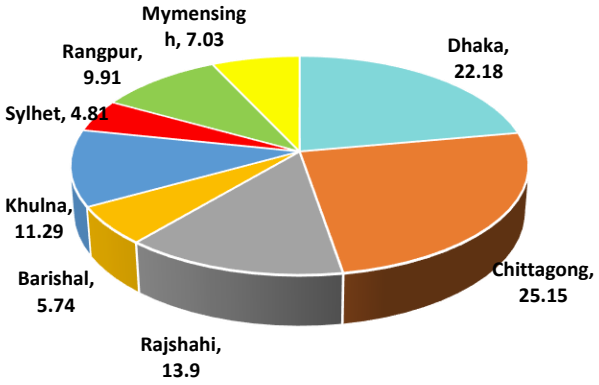
As indicated in Figures 1-2, the distribution of the sample by division in 2023 is very similar to the distribution in 2018.

Figure 1: Sample distribution in 2018 by division



Source: SANEM-GED, 2018

Figure 2: Sample distribution in 2023 by division



Source: SANEM-GDI Household Survey, 2023

We investigated the possibility of attrition bias using observable household characteristics: for example, the division and region in which the household was located, the sex of the household head, the household head's main occupation, the household's main income sources, and the education level of the household head. We investigated systematic variation in the attrition rate by comparing the sample distributions in 2023 with those in 2018. Further results from this exercise are available on request.

2.1 Qualitative approaches

The 2023 study also incorporated qualitative methods such as key informant interviews (KIIs) and focus group discussions (FGDs), in addition to the primary survey (Table 2). The main objective of these additional, qualitative methods was to investigate the dynamic of policymaking and events during the pandemic, such as steps taken by the relevant authorities

combat the pandemic and the perceived challenges they faced. In total, 17 KIIs were conducted with Upazila Nirbahi Officers (UNO), Union Parishad (UP) chairmen, officials from different ministries, academicians, and some experts from development partners.

Eight FGDs were conducted, with one in each division. In each FGD, there were 8-12 participants comprising school/madrasa teachers, local entrepreneurs, representatives of local civil society organizations, and NGOs. In the FGDs, a semi-structured checklist was used as a framework for participant responses and opinions. When required, relevant follow-up questions were asked during the discussions. The FGDs provided some important back-stories about the type of challenges that households faced during the pandemic with regard to access to education, healthcare, or social security support. The FGDs also highlighted perceptions about the current challenges in the locality.

Findings from the KIIs and FGDs are used to supplement the survey findings in this report.

Table 2. Distribution of KIIs and FGDs

Instrument	Number	Respondents
Key Informant Interviews (KII)	17	Government officials, UNOs, Union Parishad Members/Chairmen, Academicians, Development partners
Focus Group Discussion (FGDs)	8	School/madrasa teachers, local Union Parishad members, local entrepreneurs, and representatives of local civil society organizations and NGOs.

Chapter 3: Overview of Household and Housing Information

This chapter presents the characteristics of the households and individuals in the sample.

3.1 Overall characteristics

Table 3 provides details about the sex, age, and location of individuals in the sample. Nationally, the largest part of the sample is within the 0-14 age bracket. Comparing rural and urban areas, rural areas had a slightly higher percentage of individuals in the 0-14 age range compared to urban areas: 27.9% versus 25.0%. Conversely, urban areas had a higher proportion of individuals in the 15-24 age category compared to rural areas: 19.6% versus 18.3%. In urban areas, the older age brackets (55-64 and 65+) accounted for 8.2% and 6.0% of the population, respectively. In rural areas, these percentages were slightly higher: 8.6% for the 55-64 age group and 7.1% for the 65+ age group.

Table 3. Age and sex

	Rural			Urban			National		
Age group	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
0-14	3,779	3,583	7,362	1,460	1,358	2,818	5,239	4,941	10,180
15-24	2,383	2,457	4,840	1,096	1,113	2,209	3,479	3,570	7,049
25-34	1,403	1,916	3,319	701	834	1,535	2,104	2,750	4,854
35-44	1,571	2,008	3,579	751	925	1,676	2,322	2,933	5,255
45-54	1,549	1,635	3,184	709	721	1,430	2,258	2,356	4,614
55-64	1,195	1,074	2,269	500	419	919	1,695	1,493	3,188
65+	1,024	845	1,869	362	311	673	1,386	1,156	2,542
Total	12,904	13,518	26,422	5,579	5,681	11,260	18,483	19,199	37,682
	in %								
0-14	29.3	26.5	27.9	26.2	23.9	25.0	28.3	25.7	27.0
15-24	18.5	18.2	18.3	19.6	19.6	19.6	18.8	18.6	18.7
25-34	10.9	14.2	12.6	12.6	14.7	13.6	11.4	14.3	12.9
35-44	12.2	14.9	13.5	13.5	16.3	14.9	12.6	15.3	13.9
45-54	12.0	12.1	12.1	12.7	12.7	12.7	12.2	12.3	12.2
55-64	9.3	7.9	8.6	9.0	7.4	8.2	9.2	7.8	8.5
65+	7.9	6.3	7.1	6.5	5.5	6.0	7.5	6.0	6.7
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: SANEM-GDI Household Survey 2023

3.2 Marital status

Table 4 shows the sample distribution by marital status. 56.5% of the surveyed males are married compared to 59.7% of the surveyed females. A noticeable difference is observed between males and females regarding the widowed, divorced and separated categories. Only 1.6% of males were widowed, divorced, or separated compared to 11.7% of the females. For both groups, the rates are slightly higher in urban areas.

Table 4. Distribution by sex, marital status and area (%)

	Rural			Urban			National		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Married	6,545	7,341	13,886	2,814	2,984	5,798	9,359	10,325	19684
Unmarried	4,790	3,435	8,225	2,155	1,512	3,667	6,945	4,947	11892
Widow/Widower	122	1,201	1,323	68	554	622	190	1,755	1945
Divorced	36	82	118	18	38	56	54	120	174
Separated	20	72	92	11	69	80	31	141	172
Total	11,513	12,131	23,644	5,066	5,157	10,223	16,579	17,288	33,867
	In Percentage (%)								
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Married	56.8	60.5	58.7	55.5	57.9	56.7	56.5	59.7	58.1
Unmarried	41.6	28.3	34.8	42.5	29.3	35.9	41.9	28.6	35.1
Widow/Widower	1.1	9.9	5.6	1.3	10.7	6.1	1.2	10.2	5.7
Divorced	0.3	0.7	0.5	0.4	0.7	0.6	0.3	0.7	0.5
Separated	0.2	0.6	0.4	0.2	1.3	0.8	0.2	0.8	0.5
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: SANEM-GDI Household Survey 2023

3.3 Working age population and dependency ratio

The **dependency ratio** is an age-population ratio of the *dependent* population (aged less than 15 and older than 64) and the working age population (aged 15-64).

$$Dependency\ Ratio = \frac{(Population\ aged\ 0-14\ and\ those\ aged\ 65\ and\ over)}{Population\ aged\ 15-64} \times 100$$

The dependency ratio is thus a summary indicator of the pressure falling on the productive population. The dependency ratio for Bangladesh is 51% (Table 5). The dependency ratio for rural and urban areas was 53.7% percent and 44.9%, respectively. The ratio is higher for males than it is for females; this is true of both rural and urban areas.

Table 5. Dependency ratio, by sex and area

	Rural			**Urban**			**National**		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Working age population	8,101	9,093	17,194	3,757	4,014	7,771	11,858	13,107	24,965
Dependency ratio	59.3	48.8	53.7	48.5	41.6	44.9	55.9	46.6	51.0

Source: SANEM-GDI Household Survey 2023

Household head characteristics

3.4 Sex of household head

Female-headed households are more common in urban areas (17.7%) than in rural (15.6%) and in city corporation areas (12.9%).

Table 6. Distribution of gender of the head of the household (%)

Sex	Rural	Urban	City corporation	National
Male	84.39	82.3	87.11	84.38
Female	15.61	17.7	12.89	15.62

Source: SANEM-GDI Household Survey 2023

3.5 Education of household head

A large proportion of household heads have no education: see Table 7. Household head education levels are higher in urban areas.

Table 7. Distribution of education of the head of the household (%)

Education level of the household head	Rural	Urban	National
No education	38.49	32.31	36.65
Primary education	27.94	25.76	27.29
Secondary	19.47	23.21	20.58
SSC/HSC	10.40	13.58	11.35
University	3.69	5.14	4.13
Total	100.00	100.00	100.00

Source: SANEM-GDI Household Survey 2023

3.6 Household size

The average household size is almost same in the rural and urban areas.

Table 8. Average household size

Household Size	Mean
Rural	4.15
Urban	4.17
Total	4.16

Source: SANEM-GDI Household Survey 2023

Housing information

3.7 Types of tenancy

Nationally, 85.8% of households resided in their own homes. The rate of home ownership was higher in rural areas (93.7%) than it was in urban areas (67.3%). Correspondingly, the percentage of rented houses was higher in urban areas (25.6%) than it was in urban areas (2.3%).

Table 9. Distribution of type of tenancy by area (%)

Type of tenancy	National	Rural	Urban
Owned	85.8	93.7	67.3
Rented	9.2	2.3	25.6
Rent-free	1.6	1.2	2.7
Provided free by relatives/ employer	0.7	0.6	0.8
Government residence	0.3	0.1	0.8
Squatter	2.2	2.0	2.7
Others	0.2	0.2	0.2
Total	**100**	**100**	**100**

Source: SANEM-GDI Household Survey 2023

3.8 Types of household dwelling

In terms of housing materials, more than half of the rural houses were constructed from less durable materials (Katcha): see Table 10. Only 14.1% of the rural households were Pucca (built with concrete), while 33% were semi-pucca (with concrete floors but more rudimentary materials for walls). A larger proportion of urban houses were semi-pucca (44.0%) or pucca (28.4%).

Table 10. Distribution of type of dwelling houses by area (%)

Type of dwelling	National	Rural	Urban
Katcha	45.3	52.9	27.6
Semi-pucca	36.3	33.0	44.0
Pucca	18.4	14.1	28.4
Total	**100**	**100**	**100**

Source: SANEM-GDI Household Survey 2023

3.9 Households by sources of drinking water

At the national level, the primary source of drinking water was the tube well (61.1% of households). However, its usage varied between urban and rural areas. In urban areas, 42.0% of the population relied on tube well water, but this figure rose to 69.2% in rural areas. Conversely, 28.9% of urban dwellers had access to supply or piped water, a luxury less commonly available in rural regions, where only 2.2% had such access: see Table 11.

Table 11. Distribution of households by main source of drinking water by area (%)

The main source of drinking water	Rural	Urban	National
Piped/Supply	2.2	28.9	10.2
Tube Well	69.2	42.0	61.1
Deep Tube Well	17.3	17.5	17.4
Well	0.1	0.0	0.0
Pond	0.4	0.0	0.3
Canal/River	0.1	0.0	0.1
Rain/Spring	1.4	0.0	1.0
Motor System	1.4	0.0	1.0
Others	0.1	0.0	0.0
Total	**100**	**100**	**100**

Source: SANEM-GDI Household Survey 2023

3.10 Households by sources of lighting

Almost all households relied on externally supplied electricity for lighting, and hardly any households relied on solar panels or kerosene: see table 12.

Table 12 Distribution of households by main source of lighting by area (%)

Main Source of Light	Rural	Urban	National
Electricity	98.1	98.4	98.2
Solar Panel	1.5	1.4	1.5
Kerosene	0.4	0.2	0.3
Others	0.0	0.0	0.0
Total	**100**	**100**	**100**

Source: SANEM-GDI Household Survey 2023

3.8 Households by toilet facility

At the national level, 52.4% of households had access to sanitary toilets (whether water-sealed or non-water-sealed). 35.8% used ring slab toilets and 11.4% used kacha toilets. A small fraction of households (0.4%) lacked any toilet facilities. There were disparities in toilet access between urban and rural areas. The use of water-sealed sanitary toilets is more prevalent in urban areas (33.6% of households), compared to rural areas (11.4% of households).

Table 13. Distribution of Household by toilet facility by area (%)

Type of toilet	Rural	Urban	National
Sanitary (water-sealed)	11.4	33.6	18.0
Sanitary (no water-sealed)	32.7	38.6	34.4
Non-sanitary/Kacha toilet	13.7	6.0	11.4
Ring Slab toilet	41.7	21.7	35.8
Open Space/ No toilet	0.5	0.1	0.4
Total	100	100	100

Source: SANEM-GDI Household Survey 2023

3.9 Households by type of fuel used for cooking

Nationally, wood was the predominant cooking fuel, accounting for 57.1% of households, followed by dung or leaves at 21.3%, and gas at 11.7%. The use of gas is considerably higher in urban areas, where 32.2% of households use it, in contrast to just 3.0% in rural areas. Dung

or leaves were more commonly used in rural areas (26.5%) than in urban areas (9.0%): see Table 14.

Table 14. Distribution of Households by type of fuel used for cooking by area (%)

Fuel used for cooking	Rural	Urban	National
Wood/fire	63.7	41.7	57.1
Dung/leaves	26.5	9.0	21.3
Gas	3.0	32.2	11.7
LP Gas	6.6	16.5	9.6
Bio-Gas	0.1	0.1	0.1
Kerosene	0.0	0.2	0.1
Others	0.1	0.3	0.2
Total	100	100	100

Source: SANEM-GDI Household Survey 2023

Chapter 4: Changes in Poverty and Inequality

We measure changes in the level of poverty during the using two approaches: a conventional poverty line method, and multidimensional poverty index. The poverty line is calculated following the Cost of Basic Needs (CBN) approach following Sen and Ravallion (1998). First, we estimate a food poverty line, i.e. the amount required for each adult equivalent household member to consume 2,122 kilocalories, using a reference food basket. The overall poverty line is a combination of this amount and one of two alternative estimates of the amount required for basic non-food needs. The two alternative overall poverty lines are designated the upper poverty line (UPL) and the lower poverty line (LPL). This exercise is conducted for each geographical stratum of the sample (eight rural strata, eight urban strata, and four metropolitan areas). Households with a level of consumption expenditure than the poverty line are considered poor.[4]

It has been argued that this conventional expenditure-based poverty measure cannot capture the multidimensional nature of poverty. This is pertinent to the aftermath of the pandemic and to post-pandemic challenges. Therefore, we also construct multidimensional poverty index (MPI) using a methodology based on Alkire et al. (2020). The MPI is based on three components: Education (including years of education and school attendance), Health (including nutrition and access to healthcare), and Standard of living (including cooking fuel, sanitation, drinking water, electricity, housing materials and assets).[5] Each household's MPI is based on its estimated deprivation scores in each category. The household is considered poor if its MPI value is below a certain cut-off point.

4.1 Poverty incidence based on the CBN method

Poverty lines

Using the CBN method, upper and lower poverty lines for the 20 strata were calculated separately for 2018 and 2023: see the Annex for more details. For rural areas in 2023, the UPL ranged from BDT 3,321 per person per month (Barishal) to BDT 3,944 (Chittagong): see Figure 15. For the urban areas, the UPL ranged from BDT 3,374 (Barishal) to BDT 4,905 (Dhaka SMA). The rural LPL ranged from BDT 2,898 (Barishal) to BDT 3,188(Chittagong), while the urban LPL ranged from BDT 2,976 (Barishal) to BDT 3,503 (Dhaka SMA).

[4] The Annex provides a brief overview on the methodology used to estimate the CBN poverty lines.

[5] We modified our health indicator due to data limitations. For the details on our MPI methodology, see the Annex.

Table 15. Upper and lower poverty line

Stratum	UPL 2023	UPL 2018	LPL 2023	LPL 2018
Barishal Rural	3,321	2,140	2,898	1,822
Barishal Urban	3,374	2,642	2,976	2,203
Chittagong Rural	3,944	2,432	3,188	1,963
Chittagong Urban	4,132	2,639	3,249	2,127
Chittagong SMA	4,905	2,678	3,431	2,201
Dhaka Rural	3,671	2,760	3,037	2,402
Dhaka Urban	3,839	2,730	3,084	2,242
Dhaka SMA	4,492	3,118	3,503	2,521
Khulna Rural	3,881	2,380	3,108	2,007
Khulna Urban	3,801	2,475	3,219	2,130
Khulna SMA	4,243	2,672	3,380	2,285
Mymensingh Rural	3,732	2,429	3,136	2,162
Mymensingh Urban	3,744	2,612	3,089	2,144
Rajshahi Rural	3,983	2,353	2,918	1,903
Rajshahi Urban	3,991	2,611	3,097	1,864
Rajshahi SMA	4,025	2,557	3,182	2,152
Rangpur Rural	3,743	2,733	3,050	2,113
Rangpur Urban	3,838	2,792	3,053	2,166
Sylhet Rural	3,634	2,222	3,147	1,978
Sylhet Urban	3,453	2,930	3,131	2,624

Source: SANEM-GDI Household Survey 2023

Poverty rates

The national UPL poverty rate is estimated at 20.7%, which is slightly lower than the 2018 rate of 21.6%. This fall in the national UPL poverty rate is primarily driven by a fall in rural areas from 24.5% in 2018 to 21.6% in 2023. In contrast, the urban UPL poverty rate rose from 16.7% in 2018 to 18.7% in 2023.

The rise in urban poverty could be attributed to several different factors. For instance, the COVID-19 pandemic lockdown measures and their consequences were more stringent in urban areas than in rural ones. Moreover, after the end of the pandemic, urban areas experienced steeper rises in price levels than did rural areas. The rural supply of agricultural commodities is less restricted and food prices are lower, as reflected in the rural poverty lines. Also, most of the social security programmes in Bangladesh are targeted at rural areas, poor households often migrate from rural areas to urban areas as a livelihood diversification strategy.

Figure 3: Upper Poverty Rates by Region

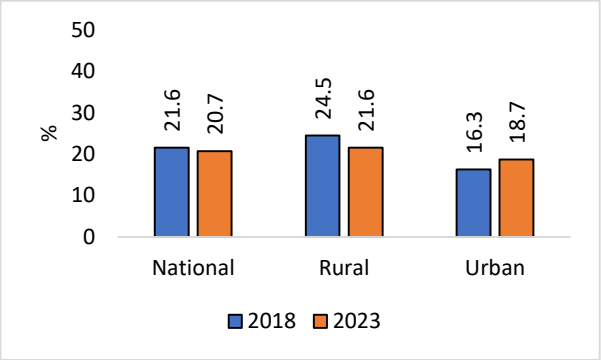
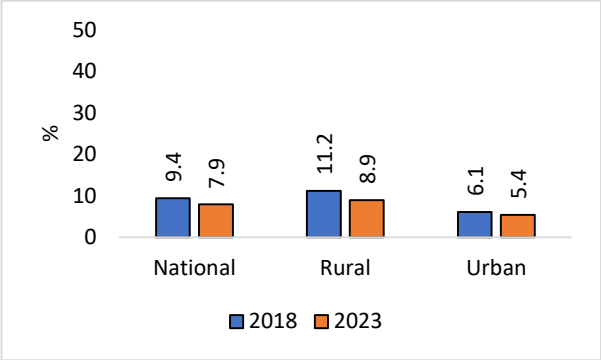


Figure 4: Lower Poverty Rates by Region



SANEM Household Survey 2018, 2023

The LPL poverty rate in Bangladesh decreased from 9.4% in 2018 to 7.9% in 2023. The fall was larger in rural areas than in urban areas.

Table 16. Poverty rates in 2023 by division (%)

Division	**National**		**Rural**		**Urban**	
	UPL	**LPL**	**UPL**	**LPL**	**UPL**	**LPL**
Barishal	32.5	17.5	34.4	18.2	25.7	15.0
Chattogram	18.8	5.5	18.6	6.5	19.2	3.6
Dhaka	15.7	5.6	16.9	7.7	14.0	2.7
Khulna	24.6	9.7	25.2	10.6	22.7	6.4
Mymensingh	10.4	3.9	10.2	4.2	11.0	2.5
Rajshahi	19.1	4.5	18.3	3.7	21.5	6.8
Rangpur	42.9	21.3	43.5	21.2	40.1	21.6
Sylhet	8.9	4.4	9.6	4.8	6.9	2.9

Source: SANEM-GDI Household Survey 2023

At the divisional level in 2023, the highest UPL poverty rates are observed in Rangpur (42.9%), Barishal (32.5%), and Khulna (24.6%): see Table 16. The incidence of extreme poverty, as measured by the LPL, is also highest in Rangpur (21.5%), Barishal (17.5%), and Khulna (9.7%).

It is noteworthy that the UPL poverty rate in Bangladesh increased in four divisions between 2018 and 2023, namely Barishal (7 percentage points (pp)), Chattogram (1.8 pp), Dhaka (1.1 pp), and Rangput (2.9 pp): see Figure 6. In all other divisions, the UPL poverty rate fell.

A different trend is observed in the LPL poverty rate, which fell in all divisions except Barishal, where it rose from 9.9% in 2018 to 17.5% in 2023.

Figure 5: Poverty dynamics between 2018 and 2023 by division (UPL poverty rate)

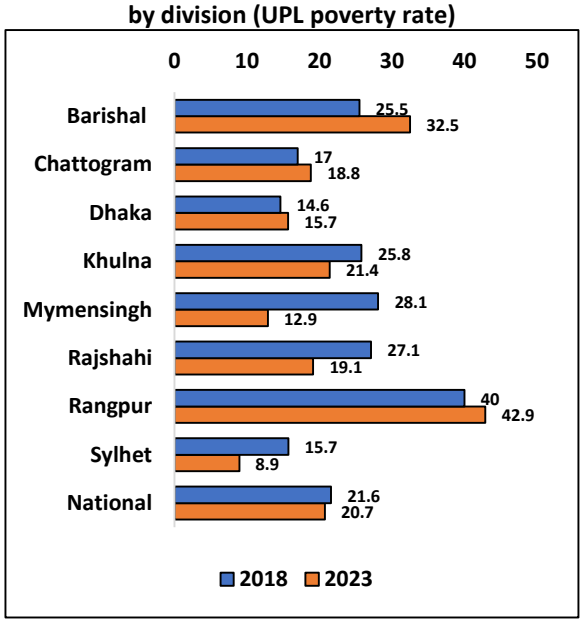
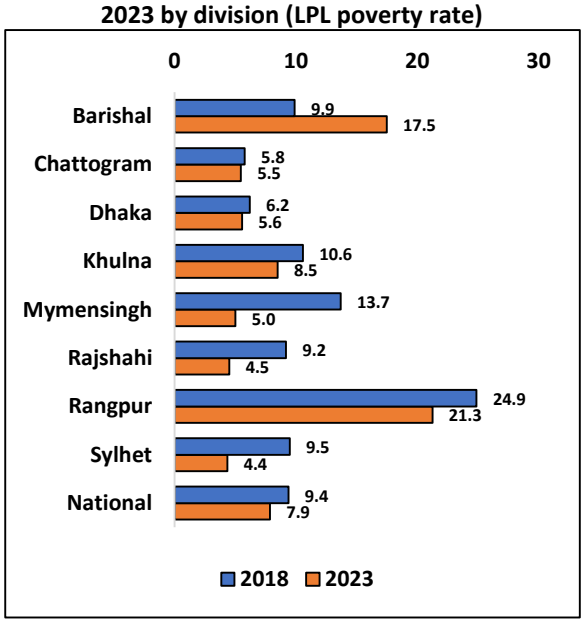


Figure 6: Poverty dynamics between 2018, and 2023 by division (LPL poverty rate)



4.2 Dynamics of the New Poor

Table 17 shows the proportion of households transitioning between different poverty categories over 2018-2023: extremely poor (below the LPL), moderately poor (above the LPL but below the UPL), vulnerable (above the UPL but below 1.25 times the UPL) and non-vulnerable (above 1.25 times the UPL). Of the households who were extremely poor in 2018, 20.5% remained extremely poor in 2023, 19.2% became moderately poor, 24.9% became vulnerable, and 35.3% became non-vulnerable.

Table 17. Poverty dynamics

		Status in 2023				
		Extremely Poor (%)	Moderately Poor (%)	Vulnerable (%)	Non-Vulnerable (%)	Total (%)
Status in 2018	Extremely Poor	20.5	19.2	24.9	35.3	100
	Moderately Poor	12.8	19.2	26.5	41.4	100
	Vulnerable	8.8	16.1	24.7	50.4	100
	Non-Vulnerable	4.1	8.9	16.8	70.2	100

Source: SANEM-GDI Household Survey 2023

*Note: Extreme poor is defined as anyone below the lower poverty line; moderate poor is defined as anyone below the upper poverty line; vulnerable poor is defined as anyone below the 1.25*upper poverty line; and non-poor non-vulnerable is defined who are above the vulnerable poverty line.*

Among the moderately poor households in 2018, 12.8% fell back into extreme poverty, 19.2% remained moderately poor, 26.5% became vulnerable, and 41.4% became non-vulnerable. Among the vulnerable households in 2018, 50.4% became non-vulnerable in 2023, 24.7% remained vulnerable, 16.1% fell into moderate poverty, and 8.8% fell into extreme poverty. Among the non-vulnerable households in 2018, 70.2% remained non-vulnerable, 16.8% became vulnerable, 8.9% fell into moderate poverty, and 4.1% fell into extreme poverty.

To better understand the New Poor, households below the UPL were categorized as Old Poor or New Poor depending on whether they were already poor prior to 2023 or had fallen below

the UPL during the pandemic. Among the New Poor households, 21% were from Barishal, 19% were from Rangpur, 13% were from Chittagong, and 13% were from Khulna: see Figure 7.

Figure 7: Distribution of old poor and new poor by division

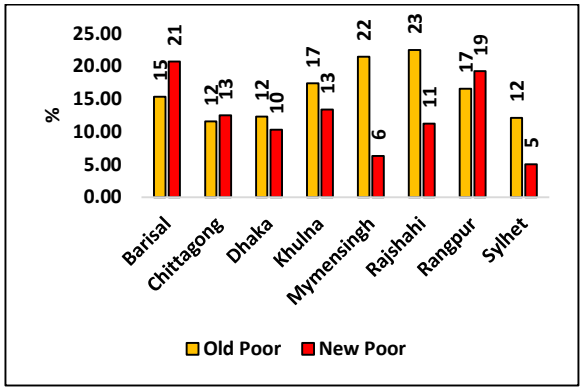
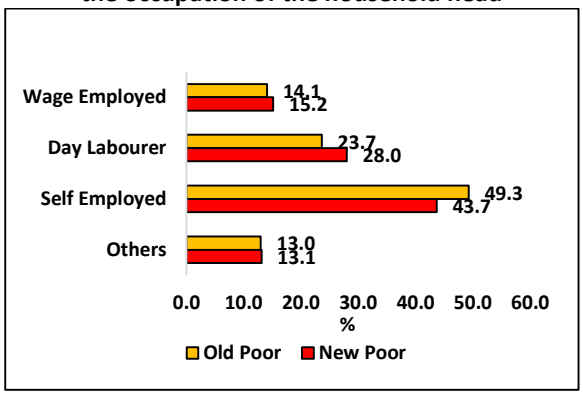


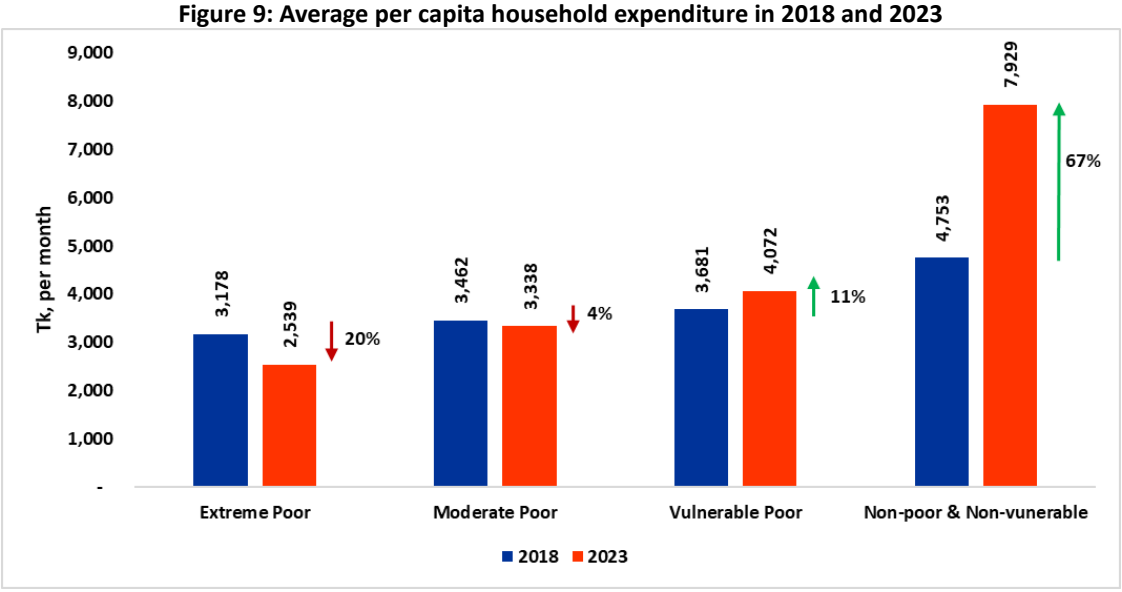
Figure 8: Distribution of old poor and new poor by the occupation of the household head



Among the Old Poor households, 49.3% had self-employed household heads, 14.1% had wage-employed heads, and 23.7% had heads who were day labourers: Figure 9. Among the New Poor households, 43.7% had self-employed household heads, 15.2% had wage-employed heads, and 28.0% had heads who were day labourers. New Poor household heads are more likely to be day labourers than are Old Poor household heads.

Figure 9 shows the average total per capita expenditure of households in each category in 2018 and in 2023. It can be seen that there is a large increase in average expenditure of non-vulnerable households, a small increase in the average expenditure of vulnerable households, a small decrease in the average expenditure of moderately poor households, and a larger decrease in the average expenditure of extremely poor households. (Note that these figures relate to household groups in each year: the 2023 groups are different from the 2018 groups, because some households transition between categories.)

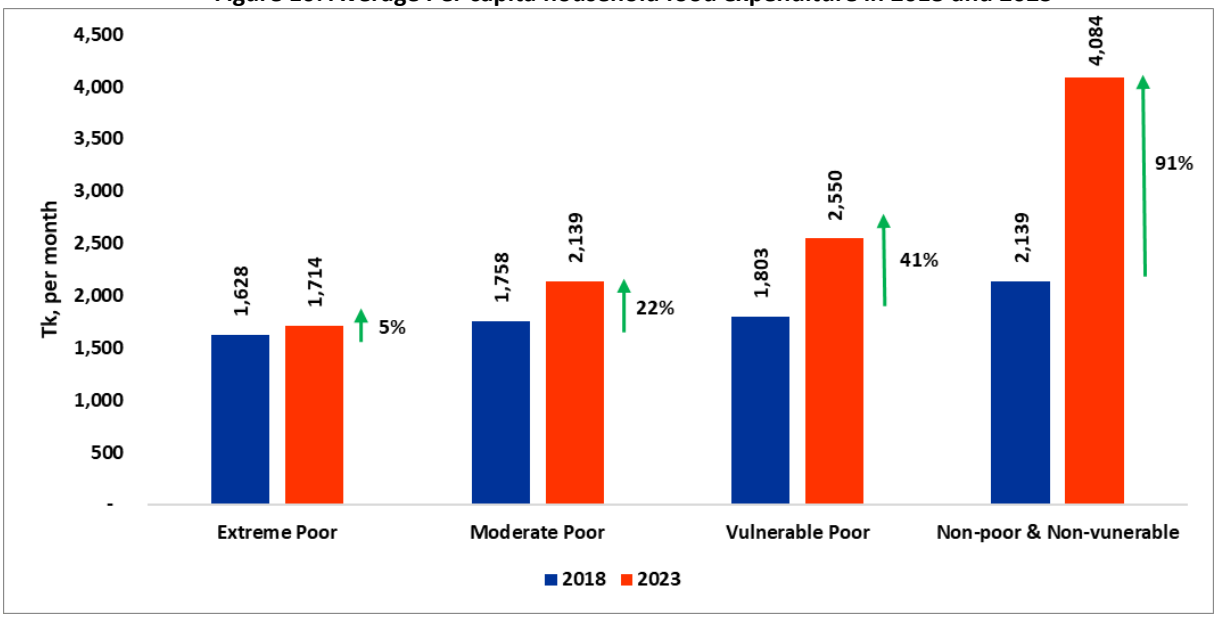
Figure 9: Average per capita household expenditure in 2018 and 2023



Source: SANEM household survey 2018, 2023

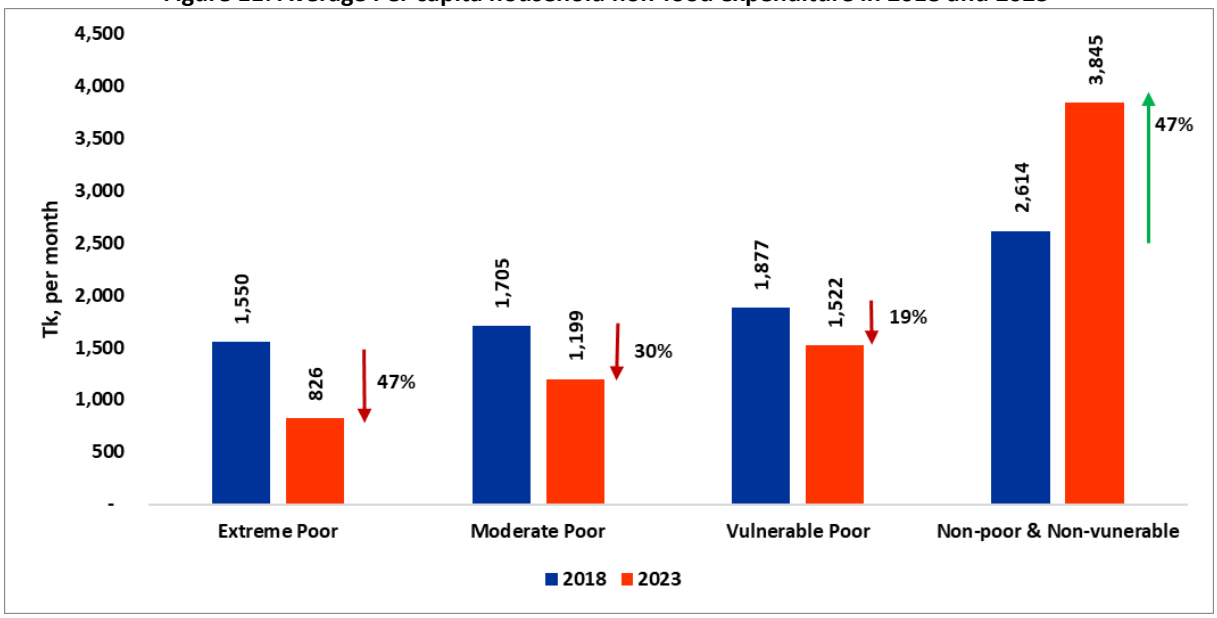
Underlying these total expenditure changes are very different changes for food expenditure and non-food expenditure: see Figures 10-11. Food expenditure is higher across all households, although the increases are smaller for the poor. Non-food expenditure is lower for all households except those who are non-vulnerable. Even among the non-vulnerable, the average increase in food expenditure increase is much larger than the average increase in non-food expenditure. This reflects the large increase in food prices in 2023.

Figure 10: Average Per capita household food expenditure in 2018 and 2023



Source: SANEM household survey 2018, 2023

Figure 11: Average Per capita household non-food expenditure in 2018 and 2023



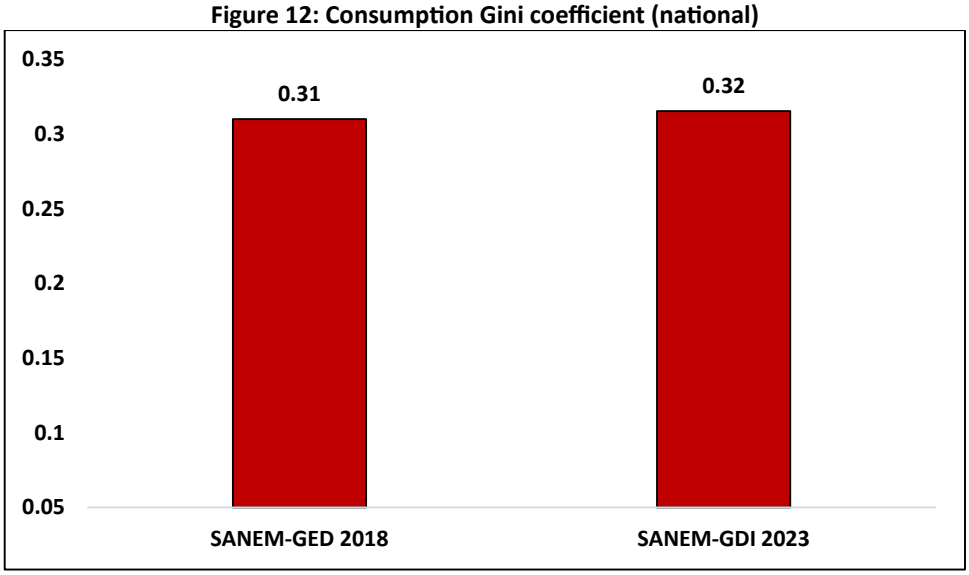
Source: SANEM household survey 2018, 2023

Figures 9-11 also imply an increase in the level of inequality between 2018 and 2023, which we explore in more detail in the next section.

4.3 Income inequality

There has been only a moderate worsening of Gini coefficient based on consumption expenditure: 0.32 in 2023 compared with 0.31 in 2018: see Figure 13.

Figure 12: Consumption Gini coefficient (national)



Source: SANEM GED HH Survey, SANEM GDI HH Survey, 2023

However, a much larger rise in inequality is observed if we compare the ratio of income of the richest 5% of households to the income of the poorest 20%: see Table 18. The ratio has risen from 2.1 in 2018 to 5.4 in 2023. Using consumption instead of income, the ratio has risen from 1.3 to 2.1 in 2023. Note that very few ultra-rich households were included in the survey, so Table 18 might understate the true rise in inequality.

Table 18. Ratio of richest 5% to poorest 20% (income and expenditure)

Income/Expenditure group	Income share (% of total)		Expenditure share (% of total)	
	2018	2023	2018	2023
Richest (5%)	15.8	23.3	12.9	17.5
Poorest (20%)	7.7	4.3	9.6	8.4
Ratio of Richest to Poorest	2.1	5.4	1.3	2.1

Source: SANEM-GDI Household Survey 2018, 2023

4.4 Multidimensional poverty

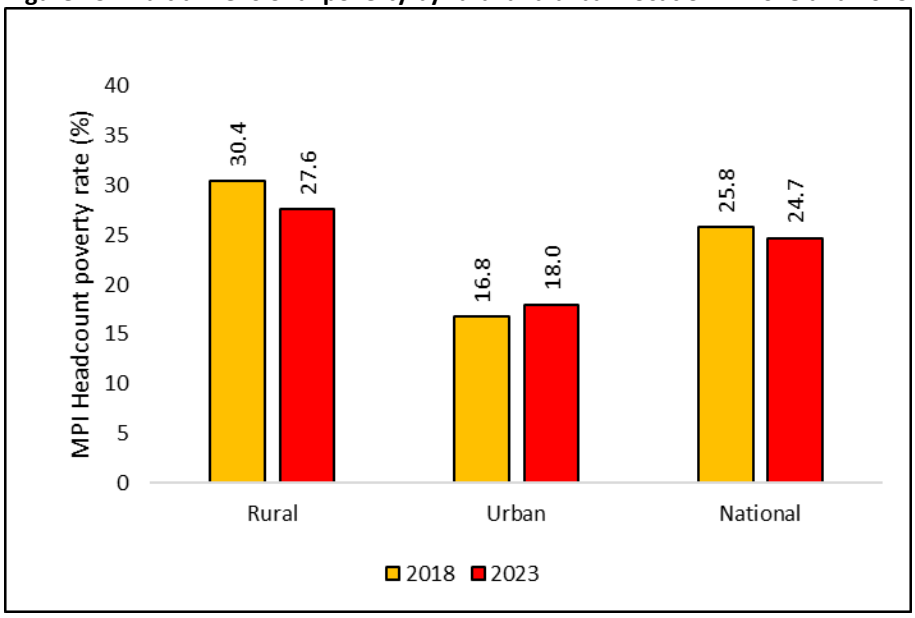
We construct multidimensional poverty index (MPI) by applying a method very similar to that of Alkire et al. (2020).[6] Poverty is measured across three dimensions: Education (including years of education and school attendance), Health (including nutrition and access to healthcare), and Standard of living (including cooking fuel, sanitation, drinking water,

[6] Due to data limitations, we modified the measure of health deprivation. We have just two sub-indicators: access to healthcare and nutrition. See the Annex for the detailed methodology.

electricity, housing materials and assets). A household is categorized as poor if its MPI is less a certain cut-off point.

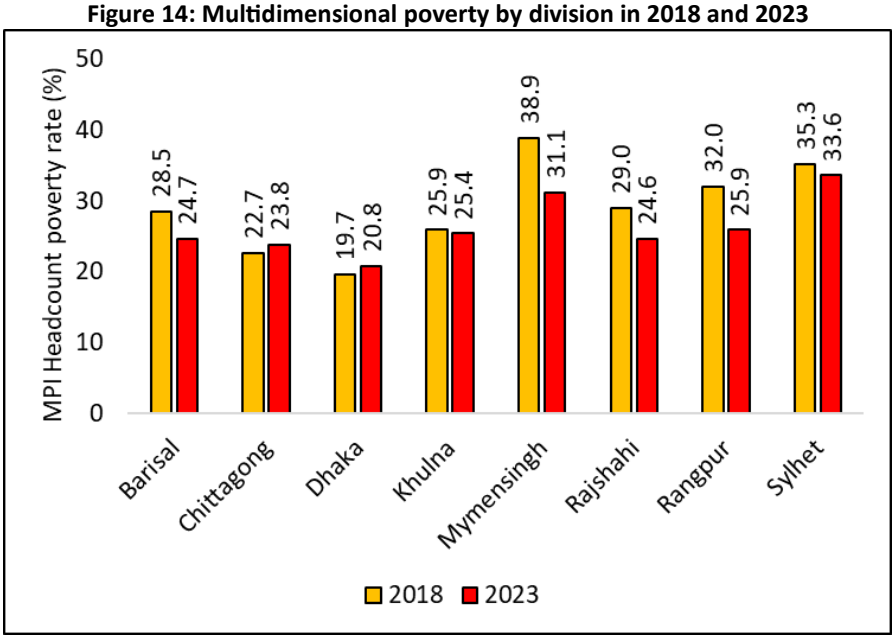
At the national level, the MPI poverty rate in Bangladesh has fallen from 25.8% in 2018 to 24.7% in 2023: see Figure 14. This fall was primarily due to a fall in rural areas from 30.4% in 2018 to 27.6% in 2023. By contrast, the urban MPI headcount poverty rate has increased 16.8% in 2018 to 18% in 2023.

Figure 13: Multidimensional poverty by rural and urban location in 2018 and 2023



Source: SANEM-GDI Household Survey 2023

Figure 14: Multidimensional poverty by division in 2018 and 2023



Source: SANEM-GDI Household Survey 2023

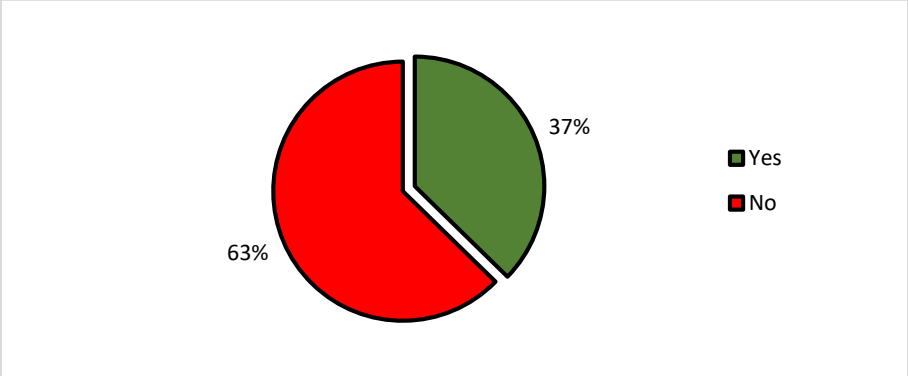
Most individual divisions' MPI poverty rates have decreased: see Figure 15. The largest fall is observed in Mymensingh (from 38.9% to 31.1%), followed by Rangpur (from 32% to 25.9%) and Rajshahi (29% to 24.6%). However, the MPI poverty rate has increased in the more

urbanized divisions such as Dhaka (from 19.7% to 20.8%) and Chittagong (from 22.7% to 23.8%). The MPI poverty rate is now highest in Sylhet (33.6%).

4.5 Social safety net programmes

One of the critical challenges facing Bangladesh during the COVID-19 pandemic was the limited spread of social safety net programmes. In 2018, only 27% of the households received some form of social safety net benefit. Between October 2022 and September 2023, only 37% of the households received benefits from social safety net programmes.

Table 19. Percentage of households who are social safety net programme beneficiaries



Source: SANEM-GDI Household Survey 2023

Across all households, 15.6% had a TCB/Family card, 9.0% had an old age allowance, 5.0% had a widow/deserted/destitute allowance, 3.3% had an allowance for financially insolvent persons with a disability, 3.2% had a Food Friendly Programme allowance, 2.9% had an OMS, and 1.7% had a VGD.

Table 20: Top ten social security programmes in Bangladesh (beneficiaries as % of all households)

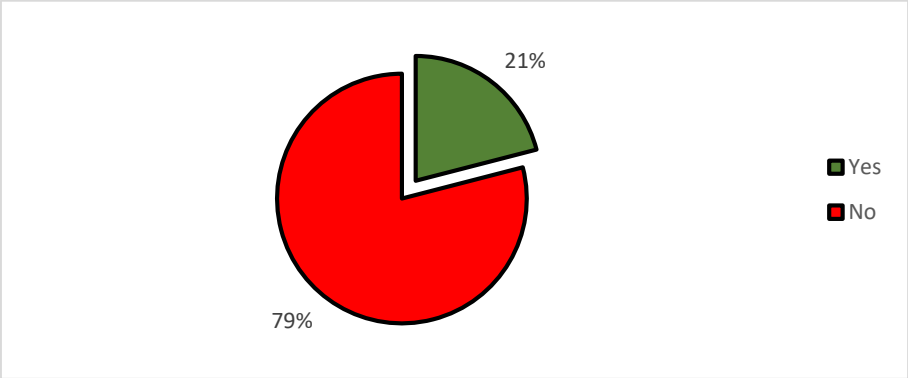
Safety net programme	% of SSP recipient HHs
TCB/ Family Card	15.63
Old Age Allowance	8.90
Widow/Deserted/Destitute Women Allowances	4.98
Allowances for the Financially Insolvent Disabled	3.34
Food Friendly Programme (FFP)	3.17
Open Market Sales (OMS)	2.92
Vulnerable Group Development (VGD)	1.68
Gratuitous Relief (GR)- Food/ Cash	0.78
Test Relief (TR) Food (cash)	0.72
Vulnerable Group Feeding (VGF)	0.67

Source: SANEM-GDI Household Survey 2023

Support during the pandemic

During the pandemic, only 21% of households received any support from government or private initiatives: see Figure 15. Among these households, 67.3% received food assistance from the government, 20.6% received a direct cash allowance from the government, and 9.6% received support from private initiatives: see Table 21. Some other programmes, for instance benefits to healthcare workers and salary support to the RMG workers, were also reported.

Figure 15: Percentage of households receiving additional support programmes during the pandemic



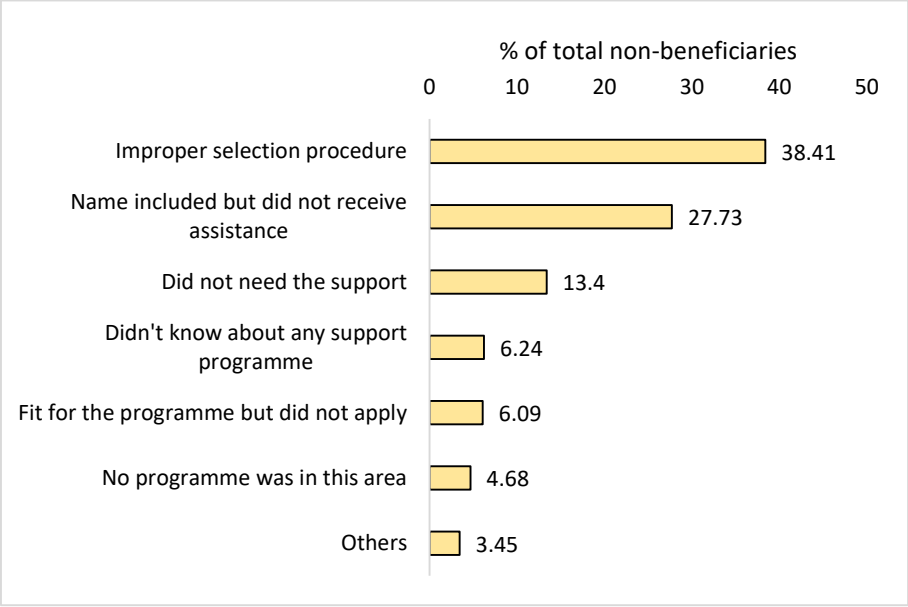
Source: SANEM-GDI Household Survey 2023

Table 21 Distribution of additional support received (%)

Type of additional benefits received during the pandemic	% of total beneficiaries
Food assistance	67.3
Direct cash allowance from the Govt.	20.6
Assistance from private sources	9.6
Agriculture assistance and equipment facilitation	0.6
Salary support to garments/manufacturing workers	0.5
Assistance for house construction	0.4
Benefits to health workers/other involved government employees	0.1
Others	0.9
Total	**100**

Source: SANEM-GDI Household Survey 2023

Figure 16: Reasons for not being included in any COVID support programme (% of total non-beneficiaries)



Source: SANEM-GDI Household Survey 2023

Households who did not receive any support during the pandemic were asked the reasons for not receiving the benefits (Figure 16). 38.4% of these households stated that the process of beneficiary selection was improper, while 27.7% stated that their names were included in the list but they did not receive any assistance. Only 13.4% of the households stated that they needed no support during the pandemic.

Chapter 5: The COVID-19 Pandemic, Education and Healthcare

5.1 Education

During the pandemic, Bangladeshi school closures were longer than those in most other countries.[7] However, the number of days of closure varies by the type of school and by region. For example, rural schools were closed for an average of 447 days and urban schools were closed for an average of 502 days: see Table 22. Religious schools opened several months earlier than did others. The prolonged closures may have severely affected student learning.

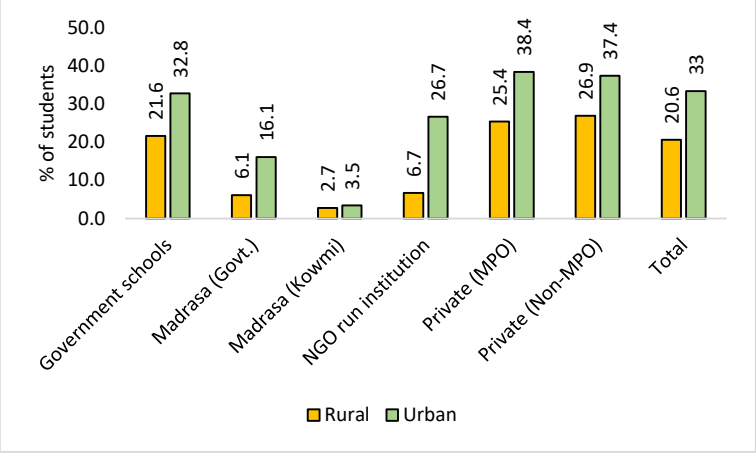
Table 22. Length of school closures during the COVID-19 pandemic by school type and by location

Types of School	National (Days)	Rural (Days)	Urban (Days)
Government	454	440	484
Private (Govt. grants or included in the MPO list)	486	469	522
Private (Not govt. grants)	471	432	533
NGO run institution	526	529	522
Madrasa (Govt. affiliated)	480	476	495
Madrasa (Kowmi)	366	343	449
Hafezi	370	367	382
Total	**464**	**447**	**502**

Source: SANEM-GDI Household Survey 2023

Different forms of online or distance learning programme were implemented across the country. These alternatives included recorded TV programmes, Zoom classes, and classes taken on Facebook. However, some schools offered no alternative, and access to online education, varied across households. Across all types of school, participation in online classes was higher in urban areas (33% of households) than in rural areas (20.6%). Participation by Students from private schools was higher than participation by students from public schools. The lowest rates of participation were for the students from religious schools.

Figure 17: Online participation by types of by location and school type (% of total)

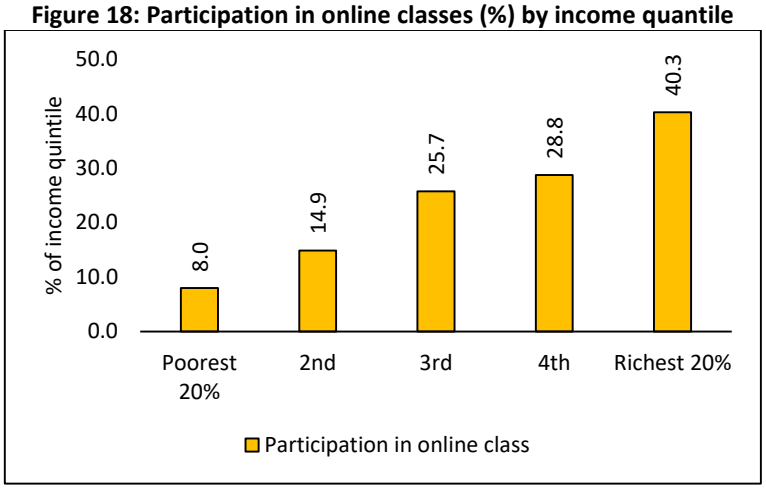


Source: SANEM-GDI Household Survey 2023

[7] According to UNESCO, schools in Bangladesh remained closed for 63 weeks; only the Philippines, Honduras, and Uganda closed their schools for longer.

Participation in online and distance education varied across households in different income quintiles (as measured with consumption expenditure): see Figure 18. Only 8.0% of children from the bottom quintile participated in any form of online or distance programme, compared to 40.3% of children from the top quintile.

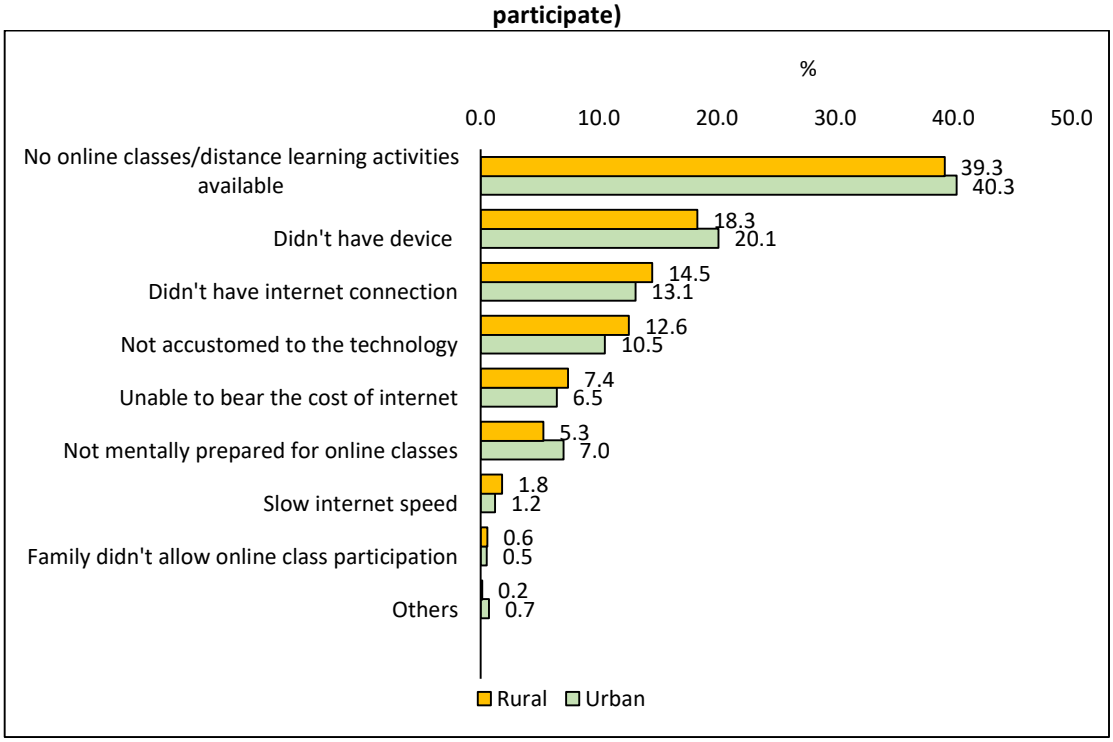
Figure 18: Participation in online classes (%) by income quantile



Source: SANEM-GDI Household Survey 2023

There were several different stated reasons for not participating in online or distance learning. These included (i) a lack of classes or distance learning activities, (ii) lacking a suitable electronic device, (ii) no internet access, (iii) slow internet connectivity, (iv) the cost of internet access, (v) not being used to the technology, (vi) not being prepared to participate, and (vi) not being allowed allowing to participate: see Figure 19.

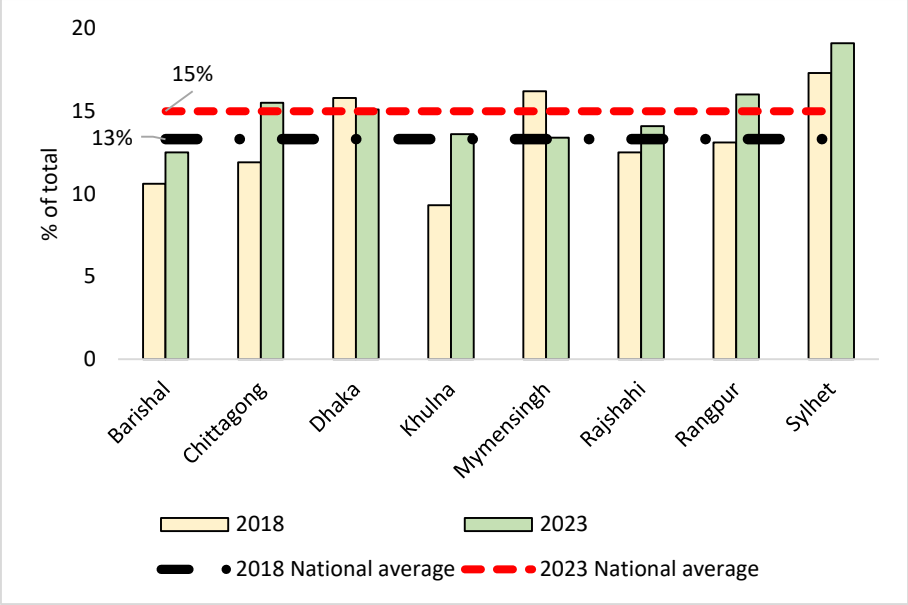
Figure 19: Reasons behind not participating in online/TV classes by location (% of students who did not participate)



Source: SANEM-GDI Household Survey 2023

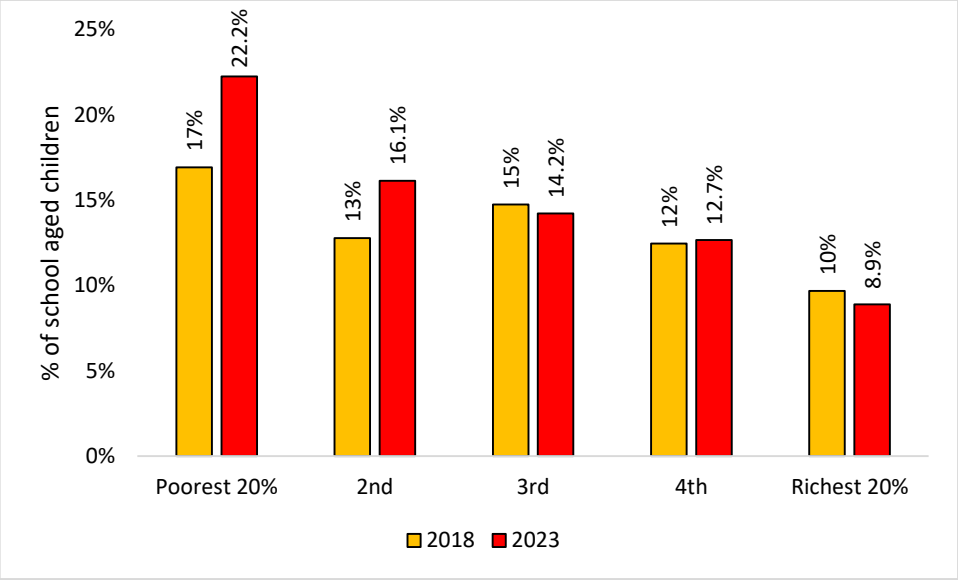
Prolonged absence from school exacerbates the risk of permanent school dropout. This phenomenon is reflected in the rise in the percentage of school-aged children outside education: see Figure 23. In 2018, at the national level, 13% of the children in the 5-15 age group were not attending school; this rose to 15% in 2023. The highest rates of increase were in Chittagong (4.6 p.p.) and Khulna (4.3 p.p.).

Figure 20: Children outside education in 2018 and 2023 by location (% of school-aged children)



Source: SANEM-GDI Household Survey 2023

Figure 21: Children outside education by income quantile in 2018 and 2023 (% of school-aged children 5-15)



Source: SANEM-GDI Household Survey 2023

In fact, there has only been a marked fall in the proportion of children outside education in the bottom two income quintiles: see Figure 21. In the top quintile, the proportion of children outside education has decreased.

There were several stated reasons for not attending education: see Table 23. These reasons vary by sex and include a loss of interest (63% males, 34% females), which could be directly

related to their long-time absence from school during the pandemic. Moreover, poor households withdrew their children from school as a coping strategy: 36% of the male students and 59% of the female students stated unaffordability as one of the reasons for not attending school. 26.5% of male students left school to support the family income and start working (26.5%). 4.5% of female students did this, but 12.6% dropped out because of marriage. Other reasons included parents' unwillingness to continue education, security reasons, or failing an examination.

Table 23. Reasons for not continuing education by sex (% of children aged 5-15 not attending school)

Reasons for not continuing education	Males	Females	Total
Not interested	63.1	34.2	54.0
Could not afford	36.1	58.6	43.2
Dropped out during the COVID	20.3	12.6	17.9
To support family income/start working	26.1	4.5	14.8
Parents did not want	11.6	16.2	13.1
Failed in examination	13.7	6.3	11.4
Marriage	0.4	12.6	4.3
No school nearby	0.8	1.8	1.1
Security reason		2.7	0.9
Others	0.8	1.8	1.1

Source: SANEM-GDI Household Survey 2023
Note: Households selected multiple reasons behind not attending school.

5.2 Healthcare

8.5% of those surveyed reported suffering from coronavirus symptoms between March 2020 and October/November 2023: see Figure 22. Among those who had symptoms, less than a quarter undertook a COVID-19 test (Figure 24) and 29% tested positive (Figure 24). One of the main reasons for not testing was the lack of willingness to go through the test process (Table 24). Note that testing facilities were not readily available in all parts of the country. Self-testing kits were not allowed in Bangladesh, and the only way to get a COVID-19 test was RT-PCR, which was often costly and locally unavailable, and took several days to produce results.

Figure 22: Percentage of population with coronavirus symptoms

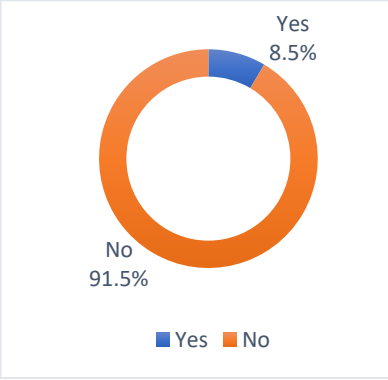


Figure 23: Percentage of population with COVID tests (% of those who had symptoms)

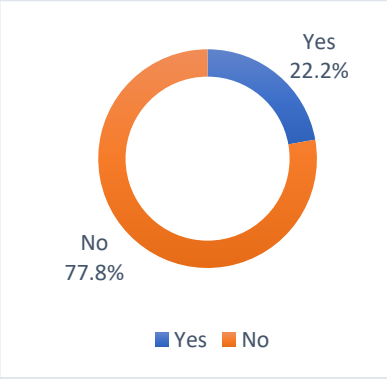
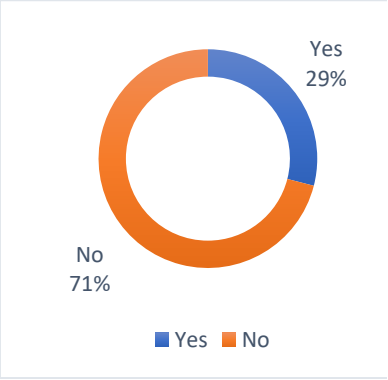


Figure 24: Percentage of the population diagnosed positive in a COVID test (% of those who tested)



Source: SANEM-GDI Household Survey 2023

Table 24. Reasons for not testing for COVID

Reasons	%
Didn't feel the need to do it	87.7
Transport to the testing facility is not easy/costly	6
Testing was not available	3.7
Testing was not available	2.1
Others	0.6
Total	100

Source: SANEM-GDI Household Survey 2023

29.7% of those surveyed used facemasks most of the time: see Table 25. Facemask use rates were highest in Barishal (56.9%), Rajshahi (35.7%), Chittagong (29.8%), and Khulna (29.4%). During the peak of the pandemic, regular facemask use was higher among males than among females (Figure 25) and higher in urban areas than in rural areas (Figure 26). During the peak of the pandemic, lockdown restrictions were implemented more stringently in urban areas than in rural areas.

Table 25. Frequency of the use of masks during the peak of the pandemic by divisions (%)

Division	**Frequency of face mask usage (%)**					
	Always	**Most of the time**	**Sometimes**	**Almost never**	**Never**	**Total**
Barisal	16.1	56.9	16.2	1.2	9.6	100
Chittagong	5.3	29.8	42.0	10.5	12.5	100
Dhaka	1.6	25.9	50.3	3.4	18.8	100
Khulna	1.3	29.4	49.7	7.7	11.9	100
Mymensingh	4.2	21.8	44.9	8.4	20.7	100
Rajshahi	13.4	35.7	35.3	4.6	11.1	100
Rangpur	0.2	21.2	56.7	8.9	13.0	100
Sylhet	10.9	25.5	53.7	3.0	6.9	100
Total	5.5	29.7	44.4	6.7	13.8	100

Source: SANEM-GDI Household Survey 2023

Figure 25: Frequency of the use of masks during the peak of the pandemic by sex (%)

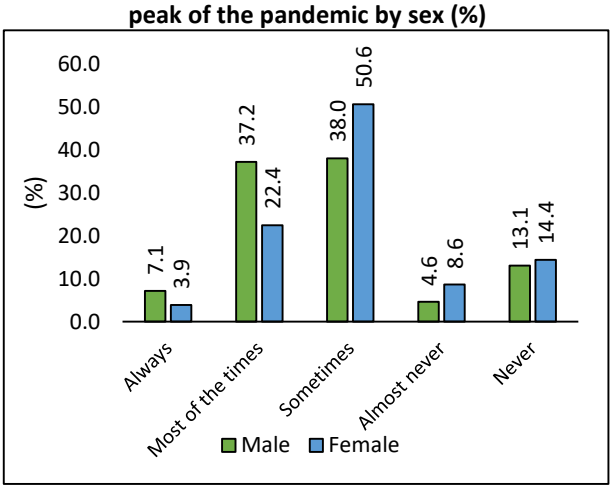
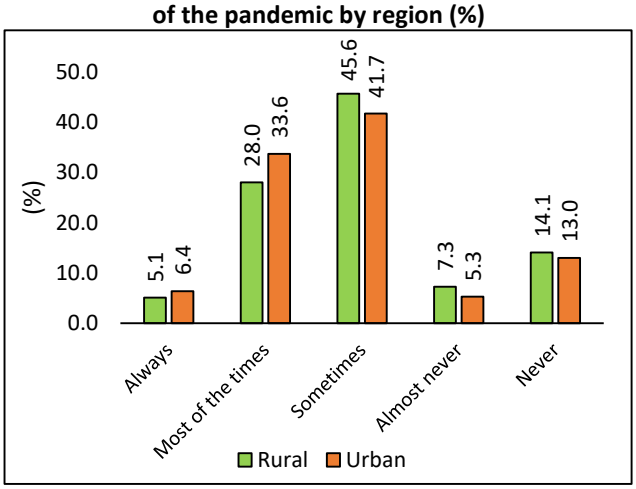


Figure 26: Frequency of the use of masks during the peak of the pandemic by region (%)



Source: SANEM-GDI Household Survey 2023

One of Bangladesh's successes in tackling the COVID-19 pandemic was the speed of the vaccine roll out, and vaccine administration began on 27 January 2021. Table 26 shows that

77% of males aged five or over and 80% of the females received more than two doses of the vaccine. Table 27 shows that there was no substantial rural-urban variation in the vaccination rate.

Table 26. Percentage of the population with COVID-19 vaccine doses (%, by sex)

Sex	Doses of the vaccine				
	No doses	**One dose**	**Two doses**	**Three doses/ Booster doses**	**Total**
Male	17.6	5.4	27.0	50.0	100
Female	16.0	4.6	30.1	49.3	100
Total	16.8	5.0	28.6	49.6	100

Source: SANEM-GDI Household Survey 2023

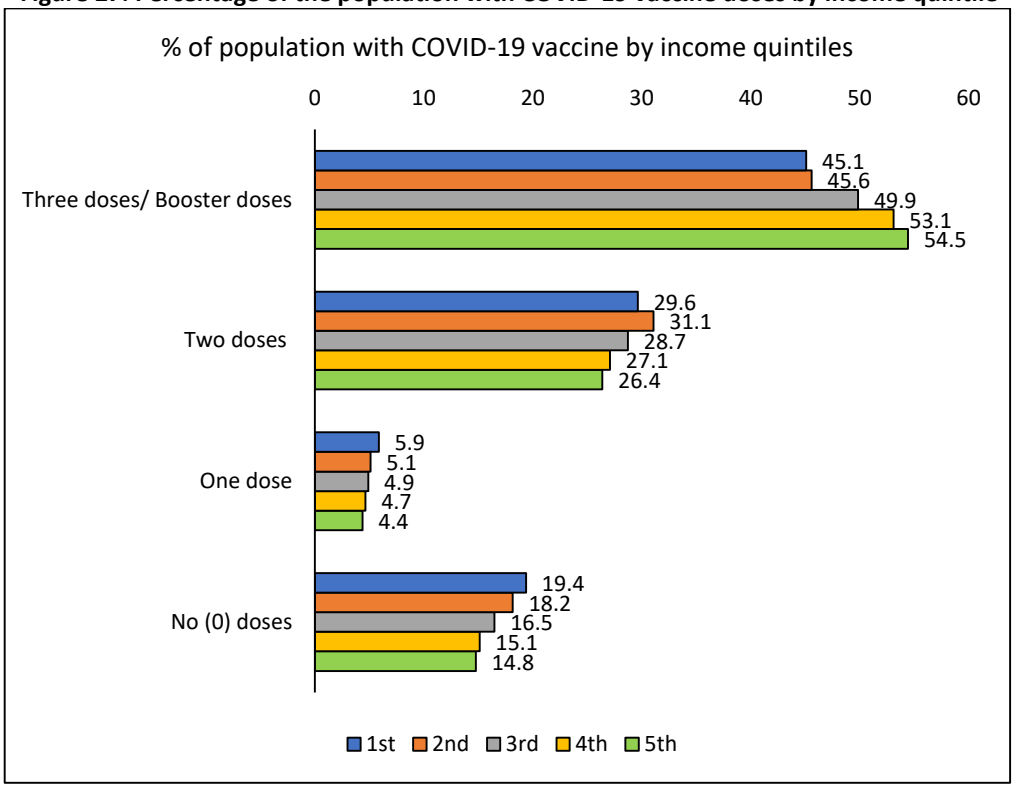
Table 27. Percentage of the population with COVID-19 vaccine doses by location (rural/urban)

Location	Doses of the vaccine				
	No doses	**One dose**	**Two doses**	**Three doses/ Booster doses**	**Total**
Rural	17.1	4.9	28.4	49.6	100
Urban	16.0	5.1	29.1	49.8	100
Total	**16.6**	**5.0**	**28.7**	**49.7**	**100**

Source: SANEM-GDI Household Survey 2023

There is some variation in the vaccination rate across income quintiles: see Figure 27. The three-dose vaccination rate for the top quintile is almost ten percentage points higher than the rate for the bottom quintile. This could reflect a higher level of education among richer households.

Figure 27: Percentage of the population with COVID-19 vaccine doses by income quintile



Source: SANEM-GDI Household Survey 2023

Average monthly per capita health expenditure has increased more than threefold between 2018 and 2023: see Figure 22. However, the rise is not symmetrical across all income groups: see Figure 23. In the bottom quintile, expenditure has approximately doubled, but in the top quintile, expenditure has increased almost six-fold. The increase in expenditure may by partly a consequence of inflation and partly a consequence of the pandemic. The asymmetry across income groups is a topic for future research.

Figure 28: Average per capita health expenditure in 2018 & 2023

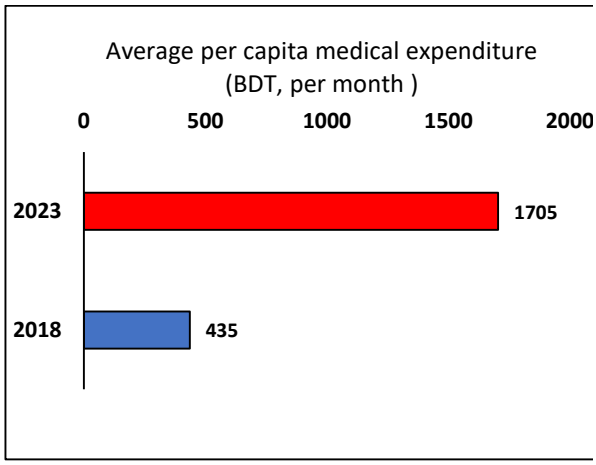
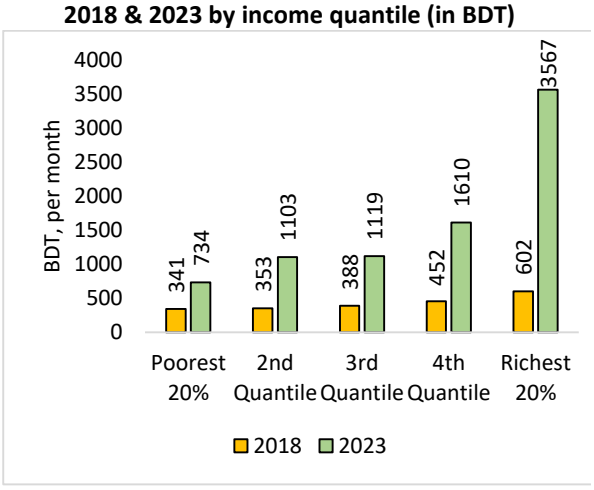


Figure 29: Average per capita health expenditure in 2018 & 2023 by income quantile (in BDT)



Source: Source: SANEM Household Survey 2018; SANEM-GDI Household Survey 2023

Chapter 6: Economic Activity

6.1 Employment

47% of employment is in the service sector, 36% is in agriculture, and 18% is in industry: see Table 28. Agricultural is concentrated in rural areas, where it accounts for 39% of male employment and 67% female employment. In urban areas, 66% of males and 50% of females are employed in the services sector.

Table 28. Distribution of employment by sector, sex and location (%)

	Rural			Urban			National		
Economic Sector	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Agriculture	39	67	45	11	26	15	30	54	36
Industry	17	9	15	23	24	23	19	14	18
Service	44	24	40	66	50	62	51	32	47
Total	100	100	100	100	100	100	100	100	100

Source: SANEM-GDI Household Survey 2023

We estimate the 2023 unemployment rate to be 3.6% in rural areas, 4.6% in urban areas, and 3.9% nationally: see Table 29.[8] In both rural and urban areas, the unemployment rate is higher among the youth (15-24) and early career workers (25-34). However, in both rural and urban areas, as well as across all age groups, the female unemployment rate is higher than the male unemployment rate.

Table 29. Unemployment rate by age, sex and location (%)

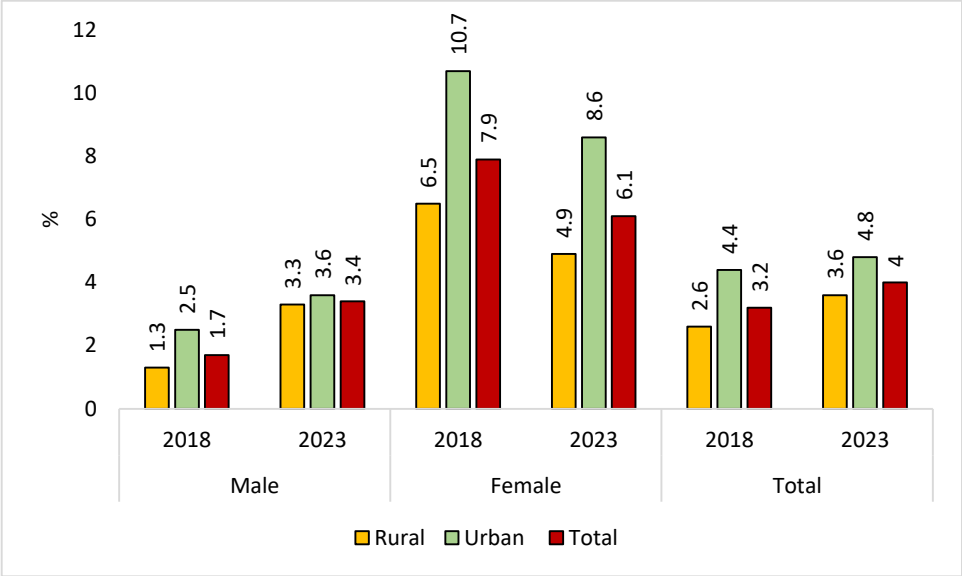
	Rural			Urban			Bangladesh		
Age Category	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
15-24	12.3	13.8	12.6	9.9	18.9	12.2	11.6	15.7	12.4
25-34	3.9	8.3	5.0	6.2	13.3	8.1	4.7	10.0	6.1
35-44	0.6	2.0	1.0	0.6	3.8	1.4	0.6	2.6	1.1
45-54	0.7	1.8	0.9	0.8	2.2	1.1	0.7	1.9	1.0
55-64	0.1	0.5	0.2	0.5	1.5	0.6	0.2	0.8	0.3
Total	**3.3**	**4.9**	**3.6**	**3.4**	**8.4**	**4.6**	**3.3**	**6.1**	**3.9**

Source: SANEM-GDI Household Survey 2023

The overall unemployment rate in Bangladesh has slightly increased from 3.2% in 2018 to 4.0% in 2023. However, during this time, the male unemployment rate almost doubled in both rural areas (from 1.3% in 2018 to 3.3% in 2023) and urban areas (from 2.5% in 2018 to 3.6% in 2023). By contrast, the female unemployment rate decreased in both rural (from 6.5% in 2018 to 4.9% in 2023) and urban areas (from 10.7% in 2018 to 8.6% in 2023). The fall in female unemployment might be because of more females being engaged in unpaid family work or in the rural agricultural subsistence sector. The rate of male youth unemployment has increased in both rural and urban areas, but female youth unemployment rate has fallen: see Figure 31.

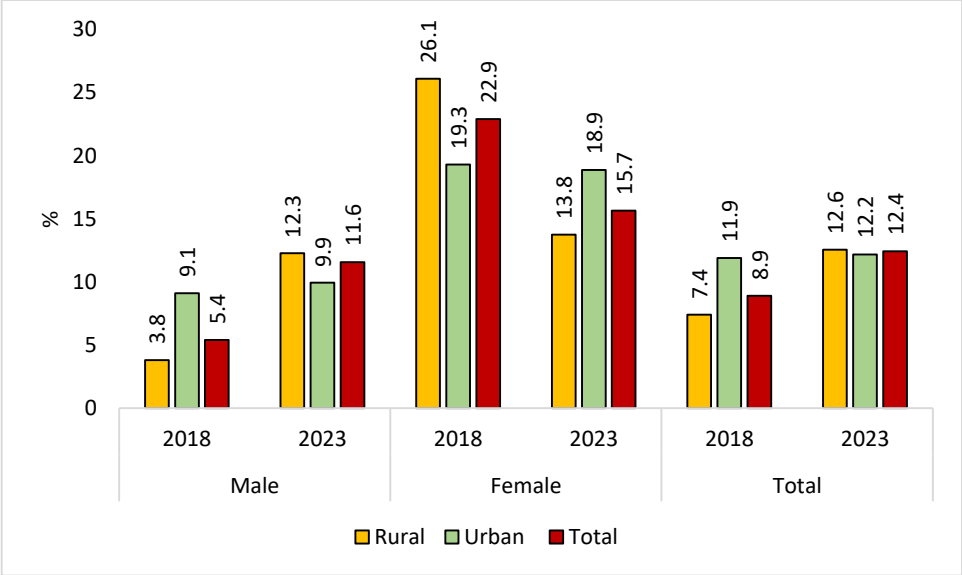
[8] We use the same definition as the BBS: "A person within the active population age (15-64) is considered unemployed if he actively looked for work in the last four weeks, was available to work in the last one week, and is available to take a job within two weeks." (BBS, 2022).

Figure 30: Unemployment rates by region and sex in 2018 and 2023 (%)



Source: SANEM-GDI Household Survey 2023

Figure 31: Youth unemployment rates by region and sex in 2018 and 2023 (15-24, %)



Source: SANEM-GDI Household Survey 2023

6.2 Youth NEET

Between 2018 and 2023, the proportion of youth not in employment, education, or training (NEET) has risen substantially: see Figures 32-Figure 33. The rate of male youth NEET has risen in both in rural and urban areas. The female youth NEET rate has risen in rural areas but has declined in the urban areas. Irrespective of location, youth NEET rates are almost five times higher for females than for males.

Figure 32: Male youth NEET rate (% of males aged 15-29 years)

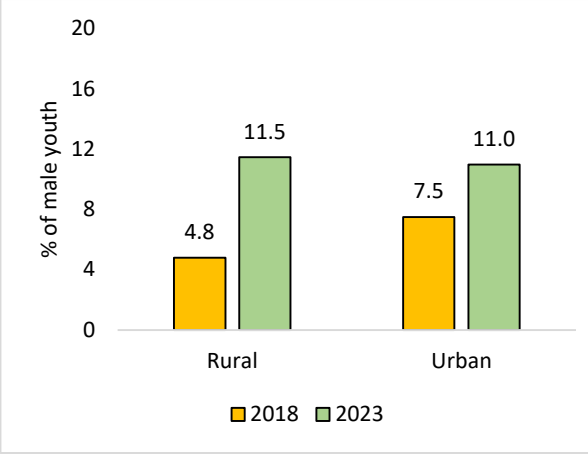
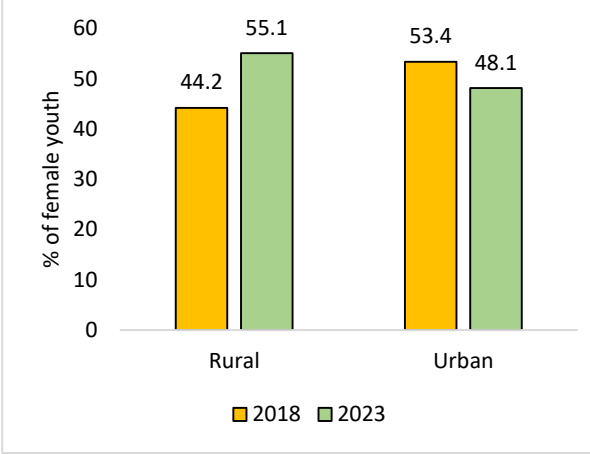


Figure 33: Female youth NEET rate (% of females aged 15-29 years)



Source: SANEM-GDI Household Survey 2023

Table 30. Proportion of youth not in education, employment or training in 2023

Age Category	Rural			Urban			Bangladesh		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
15-19	1352	1345	2697	588	587	1175	1940	1932	3872
20-24	1031	1113	2144	508	527	1035	1539	1640	3179
25-29	739	1017	1756	379	417	796	1118	1434	2552
Total	**3122**	**3475**	**6597**	**1475**	**1531**	**3006**	**4597**	**5006**	**9603**
NEET Population									
15-19	170	446	616	53	168	221	223	614	837
20-24	113	726	839	61	292	353	174	1018	1192
25-29	75	742	817	48	277	325	123	1019	1142
Total	**358**	**1914**	**2272**	**162**	**737**	**899**	**520**	**2651**	**3171**
NEET as % of youth aged 15-29									
15-19	12.6	33.2	22.8	9.0	28.6	18.8	11.5	31.8	21.6
20-24	11.0	65.2	39.1	12.0	55.4	34.1	11.3	62.1	37.5
25-29	10.1	73.0	46.5	12.7	66.4	40.8	11.0	71.1	44.7
Total	**11.5**	**55.1**	**34.4**	**11.0**	**48.1**	**29.9**	**11.3**	**53.0**	**33.0**
NEET as % of total NEET									
15-19	5.4	14.1	19.4	1.7	5.3	7.0	7.0	19.4	26.4
20-24	3.6	22.9	26.5	1.9	9.2	11.1	5.5	32.1	37.6
25-29	2.4	23.4	25.8	1.5	8.7	10.2	3.9	32.1	36.0
Total	**11.3**	**60.4**	**71.6**	**5.1**	**23.2**	**28.4**	**16.4**	**83.6**	**100.0**

Source: SANEM-GDI Household Survey 2023

6.3 Wage employment

During the pandemic, 54% of males and 44% of females in the workforce lost their jobs, even if temporarily (Figure 34). The rate of job loss during the pandemic was higher in urban areas for both males and females. For males, job loss was greatest in the Chittagong division (72%), followed by Khulna (66%), Barishal (63%), and Rangpur (59%): see Figure 35. The least affected division was Sylhet (16%). For females, job loss was greatest in Chittagong (67%), Mymensingh (46%), Barishal (45%), and Rajshahi (44%).

Figure 34: Proportion of people in the labour force who lost their job by sex and location (rural/urban)

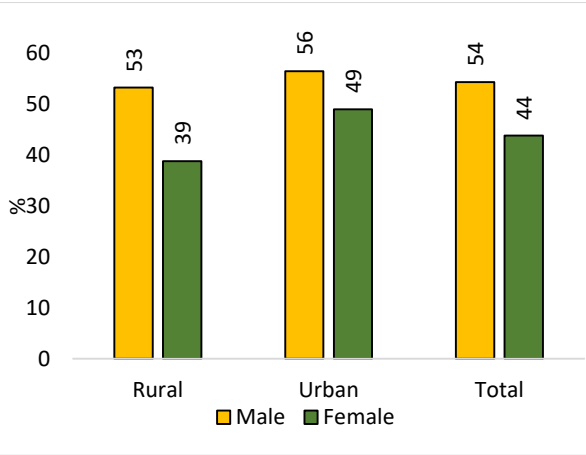
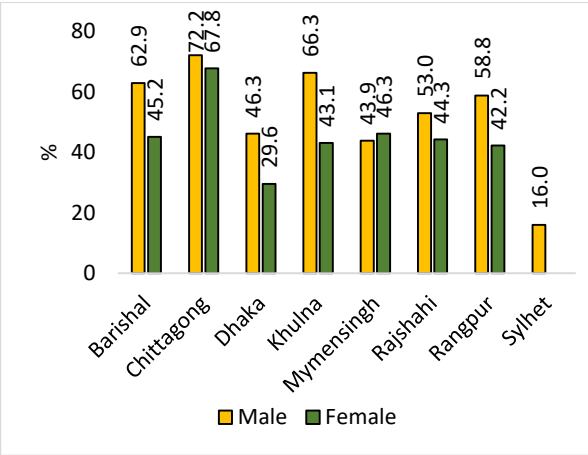


Figure 35: Proportion of people in the labour force who lost their job by sex and division



Source: SANEM-GDI Household Survey 2023
Note: The graph only considers the population who were in the labour force during the pandemic

The total duration of unemployment during the pandemic was almost the same for males and females, and almost the same in rural and urban areas: see Figures 36-37. 45% of males were without work for a period of 3-4 months, while 19% remained unemployed for more than five months. 47% of females were unemployed for a period of 3-4 months, while 22% remained unemployed for more than five months.

Figure 36: Duration of unemployment (Male)

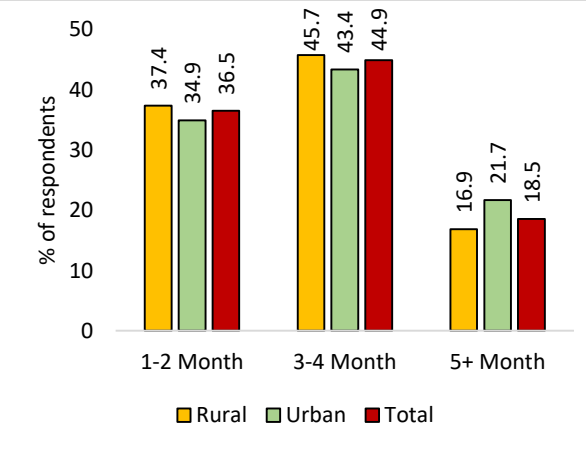
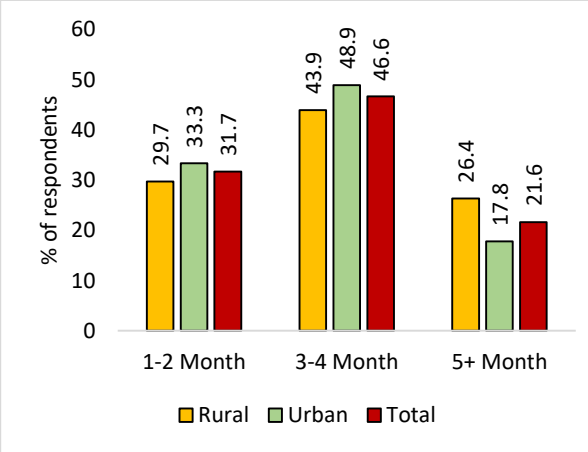


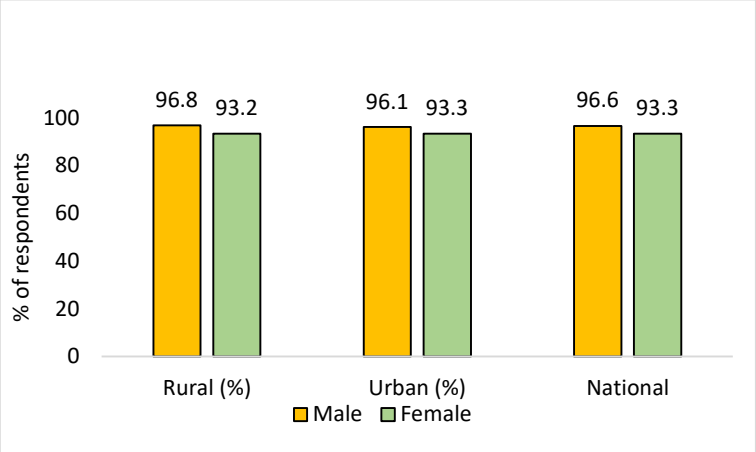
Figure 37: Duration of unemployment (Female)



Almost all workers faced a reduction in wages during the pandemic (Figure 38). In both rural and urban areas, the lowest earning periods were the first six months after the start of the

pandemic, i.e., between April-June 2020 and July-September 2020: see Table 31. The most stringent lockdowns were enforced during this time.

Figure 38: Proportion of workers reporting reduced salary during the pandemic by sex and location (% of respondents)



Source: SANEM-GDI Household Survey 2023

Table 31: Month of lowest salary by gender and location

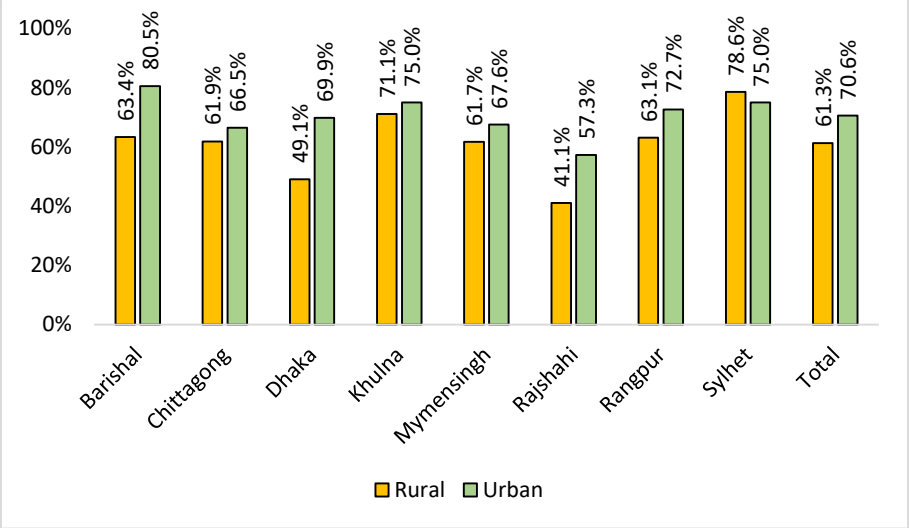
Lowest income period since March 2020	Rural (%)		Urban (%)	
	Male	Female	Male	Female
Apr-Jun 2020	51.0	51.1	65.0	63.7
Jul-Sep 2020	34.3	32.1	25.5	24.4
Oct-Dec 2020	10.0	13.9	7.1	10.1
Jan-Mar 2021	2.4	1.5	1.7	1.8
Apr-Jun 2021	1.4	0.7	0.7	0
Jul-Sep 2021	0.5	0	0	0
Oct-Dec 2021	0.3	0.7	0	0
Apr-Jun 2022	0.1	0	0	0
Oct-Dec 2022	0.1	0	0	0
Total	100	100	100	100

Source: SANEM-GDI Household Survey 2023

6.4 Self-employment (non-agricultural enterprises)

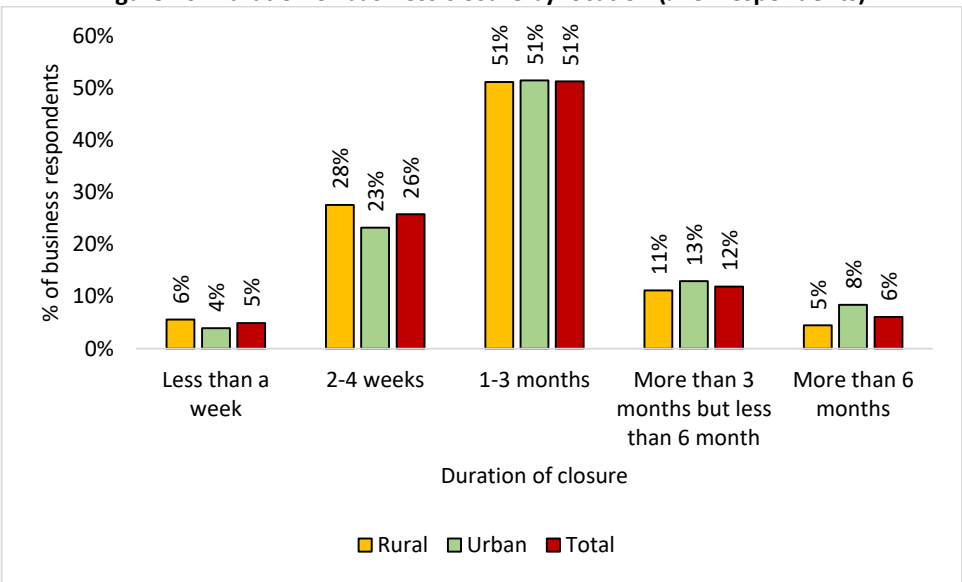
70% of urban non-agricultural self-employed enterprises and 61% of rural enterprises reported a business closure during the pandemic (Figure 39). Barishal had the highest proportion of urban business closures (81%), followed by Khulna (75%), and Sylhet (75%). The rural proportions were highest in Sylhet (79%), Khulna (71%), and Rangpur (63%). In both urban and rural areas, 51% of the self-employed had to close their business for a period of 1-3 months (Figure 40). Almost 21% of the urban self-employed and 16% of the rural self-employed had to close their business for a period longer than three months.

Figure 39: Proportion of the self-employed (non-agricultural enterprises) reportig business closure any time during the pandemic by locations and division (%)



Source: SANEM-GDI Household Survey 2023

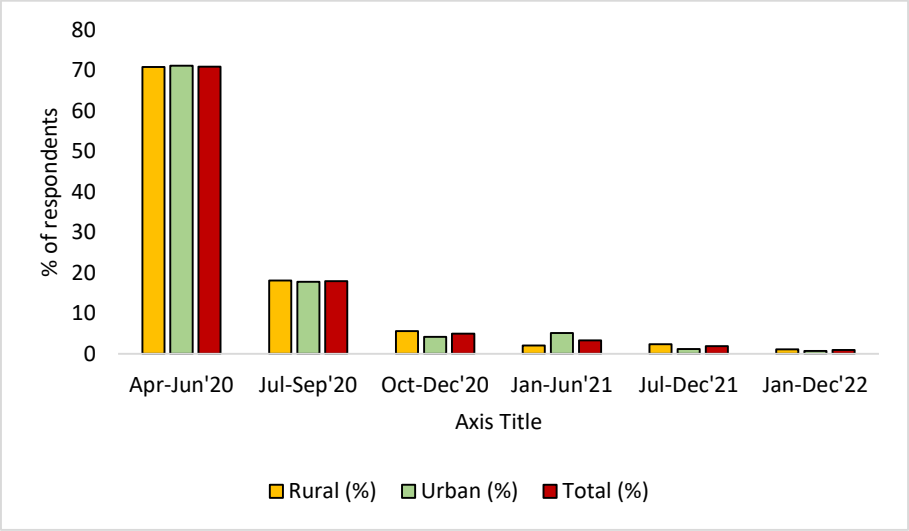
Figure 40: Duration of business closure by location (% of respondents)



Source: SANEM-GDI Household Survey 2023

Reflecting the pattern in wage employment, average monthly profits were lowest in April-June 2020 and July-September 2020: see Figure 41). Responses are similar across rural and urban areas.

Figure 41: Month of lowest profit by location and division (%)



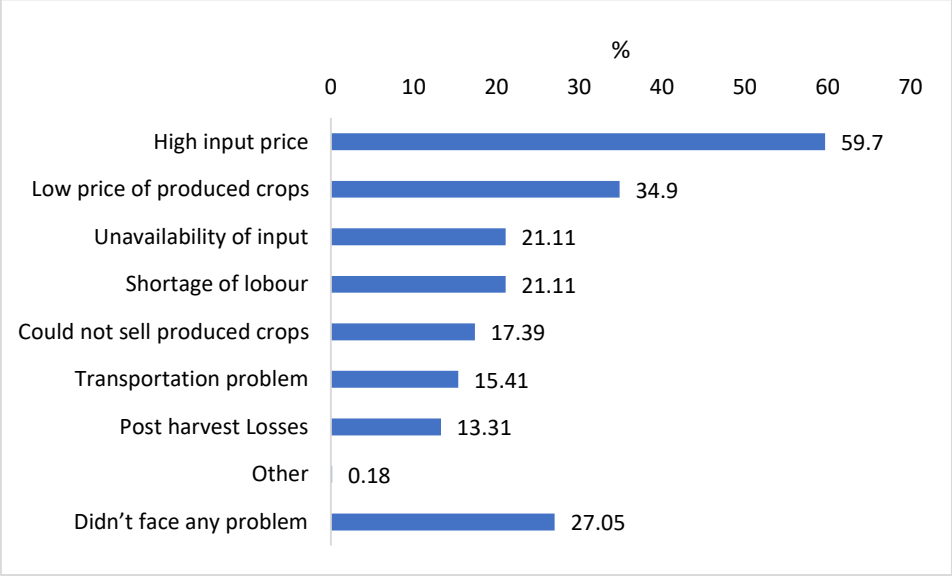
Source: SANEM-GDI Household Survey 2023

6.5 Agriculture

6.5.1 Crop production

37% of the households were engaged in crop production. The major problems faced by these households during the pandemic included the high price of agricultural inputs, the low price of produced crops, the unavailability of inputs, a shortage of labour, an inability to sell crops, transportation challenges (15%), and post-harvest losses: see Figure 42.

Figure 42 Problems faced during the pandemic in crop productions (%)



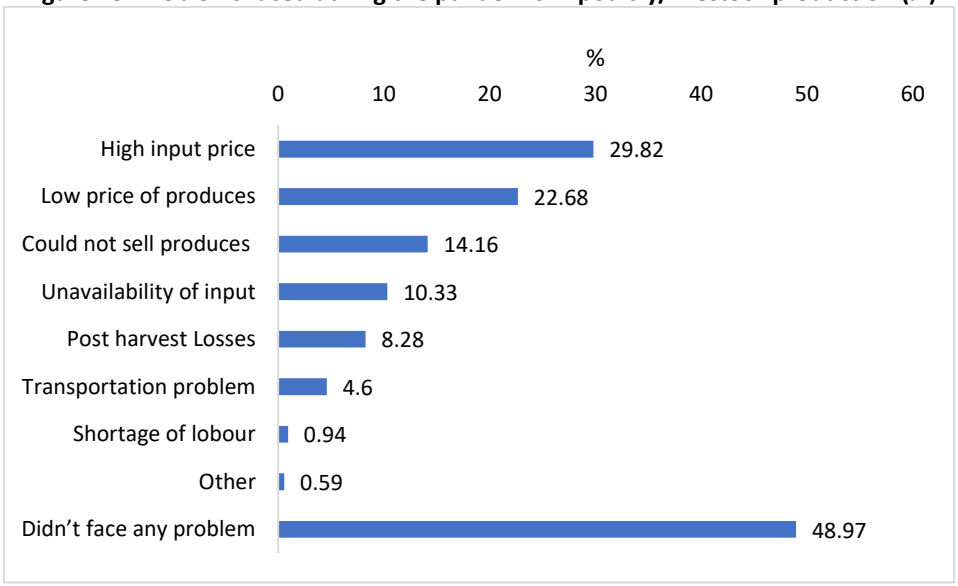
Source: SANEM-GDI Household Survey 2023

6.5.2 *Livestock and poultry*

45% of the households were engaged in livestock and poultry production. The major problems faced by such households included high input prices, low prices of poultry/livestock products, an inability to sell produce, the unavailability of inputs, and post-harvest losses: see Figure 43.

Nevertheless, nearly half of the households engaged in poultry/livestock production reported no challenges during the pandemic.

Figure 43: Problems faced during the pandemic in poultry/livestock production (%)

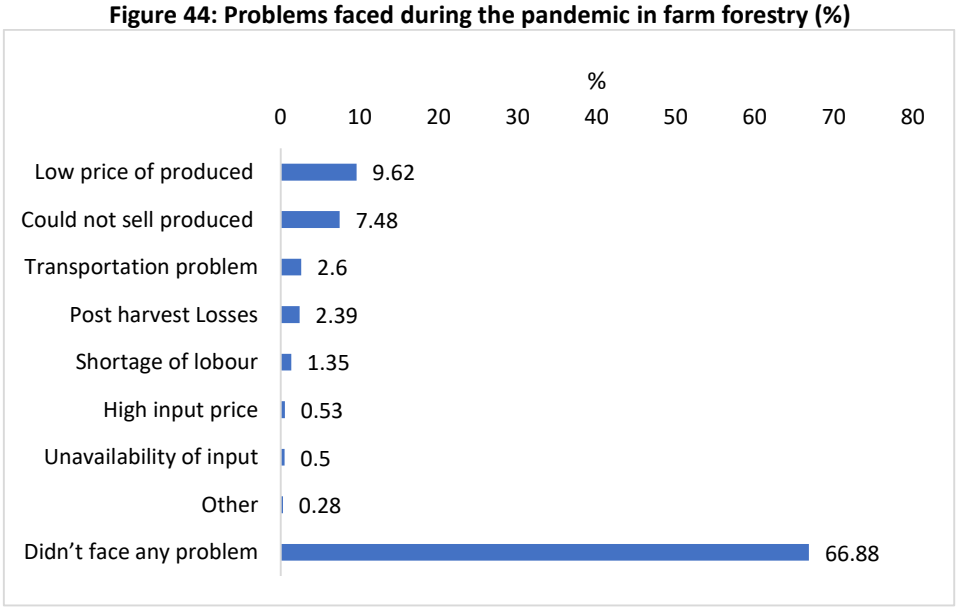


Source: SANEM-GDI Household Survey 2023

6.5.3 Farm Forestry

32% of the households were engaged in farm forestry (which included gardening/tree plantations and timbering. As indicated in Figure 44, two-thirds of these households faced no challenges during the pandemic. Only 10% of these households faced a lower producer price, while 7.5% were unable to sell their produce.

Figure 44: Problems faced during the pandemic in farm forestry (%)

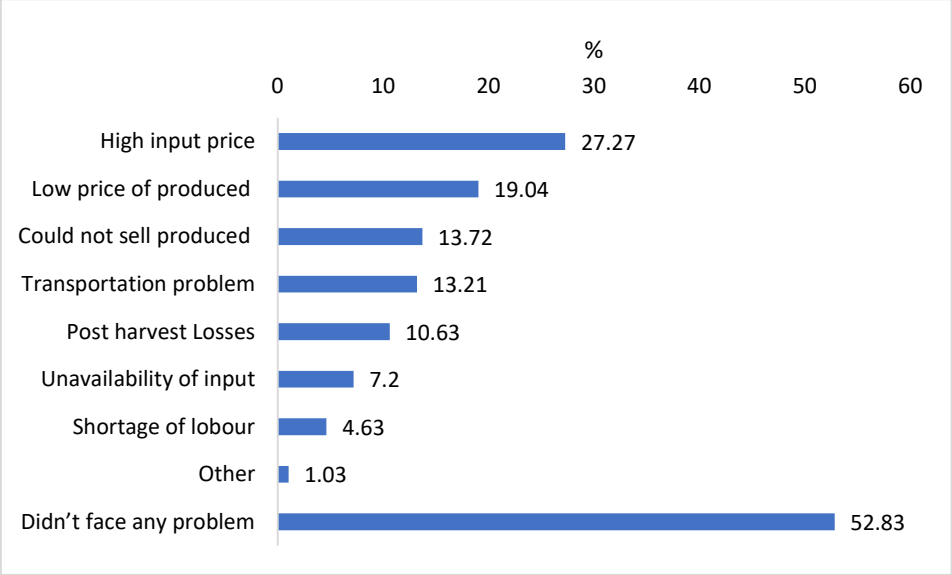


Source: SANEM-GDI Household Survey 2023

6.5.4 Fisheries

Only 6.5% of the households were engaged in fish cultivation. Over half of these households reported no challenges during the COVID-19 pandemic. However, 27% faced problems related to high input prices, 19% faced low producer prices, and 14% were unable to sell their produce.

Figure 45: Problems faced during the pandemic in fisheries (%)



Chapter 7: Migration and Remittances

7.1 Current migration profile

Internal migration is less common than international migration (Figures 46-47). Only 3.5% of households had any internal migrant worker. The highest proportions of internal migrant workers were from Barishal (14.0%), Mymensingh (6.8%), and Sylhet (4.4%). By contrast, 11.4% of the households had at least one member working abroad. The proportions were highest in Chittagong, Sylhet, and Dhaka. The lowest proportion (0.9%) was in Rangpur, which is also the poorest division in the country.

Figure 46: Proportion of households with domestic migrants (% of all households)

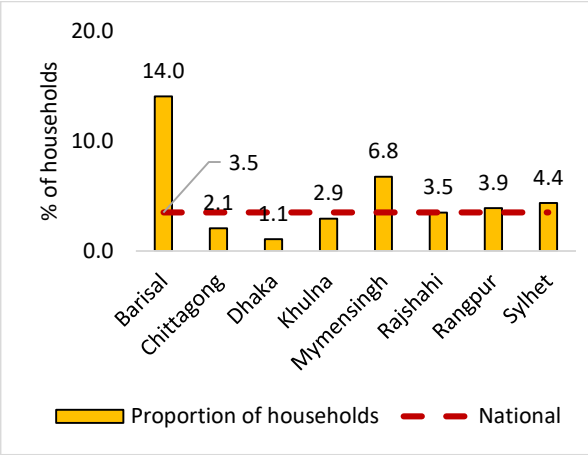
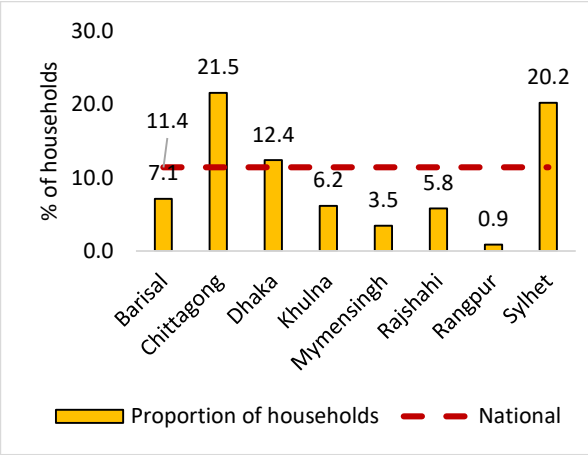


Figure 47: Proportion of households with international migrants (% of all households)



Source: SANEM-GDI Household Survey 2023

Figures 48-49 show the shares of each division in the total number of migrants. Nearly half of the international migrants were from Chittagong, and 20% were from Dhaka. The largest share of internal migrants also came from Chittagong (29%) and Dhaka (18%).

Figure 48: Distribution of domestic migrant workers by division (% of national)

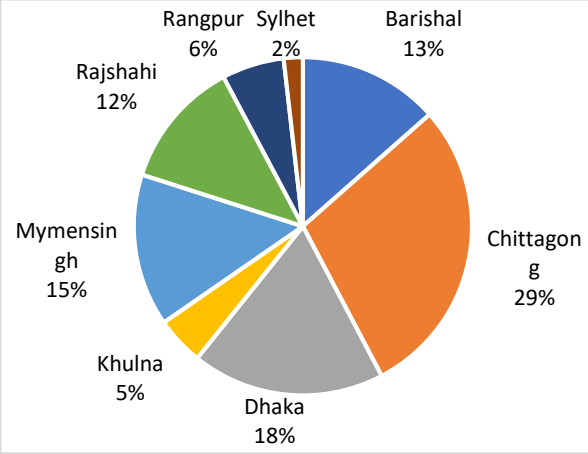
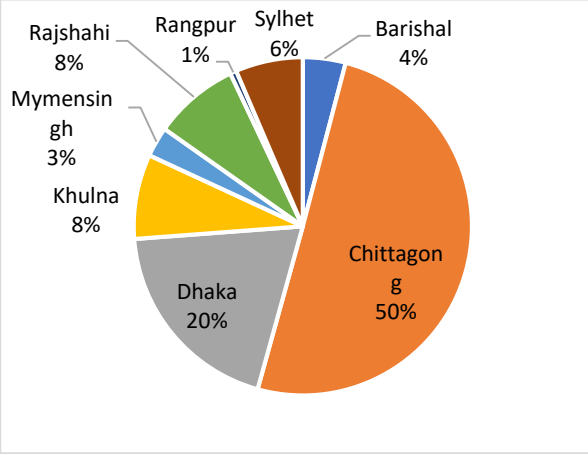


Figure 49: Distribution of international migrant workers by division (% of national)



Source: SANEM-GDI Household survey 2023

The are some differences in the education levels of internal and international migrant workers (Table 32). 15.8% of the internal migrant workers have a tertiary qualification, while 36.3% have passed secondary or higher secondary education (SSC/HSC). Only 3.8% of international migrant workers have a tertiary qualification, while 42.4% had passed SSC/HSC.

Table 32. Education levels of migrant workers by destination (%)

Level of education	**Internal**	**International**
Primary	29.1	29.5
Junior Secondary	18.8	24.3
SSC/HSC/Vocational	36.3	42.4
Tertiary	15.8	3.8
Total	100	100

Source: SANEM-GDI Household Survey 2023

There is also a clear difference between internal and international migrant workers in terms of occupation (Table 49). Very few of the international migrants work in skilled occupations (managers, professionals, and technicians): see Table 33. The occupations of internal migrants are more diverse.

Table 33. Occupation of the migrant worker by sector and destination

Occupation	**Destination**		
	Internal	**International**	**Total**
Managers	5.2	0.9	2.7
Professionals	8.9	0.3	4.0
Technicians and Associate Professionals	5.2	2.1	3.4
Clerical Support Workers	2.9	1.5	2.1
Service and sales workers	22.0	18.5	20.0
Skilled Agricultural, Forestry and Fishery Workers	1.2	2.7	2.0
Craft and Related Trades Workers	29.8	43.7	37.8
Plant and Machine Operators, and Assemblers	12.6	6.4	9.0
Elementary Occupations	8.8	23.9	17.5
Armed Forces Occupations	3.5	0.0	1.5
Total	100	100	100

Source: SANEM-GDI Household Survey 2023

Another difference between internal and international migration is the source of finance (Table 50 and Figure 50). Internal migration is inexpensive and the cost is mostly borne by the migrant without depleting any assets. By contrast, international migration is expensive (Table 51). Across all destinations, the cost of migration to India is the lowest, mostly because of its proximity. Given the high cost of international migration, it are mostly financed by borrowing (55%) or selling lands/assets (13%).

Table 34. Who finances the migration expense by destination (%)

Source	Internal	International
The migrant himself	41.0	15.5
The Household	56.9	80.4
Employer in the destination	1.7	2.8
Other	0.3	1.3
Total	100	100

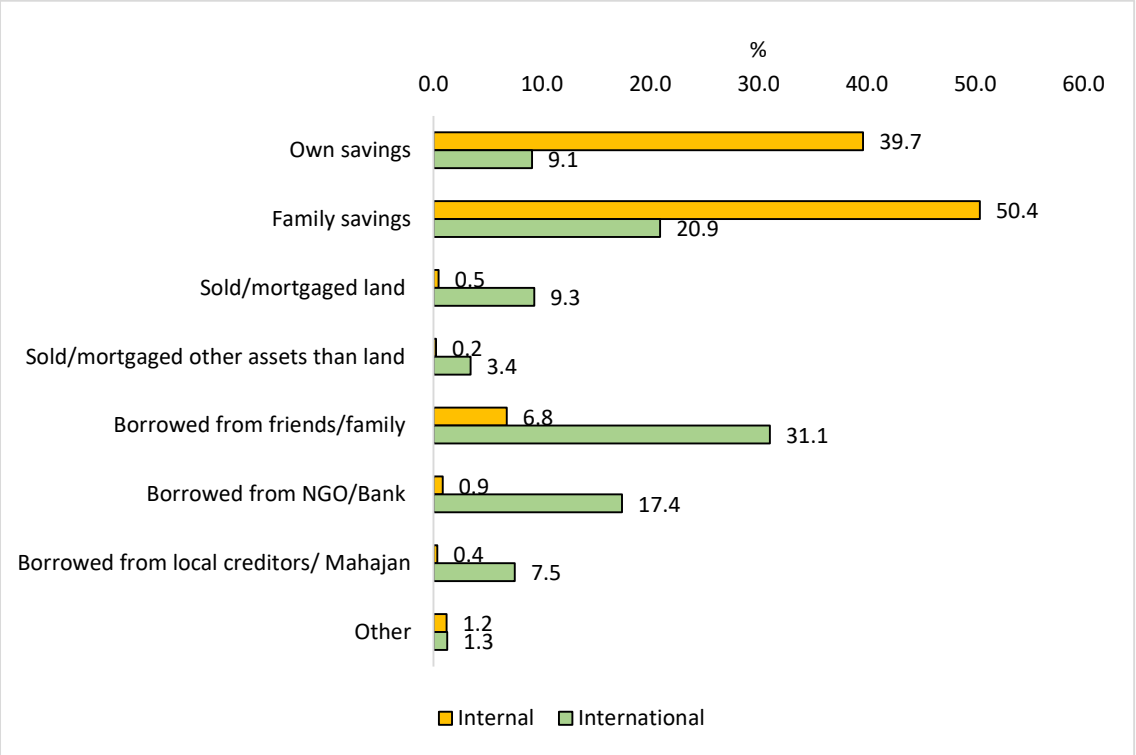
Source: SANEM-GDI Household Survey 2023

Table 35 Total cost of migration by international destination (in BDT)

Country name	Total average cost
Australia	675,000
Bahrain	384,546
Brazil	1,900,000
Brunei	350,000
China	600,000
Egypt	300,000
France	2,000,000
Germany	1,600,000
Greece	1,000,000
India	36,875
Iraq	473,000
Italy	1,174,556
Jordan	400,000
South Korea	650,000
Kuwait	390,778
Libya	450,000
Malaysia	424,251
Maldives	296,000
Mauritius	400,000
Oman	336,775
Other European Countries	1,150,000
Qatar	442,787
Romania	700,000
Saudi Arabia	452,617
Singapore	630,278
South Africa	621,429
Sweden	900,000
Turkey	683,333
UK	850,000
UAE	335,276
USA	170,000

Source: SANEM-GDI Household Survey 2023

Figure 50: Sources of finance by migration destination



Source: SANEM-GDI Household Survey 2023

The three major channels for international migration include a friends/family network at the point of origin (35%), a friends/family network at the destination (21%), or the assistance of intermediaries (Table 36). However, the proportion of migrant workers who use these channels varies by destination. In East Asia recruiting agencies play a major role (45%), and in South Asia migrants typically do not need any assistance.

Table 36. Who helped in the international migration (by destination, %)

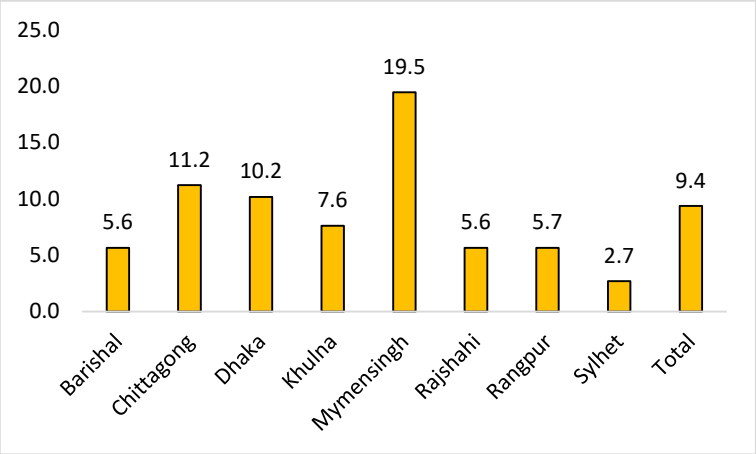
REGION	Migrated himself	Friend, family, or acquaintance in the locality	Friends/ Family/ acquaintances in the destination	Dalal/ Intermediary	Recruiting agency	NGO	Total	N
East Asia	18	27	0	9	45	0	100	11
Southeast Asia	9	32	22	30	6	2	100	283
South Asia	22	39	28	11	0	0	100	18
MENA	10	35	21	25	7	1	100	1157
Western countries	8	39	18	33	2	0	100	51
Southern Africa	0	22	22	56	0	0	100	9
Total	10	35	21	26	7	1	100	1529

Source: SANEM-GDI Household Survey 2023

7.2 Returnee international migrants

After the start of the pandemic, many international migrant workers had to return to Bangladesh permanently. Over 9% of households with and international migrant in 2018 had a permanent returnee at the time of the 2023 survey (Figure 51). At the divisional level, the highest proportion of returnees was in (Mymensingh (20%), Chittagong (11%), and Dhaka (10%).

Figure 51: Permanent returnee migrants in 2023 by division (as % of 2018 migrant stocks)



Source: SANEM-GDI Household Survey 2023

The major reasons for returning include job loss during the pandemic (33%), contractual issues (20%), and disputes with the employer (15%): see Figure 52. Moreover, of these permanent returnees, nearly one-third remained unemployed at the time of the 2023 survey: see Figure 53. Given the high sunk cost of international migration, the phenomenon of returnee migrant workers has important policy implications.

Figure 52: Reasons behind permanent return (as % of returnee migrants)

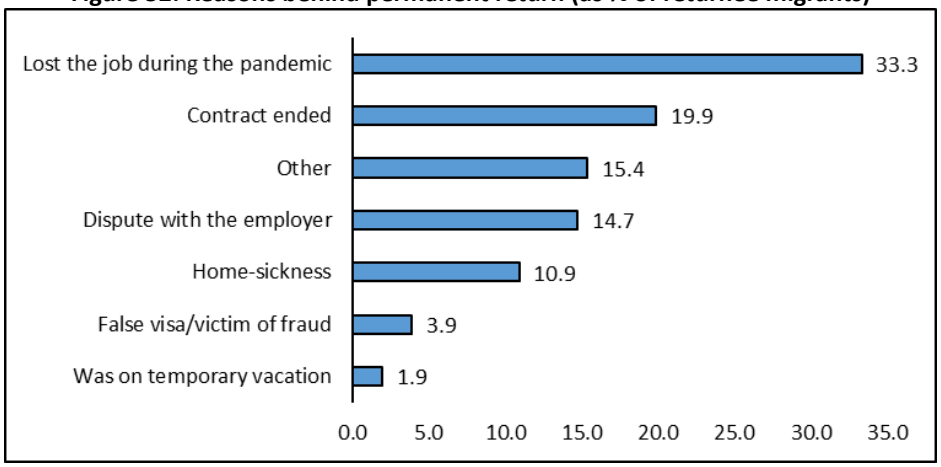
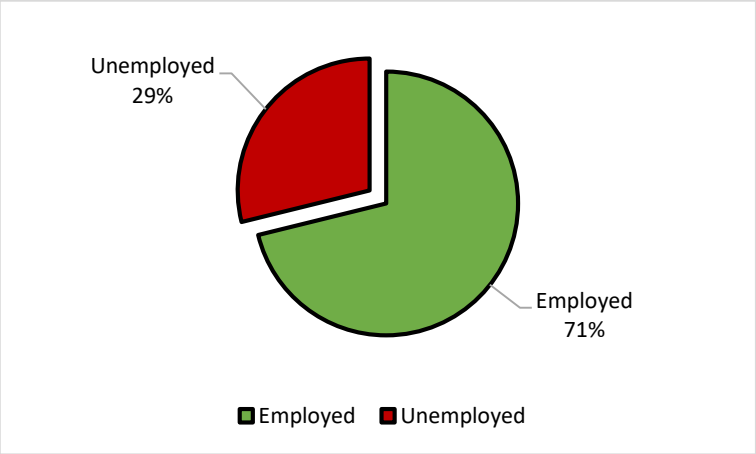


Figure 53 Current status of the permanent returnee migrant in October/November 2023 (%)

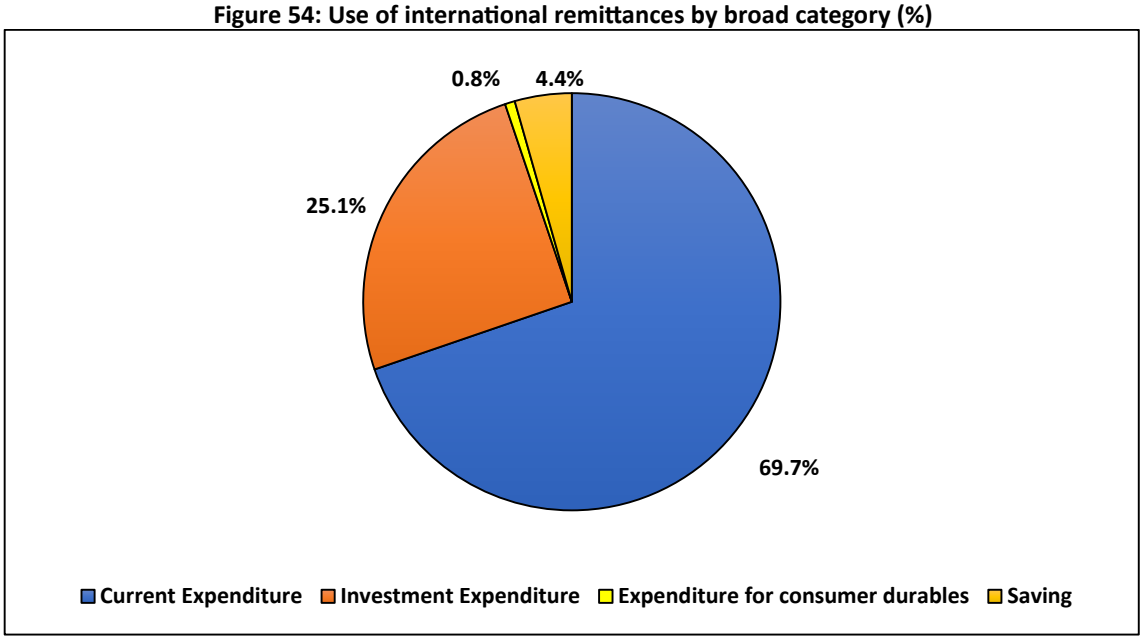


Source: SANEM-GDI Household Survey 2023

7.3 Remittances

Most of international remittances were used for current expenditures such as food and clothing, education, and healthcare: see Figure 54. However, a quarter of remittances were used for investment expenditure such as house construction or for loan repayments. Only 4.4% the remittances were used for savings.

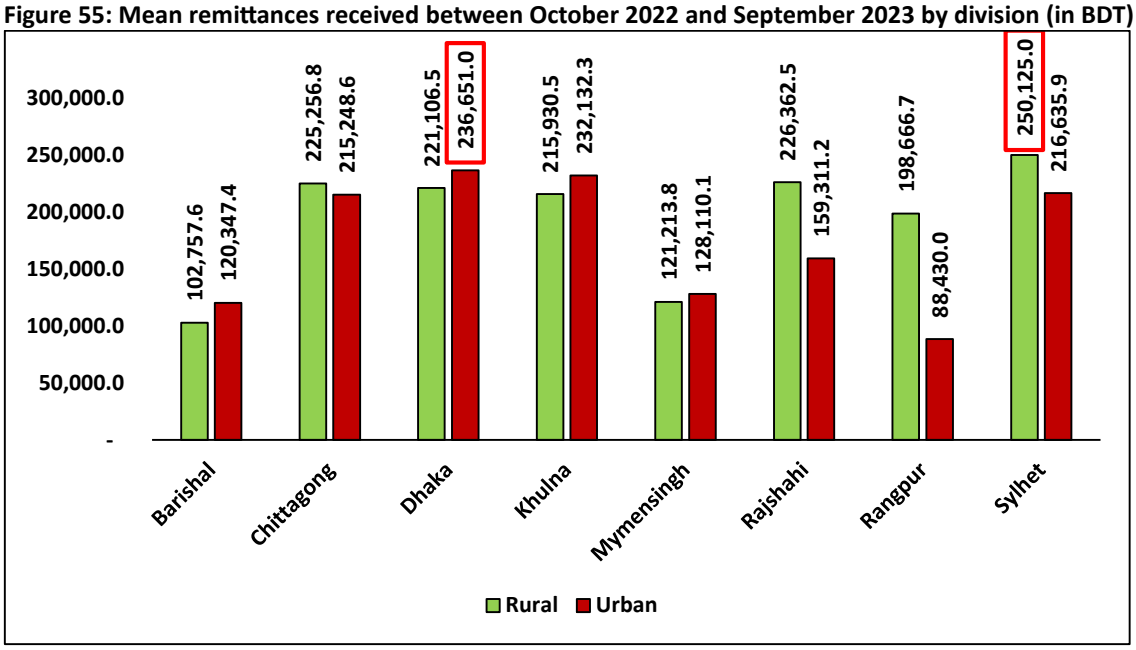
Figure 54: Use of international remittances by broad category (%)



Source: SANEM-GDI Household Survey 2023

Between October 2022 and September 2023, the Dhaka division received the highest amount of remittances, followed by Chittagong and Sylhet, while the Barishal and Mymensingh divisions received the lowest (Figure 55).

Figure 55: Mean remittances received between October 2022 and September 2023 by division (in BDT)

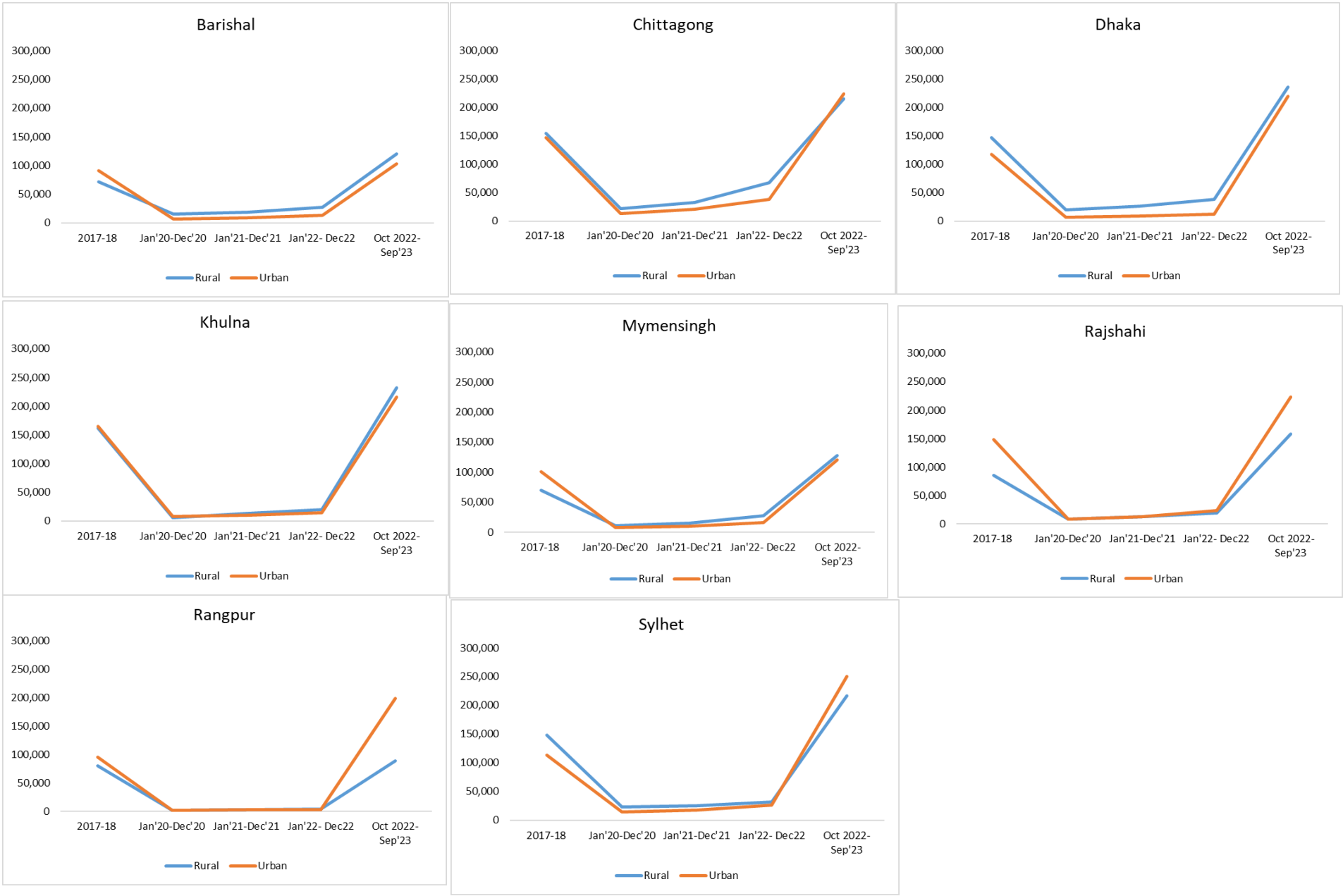


Source: SANEM-GDI Household Survey 2023

7.4 Impact of the pandemic on remittances

Figure 56 shows that across all divisions and across both rural and urban areas, international remittances have plummeted since the start of the pandemic. Remittances remained very low between January 2020 and December 2021, and only slightly increased in 2022. Remittances only returned to pre-pandemic levels at the end of 2022.

Figure 56: International remittances by division and time period



Chapter 8: Shocks and Coping Strategies

8.1 Shocks in the last 12 months (October 2022-September 2023)

The major shock experienced by households in both rural and urban areas over October 2022 - September 2023 was the unusually high rate of inflation of the price of the essential commodities. Table 37 shows that over three quarters of households reported this. Otherwise, the most commonly reported shocks vary between rural and urban areas. The most common shocks faced by households in the rural areas included a high price of agricultural inputs, crop disease, a reduction in earnings, and livestock disease. In urban areas, the most common shocks included serious illness and a reduction in earnings.

Table 37. Shocks experienced by households in the last 12 months (%) by location (rural/urban)

Recent shocks	Rural	Urban	National
High price of essential commodities	78.33	75.52	77.49
Reduction in the earnings of household members	15.76	19.56	16.89
Serious illness income earners	13.15	21.3	15.58
High levels of crop diseases	18.64	6.48	15.01
High prices of agricultural inputs	18.68	6.3	14.99
High levels of livestock disease	14.56	5.26	11.79
Floods	9.61	4.74	8.16
Low prices of agricultural output	8.79	3.15	7.11
Drought	4.43	4.74	3.6
Loss of employment of household members	2.31	2.15	2.26
Others (specify)	1.78	1.56	1.71
Fire/Tornado/Hail/Earthquake, etc.	1.89	0.89	1.59
Death of income earners	1.16	1.78	1.35
Theft	1.26	1.44	1.31
Conflict/Violence	1.07	1.26	1.13
Landslides/ Erosion	1.13	0.11	0.83
Hijacking	0.31	0.37	0.33
No shocks encountered	9.44	13.22	10.56

Source: SANEM-GDI Household Survey 2023
Note: The households selected multiple responses to this question; therefore, the column does not add up to 100%.

The most common coping strategy in response to these shocks was a change in dietary patterns (Table 38). In addition, almost half of the households depleted their savings and around 40% of households borrowed. Other coping strategies include help from friends or relatives, reduced expenditure on health and education, and (in rural areas) selling animal stock and changing cropping practices. About 5% of households received government support.

Table 38. Coping strategies in response to the shock (%) by location

Coping strategies	Rural	Urban	National
Changed dietary patterns involuntarily	57.7	61.3	58.74
Relied on savings	45.66	45.28	45.55
Obtained credit	41.59	37.25	40.33
Unconditional help from relatives/friends	33.1	32.08	32.8
Sold animal stock	10.53	3.67	8.54
Reduced expenditure on health and education	7.45	9.44	8.02
Household members took on more non-farm employment	7.97	7.56	7.85
Changed cropping practices	7.01	3.03	5.86
Unconditional help from local government	4.37	5.77	4.77
Household members took on more farm-wage employment	3.64	2.56	3.33
Rented out land/building	2.05	1.79	1.98
Migrating abroad	1.37	1.32	1.36
Sold durable household assets	1.18	1.28	1.21
Sold land or building	0.87	0.94	0.89
Migrating from village to town	0.85	0.43	0.73
Early marrying of daughters (aged less than 18)	0.45	0.17	0.37
Sending children to work	0.35	0.21	0.31
Migrating from town to village	0.3	0.13	0.25
Sent children to live elsewhere	0.16	0.13	0.15
Returning from abroad to Bangladesh	0.17	0.04	0.14
Others (specify)	1.27	1.41	1.31

Source: SANEM-GDI Household Survey 2023

8.2 Shocks during the pandemic

The pandemic in Bangladesh can be divided into two periods. First, there was *the peak period* (March 2020 to September 2021): the first nationwide lockdown was enforced in late March 2020, the last nationwide lockdown ended in July 2021, and the last regional lockdown ended in August 2021. The daily death rate from the coronavirus flattened after September 2021. Second, there was *the recovery period* from October 2021 to September 2022.

The shocks experienced by households varied between these two periods (Table 39). During the peak period, the major shocks included a reduction in working hours (57%), a reduction in wages or stopped wages (45%), and unusual prices of daily necessities (59%). During the recovery period, the proportions of households reporting a reduction in working hours or wages declined by almost 20 percentage points. However, the proportion of households experiencing high inflationary pressure slightly increased, reflecting the onset of the energy price hike following the start of the Russia-Ukraine war.

Table 39. Shocks reported by households during different phases of the pandemic (%)

Shocks	Peak of the pandemic (March 2020-September 2021)	Recovery period (October 2021-September 2022)
Job loss of an earning family member	8.94	3.33
Reduction of working hours of an earning family member	57.01	37.47
Reduction in wage/stopped wage	44.54	22.82
Serious illness/death of any earning member due to COVID	3.98	3.01
Serious illness/death of any earning member (other than COVID)	5.56	4.26
Unusual prices of daily necessities	59.21	60.64
Others	1.49	0.85
No problems encountered	7.3	22.32
Cannot recall	0.42	0.88

Source: SANEM-GDI Household Survey 2023

Coping strategies also varied between the two periods (Table 40). During the peak of the pandemic, many households relied on borrowing (50%), depleted savings (49%), changed food habits (67%), or reduced health expenditure (21%). In the recovery period, fewer households relied on unconditional borrowing or depletion of savings. However, the proportion of households undertaking involuntary changes in food habits or reducing expenditure on education and healthcare remained the same in the recovery period. Moreover, a larger proportion of households undertook extra work or worked longer hours during the recovery period. In both periods, under 8% of households received government support.

Table 40. Coping strategies of households during different phases of the pandemic (%)

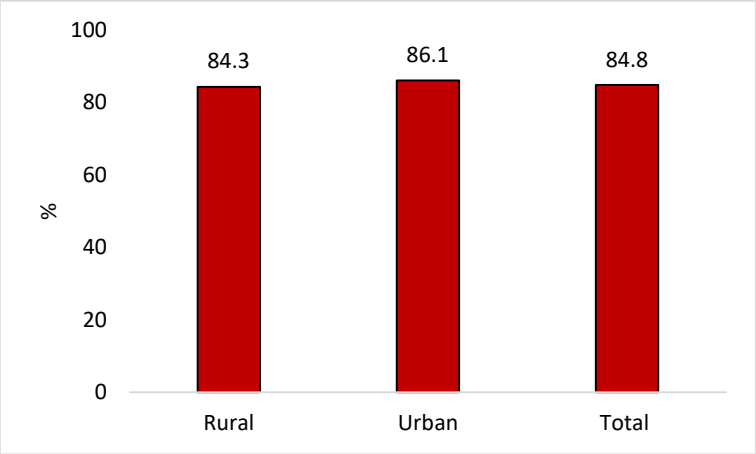
Strategy	Peak of the pandemic (March 2020-September 2021)	Recovery period (October 2021-September 2022)
Migrating from town to village	1.79	0.47
Migrating from village to town	0.39	0.99
Migrating abroad	0.42	1.47
Returning from abroad to Bangladesh	0.78	0.55
Borrowing	50.02	44.69
Unconditional help (other than gov)	19.65	14.78
Government social support	8.31	6.09
Depleting savings	48.62	41.17
Selling household assets/lands	6.13	4.57
Changing food habits	66.69	65.51
Reducing health expenditure	21.06	20.73
Reducing education expenditure	13.52	11.94
Working for extra hours/extra work	14.31	25.01
Changing occupations	6.77	6.95
Early marrying of daughters (aged less than 18)	0.54	0.63
Sending children to work	1.06	1.45
Others	0.86	0.69

Source: SANEM-GDI Household Survey 2023

8.3 Coping strategies during the recent inflationary episode

As part of the survey in October-November 2023, households were asked whether they were affected by the price hike over the previous 12 months. They were also asked about their coping strategies. 85% of households reported that their life was severely affected by the price hike (Figure 57). In addition, the income of a large proportion of households remained unchanged or fell between April and October 2023 (Table 41). Therefore, the real income of most of the households fell sharply during this period.

Figure 57: Proportion of households reporting price hike as a major challenge in the last 12 months



Source: SANEM-GDI Household Survey 2023

Table 41. Change of income and expenditure of the household in September 2023 and April 2023

Income change	Expenditure change			
	Household expenditure increased (%)	Household expenditure decreased (%)	Household expenditure remained unchanged (%)	Total (%
Household income increased	**22.3**	**0.9**	**1.4**	**24.7**
Household income decreased	**21.1**	**7.2**	**2.2**	**30.6**
Household income remained unchanged	**26.5**	**2.1**	**16.1**	**44.7**
Total	**69.9**	**10.3**	**19.8**	**100**

Source: SANEM-GDI Household Survey 2023

The most common coping strategy during the inflationary period was a change in food habits: see Table 42. The other major coping strategies included saving less, reduced non-food expenditure, borrowing, depleting savings, and working overtime.

Table 42. Coping strategies of households in response to high inflationary pressure in the last six months (April-October 2023)

Strategy	Per cent
Changing food habits	70.17
Erosion of the opportunity to save	39.4
Reducing non-food expenditure	34.55
Borrowing	28.01
Using savings	17.43
Working overtime (hours)	10.27
Relying on aid from others	5.45
Involving in secondary occupations	2.99
Migration	2.45
Reducing expenditure by discontinuing children's education	1.68
Selling properties	1.5
Moving to a cheaper rented house	0.68
Early marrying off a daughter	0.56
Other	0.55
Changing job	0.53
Involving children in paid labor	0.53
Selling off some of your durable goods	0.52
Did not need to cope up	7.78

Source: SANEM-GDI Household Survey 2023

8.4 Impact of inflationary pressure on household food security

One impact of the recent inflationary pressure could be greater food insecurity, particularly among poorer households. We therefore construct a Food Insecurity Experience Scale (FIES) following FAO (2022). The FIES consists of eight questions regarding people's access to adequate food (see Annex for details). It asks, in the reference period:

1. Were you worried you would not have enough food to eat? (WORRIED)
2. Were you unable to eat healthy and nutritious food? (HEALTHY)
3. Did you eat only a few kinds of food? (FEW FOODS)
4. Did you have to skip a meal? (SKIPPED)
5. Did you eat less than you thought you should? (ATE LESS)
6. Did your household run out of food? (RANOUT)
7. Were you hungry but did not eat? (HUNGRY)
8. Did you go without eating for a whole day? (WHOLEDAY)

Each of these questions is a component of the FIES score. We measure the FIES scores at two points in time: April 2023 and October/November 2023.

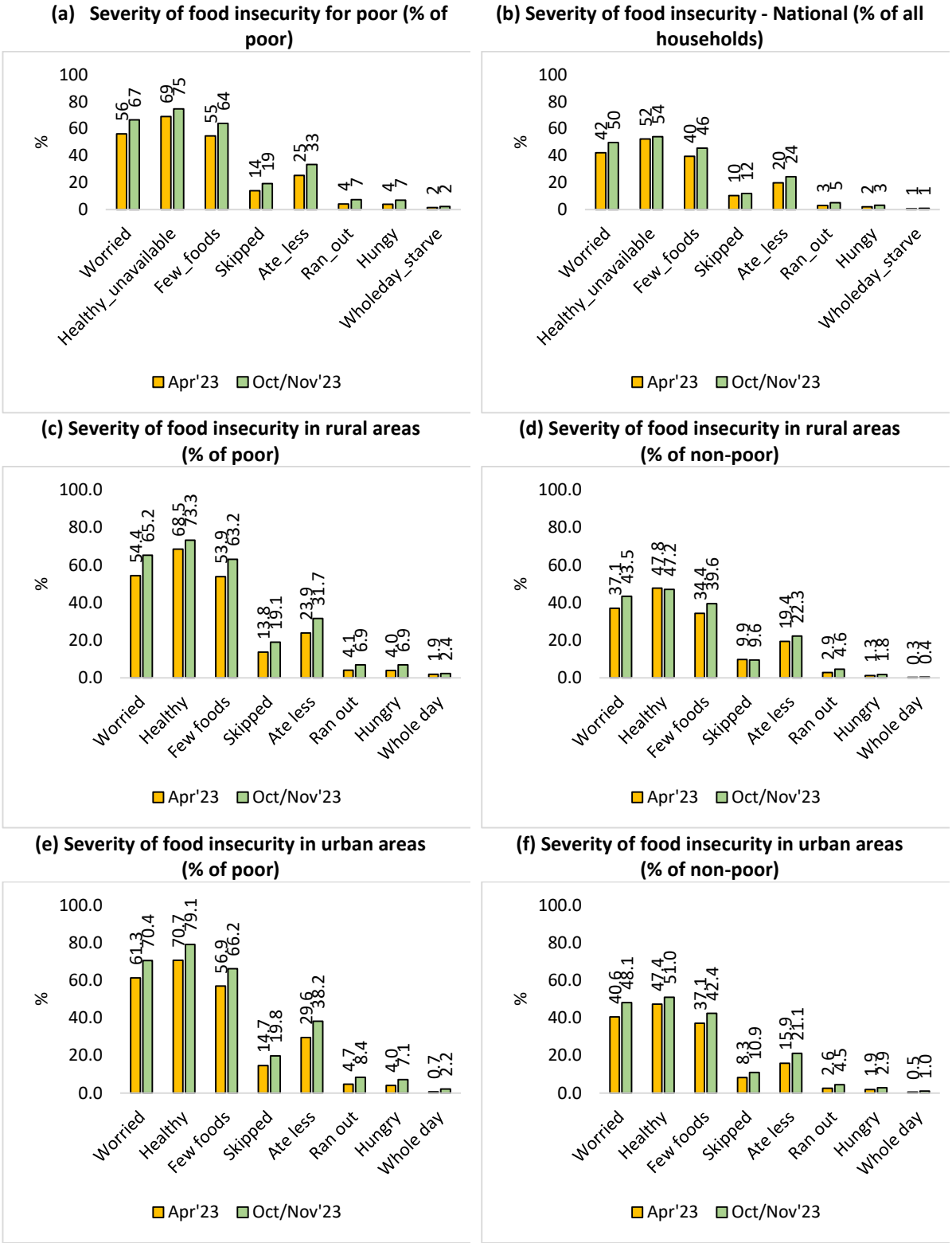
Between April 2023 and October-November 2023, a rise in all eight indicators can be observed at the national level (Figure 58-b). However, the initial levels and increases in the indicators are higher for poor households (Figure 58-a). For instance, in April 2023, 56% of poor households were worried that they would not have enough food to eat. This rate increased to 67% in October-November 2023. The proportion of poor households who were unable to eat healthy food has increased from 69% in April 20223 to 75% in October-November 2023. 55%

of poor households ate only a few kinds of food in April 2023, and this increased to 64% in October-November 2023. 19% of the poor households skipped a meal in October-November 2023, a rise from 14% in April 2023. In October-November 2023, 2% of poor households went out without eating the whole day.

A similar pattern is observed when comparing poor and non-poor households in rural areas (Figure 58-c,d) and urban areas (Figure 58-e,f). However, in almost all components of the FIES, the severity of food insecurity is higher among the urban poor than it is among the rural poor, and higher among the urban non-poor than it is among the rural non-poor. The urban population faces more food insecurity than does the rural population. The supply of agricultural produce, the practice of homestead gardening, and lower food prices in rural areas could contribute to this phenomenon.

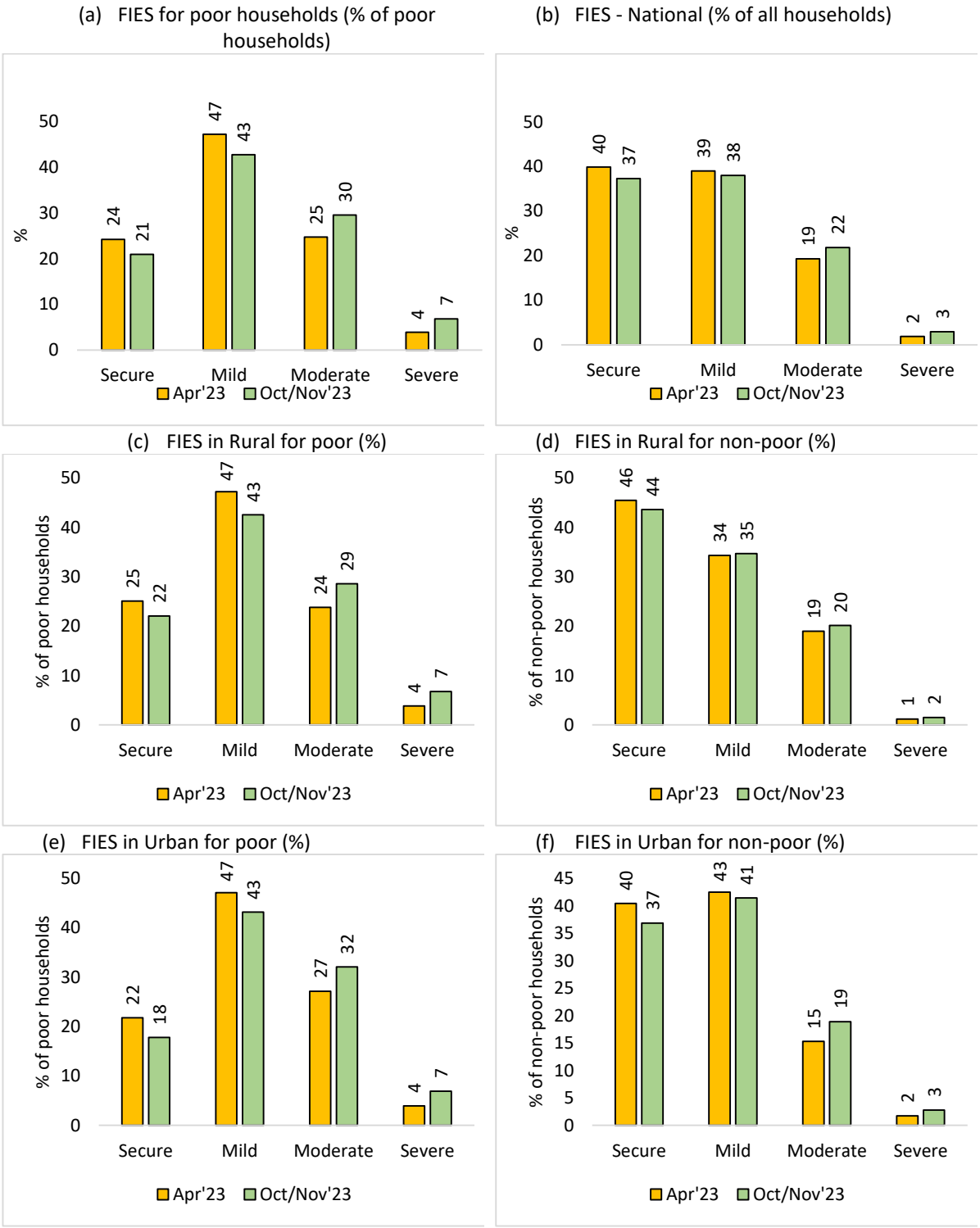
Between April and October-November 2023, food insecurity as measured by the FIES has worsened for poor and non-poor households across all regions (Figure 59: a-g). Among poor households, moderate food insecurity has increased by five percentage points, while severe food insecurity has increased by three percentage points (Figure 59-a). At the national level, moderate food insecurity has increased by three percentage points and severe food insecurity by one percentage point. 29% of rural poor households and 32% of urban poor households were categorized as moderately food insecure in October-November 2023. In both rural and urban areas, severe food insecurity was found to be 7% among poor households (Figure 59-c, e).

Figure 58: Severity of food insecurity by region and poverty status



Source: SANEM-GDI Household Survey 2023

Figure 59: FIES score by region and poverty status



Source: SANEM-GDI Household Survey 2023

Chapter 9: Conclusion and Policy Recommendations

In modern times, the world economy has never encountered anything like the COVID-19 pandemic. The COVID-19 shock was not unique to Bangladesh, but the effect of the pandemic on Bangladesh differed from its effect in many other countries, because of, for example, the importance of international migrant remittances to Bangladesh. The prolonged countrywide lockdown, the worldwide economic depression, and the ensuing disruption to supply and demand are putting additional pressure on the economy. The pandemic-induced recessions are expected to have long-term effects, including decreased investment; a decline in human capital due to lost wages, education, and employment; higher unemployment; lower interest rates; and the breakdown of international supply chains.

This study provides evidence on poverty and inequality dynamics during the pandemic and the post-pandemic inflationary period, on the livelihoods of different types of household in Bangladesh, and on their coping mechanisms. The study identifies several key findings related to poverty rates, household spending, multidimensional poverty, social safety net distribution, and the pandemic's effects on other socioeconomic dimensions such as education, and healthcare.

First, while the overall CBN-based poverty rate in Bangladesh has fallen between 2018 and 2023, the rate of urban poverty, as measured by the UPL poverty line, has risen. A similar trend is observed with regard to the multidimensional poverty rate, which has the rural areas but risen in urban areas. One reason behind the rise in urban poverty could be a lack of adequate social security programmes in urban areas. Our survey indicates that only 37% of households (nationally) are benefitting from existing social security programmes. Key social security programmes include the TCB/Family Card, the old age allowance, and Widow/Deserted/Destitute Women allowances. Our findings support the case for a wider social safety net programme in urban areas.

We also see a disparity in household consumption expenditure patterns. Poor households have reduced their food and non-food consumption expenditure. However, richer households have increased their spending significantly. Such a disparity signals rising inequality: the share of income of the top 5% of the households compared to the bottom 40% more than doubled between 2018 and 2023. Conventional growth-promoting policies often trigger further income inequality, and a balanced and cautious policy towards growth is warranted.

The COVID-19 pandemic adversely affected education. Around 15% of school-aged children are still not attending school in 2023, a rise of two percentage points since 2018. Moreover, the rate is much higher among poorer households. This is likely to have a severe long-term consequences on livelihoods without timely policy to raise school attandance.

We also see a substantial rise in healthcare expenditure, but this rise is much larger among richer households. The extent to which the rise in expenditure is a consequence of (i) the pandemic and (ii) recent inflation needs to be explored further. One noteworthy success relating to health is the rapid rollout of the vaccination programme: Bangladesh was able to vaccinate over 84% of its population.

The impact of the pandemic on livelihoods has been manifested in several ways. The male unemployment rate has increased significantly. Moreover, the proportion of young men not in employment, education, or training has also increased significantly. Both of these increases indicate a need for more substantial labour market interventions. In terms of the impact of the pandemic on livelihoods, more than half of the employed population lost their jobs (at least temporarily) during the pandemic; many of them were unemployed for over three months. Business closures and prolonged losses were reported by the self-employed. Households engaged in agricultural production faced several challenges, including low crop prices and high costs of labour, inputs and transportation.

International migrant households also faced severe challenges as the level of remittances plummeted during the pandemic. The high cost of international migration, which is often met by borrowing or selling household assets, makes these households vulnerable. The condition of permanent returnee migrant workers requires particular attention: 10% of households with international migrants in 2018 had permanent returnees in 2023. Almost one third of these permanent returnees were unemployed at the time of the survey in 2023.

The single most important challenge faced by the majority of households in the post-pandemic period was the high inflation rate. In the last four decades, the country has never had such a high rate of inflation for such a long period of time. In the face of the cost of living crisis, households resorted to changing dietary patterns, increased borrowing, depleting savings, and cutting down non-food expenditure. We find that the food insecurity of households, as measured with the Food Insecurity Experience Scale, has worsened between April 2023 and October-November 2023, especially among poor households. In October-November 2023, more than one third of poor households can be categorized as moderately or severely food insecure. The prevalence of food insecurity is higher in urban areas.

Based on the findings, we recommend the following:

Modify the National Social Security Strategy (2015) and ensure nationwide implementation
In the face of rising urban poverty and food insecurity, Bangladesh must undertake more policies that reach the urban poor and the new poor. Bangladesh adopted a National Social Security Strategy (NSSS) in 2015, which outlines a life-cycle-based universal social security programme. It acknowledges the lack of social security programmes in the urban areas and envisages the expansion of programmes in urban areas. The pandemic and the post-pandemic challenges have created an even more pressing need for the NSSS to be updated, modified and implemented in a timely manner.

Raise the budgetary allocation for education and implement specific policies for the education sector
Bangladesh's education sector needs a larger budgetary allocation in the aftermath of the crisis. The government should prioritize the reduction of school dropout rates and mitigate the learning loss caused by the pandemic. One important area of further research for the government of Bangladesh and development partners is to estimate the extent of learning loss and the causes behind children missing in education.

Increase the tax base and restructure the existing tax frame

Increasing budgetary allocations for education and social security programmes will require a larger fiscal space. Bangladesh must expand its existing tax base and restructure the existing tax frame for increased revenue mobilisation. Bangladesh has one of the lowest tax-GDP ratios in the world and relies more on indirect taxes than direct taxes. It is often suggested, as noted during the interviews for this study, that the taxation in Bangladesh covers only a small portion of eligible income earners. Strong revenue mobilisation is a pre-condition for increased spending on education, healthcare and social safety net programmes.

Enhance job market policies to reduce unemployment and engage youth in skill-enhancing sectors

Bangladesh has experienced a long period of "jobless economic growth" (Salim and Bashar, 2023). The country's employment market has tightened further in the aftermath of the pandemic. There should be more active labour market policies in response to higher male unemployment rates and youth NEET rates. The government should enhance the existing skill-generating training programmes demanded by industry. The industrial sector is adapting to AI and fourth-generation machinery, and training programmes should cater to this change in demand. This could be an area in which the Government of Bangladesh collaborates with development partners.

Provide more training to facilitate the assimilation of returnee migrants into the labour market

There should be more specific policy directives for returnee migrant workers. International migration from Bangladesh is expensive, and nearly three-quarters of the migrants use borrowing or selling assets to migrate abroad. The families of migrant workers who cannot re-enter the labour market after returning are likely to face substantial hardship.

Undertake policies to mitigate the impact of food price inflation on households

Such policies might include monitoring of the market to reduce the number of business cartels in the food chain and reducing import tariffs on food products. Bangladesh is one of the most protected countries in the world, with high tariffs and supplementary duties on almost all food products. Many of the tariffs are prohibitive, reducing imports from abroad and increasing the cost of imported food for consumers. The tariff reduction could be focussed on essential food categories such as poultry, beef, and some vegetables.

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Annex

Survey Methodology

The 2023 round of the survey was based on the same methodology as the 2018 survey.

The 2018 survey involved a sample of 10,500 households from 500 Primary Sampling Units (PSUs) distributed across all 64 districts. 323 PSUs (65% of the total) are rural and 177 PSUs (35% of the total) are urban; out of the 35% urban PSUs, 19% (94) belong to a municipality while 17% (83) belong to a city corporation. The survey covered both urban and rural areas and households of all sizes. The population and housing census 2011 was used as the sampling frame for the household survey. A two-stage stratified random sampling method was followed for the selection of the PSUs and the Ultimate Sampling Units (USUs) from the 8 divisions and 64 districts of Bangladesh. The survey incorporates 21 households from every PSU. The questionnaire was written in both Bengali and English. A survey manual was produced by the research team under the supervision of experts as a guide for the Enumerators and the Supervisors for conducting the survey efficiently. The data processing software CSPro was developed and checked by the research team under the supervision of the experts. There were training sessions for enumerators, supervisors and data entry operators. During two days of field testing, enumerators conducted interviews of households not included in the survey sample. The data collection process included mapping, household listing, enumeration and crosschecking of the questionnaires twice before sending them to the research team. Data processing involved data entry, data cleaning and data analysis.

Scope and coverage

The household survey for the "Study on Employment, Productivity and Sectoral Investment in Bangladesh" was conducted between April 8, 2018 and August 18, 2018. The main purpose of the study was to identify characteristics of the labour market in Bangladesh. The survey involved a sample of 10,500 households from 500 Primary Sampling Units (PSUs) distributed across all 64 districts; there were 323 rural PSUs (65% of the total) and 177 urban PSUs (35% of the total); 94 of the urban PSUs belonged to municipality and 83 belonged to a city corporation. The survey covered households of all sizes.

The sampling framework

The Population and Housing Census 2011 was used as the sampling frame for the survey. A two-stage stratified random sampling technique was used to select the PSUs and Ultimate Sampling Units (USUs). In the first stage, PSUs were selected using the Probability Proportional to Size (PPS) method. In the second stage, 21 households were selected in each PSU using the Systematic Random System method. PSUs are geographically contiguous areas of land with identifiable boundaries. The 500 PSUs are spread across the whole country and the sample is representative of the whole population. The survey incorporates twenty-four domains, i.e. the rural, urban and city corporations of the eight administrative divisions.

Sample size determination

Bangladesh is divided into 8 divisions and 64 districts. Previously, Bangladesh was divided into 21 districts: Barishal, Patuakhali, Cumilla, Noakhali, Chattogram, Chattogram Hill Tracts, Dhaka, Tangail, Faridpur, Kishoreganj, Khulna, Jashore, Kushtia, Mymensingh, Jamalpur, Rajshahi, Bogura, Pabna, Rangpur, Dinajpur, and Sylhet. The sampling frame was based on this old division of 21 districts. Each district was divided into two parts: urban and rural; the urban part could contain a municipality and a city corporation. Thus each district was divided into three strata: rural, municipality and city corporation.

Cochran's formula was used to determine the required sample size:

$$n^0 = \frac{Z.^2\, p.(1-p)}{e^2}$$

Here, n^0 is the required sample size, Z is the abscissa of the normal curve that delineates an area α at the tails of the distribution (and 1 - α is the desired confidence level), e is the desired level of precision, and p is the estimated proportion of an attribute that is present in the population.

For an attribute that is present in half of the population (such as the proportion of people who are economically active), p = 0.5, with a desired precision level e = 0.05, and deriving Z from a standard Normal distribution, we have:

$$n^0 = \frac{(1.96)^2.(0.5).(0.5)}{(0.05)^2} \approx 384$$

This implies that a total sample of (384 × 21) = 8,064 households are required. All other values of p entail a smaller value of n^0. A sample of 10,500 households should therefore deliver a precision level of 0.05 or less.

The Probability Proportional to Size method was used to calculate the proportion of PSUs in rural, municipality, and city corporation areas. With approximately 80% of households in the population living in rural areas and 20% living in urban areas, 400 PSUs should be rural and 100 should be urban. With 55% of the urban households living in municipalities and 45% living in city corporation areas, 55 out of the 100 urban PSUs should be in municipalities and 45 should be in city corporations. However, given the imbalance between the rural and urban populations, rural-urban differences are likely to be estimated more precisely if the urban areas are over-sampled, so the survey was based on a sample of 325 rural PSUs and 175 urban PSUs from urban areas; 90 of the urban PSUs were in municipalities and 85 were in city corporations.

Table 43. Detailed sample distributions by district

	District	Number of households in 2018	Number of households In 2023	Households in 2018 as a % of the total	Households In 2023 as a % of the total	Number of households not surveyed in 2023	Households not surveyed in 2023 as a % of the total
1	Bagerhat	105	96	1.0	1.1	9	0.5
2	Bandarban	63	47	0.6	0.5	16	0.9
3	Barguna	84	81	0.8	0.9	3	0.2
4	Barishal	168	155	1.6	1.8	13	0.7
5	Bhola	84	81	0.8	0.9	3	0.2
6	Bogra	273	260	2.6	3.0	13	0.7
7	Brahmanbaria	168	161	1.6	1.8	7	0.4
8	Chandpur	294	268	2.8	3.1	26	1.5
9	Chittagong	1,113	838	10.6	9.6	275	15.9
10	Chuadanga	84	82	0.8	0.9	2	0.1
11	Comilla	483	457	4.6	5.2	26	1.5
12	Cox's Bazar	105	88	1.0	1.0	17	1.0
13	Dhaka	1,281	563	12.2	6.4	718	41.4
14	Dinajpur	168	160	1.6	1.8	8	0.5
15	Faridpur	105	99	1.0	1.1	6	0.3
16	Feni	105	83	1.0	0.9	22	1.3
17	Gaibandha	147	137	1.4	1.6	10	0.6
18	Gazipur	231	184	2.2	2.1	47	2.7
19	Gopalganj	42	38	0.4	0.4	4	0.2
20	Habiganj	126	114	1.2	1.3	12	0.7
22	Jamalpur	168	153	1.6	1.7	15	0.9
23	Jessore	210	189	2.0	2.2	21	1.2
24	Jhalokati	63	58	0.6	0.7	5	0.3
25	Jhenaidah	105	105	1.0	1.2	0	0.0
21	Joypurhat	42	40	0.4	0.5	2	0.1
26	Khagrachhari	63	49	0.6	0.6	14	0.8
27	Khulna	168	138	1.6	1.6	30	1.7
28	Kishoregonj	168	157	1.6	1.8	11	0.6
29	Kurigram	105	98	1.0	1.1	7	0.4

	District	Number of households in 2018	Number of households In 2023	Households in 2018 as a % of the total	Households In 2023 as a % of the total	Number of households not surveyed in 2023	Households not surveyed in 2023 as a % of the total
30	Kushtia	126	125	1.2	1.4	1	0.1
31	Lakshmipur	105	78	1.0	0.9	27	1.6
32	Lalmonirhat	84	82	0.8	0.9	2	0.1
33	Madaripur	63	60	0.6	0.7	3	0.2
34	Magura	63	62	0.6	0.7	1	0.1
35	Manikganj	105	102	1.0	1.2	3	0.2
37	Maulvibazar	105	89	1.0	1.0	16	0.9
36	Meherpur	42	42	0.4	0.5	0	0.0
38	Munshiganj	105	94	1.0	1.1	11	0.6
39	Mymensingh	315	278	3.0	3.2	37	2.1
40	Naogaon	189	179	1.8	2.0	10	0.6
41	Narail	42	42	0.4	0.5	0	0.0
42	Narayanganj	231	198	2.2	2.3	33	1.9
43	Narsingdi	126	126	1.2	1.4	0	0.0
44	Natore	126	122	1.2	1.4	4	0.2
45	Chapainababganj	105	100	1.0	1.1	5	0.3
46	Netrakona	126	108	1.2	1.2	18	1.0
47	Nilphamari Zila	105	96	1.0	1.1	9	0.5
48	Noakhali	147	129	1.4	1.5	18	1.0
49	Pabna	189	180	1.8	2.1	9	0.5
50	Panchagarh	84	81	0.8	0.9	3	0.2
51	Patuakhali	84	79	0.8	0.9	5	0.3
52	Pirojpur	42	39	0.4	0.4	3	0.2
54	Rajbari	84	76	0.8	0.9	8	0.5
53	Rajshahi	189	170	1.8	1.9	19	1.1
55	Rangamati	21	0	0.2	0.0	21	1.2
56	Rangpur	168	153	1.6	1.7	15	0.9
58	SaBDThira	126	123	1.2	1.4	3	0.2
57	Shariatpur	63	58	0.6	0.7	5	0.3
60	Sherpur	84	74	0.8	0.8	10	0.6
59	Sirajganj	147	132	1.4	1.5	15	0.9

	District	Number of households in 2018	Number of households In 2023	Households in 2018 as a % of the total	Households In 2023 as a % of the total	Number of households not surveyed in 2023	Households not surveyed in 2023 as a % of the total
61	Sunamganj	104	89	1.0	1.0	15	0.9
62	Sylhet	168	137	1.6	1.6	31	1.8
63	Tangail	252	222	2.4	2.5	30	1.7
64	Thakurgaon	63	61	0.6	0.7	2	0.1
	Total	**10,499**	**8,765**	**100**	**100**	**1,734**	**100.00**

Poverty Line Estimation: Cost of Basic Needs (CBN) Approach

The CBN method is used to calculate the expenditure required to attain a consumption level adequate to meet a person's basic needs. Any person unable to afford this minimum expenditure is considered poor.

The first step in calculating this minimum total expenditure level is to determine the minimum expenditure on food. Following Ravallion and Sen (1996), the food consumption bundle comprises eleven items: rice, wheat, pulses, milk, oil, meat, fish, potatoes, vegetables, sugar, and fruits. These eleven food items provide the minimal nutritional requirement for a healthy life. In each stratum, the price of each food item is taken to be the median price reported by a reference group. (In our survey, the reference group comprises all households heads.) The minimum food expenditure level is a weighted sum of each price times the required quantity of each food item. This is minimum level is referred to as the food poverty line (zf).

The second step of the CBN method involves calculating the non-food expenditure requirement. There are two alternative forms of the calculation: the lower non-food allowance (zl) and the upper non-food allowance (zu). The lower non-food requirement is determined by identifying the median monthly per-capita non-food expenditure of a reference group in each stratum whose total per capita expenditure is close to the food poverty line. The upper non-food requirement is determined by identifying the median monthly per capita non-food expenditure of a reference group in each stratum whose per capita food expenditure is close to the food poverty line. Finally, the lower poverty line is obtained by adding the food poverty line to the lower non-food requirement (zf+zl). The upper poverty line is obtained by adding the food poverty line to the upper non-food requirement (zf+zu).

Multidimensional Poverty Index (MPI) Methodology

The MPI is calculated following Alkire et al. (2020). It is based on components in three categories: (1) education, (2) healthcare, (3) the standard of living.

The overall deprivation score of an individual (c_i) is calculated as a weighted sum of his/her deprivation level in each component i. The deprivation level in each component is a binary indicator variable: $I_i = 1$ if the person is deprived and $I_i = 0$ if the person is not deprived. The score is scaled so that it lies in the unit interval. An individual who is deprived in all components will have a score of one, and a person who is deprived in no component will have a score of zero. The sum of the weights (w_i) is also equal to 1.

$$c_i = \sum_{i=1}^{i=N} w_i I_i \quad \text{and} \quad \sum_{i=1}^{i=N} w_i = 1$$

An individual is considered to be multidimensionally poor if $c_i \geq 1/3$. Further calculations are based on a censored version of the deprivation score: $c_i^* = c_i$ if $c_i \geq 1/3$, otherwise $c_i^* = 0$.

The MPI for a group of individuals is the product of two components: (1) the proportion of individuals who are poor and (2) the intensity of deprivation. The first component is a headcount ratio (H):

$$H = {}^{q}/_{n}$$

Here, q is the number of individuals for whom $c_i^* > 0$ and n is the total number of individuals in the group. The second component is the intensity measure A:

$$A = \sum_{i=1}^{i=n} c_i^* \Big/ q$$

The MPI is then calculated as $H \times A$.

Table 44. MPI indicators and their weights

Dimensions of Poverty	Indicator	Deprived if living in a household where…	Specifics (Deprived if…)	Weight
Education (1/3)	Years of schooling	No eligible HH member has completed 6 years of schooling.	No HH member aged 12 and above completed 6 years of schooling.	1/6
	School attendance	Any school-aged child is not attending school up to the age at which he/she would complete class 8.	Any child in the age range of 5-15 not attending school.	1/6
Livng Standards (1/3)	Cooking fuel	A household cooks using solid fuel, such as dung, agricultural crops, shrubs, wood, charcoal, or coal.	HHs using wood/fire-wood or dung/leave/straw.	1/18
	Sanitation	The household has unimproved or no sanitation facility or it is improved but shared with other households.	Households not utilizing a sanitary facility, whether water-sealed or non-water-sealed.	1/18
	Drinking water	The household's source of drinking water is not safe or safe drinking water is a 30-minute or longer walk from home, roundtrip.	HHs drinking water from ponds, canals/rivers, and other sources.	1/18
	Electricity	The household has no electricity.	HHs that use solar panels, kerosene, and other options.	1/18
	Housing	The household has inadequate housing materials in any of the three components: floor, roof, or walls.	HHs living in semi-pucca and Katcha house.	1/18
	Assets	The household does not own more than one of these assets: radio, TV, telephone, computer, animal cart, bicycle, motorbike, or refrigerator, and does not own a car or truck.	HHs that do not own more than one radio, TV, telephone, computer, animal cart, bicycle, motorbike or refrigerator, and does not own a car or tractor.	1/18
Health (1/3)	Nutrition	A modified household dietary diversity index is calculated where the adult equivalent consumption of each of the eleven food groups is calculated (for details see the next annex). If a household consumes less than the amount of food required on five or less categories of food, that household is considered as deprived on nutrition dimension. In other words, the household was deprived of adequate diversified nutritions it requires.	HHs with modified HDDS below 6.	1/6
	Access to healthcare	No household member had barriers to accessing healthcare services when they needed.	Any household member who was sick in the last 30 days however, could not receive any treatment because (i) the quality of healthcare was not good, (ii) treatment cost was too much, (iii) the distance was too far, (iv) nobody at home to take care, (v) there was none to accompany him/her, (vi) it was a hassle to go outside, (vii) not able to make his/her own decision about healthcare/treatment, (viii) didn't know where to go for treatment, etc.	1/6

Modified Household Dietary Diversity Score (HDDS) Methodology

The HDDS assesses dietary diversity by considering 11 food items: rice, wheat, potatoes, meat, fish, vegetables, pulses, fruits, sugar, milk, and oil. (These are the 11 items used in the CBN method.) Unlike the traditional HDDS, the modified version incorporates not only the presence of items in a person's diet, but also the quantity.

In the following calculations, f_{ik} denotes the quantity of food item i consumed by household k, and n denotes the adult-equivalent household size. Household k's per capita consumption of item i is measured as:

$$F_{ik} = \frac{f_{ik}}{n}$$

There is a cut-off point $\overline{F_i}$ for each food item. This cut-off point is based on an adult-equivalent energy intake estimated by Ravallion and Sen (1996).

Table 45. Food items for the modified HDDS

Food Items	Kilocalories	Grams $(\overline{F})$
Rice	1,386	397
Wheat	139	40
Potatoes	153	40
Meat	39	58
Fish	180	20
Vegetables	14	12
Pulses	51	48
Fruits	26	27
Sugar	36	150
Milk	82	20
Oil	6	20
Total	**2112**	**832**

Source: Ravallion and Sen (1996)

Household k is considered to be deprived of item i if $F_{ik} < \overline{F_i}$. Deprivation is defined in terms of a set of indicator variables V_{ik}:

$$V_{ik} = \begin{cases} 0 \; if \; F_{ik} < \overline{F_i} \\ 1 \; if \; F_{ik} \geq \overline{F_i} \end{cases}$$

The modified HDDS for household k is calculated as:

$$HDDS_k = \sum_{i=1}^{i=11} V_{ik}$$

If $HDDS_k < 6$ then household k is considered to be deprived overall.

FIES Calculation Methodology

"The FIES Survey Module (FIES-SM) consists of eight questions regarding people's access to adequate food. The questions refer to the experiences of the individual respondent or of the respondent's household as a whole. The questions focus on self-reported food-related behaviors and experiences associated with increasing difficulties in accessing food due to resource constraints". (FAO, 2024). The indicators (WORRIED, HEALTHY, FEWFOODS, SKIPPED, ATELESS, RANOUT, HUNGRY, WHOLEDAY) show if the respondent answered yes or no to the following eight questions.

1. Were you worried you would not have enough food to eat? (WORRIED)
2. Were you unable to eat healthy and nutritious food? (HEALTHY)
3. Did you eat only a few kinds of food? (FEW FOODS)
4. Did you have to skip a meal? (SKIPPED)
5. Did you eat less than you thought you should? (ATE LESS)
6. Did your household run out of food? (RANOUT)
7. Were you hungry but did not eat? (HUNGRY)
8. Did you go without eating for a whole day? (WHOLEDAY)

The severity of the respondent's food insecurity is determined by a score based on the answers to the eight questions. The questions are ordered according to severity, so if a respondent answers yes to a certain question then the correct response to all previous questions is assumed to be yes, regardless of the respondent's actual answer to these previous questions. (Given the nature of the questions, it is more likely that the respondent misunderstood an earlier question than it is that he/she misunderstood a later one.) With this modification, the overall severity score (S) is the total number of questions with a yes response.

- The individual is secure if $S = 0$
- The individual is mildly insecure $1 \leq S \leq 3$
- The individual is moderately insecure if $4 \leq S \leq 6$
- The individual is severely insecure if $7 \leq S \leq 8$

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