NATIONAL MULTIDIMENSIONAL POVERTY INDEX FOR BANGLADESH

General Economics Division (GED)
Bangladesh Planning Commission
Government of the People's Republic of Bangladesh

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In Collaboration with

United Nations Children's Fund (UNICEF)
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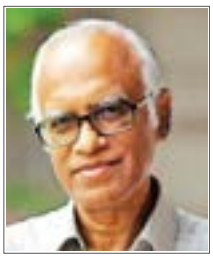

Professor Wahiduddin Mahmud
Adviser, Ministry of Planning
Government of the People's Republic of Bangladesh

MESSAGE

I am pleased that the General Economics Division (GED) has finalized the National Multidimensional Poverty Index (MPI) for Bangladesh. This long-anticipated report is the result of extensive international collaboration between the Government, development partners, and academia. It represents nearly five years of rigorous training, validation, and consultation, culminating in a landmark achievement now being shared with the public.

The Sustainable Development Goals (SDGs) call for the eradication of poverty in all its forms and dimensions for men, women, and children. In recognition of the complex, multifaceted nature of human poverty and deprivation, the Government of Bangladesh undertook the initiative in collaboration with Bangladesh Bureaue of Statistics (BBS) and UNICEF Bangladesh to develop a national MPI. This report is designed to support monitoring and guide progress toward the targets outlined in our medium and long-term development plans.

The MPI offers a fresh lens through which to understand poverty—not merely as a matter of income or consumption, but as a multidimensional phenomenon. This is significant for two main reasons. First, there is a growing global consensus that income-based poverty measures are insufficient to inform effective public policy, particularly in the domain of social protection. A multidimensional approach—one that considers indicators such as education, health, nutrition, and living standards—can better guide the design of impactful development programs and services. Second, several MPI indicators, including child stunting, immunization, access to healthcare, and child labor, can serve as early warning signals of vulnerability during economic shocks, such as those triggered by instability in the global political economy.

The MPI opens the door to new and innovative strategies for tackling poverty. It must be used to identify the most disadvantaged areas and population groups, enabling targeted, evidence-based interventions to address their specific deprivations. Moving forward, it is critical to integrate this multidimensional understanding of poverty into our policymaking and planning processes. We must ensure that adequate technical guidance and institutional capacity are in place to apply this approach meaningfully and sustainably.

I trust that government officials, researchers, and development practitioners will find this report valuable in designing forward-looking policies and programs to address the evolving challenges of poverty and inequality in Bangladesh. I congratulate the leadership and officials of GED for steering this initiative to completion, as well as colleagues from BBS, UNICEF, and OPHI whose contributions made this milestone possible.

Wahiduddin Mahmud

Rana Flowers
Representative to UNICEF in
Bangladesh

MESSAGE

The inaugural report on the national Multidimensional Poverty Index (MPI) for Bangladesh, prepared by the General Economics Division (GED) of the Bangladesh Planning Commission, establishes a valuable baseline, and most critically, it emphasizes that poverty is so much more than an economic measure, it is a measure of deprivation across several child rights areas.

As Bangladesh advances on its journey towards becoming a middle-income country, it enters a critical phase of reform and transition. The socio-economic landscape is becoming more intricate and multifaceted, shaped by rapid technological change, demographic shifts and political transformation. Last year especially marked a turning point in Bangladesh's history, as thousands of young people courageously elevated their voices to demand a better future. Their calls must not go unanswered.

Children must be at the core of this transformation as the heartbeat of the country. They deserve to be cared for and protected, to live in a safe and healthy environment, to grow up with access to quality education and quality healthcare to thrive to their full potential. Over the past decades, Bangladesh has made important strides toward these goals, including reducing child mortality, increasing school enrollment, narrowing gender gaps in education, and expanding access to safe water and sanitation. Yet, far too many children, particularly those in remote areas and urban slums, remain left behind. The climate crisis adds another layer of urgency. More frequent and severe climate shocks are already disrupting children's lives, causing learning loss and threatening their development and well-being with long-term, irreversible consequences, condemning them to poverty.

This is why a shift in our policy approach is vital, one grounded not only in income-based metrics but in a holistic understanding of poverty. The national MPI is a powerful, indispensable tool to support this shift. It reveals the multiple deprivations children and the people of Bangladesh experience, such as limited access to health care, education, and adequate nutrition. It serves as a crucial indicator for monitoring Bangladesh's progress towards the Sustainable Development Goals, whose deadline is in only less than five years. Ultimately, MPI is critical to designing and implementing targeted policies that promote children's rights, address child poverty and foster the country's human capital development.

UNICEF is deeply honored to have been a trusted partner in this endeavor, collaborating closely with BBS and the Oxford Poverty and Human Development Initiative (OPHI) at the University of Oxford. A key outcome of this partnership was building national capacity, through comprehensive training of a multisector team from

GED and BBS, to ensure national ownership and long-term sustainability of the MPI. But the work does not end here. The next step is to utilize this invaluable tool to guide investments and formulate policies that address the challenges of a transitioning economy. UNICEF stands ready to support the Government of Bangladesh in disseminating the findings and translating this data and analysis into tangible policies and programme designs.

UNICEF reaffirms its relentless commitment to supporting the Government of Bangladesh in realizing the SDGs - especially those that uphold the rights of every child. Together with GED, we look forward to advancing this shared vision for a more inclusive and equitable future for all children in Bangladesh.

Rana Flowers

Dr. Monzur Hossain
Member, General Economics Division
Bangladesh Planning Commission
Government of the People's Republic of Bangladesh

FOREWORD

The Multidimensional Poverty Index (MPI) has been estimated for the first time in Bangladesh using data from the 2019 Multiple Indicator Cluster Survey (MICS). MPI serves as an additional indicator that complements income-based poverty measures by capturing the multiple deprivations people experience in their daily lives. The MPI is rooted in Amartya Sen's Capability Approach, which emphasizes that poverty should not be seen solely as a lack of income. Instead, it reflects the deprivation of essential functions and capabilities, such as good health, education, access to clean water, and decent housing, among others. The Agenda 2030 rightly highlights the need to address poverty from multidimensional perspectives.

Since the MPI provides an in-depth examination of poverty across key dimensions, including education, health, and standard of living, this will help us track and monitor targets of SDG Goal 1. Furthermore, this approach allows us to understand the overlapping disadvantages that affect individuals and households, providing a more nuanced picture of poverty that extends beyond income. Such insights are crucial for crafting effective and targeted interventions at national and sub-national levels.

The General Economics Division (GED) of the Bangladesh Planning Commission has been playing a central role in driving evidence-based policymaking. With support from UNICEF, GED took the initiative to measure MPI in Bangladesh. The measure considers standard indicators that are followed worldwide, along with one additional indicator, "internet access," following comprehensive stakeholder consultations. We are committed to utilizing tools like the MPI to sharpen our strategies and measure progress toward achieving the Sustainable Development Goals (SDGs), particularly Goal 1: Ending poverty in all its forms everywhere.

This publication is the result of a collaborative effort involving national and international stakeholders, including the Bangladesh Bureau of Statistics (BBS), UNICEF, Oxford Multidimensional Poverty and Development Initiative (OPHI), and technical experts. In Particular, I express my gratitude to Professor Sabina Alkire, the pioneer of developing the MPI methodology, for helping us to measure the MPI for Bangladesh. I extend my sincere thanks to all who contributed their time, expertise, and dedication to ensure the integrity and relevance of this important work.

I extend my heartfelt gratitude to Professor Wahiduddin Mahmud, Honorable Adviser, Ministry of Planning, for inspiration and guidance in bringing out this important publication.

As we strive toward building a more equitable society, the MPI provides us with actionable data to guide policy, allocate resources effectively, and empower communities. I hope that this publication will serve as a key reference for policymakers, researchers, and development practitioners working to combat poverty and improve the quality of life for all Bangladeshis..

Monzur Hossain

ACRONYMS AND ABBREVIATIONS

BBS	Bangladesh Bureau of Statistics
BDT	Bangladeshi Taka
CBN	Cost of Basic Needs
DCI	Direct Calorie Intake
FYP	Five Year Plans
GED	General Economics Division
HDRO	Human Development Report Office
HIES	Household Income and Expenditure Survey
MICS	Multiple Indicator Cluster Survey
MPI	Multidimensional Poverty Index
NSSS	National Social Security Strategy
OPHI	Oxford Poverty and Human Development Initiative
SDGs	Sustainable Development Goals
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
VNR	Voluntary National Review

GLOSSARY

MPI	Multidimensional Poverty Index: the product of the incidence and the intensity of multidimensional poverty. It ranges between 0 and 1, with 0 indicating no poverty and 1 indicating that everyone is multidimensionally poor and deprived in all indicators.
H	Headcount ratio of multidimensional poverty or incidence of multidimensional poverty: proportion of people who are multidimensionally poor. It ranges from 0 to 100%.
A	The average intensity of multidimensional poverty: average deprivation shares among the multidimensionally poor. It ranges from poverty cut-off k to 100%.
Uncensored Headcount Ratio	Shows the proportion of people who are deprived in each particular indicator. It ranges from 0 to 100%
Censored Headcount Ratio	Reported for each indicator to show the proportion of people who are multidimensionally poor and deprived in a particular indicator. It ranges from 0 to 100%.
k	Poverty cut-off or multidimensional poverty line: minimum value of weighted deprivations required to be considered MPI poor, reported as a percentage.
Weights	Indicator weights are normalized from 0 to 100%, and indicate the importance of each indicator within the overall index.

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EXECUTIVE SUMMARY

Poverty reduction is an overriding good requiring multifaceted and cross-sectoral interventions. The Agenda 2030 rightly identifies the eradication of poverty as the greatest challenge in the world and the fundamental requirement for achieving the SDGs. Bangladesh Bureau of Statistics (BBS), as the national statistical organization, uses the costs of basic needs approach to measure poverty and extreme poverty in the country. BBS conducts the Household Income and Expenditure Survey (HIES) on a regular basis, usually in five-year intervals, to provide an estimate of poverty in monetary terms. The money-metric poverty estimate faces criticism as many consider it to be unidimensional in nature. Given this context, the multidimensional poverty estimate was introduced at the global level in the early 2010s following the methodology developed by Alkire and Santos (2010, 2013) to enrich the traditional money-metric poverty estimates. In the Agenda 2030, target 1.2 of SDG Goal 1 has clearly articulated the importance of multidimensionality in measuring poverty. The Multidimensional Poverty Index (MPI) can thus be an additional indicator of poverty estimates for Bangladesh.

This report presents the first National Multidimensional Poverty Index (MPI) for Bangladesh, which is an official statistic that complements the national monetary poverty measure. Using the most recent Multiple Indicator Cluster Survey (MICS) 2019, a detailed picture of multidimensional poverty across Bangladesh is provided at the national, divisional, and district levels. The National MPI is reported with an associated information platform of intuitive and policy-relevant statistics, both nationally and disaggregated to subnational levels and by socioeconomic subgroups.

Furthermore, the report also offers insights into changes over time in Bangladesh using a harmonized national MPI. The trend analysis is based on data from two rounds of MICS, conducted in 2012/13 and 2019. Similar to the analysis of the National MPI, the harmonized national MPI is also assessed at the national, divisional, and district levels, while also offering a detailed breakdown for various age groups and distinctions between rural and urban areas.

While poverty has traditionally been measured solely by income or consumption, Bangladesh is now following and reporting on Target 1.2 of the Sustainable Development Goals (SDGs), which also aims to reduce poverty in all its forms by 2030, according to national definitions. The National MPI for Bangladesh measures SDG Target 1.2. It includes three dimensions spanning 11 indicators. These indicators, which have been carefully selected from various stakeholder consultations, are considered the most feasible ones given current data possibilities, and they have been tested rigorously. They are connected to different SDGs and to the national development plans. Hence, the National MPI has the potential to serve as a valuable instrument for shaping policy decisions and guiding sector-specific planning.

The global MPI is a measure of acute poverty that is developed and computed for more than 100 countries by Oxford Poverty and Human Development Initiative (OPHI) in partnership with the United Nations Development Programme's Human Development Report Office (UNDP - HDRO) and published in the annual Human Development Report (HDR). Under the SDG agenda and Target 1.2, countries are encouraged to develop their own national MPI, which may be tailored to their national circumstances.

The National MPI has been constructed following the structure of the global MPI considering the country context. For instance, in the global MPI for Bangladesh, 10 indicators have been considered under three equally weighted dimensions: living standards, education, and health. Whereas for the National MPI, 11 indicators have been used under the same three dimensions, including internet access as an additional indicator. Any person who is deprived in one-third or more of the weighted indicators is identified as multidimensionally poor under the National MPI.

The purpose of the National MPI is to monitor progress in Bangladesh towards the goals established in the SDGs and the government. plans. It is expected that, along with SDG monitoring, the National MPI will be used as a tool to inform budget decisions and resource allocations at the division and district levels. It can thus become a practical instrument to identify the poorest of the poor through targeted schemes. The National MPI using MICS 2019 data is also designed to be a robust baseline for tracking progress in poverty reduction over time.

2019 National MPI Results

In 2019, 24.05% of the population was identified as multidimensionally poor, meaning that around 39.77 million people are deprived in at least one-third of the 11 weighted indicators. The intensity of poverty among the poor, which reflects the average share of deprivations each poor person experiences, is 44.17%. This means that, on average, poor persons are deprived of 44.17% of the weighted indicators. The National MPI, which is the product of the percentage of poor people and the intensity of their poverty, stands at 0.106. This indicates that poor people in Bangladesh experience 10.6% of the possible deprivations that a society would experience if all people were multidimensionally poor and deprived in all indicators.

The results of the regional analyses reveal that the proportion of people identified as poor in urban areas is significantly lower than in rural areas (13.48% vs. 26.96%). Across divisions, the poverty rates range from 15.22% in Khulna (with an intensity of 42.06%) to 37.70% in Sylhet (with an intensity of 46.86%), revealing important regional differences in multidimensional poverty. There is even greater variation across the 64 districts, with multidimensional poverty affecting 8.66% of people in Jhenaidah and 65.36% of people in Bandarban.

Across age groups, poverty is the highest for children – and over 35.55% of the population of Bangladesh are children under 18 years of age. According to the 2019 national MPI, 28.64% of children aged 0 to 9 and 28.83% of the children aged 10 to 17 are multidimensionally poor, as compared to 21.44% of adults (older than 17).

Reduction of deprivation across the 11 indicators should be targeted, as reducing deprivation in any indicator leads to a reduction in multidimensional poverty. A highly visible deprivation is revealed in the housing indicator– those households without improved floors/roofs/walls. Around 21.34% are multidimensionally poor and deprived in housing. However, child school attendance has the highest weighted contribution to the National MPI, followed by years of schooling, nutrition, and housing. Profiles of poverty by indicator vary across divisions and districts. The censored headcount ratios (the percentage of people who are multidimensionally poor and are deprived in specific indicators) of three indicators (housing, internet access, and sanitation) are high across all areas. Over 20% of the people are multidimensionally poor and deprived in each of these indicators. Thus, besides educational priorities, government programmes aimed at these sectors can go a long way in reducing the simultaneous deprivations faced by millions of poor people.

Changes over time using harmonized MPI

This report also includes the first trend analysis of the harmonized National Multidimensional Poverty Index (MPI) for Bangladesh. The trend analysis relies on two rounds of the Multiple Indicator Cluster Survey (MICS): 2012/13 and 2019. For the purpose of the trend analysis, indicators of the National MPI are harmonized in such a way that they become comparable between the two datasets (MICS 2012/13 and MICS 2019).

The harmonized national MPI (details of harmonization are found in Chapter 4) has shown significant progress in reducing multidimensional poverty in Bangladesh, with impressive decreases in both incidence and intensity of poverty. The harmonized national MPI decreased from 0.197 to 0.101. This reduction is driven by

decreases in both the headcount ratio (H) and the intensity of poverty (A). In 2012/13, approximately 42.65% of the population was considered MPI poor, but by 2019, this proportion had reduced to nearly one-fourth, or 24.08% of the population. Remarkably, despite population growth during this period, the actual number of MPI poor individuals in Bangladesh significantly dropped from 65.51 million to 39.82 million, indicating that approximately 25.68 million people transitioned out of poverty between these years.

Particularly strong reductions (censored headcount ratios) were seen in electricity, housing, asset ownership, and sanitation, reflecting concerted efforts across a range of social services and goods. Given the high rural population in Bangladesh, it's encouraging to see that poverty reduction efforts have been equally remarkable in both urban and rural areas, with a reduction of 0.061 in the harmonized national MPI observed in urban areas and an even greater reduction of 0.105 in rural areas. Likewise, significant reductions in the harmonized national MPI was observed in all eight divisions and all 64 districts. The adoption of the national MPI as an official measure, continued monitoring, and prioritized sector-specific actions will be crucial in further advancing the fight against multidimensional poverty in Bangladesh.

Analyzing the harmonized national MPI by age group for 2019, it becomes evident that a larger percentage of children under the age of 18 (28.87%) experience multidimensional poverty in comparison to adults aged 18 and above (21.45%), underscoring the need for targeted interventions to enhance their well-being. Nevertheless, there has been a noteworthy decline in the incidence of multidimensional poverty among children. For example, for those aged below 18, multidimensional poverty has decreased from 50.2% in 2012/13 to 28.87% in 2019. This has led to the uplifting of approximately 13 million individuals (aged 0-17) from multidimensional poverty.

Policy Recommendations:

Here are some policy recommendations stemming from the analysis of the National MPI:

- Adopting the National MPI as an official national measure of poverty. To complement existing monetary poverty measures in Bangladesh, the National MPI should be adopted as an official poverty statistic.
- Monitoring national and international targets. The National MPI can be used as a tool for monitoring progress. The pre-pandemic data from the 2019 MICS, presented in this report, serve as a useful baseline. At a national level, keeping track of the MPI and its constituent indicators will provide important information on how the country is doing with respect to the goals outlined in the SDGs.
- Identifying priority sectors. The indicators under the education dimension contribute the most to the National MPI, followed by nutrition under health, and housing in the living standards dimension. To reduce MPI, it is crucial to prioritize efforts addressing educational deprivations (both in school attendance and years of schooling) in poverty alleviation strategies.
- Geographical targeting. There is a need for immediate action in those districts where MPI is the highest. People in these districts are in severe distress and need immediate government assistance to improve their basic living standards. For instance, 65.36% of those living in Bandarban, the poorest district, are MPI poor. Around 47% of those living in Cox's Bazar (47.70%) and Sunamganj (47.36%) are MPI poor. Note that MPI adds actionable insights to geographical targeting using monetary poverty, which finds most poverty in Kurigam (70.80% are income poor).
- The National MPI further highlights the rural-urban divide in Bangladesh and points towards the need for high-impact interventions that target the multidimensionally poor in rural areas.
- Guiding policy interventions. The National MPI identifies how people are poor by indicator, and shows how this differs from area to area or group to group. This can assist in designing nuanced and appropriate interventions to meet the challenge of poverty across Bangladesh.

The poorest suffer from multiple deprivations, and after the educational priorities of child school attendance and years of schooling, housing, internet access, sanitation and assets constitute four pillars of particularly high censored headcount ratios when using the MPI. Interventions should therefore focus on enhancing school attendance and increasing the number of years of schooling for MPI poor children. Policies should also develop affordable housing initiatives to improve housing conditions for the poorest, and launch projects to expand internet access in underserved areas, particularly in rural regions. This can involve building internet infrastructure, providing subsidies for internet services, and promoting digital literacy programs.

According to the National MPI, children are the most vulnerable group. Universal health and education programmes for children are highly recommended to improve the lives of Bangladesh's youngest generation. Children in the poorest districts would benefit the most from government support for improved housing conditions, safe drinking water, improved sanitation, electricity, and clean cooking fuel.

In conclusion, this report provides an in-depth analysis of the National MPI, delving into a detailed breakdown of multidimensional poverty in Bangladesh at various subgroup levels. Additionally, it provides an overview of trends over the time period 2012/13 to 2019, utilizing a harmonized national MPI. The dual focus of this analysis enables readers to gain insights into the remarkable progress Bangladesh has made in recent years in its ongoing fight against multidimensional poverty. It offers insights into how Bangladesh has advanced across various indicators between 2012/13 and 2019. Although the National MPI differs in structure from the harmonized national MPI, the examination of changes over time remains a crucial component for understanding how indicators have progressed.

CHAPTER 1:
INTRODUCTION

1.1 Background

Poverty reduction has been a major development objective of Bangladesh since its independence. It is indeed an overriding good requiring multifaceted and cross-sectoral interventions. The Agenda 2030 rightly identifies the eradication of poverty as the greatest challenge in the world and the fundamental requirement for achieving the SDGs. There are different methods of measuring poverty, from absolute to relative, as used by multilateral institutions. Each country uses its own national definition in terms of poverty and follows some standard guidelines. Bangladesh Bureau of Statistics (BBS), as the national statistical organization, uses the costs of basic needs approach to measure poverty and extreme poverty in the country. BBS conducts the Household Income and Expenditure Survey (HIES) on a regular basis, usually in five-year intervals, to provide an estimate of poverty in monetary terms.

No measurement is perfect, and different measures have different merits and demerits. The monetary poverty estimate faces criticism as many consider it to be unidimensional in nature. Given this context, the multidimensional poverty estimate was introduced at the global level in the early 2010s following the methodology developed by Alkire and Santos (2010, 2013) to enrich the traditional money-metric poverty estimates. In the Agenda 2030, target 1.2 of SDG Goal 1 has clearly articulated the importance of multidimensionality in measuring poverty. The Multidimensional Poverty Index (MPI) can thus be an additional indicator of poverty estimates.

Using the most recent Multiple Indicator Cluster Survey (MICS) 2019, a detailed picture of multidimensional poverty across Bangladesh is provided at the national, divisional, and district levels. The National MPI is reported with an associated information platform of intuitive and policy-relevant statistics, both nationally and disaggregated to subnational levels and by socioeconomic subgroups. Furthermore, a harmonized national MPI is also estimated to offer insights into changes in poverty over time in Bangladesh. The trend analysis is based on data from two rounds of MICS, conducted in 2012/13 and 2019. Similar to the analysis of the National MPI, the harmonized national MPI is also assessed at the national, divisional, and district levels, while also offering a detailed breakdown for various age groups and distinctions between rural and urban areas.

The General Economics Division (GED) is nationally responsible for the analysis and monitoring of poverty. In this respect, GED, in collaboration with BBS, with technical and financial support from UNICEF and Oxford Multidimensional Poverty and Development Initiative (OPHI), took the initiative to introduce the multidimensional poverty index by national definition.

1.2 Poverty Measurement in Bangladesh: Convention and Status

Bangladesh's official poverty measure and analysis involve two organizations. Bangladesh Bureau of Statistics (BBS), the national statistical office, provides the data through the HIES. General Economics Division (GED), Bangladesh Planning Commission, as the country's Poverty Focal Point, performs further analysis and develops projections that facilitate the poverty reduction measures of the long-term and medium-term development plans.

Historically, Bangladesh's poverty measurement has been consumption-based and relied on consumption and expenditure data from the HIES. Direct calorie intake (DCI) was the country's favoured method for estimating the poverty line when it started to measure poverty after its independence. After relying on the DCI from 1973 to 1988, the country moved to the cost of basic needs (CBN) method in the mid-1990s and has been using it since then. As described in the final report of HIES 2022 (p. 90-91):

The process starts with estimating a poverty line by calculating the cost of a basic consumption bundle constituting eleven items – coarse rice, wheat pulses, milk, oil, meat, fish, potatoes, other vegetables, sugar, and fruits – that supplies the minimum nutritional requirements equivalent to 2122 kilocalories a day per person. The total poverty line (simply referred to as the 'poverty line') is obtained by adding to the food component the cost of the non-food allowance. The household and all members of the household are considered to be poor if the per capita consumption expenditure is less than the consumption poverty line. This poverty line is adjusted at the time of the poverty estimation to account for inflation.

According to the findings of the recent poverty analysis using HIES (2022), poverty fell substantially between 2010 and 2022 (see Table 1.1 for details).. The poverty headcount ratio, using the upper poverty line,[1] fell from 31.5% in 2010 to 18.7% in 2022. Using the lower poverty line[2], the headcount ratio fell dramatically from 17.6% in 2010 to 5.6% in 2022. The poverty gap, which measures the depth of poverty, was 6.5 in 2010 when the upper poverty line was used and fell to 3.8 in 2022; when the lower poverty line was used, the poverty gap again fell, from 3.1 in 2010 to 0.9 in 2022. This means that in 2022, the consumption per capita in poor households was 3.8% below the upper poverty line on average (or 0.9% using the lower poverty line).

The squared poverty gap (severity of poverty) using the upper poverty line was 2.0 in 2010 and fell to 1.2 in 2022. The same indicator using the lower poverty line moved from 0.8 in 2010 to 0.2 in 2022 (see Table 1.1 for details).

Table 1.1: Poverty Trends in Bangladesh

Indicators	2005			2010			2016			2022		
	National	Rural	Urban	National	Rural	Urban	National	Rural	Urban	National	Rural	Urban
Upper Poverty Line												
Headcount Ratio (%)	40.00	43.80	28.40	31.50	35.20	21.30	24.30	26.40	18.90	18.70	20.50	14.70
Poverty Gap	9.00	9.80	6.50	6.50	7.40	4.30	5.00	5.40	3.90	3.80	4.20	2.90
Severity of poverty	2.90	3.10	2.10	2.00	2.20	1.30	1.50	1.70	1.20	1.20	1.30	0.90
Lower Poverty Line												
Headcount Ratio (%)	25.10	28.60	14.60	17.60	21.10	7.70	12.90	14.90	7.60	5.60	6.50	3.80
Poverty Gap	4.60	5.30	2.60	3.10	3.70	1.30	2.30	2.60	1.30	0.90	1.10	0.60
Severity of poverty	1.30	1.50	0.70	0.80	1.00	0.40	0.60	0.70	0.40	0.20	0.30	0.10

Source: HIES 2005, 2010, 2016, 2022, Bangladesh Bureau of Statistics.

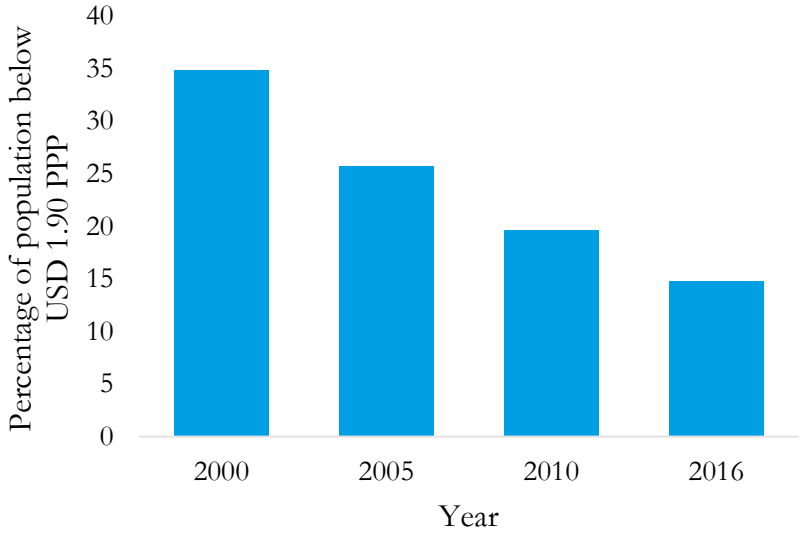
It is apparent that the high growth rates over the last decade have coincided with an overall reduction in monetary poverty. As shown in Figure 1.1, the poverty headcount ratio according to the USD 1.90 poverty line

1 The upper poverty line is basically the lower poverty line (food poverty line) plus a non-food poverty line that is estimated based on the non-food expenditure of those households who are close to the food poverty line. The food poverty line or the lower poverty line is measured based on the cost of a food basket, usually with 11 necessary food items that give a nutritional value of 2122 kilocalories per person per day.

2 Food poverty line.

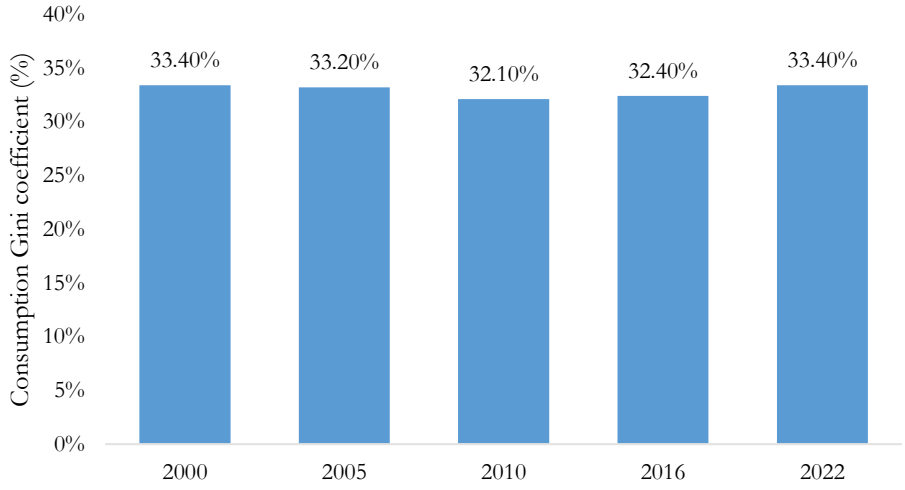
has fallen from 34.80% in 2000 to 14.80% in 2016 (2022 figures are not yet available). Nevertheless, economic growth has not been equally spread across the entire population. Figure 1.2 illustrates the Gini coefficient for Bangladesh, which has remained fairly consistent despite years of high-income growth.

Figure 1.1: Bangladesh Poverty Rate (Poverty Headcount Ratio) at USD 1.90 per day, PPP



Source: World development indicators, 2019.

Figure 1.2: Gini Coefficient of Bangladesh



Source: Key Findings Household Income and Expenditure Survey HIES 2022, 2022

According to the Human Development Index (HDI) (2022), Bangladesh improved its HDI value of 0.685 from its value of 0.68 in 2021. Despite the improvements, the country is still ranked 130th (out of a total of 193 countries). Bangladesh had a score of 0.397 when the HDI first started in 1990. The marks were subsequently further raised to 0.485 in 2000 and 0.553 in 2010. Bangladesh's HDI rating improved by 72.5 % (from 0.397 to 0.685) between 1990 and 2022, classifying it as having "Medium Human Development."

Achieving most of the relevant Millennium Development Goals (MDGs) and targets related to the health and education of children has been a major success for Bangladesh as the country outperforms many of its

Least Developed Country (LDC) counterparts. In terms of child health, the reduction in child mortality and improvements in the nutritional status of children have been two visible achievements of the country. In terms of education, both the attendance and completion rate at the primary and secondary school level have improved, as has gender parity in schools. Improvements in child protection indicators are not very visible in the country other than the remarkable progress in birth registration.

1.3 Multidimensional Poverty Measurement: The Context

Until recently, many countries have measured poverty only by income or consumption. But no single indicator (such as income) can capture the multiple aspects of poverty. The global MPI is a measure of acute poverty that is developed and computed for more than 100 countries by OPHI in partnership with the United Nations Development Programme's Human Development Report Office (UNDP - HDRO) and published in the annual *Human Development Report* (HDR). The concept of multidimensional poverty holds that poverty is a complex experience comprising multiple deprivations in health, education, living standards, and a range of other factors related to wellbeing. It has been established by various commissions, including the Stiglitz-Sen-Fitoussi Commission (2009), that the lack of income alone cannot capture the multiple faces of poverty, nor can it free individuals from the wide array of deprivations they may face.

The global MPI compares multidimensional poverty, measured by three dimensions and (ordinarily) ten indicators, identifying persons as poor if they are deprived in one-third or more of the weighted indicators. In 2023, results cover over 110 developing countries and 6.1 billion people and find that 1.1 billion people are poor. The global MPI includes data for Bangladesh and finds, for example, that from 2014 to 2019, nearly 19 million people moved out of poverty, with the fastest progress being in Sylhet, the poorest region. This equates to a faster absolute rate of MPI reduction in Bangladesh than was evident in the most recent periods of global MPI data for Nepal (2016-2019), India (2015/16 to 2019/21), or Pakistan (2012/13 to 2017/18). Bangladesh's reduction was driven by progress in each of the ten indicators, especially in housing, cooking fuel, sanitation, nutrition, years of schooling, and electricity. The ability to compare the level, change, and indicator progress across countries and also subnational regions or groups within them enables international actors to understand the complexity of poverty and learn from successes.

Many countries have adopted country-specific National MPIs as official poverty measures that are tailored to their unique contexts and localized conditions and complement monetary poverty metrics. For instance, Mexico was among the pioneers in officially adopting the MPI as its national measure in 2009, with Bhutan following suit in 2010. In 2011, Colombia announced a new National Development Plan with a focus on poverty reduction. The plan featured a national MPI along with specific targets and measures for tracking progress. Since then, roughly 40 developing countries have launched official National MPIs tailored to their specific circumstances, resulting in a global trend toward multidimensional poverty measurement.

In South Asia, National MPIs have been launched in Bhutan, India, Nepal, Maldives, Pakistan, Sri Lanka and (in 2019) Afghanistan. The objective of introducing a multidimensional perspective to poverty measurement is to complement monetary poverty measures in order to streamline policy interventions – which areas and sectors should be given priority – as well as to broaden the policy space for poverty alleviation. The MPI also aligns with global commitments in the Sustainable Development Goals (SDGs). The first of 17 SDGs aims to end poverty in all its dimensions. The second of 169 targets (Target 1.2) is to reduce at least by half the proportion of men, women, and children of all ages living in poverty in all its dimensions, according to national definitions. The National MPI is SDG indicator 1.2.2, for which countries are the custodian agencies, and

monitors progress towards this goal. Simultaneously, most MPIs include indicators related to SDGs 1,2,3,4,6,7, and 11, so MPI reduction has the greatly amplified benefit of improving multiple other interconnected SDGs. It is thus a strategic tool.

1.4 Overview of the National MPI for Bangladesh

The Government of Bangladesh has been committed to achieving inclusive growth and poverty eradication, as made public in all national development plans and policies. Bangladesh's stated aspiration to become an upper-middle income calls for new measures that track the process made among all people and multiple deprivations. With the National MPI, the Government of Bangladesh will be able to monitor multiple and overlapping deprivations that are national priorities.

For this purpose, the GED and BBS conducted extensive consultations with line Ministries, Prime Minister's Office (PMO), and UNICEF, along with other Development Partners, and OPHI since 2018. Several stakeholders from academia and civil society were invited to discuss the idea of a national MPI for Bangladesh. GED in collaboration with UNICEF and BBS shared some of the early work on a tentative MPI for Bangladesh and its analysis and participated regularly over the course of 2018 and 2019 in various stakeholder events and technical workshops. The Bangladesh MICS 2019 was considered the best available data for capturing the joint deprivations people face in the country. However, it was noted that the MICS 2019 has some limitations (e.g. quality of schooling or services and the exclusion of many employment-related indicators), which prevented the technical team from including all the indicators identified as relevant for the Bangladesh context.

The results presented here form a baseline national MPI that will be a yardstick to measure Bangladesh's progress in the coming years. Using the MPI to monitor changes will enable the government to assess how its various policies are affecting people, particularly the poor. It is hoped that the National MPI for Bangladesh will be updated regularly and become part of the monitoring system.

CHAPTER 2:
METHODOLOGY OF THE NATIONAL MPI

The National MPI is based on the Alkire-Foster method. This chapter illustrates the Alkire-Foster method, introducing the general terms. For a detailed technical treatment of the Alkire-Foster method along with its properties, please refer Appendix A.

2.1 Alkire-Foster Method

The global MPI, which was developed by Alkire and Santos (2010, 2013) and first appeared in the 2010 Human Development Report, is one particular adaptation of the adjusted headcount ratio (M_0 or MPI) proposed in Alkire and Foster (2011) and elaborated in Alkire, Foster, Seth, Santos, Roche, and Ballon (2015).

The MPI, which is also called the adjusted headcount ratio, captures several indicators of poverty across several dimensions and provides information both on the incidence as well as the intensity of multidimensional poverty. In order to count the simultaneous deprivations that people face, all indicators must be built from the same dataset.

The MPI is calculated in two steps: identification and aggregation. The identification step follows a dual cut-off approach. First, once the most suitable indicators to capture poverty have been identified, deprivation cut-offs (z) – i.e., minimum criteria – are set for each indicator. Applying indicator weights that add to one, the 'deprivation score' captures the weighted sum of deprivations for each individual or household. The second cut-off, the poverty cut-off k, determines whether a person is multidimensionally poor or not. The poverty cut-off is essentially 'the proportion of weighted deprivations a person needs to experience in order to be considered multidimensionally poor'. Put simply, if their deprivation score meets or exceeds the poverty cut-off, they are poor.

With the multidimensionally poor identified via both the indicator cut-offs (z) and poverty cut-off (k), aggregation of the poor over the entire population yields the headcount ratio of multidimensional poverty (H). Thus, H is the incidence of multidimensional poverty or the proportion of multidimensionally poor people. Summing up the deprivation score among the multidimensionally poor people, then dividing by the total number of poor people, yields the intensity of multidimensional poverty (A). Thus, the intensity is the average deprivation share among the poor. Finally, M0 or MPI is the adjusted headcount ratio as it is measured as the product of the incidence (H) and the intensity (A):

MPI = H x A.

The Alkire-Foster method, as described above, allows for very useful disaggregation by subgroups as well as by indicator. Applying the Alkire-Foster method – data permitting – can yield results that can underpin policy guidance for regions (e.g., districts) and various socioeconomic subgroups, such as groupings by gender, age, and religion.

2.2 Data: Bangladesh MICS 2019 and Population

For the National MPI, the Bangladesh MICS 2019 was used[3]. The Bangladesh MICS 2019 was designed to provide information on indicators for eight administrative divisions and 64 districts. MICS 2019 has been

3 More details can be obtained at mics.unicef.org.

a major source of information to track the SDGs in the country as it includes questions on demographic characteristics, education, health, household assets, household amenities, water supply, and sanitation, among others. The target population of this survey consists of all urban and rural areas of the eight divisions. The sample size of the Bangladesh MICS 2019 varies between 800 and 1,000 households at the district level and is 64,400 households at the national level. A two-stage stratified sample design was adopted. For more information on the sampling of the MICS 2019 and the key findings, see BBS (2019).

The population figures nationally and by rural/urban areas and divisions were provided by the BBS for 2012/13 and 2019, and are used as provided.

2.3 Measurement Design of the National MPI

The National MPI for Bangladesh is inspired by the global MPI in terms of dimensions, indicators, and deprivation and poverty cut-offs. At the same time, the choice of indicators and cut-offs reflect Bangladesh's priorities, as expressed in the national plans and policies as well as its SDG commitments. This section describes the choice of indicators, cut-offs, weights, and some of the underlying normative decisions for the National MPI for Bangladesh.

2.4 Unit of Identification and Unit of Analysis

The unit of identification refers to the entity that is identified as deprived or non-deprived – usually the individual or the household. In the case of the National MPI for Bangladesh, the unit of identification is the household. Therefore, all household members receive the same deprivation score. This acknowledges intra-household caring and sharing – for example, educated household members reading for each other and multiple household members being affected by someone's severe health condition. The unit of analysis is related to how the results are reported and analysed. In the case of the National MPI for Bangladesh, the unit of analysis is the individual. This means that, for instance, the headcount ratio is the percentage of people who live in a multidimensionally poor household.

2.5 Dimensions, Indicators, and Deprivation Cut-offs

The National MPI includes three dimensions: living standards, education, and health. The latter deviates the most from the global MPI to better reflect national priorities and the context of Bangladesh. In total, 10 of the 11 indicators are similar to global MPI indicators. Within the living standards dimension of the National MPI, there are seven indicators. These include electricity, sanitation, drinking water, housing, cooking fuel, assets, and internet access (Table 2.1). Like the global MPI 2019, the National MPI for Bangladesh considers three types of housing conditions for the housing indicator: floor, walls, and roof. The dimension of education includes school attendance and years of schooling, while the health dimension includes nutrition and reproductive health. Reproductive health contributes to maternal and child health by preventing unintended pregnancies and closely spaced pregnancies, which are at higher risk for poor obstetrical outcomes. The indicator definitions of deprivation have usually been kept as close as possible to the definitions included in the SDGs.

2.6 Weights

Equal weights are assigned to the three dimensions – 1/3 of the total weight to each of the three dimensions of education, health, and living standards. Within each dimension, equal weights are applied as well, such that health and education indicators have weights of 1/6 (16.67%) and living standards indicators each have a weight of 1/21 (4.76%) (see Table 2.1 for details).

Table 2.1: Dimensions, Indicators, Deprivation Cut-offs, and Weights of the National MPI for Bangladesh

Dimensions	Indicators	Deprivation Cut-off A household is…	National Weight
Living standards	Electricity	Deprived if it has no electricity.	1/21
	Sanitation	Deprived if it has unimproved sanitation services (shared toilet without piped sewer system, a septic tank or improved latrine), including the lack of handwashing facilities, soap, and water.	1/21
	Drinking water	Deprived if it does not have sufficient access to improved drinking water within the dwelling (or at least in the yard/plot). Improved sources refer to piped or public tap, tube well, or protected sources (well or spring).	1/21
	Housing	Deprived if it has any of these: a non-improved floor, roof, or walls.[4]	1/21
	Cooking fuel	Deprived if it does not have clean fuel and technology for cooking.[5]	1/21
	Assets	Deprived if it does not own more than two of the following assets: TV, mobile phone, cart, bicycle, motorcycle, major cattle (cow and goat), refrigerator, washing machine, and computer.	1/21
	Internet access	Deprived if it does not have access to the internet.	1/21
Education	School attendance	Deprived if there is at least one member of the household aged 6 to 17 years who is not attending school.	1/6
	Years of schooling	Deprived if no household member aged 16 years or above has completed five years of schooling[6].	1/6
Health	Nutrition	Deprived if any child (aged 0 to 4 years) of the household is stunted or underweight.	1/6
	Reproductive health	Deprived if demands for family planning by any currently married women (aged 15 to 49 years) are not met by modern contraceptive methods.	1/6

For the national MPI for Bangladesh, the poverty cut-off is set at 33.33%; that is, a person who is deprived of at least a third ($k \geq 33.33\%$) of the weighted sum of indicators is considered multidimensionally poor.

4 Unimproved floor refers to natural floor (earth, sand, dung); for walls: natural walls (cane, palm, trunks, or dirt, or bamboo with polyethene), rudimentary walls (bamboo, stone with mud), or no wall; for roof: natural roofing (thatch, palm leaf, nipa palm, sod), rudimentary roofing (rustic mat, palm, bamboo), or no roof.

5 This implies not using any electric/gas stove or using a liquid/solid fuel stove (with either gasoline/diesel, kerosene/paraffin, and coal/lignite), or using a traditional stove but with fan or chimney.

6 After a series of consultation with stakeholders, five years of schooling was considered a significant milestone in terms of education attainment. It represents completion of primary education as per the Bangladesh educational system. Additionally, the 1990 Primary Education Compulsory Act made primary education compulsory for all children up to grade five. This threshold was also found to be policy-relevant as it aligns with targets set in international agreements, such as the Sustainable Development Goals (SDGs), which aim for universal primary education and higher levels of educational attainment.

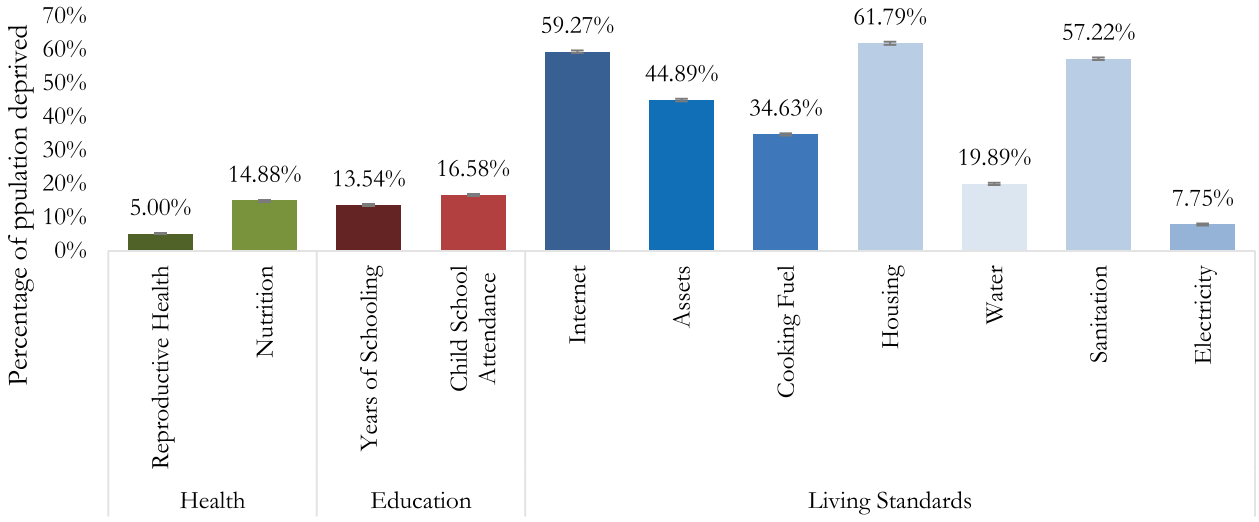
CHAPTER 3:
RESULTS OF THE NATIONAL MPI

This section provides a detailed analysis of the first National MPI results for Bangladesh. First, deprivations experienced by all people – the uncensored headcount ratios – are presented. Next, the National MPI, incidence (H), and intensity among the poor (A), along with the composition of poverty by indicator, are analysed. Finally, disaggregated results by household are presented in the last section of this chapter.

3.1 National Uncensored Headcount Ratio

The uncensored headcount ratio of an indicator represents the proportion of people who are deprived in a particular indicator, irrespective of their poverty status. **Figure 3.1** presents these rates for 2019. The highest deprivations are found for housing condition (with 61.79% of the population deprived in either floor, walls, or roof), internet access (59.27%), sanitation (57.22%) and assets (44.89%). Some indicators show significantly lower rates of deprivation. The uncensored headcount ratios are the lowest for reproductive health (5%) and electricity (7.75%).

Figure 3.1: National Uncensored Headcount Ratios (percentage of population)



Source: Calculation based on MICS 2019.

3.2 National MPI Key Results

Table 3.1 shows the National MPI for 2019, as well as its partial indices: the incidence of poverty (or poverty rate: the percentage of people identified as multidimensionally poor, H) and the intensity of poverty (or the average proportion of weighted indicators in which the poor are deprived, A). The incidence of multidimensional poverty is 24.05%, so nearly one-fourth of people in Bangladesh are multidimensionally poor.[7]

The average intensity of poverty is 44.17%, implying that each poor person is, on average, deprived in nearly

7 Since this estimate is based on a sample, it has a margin of sampling error. The 95% confidence interval is also presented in the table. In words, we can say with 95% confidence that the true multidimensional poverty headcount ratio is between 24.34% and 24.7% of the population.

half of the weighted indicators. This is the equivalent of one full dimension (33.33%) plus any one deprivation in the health or education dimensions, or three deprivations from the dimension of living standards.

The National MPI, which is the product of H and A, is 0.106. This means that multidimensionally poor people in Bangladesh experience 10.6% of the total deprivations that would be experienced if all people were multidimensionally poor and deprived in all indicators.

Table 3.1: Incidence, Intensity, and National Multidimensional Poverty Index (MPI)

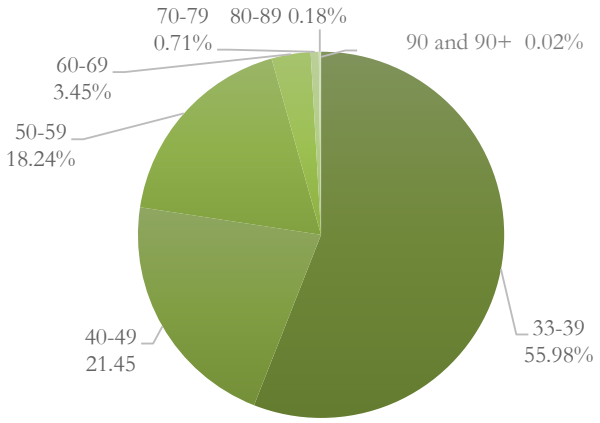
Poverty cut-off (k)	Index	National		
		Value	Confidence Interval (95%)	
	MPI	0.106	0.103	0.109
33.33%	Headcount ratio (H, %)	24.05%	23.43%	24.67%
	Intensity (A, %)	44.17%	43.93%	44.41%

Source: Calculation based on MICS 2019.

The national MPI can be supplemented by a simple breakdown of the poverty intensity. **Figure 3.2** depicts the distribution of the intensity of poverty among the poor by reporting subsets of poor people within different bands of deprivation scores. Over half (55.98 %) of all poor people in Bangladesh are in the lowest intensity band, with deprivation scores between 33.33% and 39.99% of all weighted indicators (that is, a person could be deprived in one full dimension plus one additional deprivation from the health or education dimensions or two deprivations from the living standards dimensions).

Around 21.45% of all poor people experience deprivation scores between 40.0% and 49.99%. This means that a large share of the population is deprived of less than half of the weighted indicators. But while it will be easier for these poor persons to move out of poverty (so one might expect to see an ongoing fast pace of poverty reduction), it is more difficult for those deprived in 50% or more of the indicators (severe multidimensional poverty). In Bangladesh, less than one quarter of all poor people face at least half of all possible deprivations at the same time. Careful analyses and targeted policies using the National MPI are needed to help ensure that these poorest of the poor are not left behind.

Figure 3.2: Intensity Gradient among the Poor (share of the poor sum to 100%)



Source: Calculation based on MICS 2019.

3.3 Multidimensional Poverty in Rural and Urban Areas

The divide between rural and urban areas is a common phenomenon. Thus, in Table 3.2, the MPI, incidence, and intensity of poverty are shown for both urban and rural areas. The rural poverty headcount ratio is much higher than for urban areas – 26.96% versus 13.48%, respectively. It is worth noticing that in 2019, around 71.02%8 of Bangladesh's population of roughly 117 million live in rural areas.

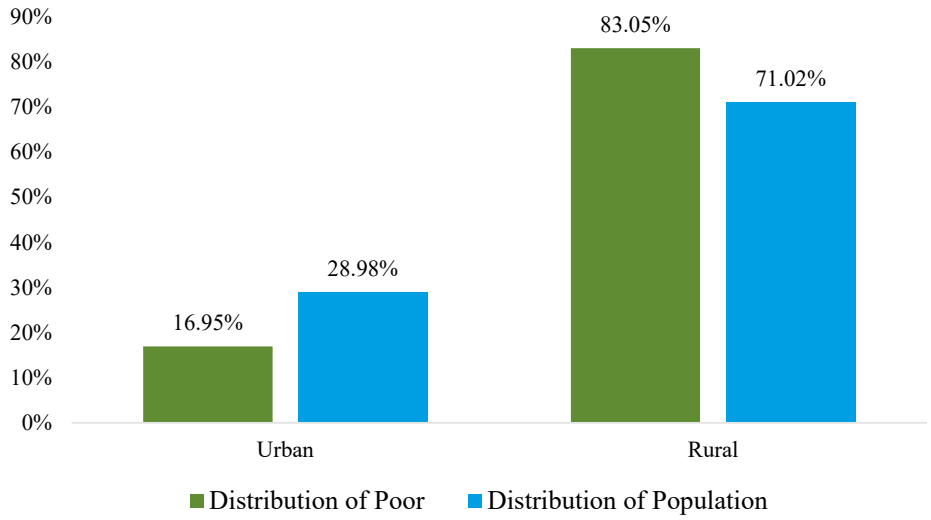
Figure 3.3 compares the distribution of the poor and the general population across urban and rural areas. Given the percentage of the population residing in rural areas in 2019, it would only be natural that rural areas have a higher number of multidimensionally poor people. Indeed, 83.05% of multidimensionally poor people live in rural areas. Only about 16.95% of the country's multidimensionally poor people reside in urban areas. Thus, rural areas are more affected by multidimensional poverty.

Table 3.2: National MPI by Rural and Urban Areas

Index	Urban				Rural			
	Population Share (%)	Value	Confidence Interval (95%)		Population Share (%)	Value	Confidence Interval (95%)	
MPI		0.059	0.054	0.064		0.119	0.116	0.123
Headcount ratio (H, %)	28.98%	13.48%	12.32%	14.65%	71.02%	27.0%	26.24%	27.69%
Intensity (A, %)		42.98%	42.98%	44.24%		44.25%	43.99%	44.50%

Source: Calculation based on MICS 2019.

Figure 3.3: Distribution of Poor and Population by Rural and Urban Areas



Source: Calculation based on MICS 2019.

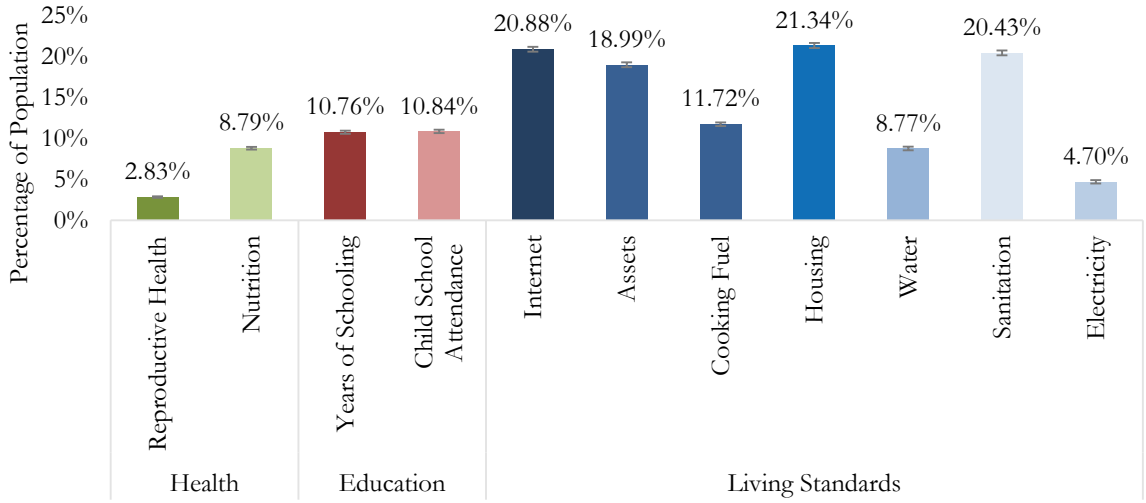
3.4 The Composition of the National MPI by Indicator

It is useful to break the MPI down by indicator to examine its composition and to adopt the appropriate policy measures. The censored headcount ratio of an indicator represents the proportion of the population that is

8 Population figures for urban and rural areas, as reported by the Bangladesh Bureau of Statistics, are 47,924 (in thousands) for urban and 117,447 (in thousands) for rural areas.

multidimensionally poor and also deprived in that indicator. The National MPI can also be computed as the sum of the weighted censored headcount ratios. This is what makes it such a powerful tool for policy: reducing any deprivation of any poor person reduces poverty. Figure 3.4 shows that three censored headcount ratios are above 20%: sanitation, housing condition, internet access and assets. Censored headcount ratios for other indicators are somewhat lower than, as low as 2.83% for reproductive health and 4.70% for electricity.

Figure 3.4: National Censored Headcount Ratios (% of population poor and deprived)



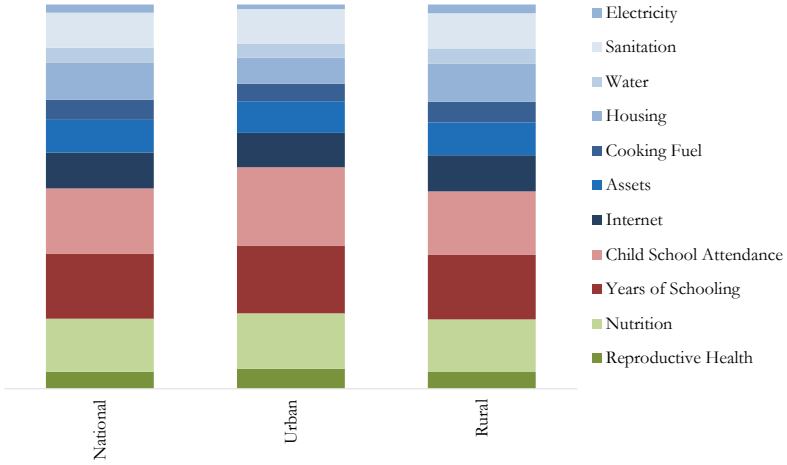
Source: Calculation based on MICS 2019.

For a more in-depth view of multidimensional poverty, it is useful to see the percentage contribution of each of the 11 indicators to overall multidimensional poverty in both rural and urban areas of Bangladesh. The MPI, as stated above, is the weighted sum of censored headcount ratios. Dividing this by the MPI provides the percentage contribution of each indicator to the MPI, so that subnational groups can be easily compared.

In Figure 3.5, the weighted percentage contribution of each indicator shows the composition of multidimensional poverty in rural and urban areas. Percentage contributions reflect both the weights and the censored headcount ratios. Recall that the weights for the health and education indicators are 3.5 times higher than those for the living standards indicators (1/6 vs 1/21) because there are only two indicators for these dimensions, whereas there are seven indicators for the living standards dimension. The contribution of each deprivation then reflects both its relative weight and its prevalence.

Indicators in the dimension of education account for the largest contribution to multidimensional poverty at the national level and also in rural and urban areas. Indeed, deprivations in school attendance alone contribute, by far, the most to overall poverty (national, rural, and urban) while years of schooling is second. This reveals a need to sharply prioritize education because in many households at least one child aged 6 to 17 is not attending school. Further, many households are MPI poor and do not have any member who has completed five years of education. The third highest contributor to overall poverty is nutritional deprivation because so many households contain at least one child under the age of 5 who is undernourished. In terms of dimensions, the seven indicators comprising living standards together contribute the most to multidimensional poverty at the national level and in rural areas, and education accounts for the largest contribution in urban areas.

Figure 3.5: Percentage Contribution of Each Indicator to National, Rural, and Urban MPI



Source: Calculation based on MICS 2019.

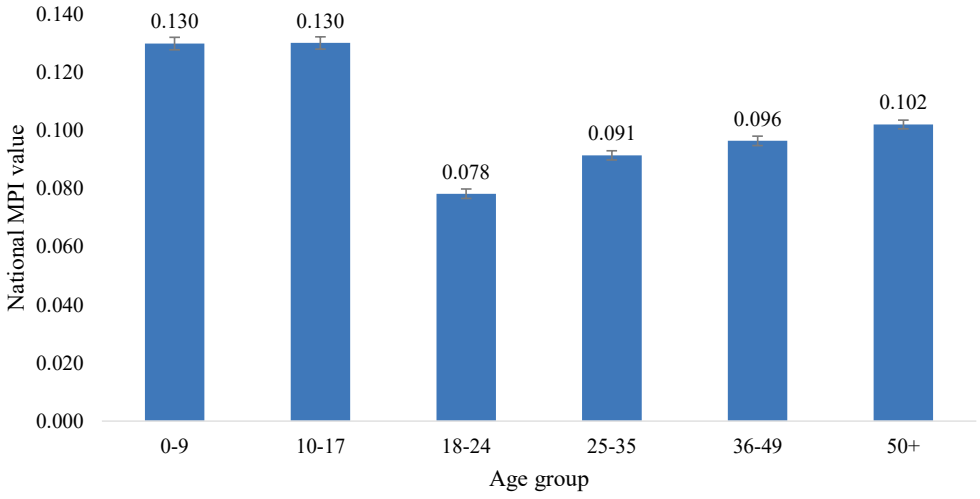
3.5 National MPI by Age Group and Gender of the Household Head

Since the Alkire-Foster method allows for subgroup decomposability and dimensional breakdown, it is possible to explore the level and indicator composition of the MPI not only for the nation and urban/rural areas, but also by social groups. In this section, we examine how multidimensional poverty varies by age groups and gender of the household head.

Multidimensional Poverty by Age Group

As **Figure 3.6** shows, children aged 0 to 9 years and 10 to 17 have the highest levels of multidimensional poverty: 0.130. 19% of the population of Bangladesh – nearly one in five people – is under 10 years old, and 16.55% of the population are aged 10 to 17 year[9]. There is a sharp drop in the MPI for young adults (18 to 24 years, 12.82% of the population), who collectively have an MPI of 0.078; whereas, the MPI is between 0.091 and 0.102 for the three oldest age groups (25 to 35 years, 36 to 49 years, and 50+ years). MPIs for the two oldest subgroups are not statistically different from one another.

Figure 3.6: National MPI by Age Group



Source: Calculation based on MICS 2019.

9 Population shares for the age groups have been sourced from MICS 2019 (0-9 is 19%, 10-17 is 16.55%, 18-24 is 12.82%, 25-35 is 17.09%, 36-49 is 16.07% and 50+ is 18.47%)

Multidimensional Poverty by Gender of the Household Head

Disaggregating the MPI by gender of the household head (Table 3.3) reveals that the MPI is not significantly different between male-headed and female-headed households. The differences are also not significant for MPI, H and A. Thus, the likelihood of being MPI poor, the incidence of poverty, and the intensity of multidimensional poverty are similar across male and female-headed households.

Table 3.3: National MPI by Gender of the Household Head

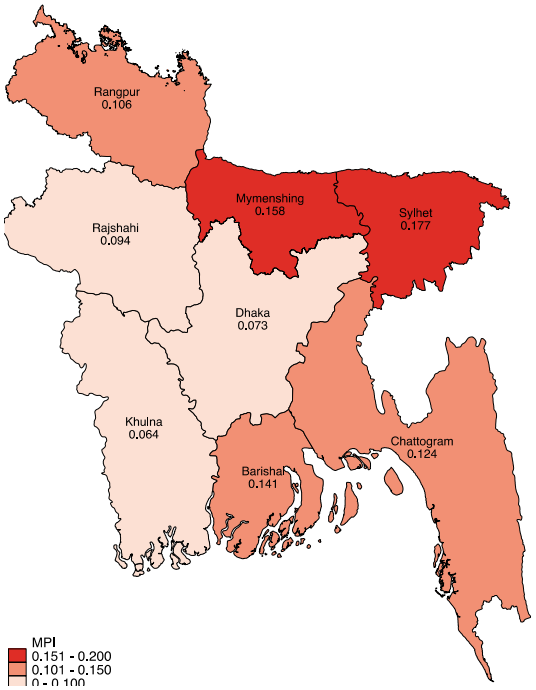
Gender of hh head	Population %	MPI			Headcount (H %)			Intensity (A %)		
		Value	Confidence interval (95%)		Value	Confidence interval (95%)		Value	Confidence interval (95%)	
Male head	90.7	0.106	0.103	0.109	24.06%	23.43%	24.70%	44.2%	43.94%	44.44%
Female head	9.3	0.105	0.099	0.112	23.94%	22.60%	25.28%	43.98%	43.41%	44.54%

Source: Calculation based on MICS 2019.

3.6 Multidimensional Poverty by Division

This section compares the results of the National MPI across the newly structured eight divisions in Bangladesh. As **Map 3.1** highlights, multidimensional poverty varies substantially across the divisions, from 15.22% to 37.70% of people being multidimensionally poor in each division. The division with the lowest MPI (0.064), Khulna, is in the southwestern part of the country, whereas the division with the highest MPI (0.177) is Sylhet in the northeast. The division of Dhaka appears in the middle of these two divisions, both in terms of location as well as MPI value (0.073).

Map 3.1: National MPI by Division



Source: Calculation based on MICS 2019.

Table 3.4 shows the divisional estimates for the MPI, incidence (H), and intensity (A) of poverty. Sylhet (0.177), Mymensingh (0.158), and Barishal (0.141) have the highest MPIs. Mymensingh and Barishal have the highest incidence of poverty (H) after Sylhet (37.70%), with 34.95% and 31.57% respectively. On the other end of the spectrum, Dhaka, the most populous division, has one of the lowest MPIs (0.073), but Khulna has the lowest MPI value amongst divisions. 15.22% are multidimensionally poor in Khulna, and in Dhaka, 16.95% are MPI poor. In the three middle divisions – Rajshahi, Rangpur, and Chattogram, 22.26% to 27.24% of people are multidimensionally poor.

Table 3.4: Multidimensional Poverty Index (MPI) by Division

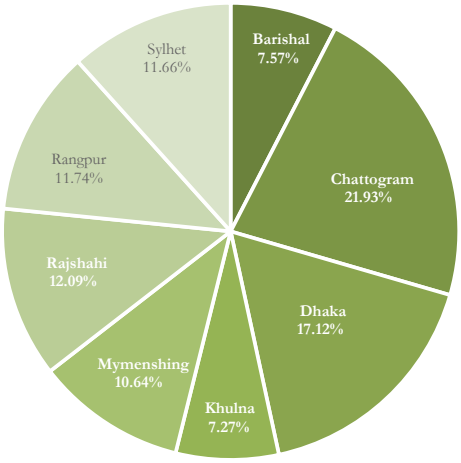
Sub-National Region	Population Share (%)	MPI			Headcount ratio (H, %)			Intensity (A, %)			Number of poor[10]
		Value	*Confidence Interval (95%)*		Value	*Confidence Interval (95%)*		Value	*Confidence Interval (95%)*		(thousands)
National	100.00	**0.106**	*0.103*	*0.109*	**24.1%**	*23.4%*	*24.7%*	**44.2%**	*43.9%*	*44.4%*	39776.75
Barishal	5.49	**0.141**	*0.131*	*0.152*	**31.57%**	*29.4%*	*33.8%*	**44.70%**	*44.0%*	*45.4%*	2866.87
Chattogram	20.13	**0.124**	*0.115*	*0.133*	**27.24%**	*25.4%*	*29.1%*	**45.37%**	*44.7%*	*46.0%*	9065.74
Dhaka	26.88	**0.073**	*0.069*	*0.078*	**16.95%**	*16.0%*	*18.0%*	**43.26%**	*42.8%*	*43.8%*	7533.60
Khulna	10.49	**0.064**	*0.060*	*0.069*	**15.22%**	*14.3%*	*16.2%*	**42.06%**	*41.5%*	*42.6%*	2640.06
Mymensingh	7.44	**0.158**	*0.146*	*0.172*	**34.95%**	*32.3%*	*37.7%*	**45.28%**	*44.6%*	*46.0%*	4300.95
Rajshahi	12.24	**0.094**	*0.088*	*0.102*	**22.26%**	*20.8%*	*23.8%*	**42.43%**	*41.9%*	*43.0%*	4507.20
Rangpur	10.61	**0.106**	*0.100*	*0.113*	**25.04%**	*23.6%*	*26.6%*	**42.32%**	*41.9%*	*42.8%*	4393.77
Sylhet	6.72	**0.177**	*0.162*	*0.193*	**37.70%**	*34.7%*	*40.8%*	**46.86%**	*46.1%*	*47.6%*	4190.36

Source: Calculation based on MICS 2019 with population shares from BBS.

In absolute terms, the divisions of Chattogram and Dhaka account for the highest number of poor people, nearly 9 million and 7.53 million, respectively. In contrast, both Barishal and Khulna account for less than half of this, with around 2.86 million and 2.64 million poor people, respectively (**Table 3.4**).

Figure 3.7 depicts how many multidimensionally poor people live in each of the eight divisions. This is important because some of the divisions with lower levels of poverty nonetheless house many more poor people than the poorest divisions. Chattogram and Dhaka house the largest share of multidimensionally poor, followed by Rajshahi, Rangpur, Sylhet and then Mymensingh. Barishal and Khulna have the smallest number of poor people.

Figure 3.7: Share of MPI poor people by Division

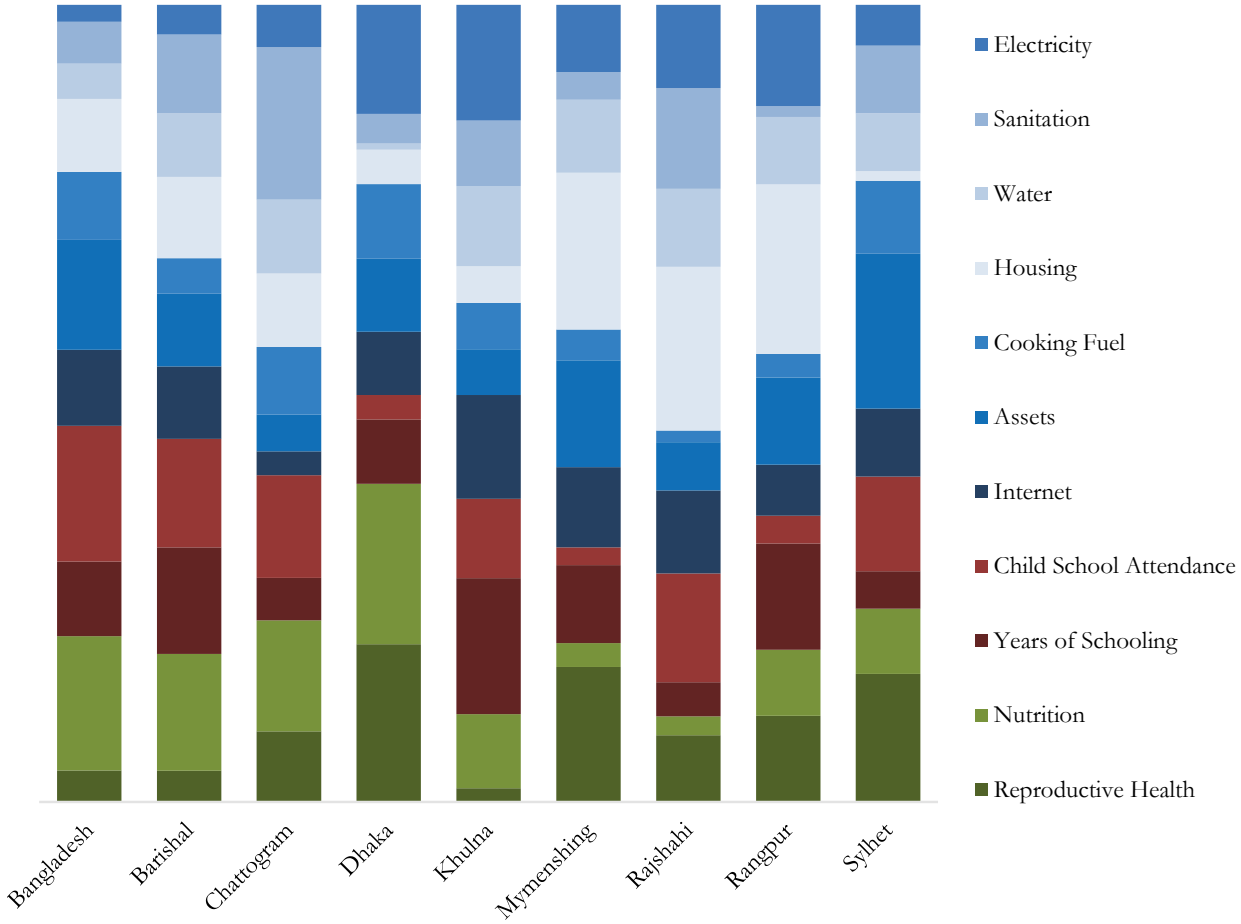


Source: Calculation based on MICS 2019, with population shares from BBS.

10 The population figures for the divisions were shared by BBS.

Figure 3.8 shows the weighted contribution of each indicator to the MPI of each division. The composition of multidimensional poverty across divisions varies; for instance, in Dhaka, the highest contribution is nutrition, while in Sylhet, assets contribute most to the MPI. Likewise, in Mymensingh, the housing indicator is the highest contributor, followed by reproductive health. The relative importance of each dimension follows a similar pattern across divisions. The dimension of living standards tends to contribute the most in all divisions. The dimension of health has the lowest contribution to the MPI in Barishal, Khulna and Rajshahi. In Barishal and Khulna, this is mainly due to low levels of deprivation in reproductive health. In Dhaka, Mymensingh, Chattogram, Rangpur and Sylhet the dimension of education have the lowest contribution to the MPI.

Figure 3.8: Percentage Contributions of Each Indicator to National MPI by Division



Source: Calculation based on MICS 2019 with population shares from BBS. Ranked by MPI.

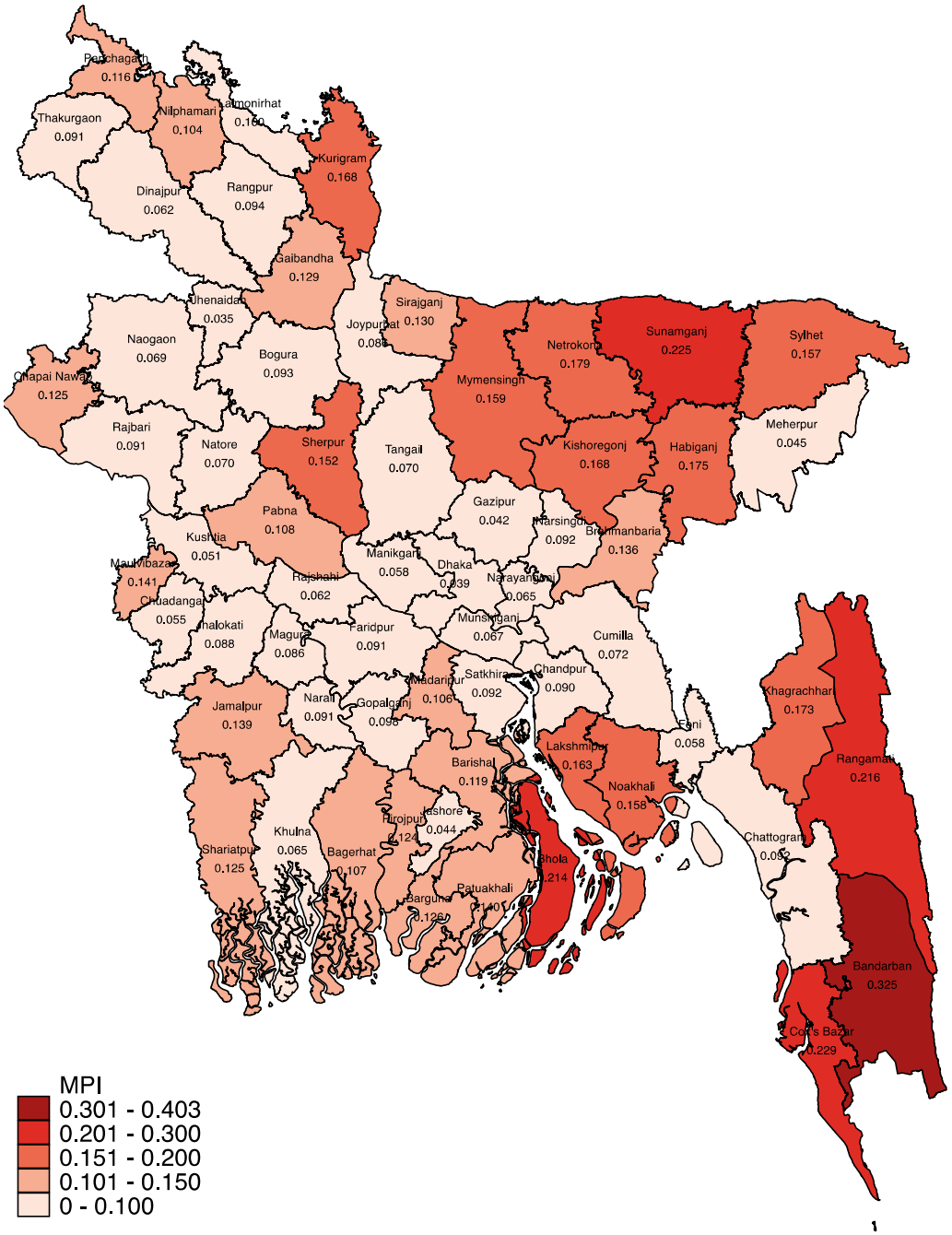
3.7 Multidimensional Poverty by District

The MPI is also disaggregated according to the 64 districts in Bangladesh. Here, the range of poverty is greater. The lowest levels of poverty are in Jhenaidah and Dhaka, where 8.66% and 9.19% of people are multidimensional poor, followed by Gazipur (9.63%), Jashore (10.58%), Meherpur (11.08%), Kushtia (12.22%), and Chuadanga (13.51%). The highest poverty is found in Bandarban, where 65.36% are multidimensionally poor. This is followed by Cox's Bazar, where 47.70% experience multidimensional poverty, closely followed by Sunamganj at 47.36%. Next in line is Rangamati district, where 45.89% of the population faces multidimensional poverty.

The MPI for Bandarban stands at 0.325, followed by Cox's Bazar at 0.229, Sunamganj at 0.225, and Rangamati at 0.216.

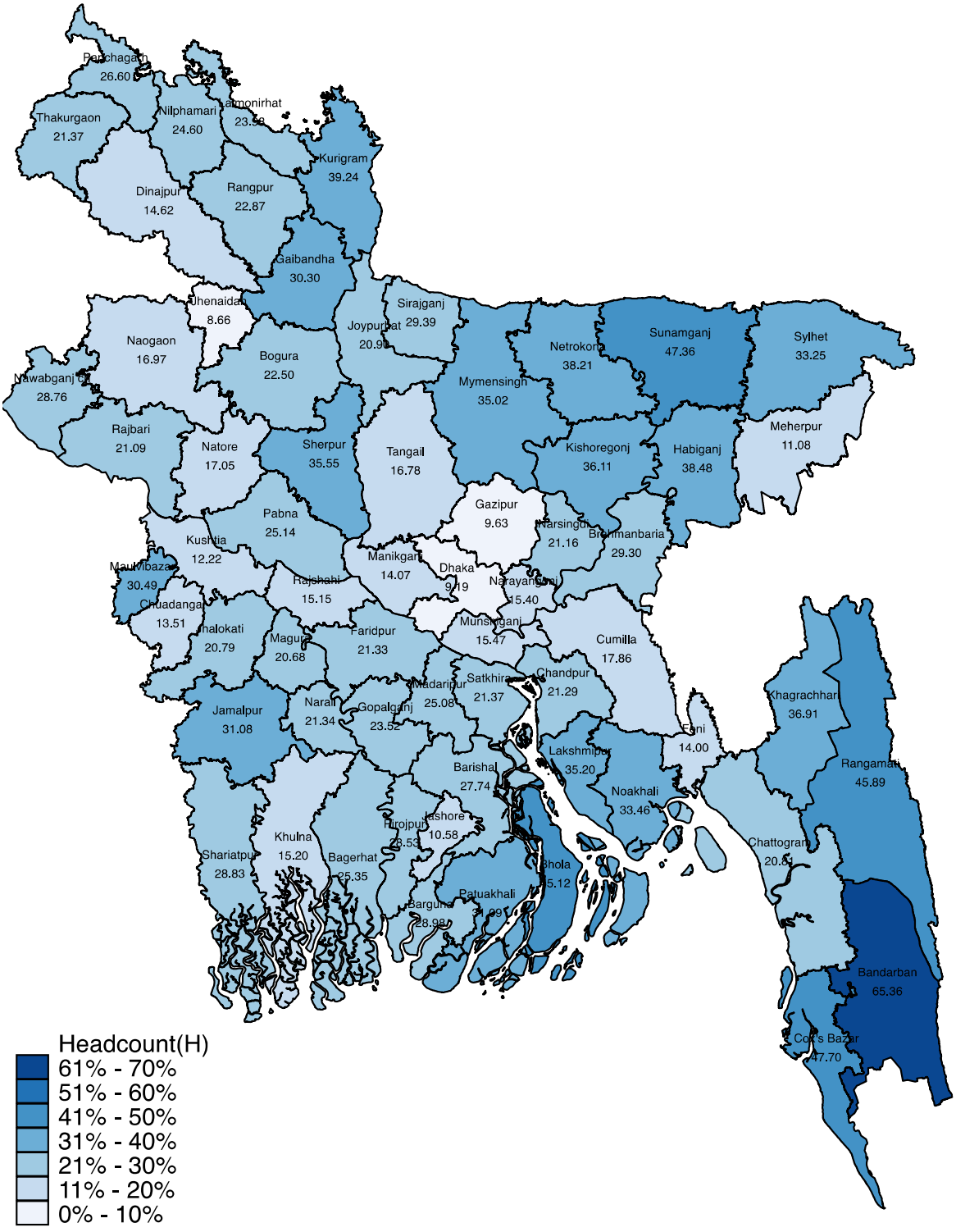
Map 3.2 and Map 3.3 show the variation across districts in terms of MPI and H, respectively, and Appendix E lists the MPI, H, and A for all districts. A great deal more analysis can be done using district data than this space permits.

Map 3.2: National MPI by District



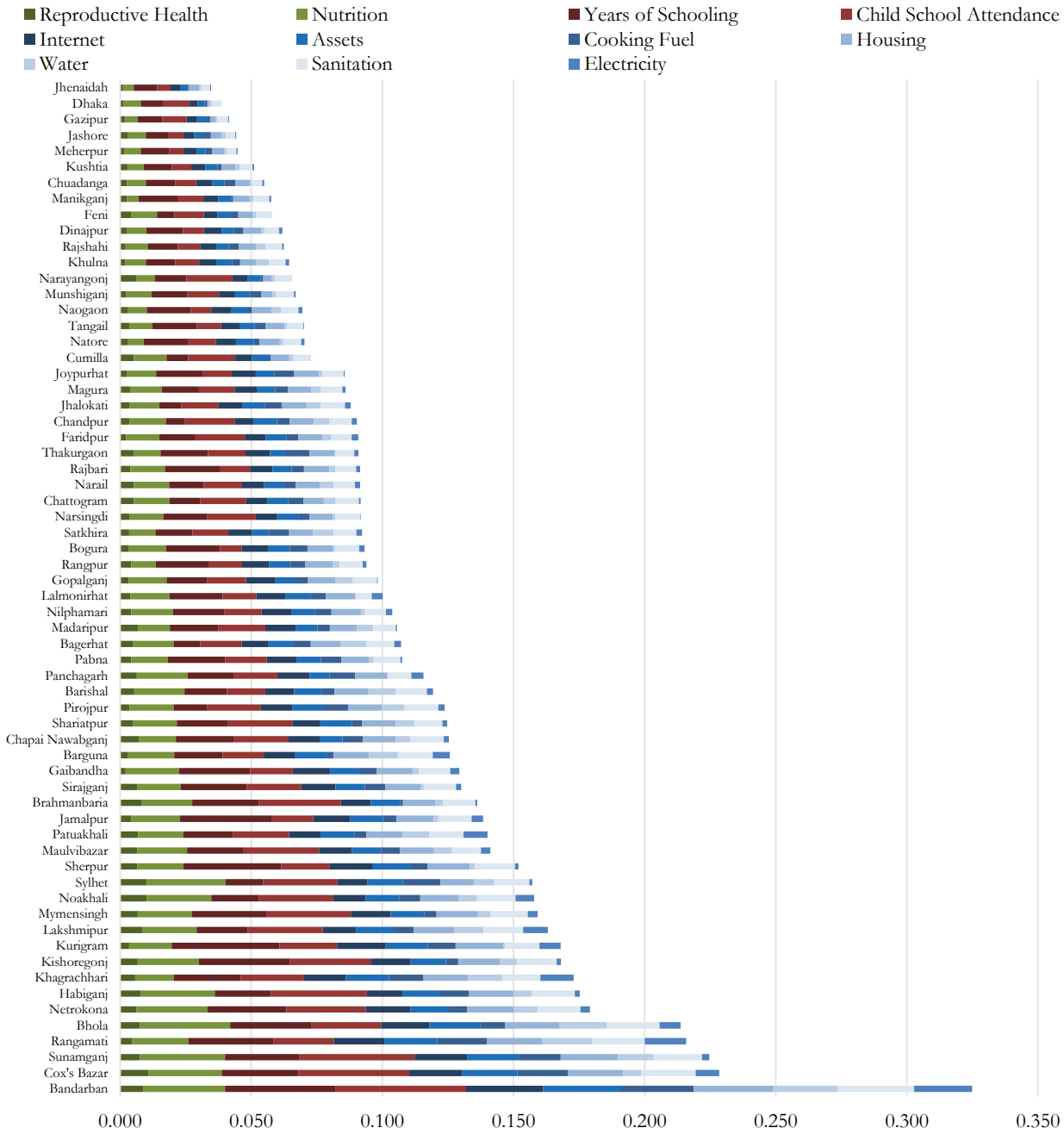
Source: Calculation based on MICS 2019.

Map 3.3: Incidence of Multidimensional Poverty by District



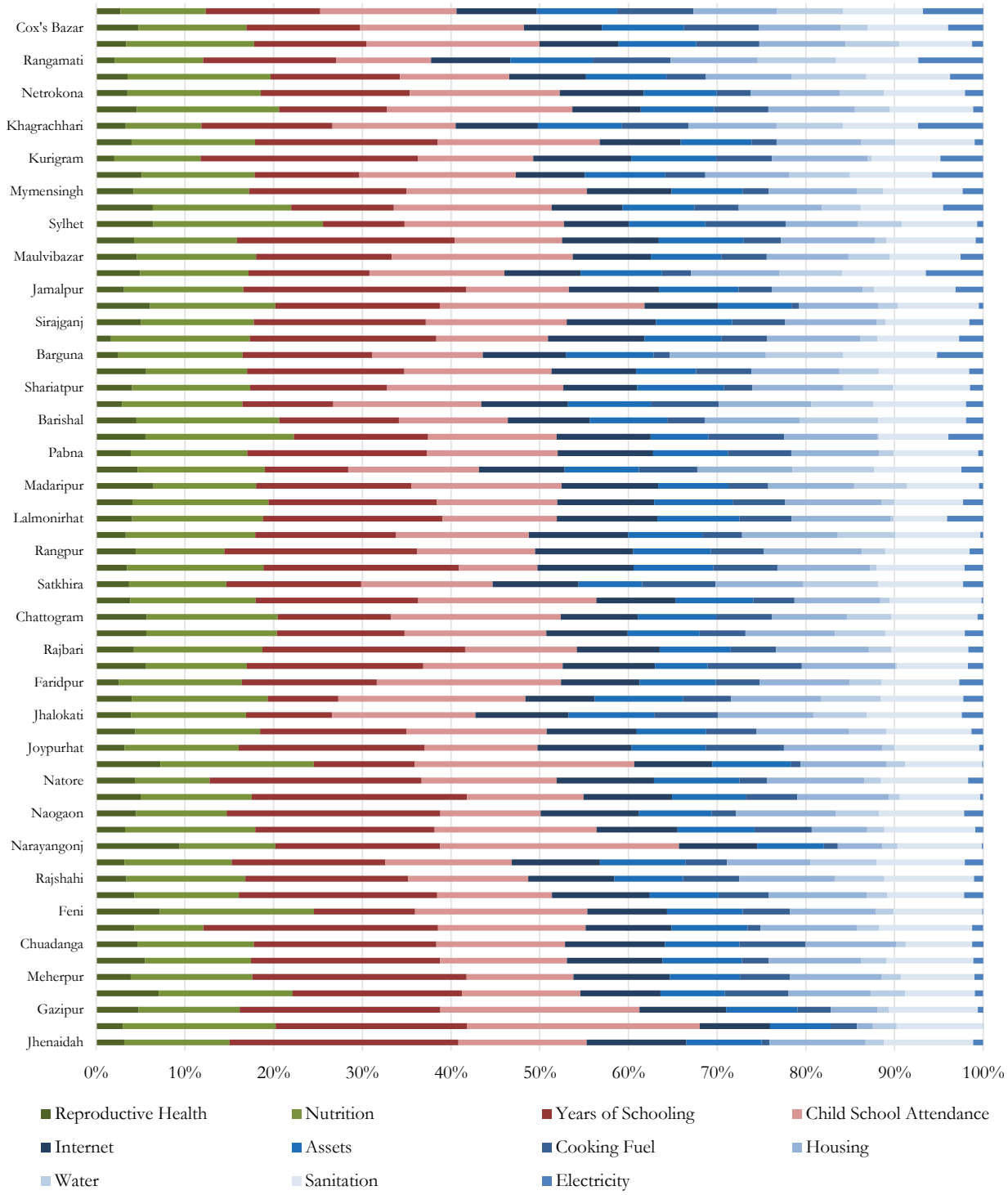
Figures 3.9 and 3.10 present the absolute and percentage contributions of each of the indicators to the MPI in each of the 64 districts. Notably, we observe variations in these contributions from one district to another.

Figure 3.9: Absolute contribution of each indicator to MPI by district (ordered by least MPI-poor to poorest)



Source: Calculation based on MICS 2019. Ranked by MPI.

Figure 3.10: Percentage contribution of each indicator to MPI by district (ordered by poorest to least MPI-poor)



Source: Calculation based on MICS 2019. Ranked by MPI.

3.8 Distribution of the poor by district: Monetary and Multidimensional Poverty

When disaggregations of the incidence of multidimensional poverty by districts are considered and compared with monetary poverty (HIES, 2016), the results show important disparities. Monetary and multidimensional poverty are compared over an illustrative set of 20 districts, out of 64 in total, for the 10 districts with the highest (**Table 3.5**) and the lowest levels of poverty (**Table 3.6**) according to each measure. Bandarban, Kishoregonj, Khagrachhari and Kurigram are the only districts which rate among the poorest 10 by both monetary and multidimensional measures – singling these out as priority districts for poverty action. On the other hand, the differences suggest that to optimize impact, a different set of policies should be implemented in each context. Also, the so-called East-West divide, a phenomenon that explains the regional disparity between the eastern side (Dhaka, Chattogram, and Sylhet) where regions are integrated with and connected to the growth poles – centres of economic activity consisting mainly of metropolitan cities – and the Western side that covers the regions (Khulna, Rajshahi, Barishal) does not hold true for the MPI.

In some cases, an integrated provision of public services to tackle multiple deprivations may prove most effective in reducing the deprivations that make up the MPI. See **Figure 3.11** and Figure **3.12** for the 10 poorest and least poor districts in Bangladesh. The MPI's associated information on interlinked deprivations provides a more detailed guide to budget allocations across sectors and policy design within districts. For instance, some policy priorities are cross-cutting. Education policies seem necessary across districts, given the relatively high contribution of these indicators, both years of schooling and school attendance, to overall poverty on average. Similarly, there appears to be a cross-cutting need for further policies to improve sanitation facilities, such as enhancing access to piped sewer systems and septic tanks, or providing latrines with access to public water. But the priority of other deprivations varies by district. In many areas, improvements in housing indicators (materials for roofs, floors, and walls) will reduce multidimensional poverty. However, as cited before, deprivations vary by district. For instance, the housing problem is bigger in Bandarban than in Cox's Bazar (Appendix F).

Table 3.5: Ten Districts Ranked According to the Highest MPI and Multidimensional Headcount Ratio and HIES (2016) Monetary Poverty

	HIES (2016) Poverty rates*				National MPI					
	Incidence of monetary poverty (%)	*95% CI*		District	MPI	*95% CI*		Incidence (%)	*95% CI*	
Kurigram	**70.80**	*64.20*	*77.40*	Bandarban	**0.325**	*0.258*	*0.400*	**65.36%**	*51.76%*	*76.83%*
Dinajpur	**64.30**	*57.90*	*70.70*	Cox's Bazar	**0.229**	*0.197*	*0.263*	**47.70%**	*41.40%*	*54.09%*
Bandarban	**63.20**	*48.10*	*78.30*	Sunamganj	**0.225**	*0.192*	*0.261*	**47.36%**	*40.98%*	*53.84%*
Magura	**56.70**	*47.40*	*66.00*	Rangamati	**0.216**	*0.176*	*0.263*	**45.89%**	*37.44%*	*54.60%*
Kishoregonj	**53.50**	*45.10*	*62.00*	Bhola	**0.214**	*0.184*	*0.247*	**45.12%**	*38.75%*	*51.65%*
Khagrachhari	**52.70**	*37.80*	*67.50*	Netrokona	**0.179**	*0.154*	*0.208*	**38.21%**	*33.03%*	*43.68%*
Jamalpur	**52.50**	*46.10*	*59.00*	Habiganj	**0.175**	*0.149*	*0.205*	**38.48%**	*33.03%*	*44.24%*
Gaibandha	**46.70**	*39.80*	*53.50*	Khagrachhari	**0.173**	*0.139*	*0.214*	**36.91%**	*29.66%*	*44.80%*
Rangpur	**43.80**	*36.70*	*50.80*	Kishoregonj	**0.168**	*0.145*	*0.194*	**36.11%**	*31.44%*	*41.04%*
Lalmonirhat	**42.00**	*33.20*	*50.80*	Kurigram	**0.168**	*0.144*	*0.195*	**39.24%**	*33.89%*	*44.86%*

Notes: MPI=Multidimensional Poverty Index; CI=Confidence Interval. *Headcount ratio using upper poverty lines from HIES 2016. Districts ranked by H according to HIES and by H according to national MPI in descending order.

Source: Calculations based on MICS 2019 with population shares from BBS.

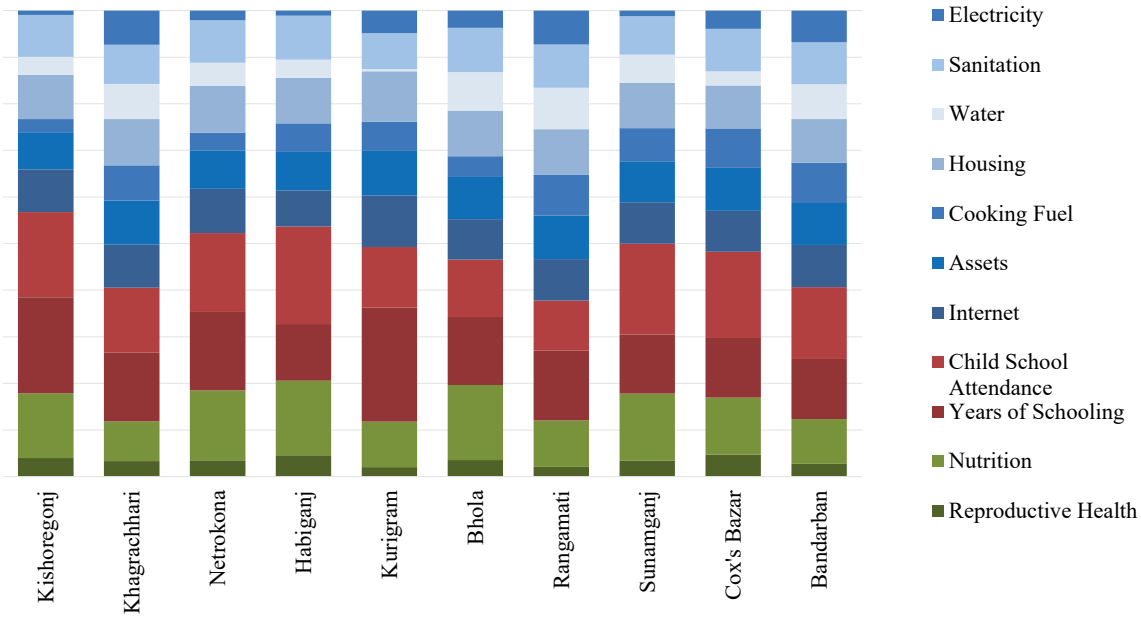
Table 3.6: Ten Least Poor Districts According to Monetary Headcount Ratios (HIES)

District	HIES Poverty rates*			District	National MPI					
	Incidence monetary poverty (%)	95% CI			MPI	95% CI		Incidence (%)	95% CI	
Narayanganj	**2.60**	*0.60*	*4.50*	Jhenaidah	**0.035**	*0.0268*	*0.045*	**8.66%**	*6.73%*	*11.10%*
Munshiganj	**3.10**	*1.10*	*5.00*	Dhaka	**0.039**	*0.0312*	*0.0481*	**9.19%**	*7.36%*	*11.40%*
Madaripur	**3.70**	*1.60*	*5.70*	Gazipur	**0.042**	*0.0309*	*0.0555*	**9.63%**	*7.25%*	*12.69%*
Gazipur	**6.90**	*4.20*	*9.70*	Jashore	**0.045**	*0.0369*	*0.0535*	**10.58%**	*8.76%*	*12.73%*
Faridpur	**7.70**	*3.80*	*11.70*	Meherpur	**0.045**	*0.0372*	*0.0541*	**11.08%**	*9.19%*	*13.31%*
Feni	**8.10**	*4.60*	*11.60*	Kushtia	**0.051**	*0.041*	*0.0635*	**12.22%**	*9.86%*	*15.05%*
Dhaka	**10.00**	*2.80*	*17.20*	Chuadanga	**0.055**	*0.0463*	*0.0649*	**13.51%**	*11.39%*	*15.96%*
Brahmanbaria	**10.30**	*5.00*	*15.60*	Manikganj	**0.058**	*0.0435*	*0.0759*	**14.07%**	*10.79%*	*18.14%*
Narsingdi	**10.50**	*5.10*	*15.80*	Feni	**0.058**	*0.0465*	*0.0714*	**14.00%**	*11.23%*	*17.32%*
Maulvibazar	**11.00**	*6.10*	*15.90*	Dinajpur	**0.062**	*0.0496*	*0.0775*	**14.62%**	*11.77%*	*18.02%*

Notes: MPI=Multidimensional Poverty Index; CI=Confidence Interval. Districts ranked by H according to HIES and by H according to national MPI in descending order. *Headcount ratios using upper poverty lines from HIES 2016.

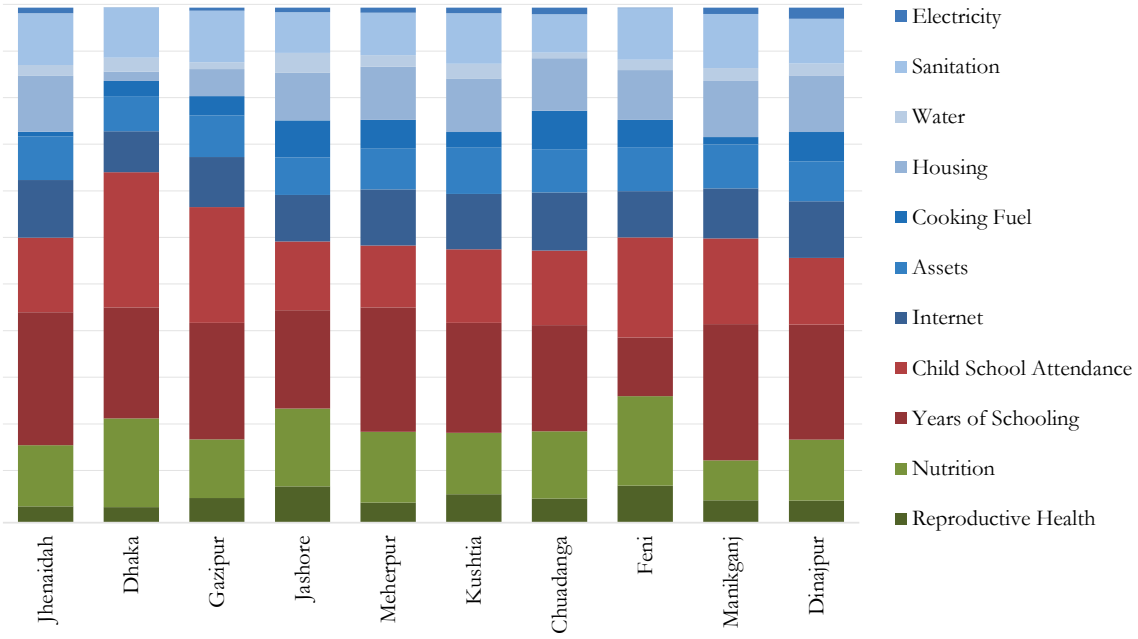
Source: Calculation based on MICS 2019

Figure 3.11: Percentage Contribution of Each Indicator to National MPI in Poorest Districts Ranked by H



Source: Calculation based on MICS 2019.

Figure 3.12: Percentage Contribution of Each Indicator to National MPI in the Least Poor Districts Ranked by H



Source: Calculation based on MICS 2019.

3.9 Conclusion

The National MPI

This chapter has presented the first National MPI for Bangladesh as an official statistic of multidimensional poverty, complementing existing monetary poverty measures. Motivated by National Development Priorities and the SDGs and especially Goal 1 and Target 1.2, Bangladesh, as led by the General Economics Division (GED), Bangladesh Planning Commission, and BBS, has started its journey in measuring and fighting multidimensional poverty.

The National MPI is tailored to the country context. It builds on the global MPI and follows many SDG guidelines, and improves these with country-specific priorities. Thus, it is a new and rigorous measure suited to informing the country's planning documents.

Results show that 24.05% of people in Bangladesh are multidimensionally poor and that the National MPI is 0.106. Each of the poor persons is deprived of at least one-third of the dimensions and in two or more of the 11 indicators included in the National MPI. On average, poor persons are deprived of under half of the weighted indicators –their intensity of poverty is 44.17%.

Disaggregation of the MPI provides policy relevant results for different subgroups. For example, one value added of the national MPI is its ability to reveal which groups are the poorest. A comparison of rural versus urban areas shows higher poverty in rural areas, but worrying educational deprivation in urban areas. Across the divisions and districts, poverty levels vary. Khulna (15.22%) and Dhaka (16.95%) are the least poor divisions, and Sylhet is the poorest division with over one-third (37.70%) of its population in poverty. Bandarban is the poorest district, with two-thirds (65.36%) of its population living in poverty; Jhenaidah is the least poor, with a

poverty rate of 8.66%. While there are no significant differences between male and female-headed households, across age cohorts, children are the poorest.

Another insight offered by MPI is its capacity to provide information on the number of poor persons in different areas and the specific deprivations they experience. For example, although the division of Dhaka has a low poverty rate, 17.12% of all poor people live in Dhaka, and another 21.93% live in Chattogram, whose poverty rate ranks in the middle. This is due to the large population sizes of these two divisions relative to the country's total population. Going beyond this, the MPI can tell exactly how many people are MPI poor and deprived in each indicator within each division or district. This information is useful for budget allocation. Going beyond just a headline level of poverty, the MPI also shows the composition of poverty, thus providing vital information for integrated multisectoral policy responses.

Monetary poverty patterns differ from multidimensional poverty. The highest level of monetary poverty is found in Kurigram, but the highest level of multidimensional poverty is found in Bandarban, a remote district in the Southeast. Particularly, the three hill districts of Bandarban, Khagrachhari, and Rangamati are in the top 10 districts with the highest incidence of multidimensional poverty.

CHAPTER 4:
TRENDS OF HARMONISED NATIONAL MPI 2012-13 TO 2019

4.1 Introduction

This chapter presents the first trend analysis of the harmonized National Multidimensional Poverty Index (MPI) for Bangladesh, which is an official measure of poverty that complements the national monetary poverty measure. The trend analysis relies on two rounds of the Multiple Indicator Cluster Survey (MICS): 2012/13 and 2019. A detailed picture of how multidimensional poverty reduced over time across Bangladesh is provided at the national, division, and district levels as well as for several age groups and rural/urban areas. The trend analysis encompasses a rich information platform of intuitive and policy-relevant statistics, both at the national level and, when disaggregated, for subnational levels and socioeconomic subgroups.

While poverty has traditionally been measured by income, with the adoption of a national MPI, Bangladesh also tracks Target 1.2 of the Sustainable Development Goals (SDGs). The National MPI for Bangladesh has three dimensions: living standards, education and health. Each dimension consists of several indicators that were selected via various stakeholder consultations in the years prior to its launch. In this way, the National MPI captures several SDGs and government priorities.

For the purpose of the trend analysis, indicators of the National MPI are harmonized in such a way that they become comparable between the two datasets (MICS 2012/13 and MICS 2019). The harmonization has resulted in slight differences in the multidimensional poverty statistics for Bangladesh from those presented in the main report. The headcount ratio is similar, at 24.08% for 2019, but the MPI and intensity are visibly lower for reasons that are explained below. Please note that the statistics presented earlier are the official values of intensity and MPI for 2019; this report provides additional details on the trends of poverty between 2012/13 and 2019 across various geographical regions and demographic subgroups.

4.2 Harmonization of the National MPI

This chapter analyses in detail how Bangladesh achieved the success measured in 2019 compared to 2012/13. With data from MICS 2012/13 and MICS 2019, the national MPIs are recalculated. **Since the two datasets use somewhat different questionnaires, for an accurate comparison of trends over time, some indicator definitions needed to be adjusted, and one indicator (internet access) needed to be dropped.** This harmonization exercise thus yields a harmonized national MPI.

As shown in Table 1, the harmonized national MPI consists of ten indicators across three equally weighted dimensions of living standards, education, and health. Each dimension is assigned a weight of 1/3. With a poverty cut-off of $k = 1/3$, any person deprived of at least 1/3 of the weighted indicators is considered multidimensionally poor according to the harmonized national MPI. Within dimensions, indicators are equally weighted. Within MICS 2012/13, however, some indicators were either not included or asked differently. These are as follows.

One indicator from the original index needs to be dropped entirely for the trend analysis to be consistent across periods. This is internet access as it was not included in the MICS 2012/13 questionnaire. Excluding

this indicator yields a slightly different weighting scheme from the original MPI (as presented in **Table 4.1**). As internet access is dropped from living standards dimension, six of the original seven indicators remain, assigning each indicator a weight of 1/18 (instead of 1/21).

Aside from these changes, some indicator definitions needed to be changed to allow for strict harmonization and comparison over time. The last column of **Table 4.1** indicates the severity (major or minor) of the harmonization. A major harmonization in indicator definition is undertaken for 'cooking fuel'. In the MICS 2012/13 questionnaire, outdoor cooking is not further specified in the response code. The original indicator definition, based on MICS 2019, considered 'cooking on a veranda/terrace' as a deprivation for health reasons. Since this information was not collected in MICS 2012/13, this could no longer be considered. This has implications for the uncensored and censored headcount ratios for the cooking fuel indicator, which deviates from the findings presented in the original report. Minor adjustments were undertaken for the indicators of drinking water, and assets. In terms of drinking water, the MICS 2012/13 questionnaire did not include information on 'suicient water'. Therefore, this information cannot be included as a deprivation cut-off. For assets, washing machine was not included in MICS 2012/13 and needed to be excluded from the count of assets.

Table 4.1: Indicators of the harmonized national MPI

National MPI (k=1/3)			
Dimension	**Indicator**	**Weight**	**Deprivation cut-off**
Living standards	Electricity	1/18	Deprived if the household has no electricity.
	Sanitation	1/18	Deprived if the household has unimproved sanitation no services (shared toilet without piped sewer system, a septic tank, or improved latrine), including the lack of handwashing facilities, soap, and water.
	Drinking water	1/18	Deprived if the household does not have access to improved drinking water. Improved sources refer to piped or public tap, tube well, or protected sources (well or spring).
	Housing	1/18	Deprived if the household does not have improved floor/roof/walls.
	Cooking Fuel	1/18	Deprived if the household does not use clean fuel and technologies for cooking.
	Assets	1/18	Deprived if the household does not own more than two of the following assets: TV, mobile phone, cart, bicycle, motorcycle, major cattle, refrigerator, and computer.
Education	Child School Attendance	1/6	Deprived if there is at least one member of the household aged 6 to 17 years who is not attending school.
	Years of Schooling	1/6	Deprived if no household member aged 16 years or above no has completed five years of schooling.
Health	Nutrition	1/6	Deprived if any child (aged 0 to 4 years) of the household is stunted or underweight.
	Reproductive Health	1/6	Deprived if demands for family planning by any no currently married woman (aged 15 to 49 years) are not met by modern contraceptive methods.

4.3 Demographic changes in Bangladesh from 2012-13 to 2019

It is important to note the demographic changes that have taken place in Bangladesh from 2012/13 to 2019 to examine whether changes in poverty levels are influenced by these demographic changes.

From 2012/13 to 2019, the total population of Bangladesh increased by 7% from roughly 153 to 165 million. The change in population was not uniform across urban and rural areas (**Table 4.2**), nor across divisions or districts (Appendix G Table A.1). This results, for example, in increasing population shares for the divisions of Dhaka and Chattogram as well as urban areas and decreasing ones for the remaining six divisions and rural areas.

Table 4.2: Trends in demographics of the Bangladesh population

	Population Share		Total Population	
	2012/13	2019	2012/13	2019
National	100	100	**153,601**	**165,371**
Rural	73.08%	71.02%	112,259	117,447
Urban	26.92%	28.98%	41,343	47,924
Barishal	5.65%	5.49%	8,685	9,081
Chattogram	19.73%	20.13%	30,312	33,281
Dhaka	25.65%	26.88%	39,401	44,446
Khulna	10.78%	10.49%	16,553	17,346
Mymensingh	7.56%	7.44%	11,618	12,306
Rajshahi	12.76%	12.24%	19,596	20,248
Rangpur	10.91%	10.61%	16,754	17,547
Sylhet	6.96%	6.72%	10,684	11,115
Age 0–9	21.32%	19.00%	32,748	31,420
Age 10–17	17.56%	16.55%	26,972	27,369
Age 18–24	12.48%	12.82%	19,169	21,201
Age 25–39	17.69%	17.09%	27,172	28,262
Age 36–49	14.26%	16.07%	21,904	26,575
Age 50+	16.70%	18.47%	25,651	30,544

Note: Based on the population figures (national, rural/urban, and divisions) provided by the BBS. The population is in thousands.

Source: Population figures provided by BBS for 2012/13 and 2019.

4.4 Economic growth and monetary poverty between 2012/13 and 2019

In the years between 2012/13 and 2019 and, more generally, in the first two decades of the new millennium, Bangladesh has made significant strides in economic growth and economic development. For example, in the decade prior to 2019, Bangladesh's average growth rate[11] has been 6.7% (year on year). Over the last years prior to 2019, the rate of growth has been consistently high and over 7% on a year-on-year basis. This coincided with considerable reductions in monetary poverty that go back to at least the year 2000. Using the updated

11 https://mof.portal.gov.bd/sites/default/files/files/mof.portal.gov.bd/page/f2d8fabb_29c1_423a_9d37_cdb500260002/Chapter-2%20%28English-2023%29.pdf

international poverty line of USD 2.15[12], the estimated poverty rate decreased from 13.47% in 2016 to 10.44% in 2022. The most recent official poverty statistics for 2016/17 reveal that 24.3% of the population live below the upper poverty line, with 12.9% living below the extreme poverty line, based on specific strata-specific national upper and lower poverty lines. Consequently, the national estimates for 2016 indicate a consistent and sustained reduction in poverty. It is hoped that the adoption of the national MPI will inform future national five-year plans, propelling Bangladesh's development to even greater heights in multiple non-monetary dimensions.

4.5 Harmonized national MPI: Reduction in multidimensional poverty between 2012/13 and 2019

Change in harmonized national MPI

The changes in poverty statistics from 2012/13 to 2019 have been impressive at a national level. **Table 4.3** shows that the harmonized national MPI decreased from 0.197 to 0.101. This means that in 2019, poor people in Bangladesh, on average, experience 10% (down from 19.7% in 2012/13) of the possible deprivations that the country would experience if all people were multidimensionally poor and deprived in all indicators.

Table 4.3: Harmonized national MPI statistics, 2012/13 and 2019

Index	MPI		H		A		Number of poor[13]	
	2012/13	2019	2012/13	2019	2012/13	2019	2012/13	2019
National	0.197 (0.003)	0.101 (0.002)	42.65% (0.60)	24.08% (0.34)	46.28% (0.20)	41.87% (0.13)	65,511	39,821

Note: Standard errors in parentheses. Number of poor in thousands.

Source: Calculation based on MICS 2012/13 and 2019.

What can also be seen in **Table 4.3** is that the significant decrease in the harmonized national MPI has been driven by decreases in the two components of the measure – the headcount ratio or incidence of poverty (also known as H) and the intensity of poverty (also known as A). In 2012/13, almost half (42.65%) of people in Bangladesh were MPI poor, and the average intensity of poverty among the poor was 46.28%. In 2019, the incidence of poverty reduced substantially to under one-fourth (24.08%) of people and the average intensity also decreased to 41.87%.

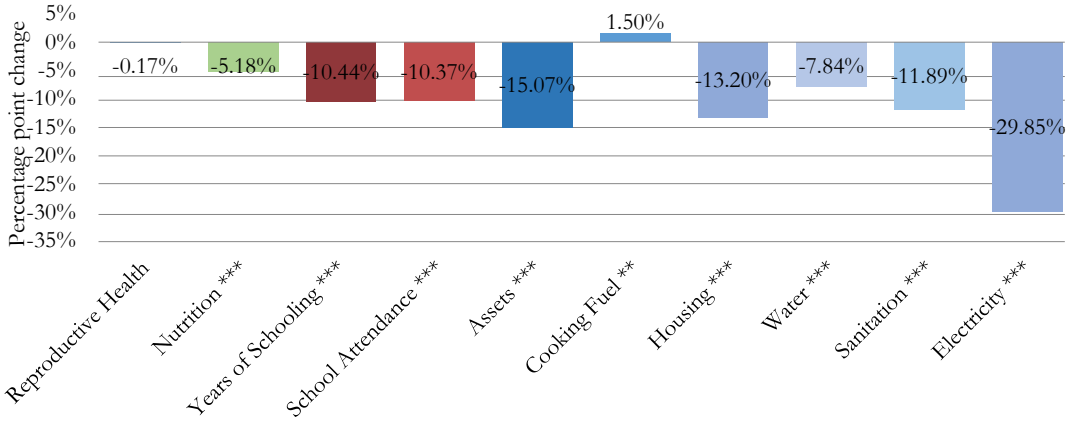
As a result, the actual number of people who are MPI poor in Bangladesh also markedly declined. Over 65.51 million people were MPI poor in 2012/13; this figure was at around 39.82 million in 2019, meaning that approximately 25.68 million people moved out of poverty during that time.

To understand how poverty has decreased, it is necessary to focus on the changes that have occurred across each of the constituent indicators. First, attention is given to the trends for each indicator amongst the entire population of Bangladesh. This is done by focusing on the uncensored headcount ratios, that is, the proportion of the general population who are deprived in a particular indicator. **Figure 4.1** details the absolute change in the uncensored headcount ratios between 2012/13 and 2019.

12 https://databankfiles.worldbank.org/public/ddpext_download/poverty/987B9C90-CB9F-4D93-AE8C-750588BF00QA/current/Global_POVEQ_BGD.pdf

13 Population figures sourced from BBS. In 2012/13 population was 153,601 and 2019 it was 165, 371.

Figure 4.1: Absolute change in uncensored headcount ratios of the harmonized national MPI, 2012/13–2019

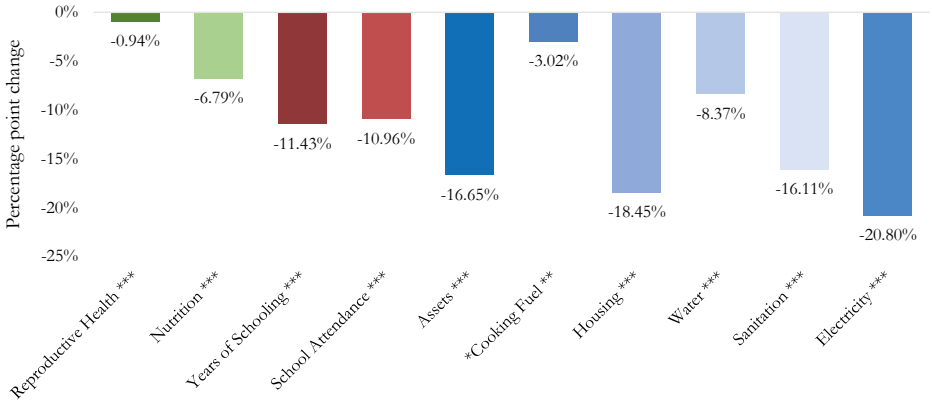


Note: Stars indicate statistical significance with *, ** and *** indicating 90%, 95% and 99% confidence intervals.
Source: Calculation based on MICS 2012/13 and 2019.

Across the whole population, the largest change in deprivation in a single indicator was for electricity, which saw an absolute decrease of 29.85 percentage points between 2012/13 and 2019. In total, nine of the ten indicators showed a statistically significant decrease in deprivation. Reductions of 10 percentage points or more were seen in assets (15.07 percentage points), housing (13.20 percentage points), sanitation (11.89 percentage points), years of schooling (10.44 percentage points) and school attendance (10.37 percentage points). In contrast, there was an increase, albeit marginal, in the uncensored headcount ratio of cooking fuel (1.50 percentage points).

Second, attention is then given to the change in the proportion of people who are MPI poor and deprived in an indicator. This is done by focusing on the censored headcount ratios, which measure the percentage of people who are MPI poor and deprived in a given indicator. **Figure 4.2** details the absolute change in the censored headcount ratios of each indicator. What is impressive is that there has been a statistically significant reduction from 2012/13 to 2019 in the censored headcount ratios of all ten indicators that make up the harmonized national MPI of Bangladesh.

Figure 4.2: Absolute change in censored headcount ratios of the harmonized national MPI, 2012/13–2019



Notes: Stars indicate statistical significance with *, ** and *** indicating 90%, 95% and 99% confidence intervals.
Source: Calculation based on MICS 2012/13 and 2019.

The highest absolute reduction in the proportion of people who are poor and deprived in a particular indicator occurred in electricity, with a decrease of 20.80 percentage points between 2012/13 and 2019. In 2012/13, one-fourth (25%) of the population was poor and deprived of electricity; this proportion reduced to only 4.65% in 2019. As shown in **Figure 4.2**, other large reductions in the censored headcounts ratio occurred for the indicators of housing (18.45 percentage points), asset ownership (16.65 percentage points), sanitation (16.11

percentage points), years of schooling (11.43 percentage points), and child school attendance (11.43 percentage points). At the other end of the scale, smaller, yet statistically significant absolute decreases were seen in the censored headcount ratios of the cooking fuel (3.02%) and reproductive health (0.94%) indicators between 2012/13 and 2019.

Change in harmonized national MPI by locality

With more than three-quarters of the total Bangladesh population living in rural areas, they are a key site for the fight against poverty. The data presented in **Table 4.4** indicate that while MPI poverty is more concentrated in rural areas, the reductions over time are equally impressive across both rural and urban areas. The MPI in rural areas decreased from 0.218 to 0.113 between 2012/13 and 2019. In urban areas, the MPI reduced from 0.117 to 0.056 during this period.

Table 4.4: Harmonized national MPI statistics by locality, 2012/13 and 2019

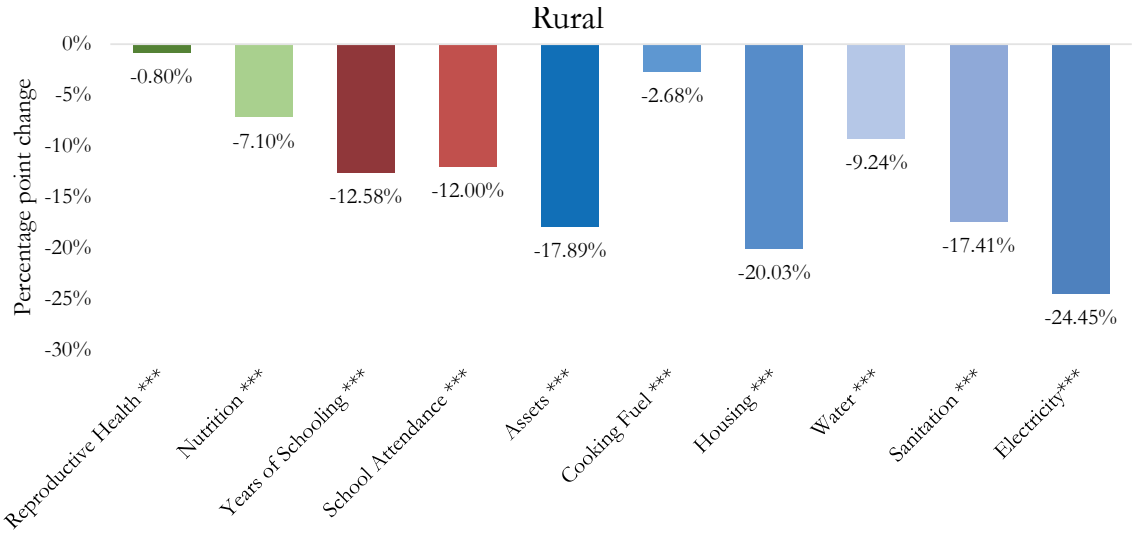
Index	MPI		H		A		Number of poor[14] (in thousands)	
	2012/13	2019	2012/13	2019	2012/13	2019	2012/13	2019
Rural	0.218 (0.003)	0.113 (0.002)	46.97% (0.5%)	26.98% (0.4%)	46.47% (0.2%)	41.95% (0.1%)	52,728	31,687
Urban	0.117 9(0.006)	0.056 (0.003)	26.14% (1.3%)	13.56% (0.6%)	44.94% (0.4%)	41.24% (0.3%)	10,807	6,498

Note: Standard errors in parentheses. Number of poor is in thousands.

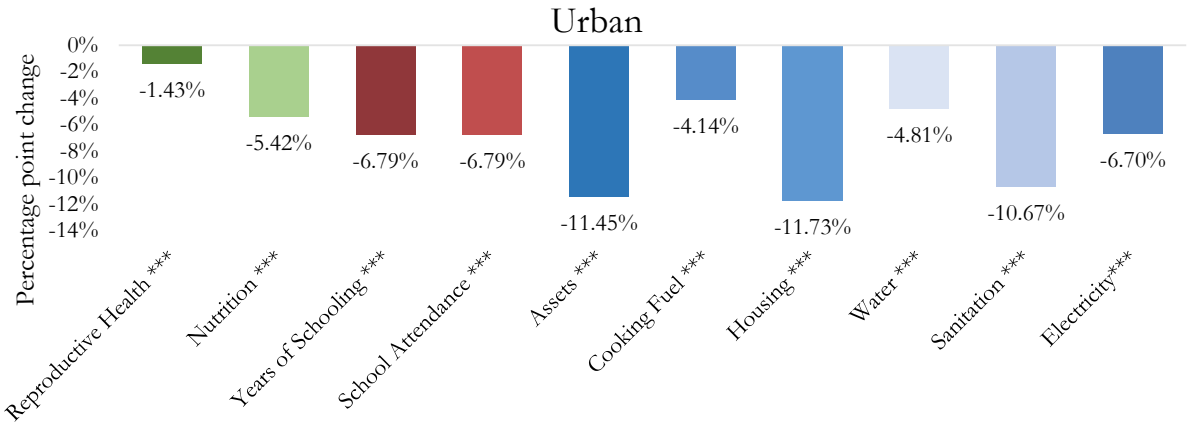
Source: Calculation based on MICS 2012/13 and 2019.

As was the case at the national level, the reduction in MPI in both urban and rural areas was driven by a reduction in both the proportion of people who were MPI poor and the intensity of multidimensional poverty that poor people experienced. In rural areas, nearly half (46.97%) of the people were MPI poor in 2012/13 while in 2019 this was reduced to just over one-fourth (26.98%). In addition, the intensity of poverty decreased from 46.47% to 41.95%, a relative decrease of 9.72%. The headcount ratio in urban areas decreased from 26.14% to 13.56% while the intensity showed a relative decline of 8.22% from 44.94% to 41.24%. While the relative rates of decline were similar across urban and rural areas, what was behind the decreases varied. **Figure 4.3** shows the absolute change in censored headcount ratios to explore which indicators declined the most in each of the areas.

Figure 4.3: Absolute change in censored headcount ratios of the harmonized national MPI by area, 2012/13–2019



14 Population figures provided by BBS. In 2012/2013, rural population was 112,259 (in thousands) and urban was 41,343. In 2019, rural population was 117, 447 (in thousands) and urban was 47,924.



Note: Stars indicate statistical significance with *, ** and *** indicating 90%, 95% and 99% confidence intervals.

Source: Calculation based on MICS 2012/13 and 2019.

At the national level, the biggest reduction in the censored headcount ratio was seen for access to electricity. In urban areas, however, the greatest changes were seen in asset ownership, housing, and sanitation, with about 10 to 11 percentage points each. Reductions in the censored headcounts of cooking fuel (4.14 percentage points) and reproductive health (1.43 percentage points) were the smallest in urban areas. Nevertheless, reductions of the censored headcount ratios in all ten of the indicators were statistically significant in urban areas.

In rural areas, the absolute reductions in the censored headcounts of cooking fuel (2.68 percentage points) and reproductive health (nearly 0.8 percentage point) were also the smallest. However, what is evident in **Figure 4.3** is that the reductions in the headcounts for the other indicators were far greater in rural areas than in urban areas, except for cooking fuel and reproductive health. In rural areas, the largest absolute reduction was seen in electricity (24.45 percentage points), which was then followed by housing (20.03 percentage points), assets (17.89 percentage points), and sanitation (17.41 percentage points) indicators.

Change in harmonized national MPI by division

The reduction in MPI poverty becomes more varied when looking at the situation at the divisional level (see **Table 4.5**). Across all eight divisions, poverty as measured by the MPI, H, and A reduced statistically significantly in absolute terms. The reduction in the harmonized national MPI in the division of Mymensingh was the greatest between 2012/13 to 2019, which was more than halved from 0.263 to 0.148. The smallest relative reduction was observed in the division of Dhaka, where MPI fell from 0.153 to 0.070.

In 2012/13, more than half of the people living in three (Sylhet, Mymesingh and Barishal) of the eight divisions were MPI poor – the remaining Rangpur (42.70%), Chattogram (47.67%), Rajshani (38.09%), Khulna (34.3%) and Dhaka (33.87%) had headcount ratios below 50% (see **Table 4.5**). By 2019, it was only in the division of Sylhet where the majority (40.48%) of people were MPI poor. Absolute reductions in the intensity of multidimensional poverty were also significant across all of the divisions, ranging from 3 to 5 percentage points. While the three divisions of Sylhet (49.52%), Chattogram (48.62%) and Barishal (48.11%) had higher levels of intensity of nearly 50% in 2012/13, the highest level of intensity in 2019 was in Sylhet (44.97%).

Table 4.5: Harmonized national MPI statistics by division, 2012/13 and 2019

	MPI		H		A		Number of poor15	
	2012/13	2019	2012/13	2019	2012/13	2019	2012/13	2019
National	0.197 (0.003)	0.101 (0.002)	42.65% (0.6)	24.08% (0.3)	46.28% (0.2)	41.87% (0.1)	65,511	39,821
Barishal	0.242 (0.008)	0.139 (0.005)	50.37% (1.4)	32.45% (1.1)	48.11% (0.4)	42.85% (0.4)	4,375	2,947
Chattogram	0.232 (0.008)	0.127 (0.005)	47.67% (1.5)	29.40% (1.0)	48.62% (0.4)	43.23% (0.3)	14,450	9,785
Dhaka	0.153 (0.006)	0.070 (0.002)	33.87% (1.3)	17.14% (0.6)	45.14% (0.3)	40.72% (0.2)	13,345	7,618
Khulna	0.151 (0.004)	0.060 (0.002)	34.29% (0.9)	15.31% (0.6)	43.95% (0.3)	39.35% (0.3)	5,676	2,656
Mymensingh	0.263 (0.008)	0.148 (0.006)	56.31% (1.5)	34.73% (1.4)	46.77% (0.4)	42.48% (0.3)	6,542	4,274
Rajshahi	0.168 (0.006)	0.078 (0.003)	38.09% (1.2)	19.79% (0.8)	44.15% (0.4)	39.40% (0.3)	7,464	4,007
Rangpur	0.186 (0.005)	0.087 (0.003)	42.70% (1.1)	21.81% (0.7)	43.47% (0.3)	39.87% (0.3)	7,154	3,827
Sylhet	0.288 (0.010)	0.182 (0.008)	58.23% (1.8)	40.48% (1.6)	49.52% (0.5)	44.97% (0.4)	6,221	4,499

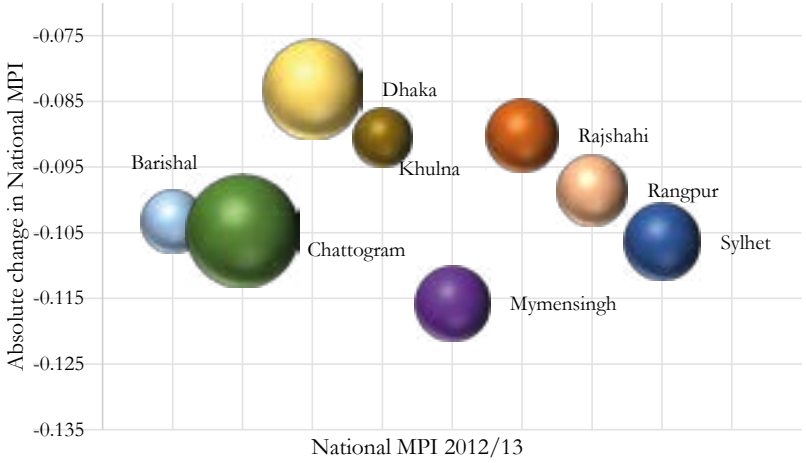
Note: Standard errors in parentheses. Number of poor is in thousands.

Source: Calculation based on MICS 2012/13 and 2019.

Figure 4.4 depicts the absolute change in the harmonized national MPI from 2012/13 to 2019. Note that the poorest division, Sylhet, had the second highest (by 0.106) decrease in the harmonized MPI. Similarly, another of the poorest divisions, Barishal, had the fourth highest absolute change in the harmonized MPI. In contrast, Mymensingh, with the second highest harmonized MPI in 2012/13, showed the greatest absolute reduction as the MPI moved from 0.263 in 2012/13 to 0.148 in 2019 (by 0.116).

What **Figure 4.4** also shows is that Dhaka, with one of the biggest cities representing the high number of people who are poor in the division, had the smallest harmonized MPI in 2012/13 (0.153) and showed the smallest absolute reduction by 2019. The other division with a high number of people who are poor in 2012/13, Chattogram, had a higher harmonized MPI in 2012/13 (0.232) and showed the third largest absolute reduction by 2019 (10.5 percentage points).

Figure 4.4: Absolute change in the harmonized national MPI by division, 2012/13–2019



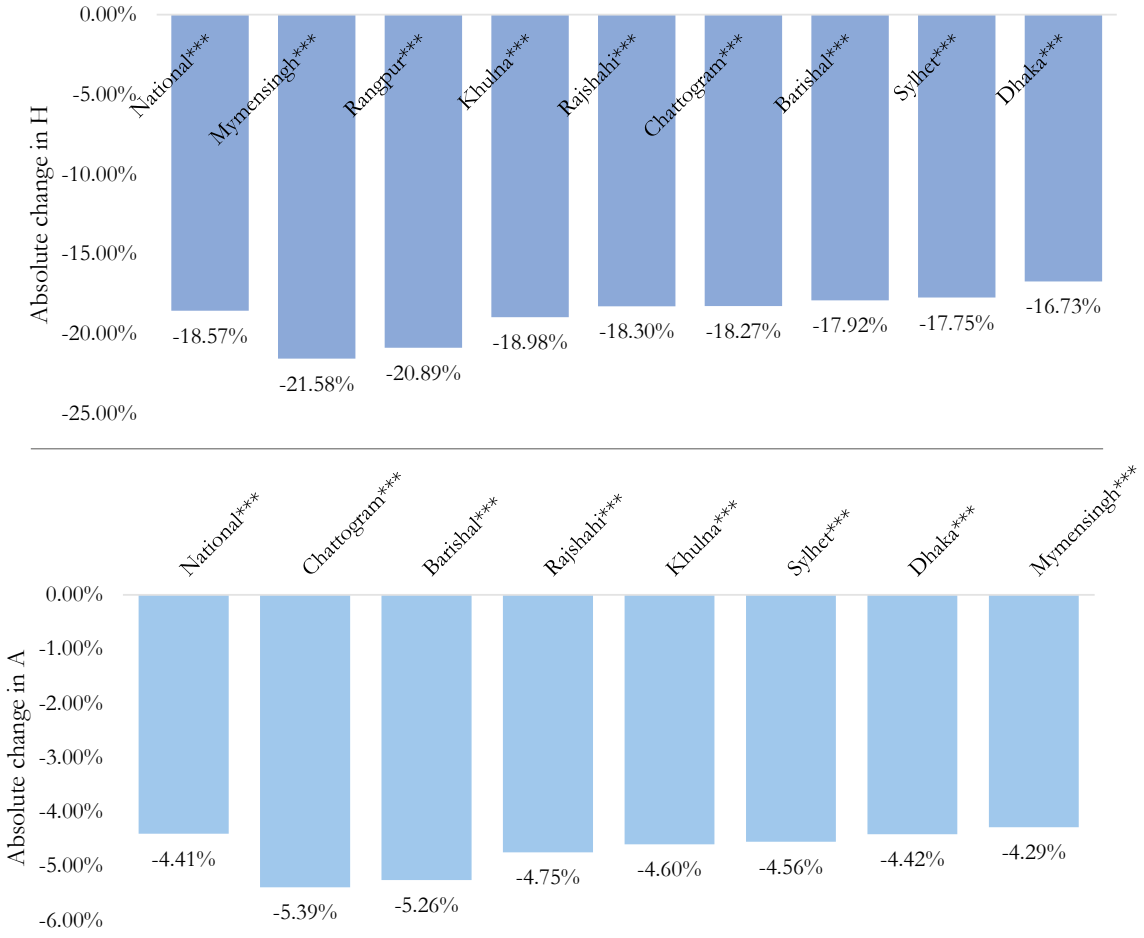
Note: Bubble size is proportionate to number of poor in 2019

Source: Calculation based on MICS 2012/13 and 2019.

15 Population figures for the divisions were sourced from BBS.

Despite the differential progress across the divisions, all eight divisions showed a statistically significant absolute reduction in the harmonized national MPI from 2012/13 to 2019. As seen above, this reduction was a result of statistically significant reductions in both the poverty headcount and the intensity of poverty in all divisions. The absolute change for all divisions in headcount and intensity is presented in **Figure 4.5** . Chattogram and Barishal have the largest absolute reductions in the intensity of poverty.

Figure 4.5: Absolute change in the incidence (H) and intensity (A) of the harmonized national MPI by division, 2012/13– 2019



Note: Stars indicate statistical significance with *, ** and *** indicating 90%, 95% and 99% confidence intervals.

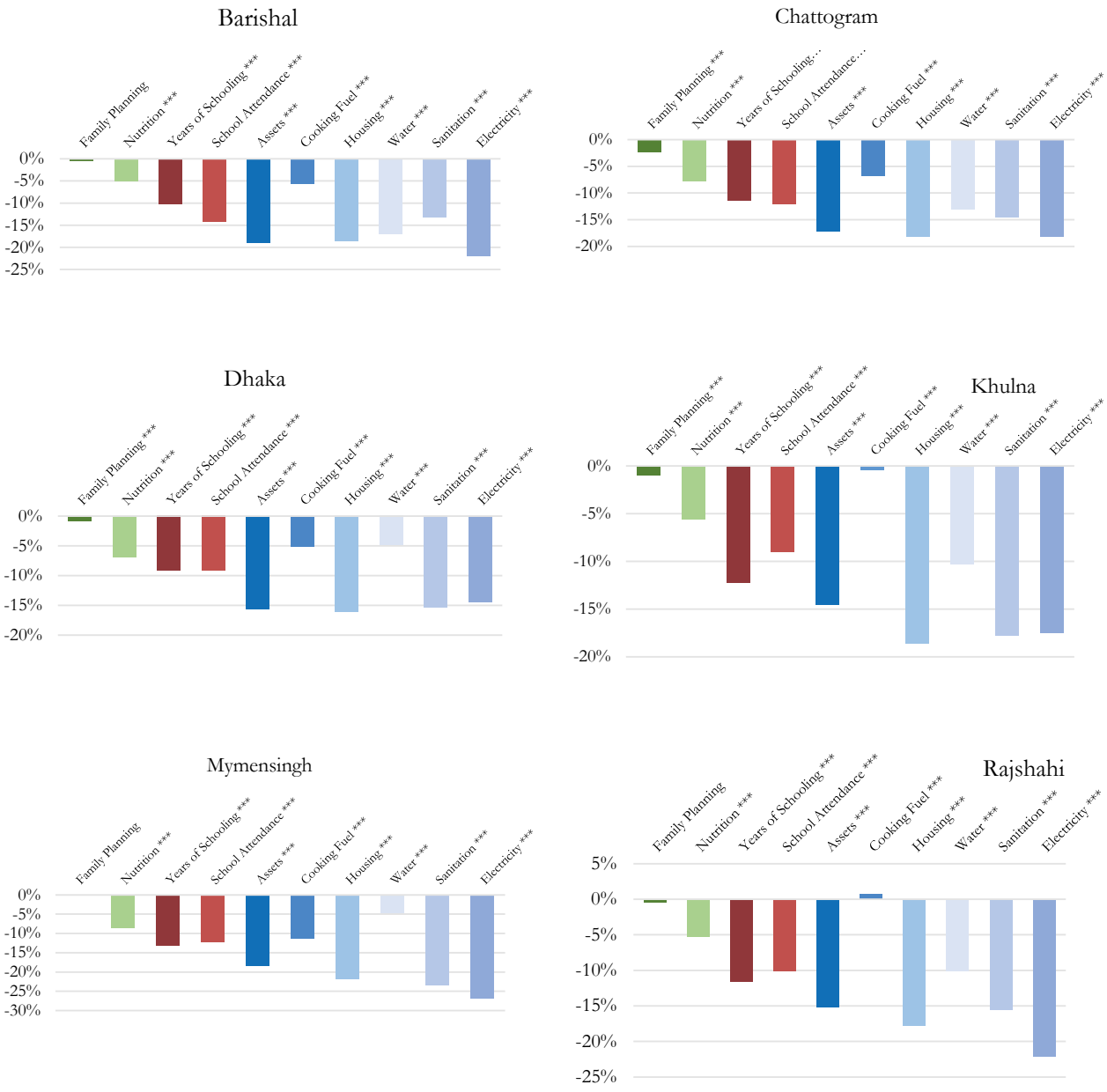
Source: Calculation based on MICS 2012/13 and 2019.

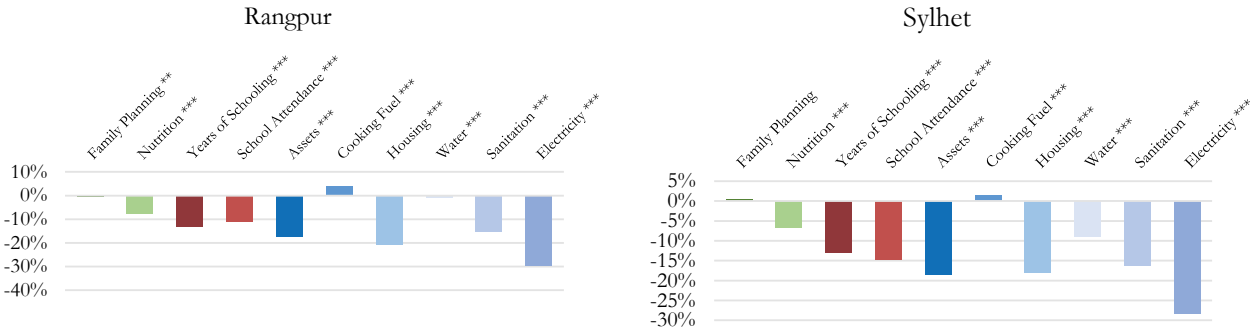
What is driving poverty reduction in one area is very different to what is driving it in another area. Increased access to electricity was key at a national level and in rural areas, while in urban areas improvements in housing and asset ownership were the main factors.

At the divisional level, a look at the absolute change in censored headcount ratios reveals further differences (see **Figure 4.6**). The absolute reductionin the proportion of people who are multidimensionally poor and deprived in electricity was largest in Rangpur (29.61 percentage points). It was also the single biggest reduction in the division by some margin, with a reduction in the censored headcount ratio of housing (21.03 percentage points) being the second largest. The reductions in censored headcount ratios of sanitation (15.53 percentage points),

assets (17.56 percentage points) and years of schooling (13.06 percentage points) were equally impressive. A reduction in the censored headcount ratio of electricity was also the largest reduction in Mymensingh (26.75 percentage points), Sylhet (28.23 percentage points), Rajshahi (22.13 percentage points) and Barishal (22.11 percentage points). In Chattogram, the reduction in censored headcount ratios of housing (18.2 percentage points) and electricity (18.23 percentage points) were same, while in Khulna the reduction in the censored headcount ratio of electricity (17.45 percentage points) was also matched by reductions in the censored headcount ratios of sanitation (around 17.81 percentage points). In Dhaka, the four censored headcount ratios of asset ownership, housing, sanitation and electricity showed a reduction of more than 14 percentage points, followed by years of schooling and child school attendance at around 9.2 percentage points.

Figure 4.6: Absolute change in censored headcount ratios of the harmonized national MPI by division, 2012/13–2019



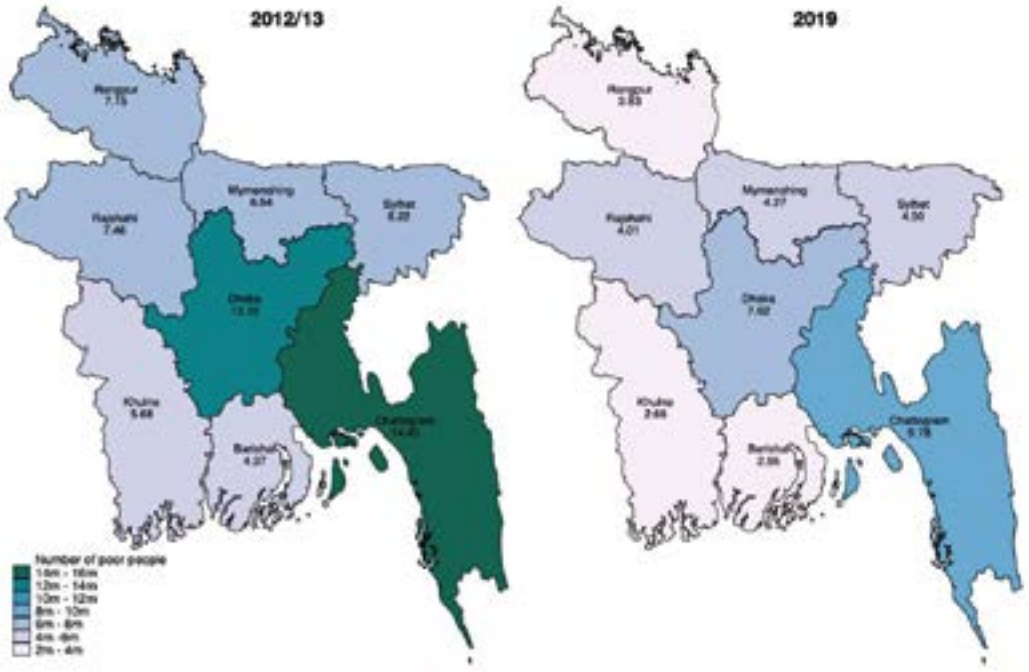


Note: Stars indicate statistical significance with *, ** and *** indicating 90%, 95% and 99% confidence intervals.

Source: Calculation based on MICS 2012/13 and 2019.

The statistically significant reductions in the poverty statistics across all eight divisions resulted in a decrease in the actual number of people who are poor across all divisions, despite population growth. Sylhet, which reduced the proportion of MPI poor people from 58.23% to 40.48%, also witnessed some population growth from 10 million to 11 million (**Table 4.2**) according to the population figures shared by BBS. Overall, this results in one of the smallest percentage reductions in the number of people who are MPI poor. The number of MPI poor people was 6.55 million in 2012/13 and 3.98 million in 2019 (**Table 4.5**). In contrast, Chattogram, Dhaka and Rajshani accounted for the greatest absolute reductions in the number of people who are poor. **Map 4.1** (see also Table 4.5) shows the number of poor people in Bangladesh in 2012/13 and 2019 according to the harmonized national MPI. Despite impressive reductions in the levels of multidimensional poverty, large numbers of people who are poor remain in Chattogram (more than 9 million in 2019) and Dhaka (over 7 million).

Map 4.1: Number of multidimensionally poor people according to the harmonized national MPI by division, 2012/13 and 2019 (See also Table 4.5)

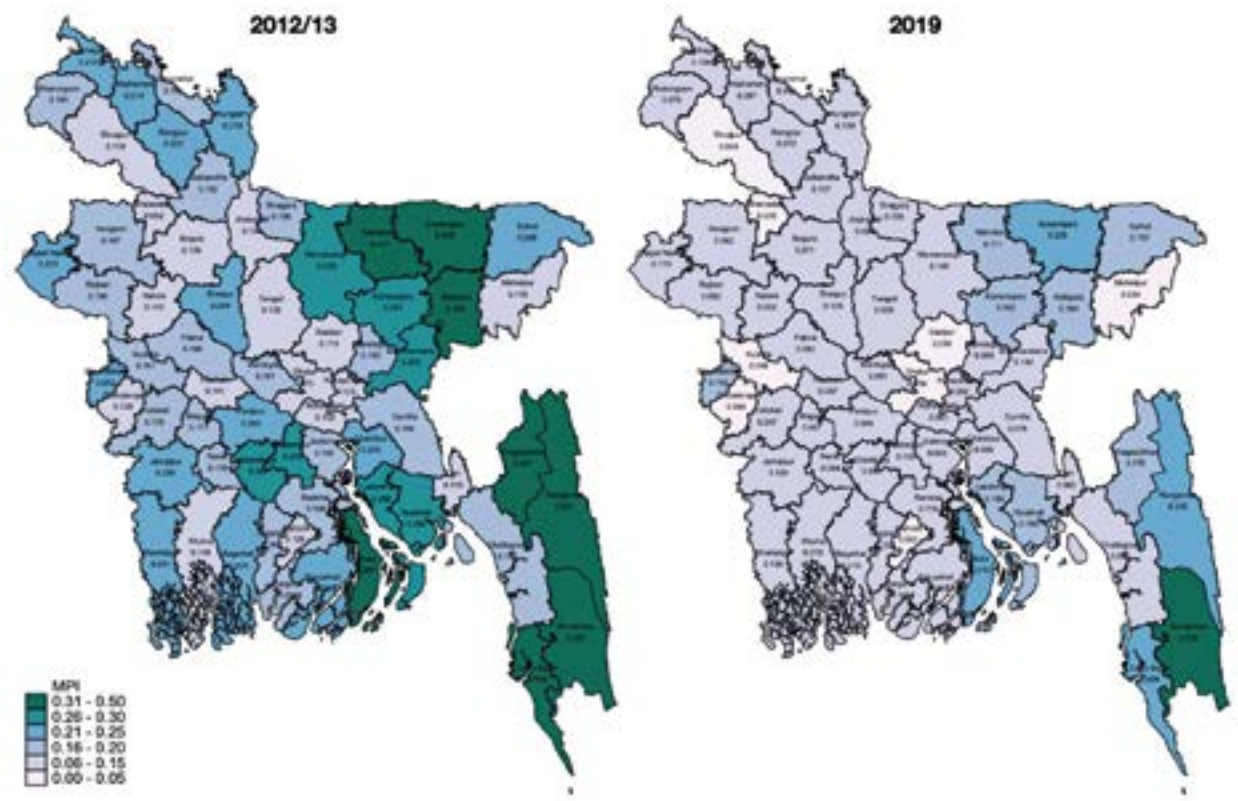


Source: Calculation based on MICS 2012/13 and 2019.

Change in harmonized national MPI by district

Having looked at the harmonized national MPI by division, attention is now turned to the district level (for detail on all 64 districts, refer to appendix G Table A6, A7, A10 and A11). There are 64 districts in Bangladesh, and in 2012/13 the harmonized national MPI varied from a high of 0.457 in Bandarban in the southeastern part of the country (Chattogram division) to 0.073 in the Dhaka district of the Dhaka division in the centre of the country. In total, 31 districts had an MPI equal to or greater than the national average of 0.197 in 2012/13. Eight districts had an MPI of 0.317 or above. **Map 4.2** indicates that by 2019, this picture had changed substantially. In 2019, Bandarban remained the district with the highest MPI equal to 0.326, and is also the only district which has an MPI value above 0.300.

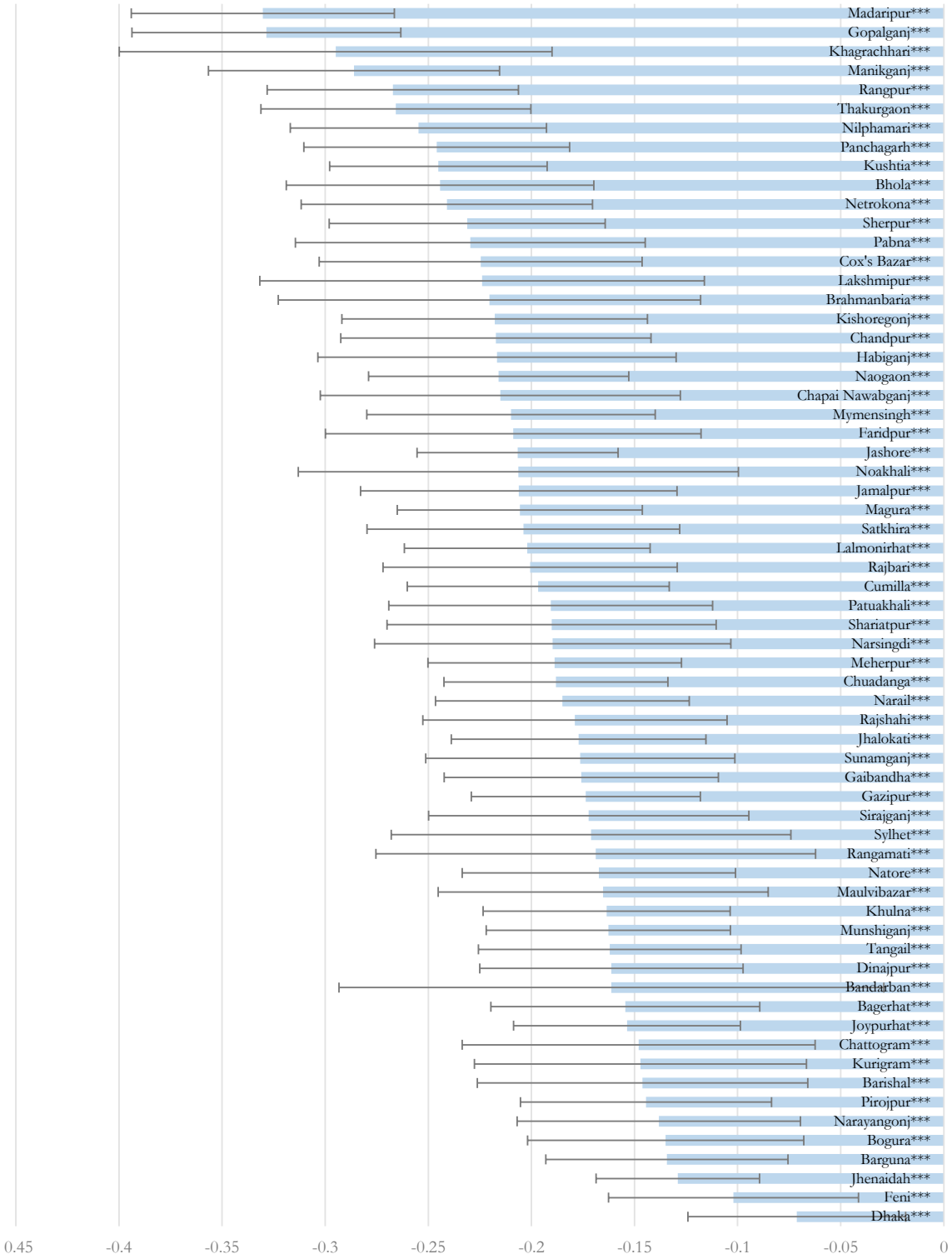
Map 4.2: Harmonized national MPI by district, 2012/13 and 2019 (See also Appendix G Table A6, A7, A10 and A11)



Source: Calculation based on MICS 2012/13 and 2019.

The MPI decreased in all 64 districts from 2012/13 to 2019, and the absolute reductions in MPI were also statistically significant across all districts. **Figure 4.7** identifies the district of Madaripur in the division of Dhaka as having the highest point estimate for the reduction in MPI; from an MPI of 0.279 in 2012/13, it reduced by 0.179 to 0.1 in 2019. This reduction, however, is not statistically different from those observed for other districts that follow suit. All the districts except for Dhaka had an absolute reduction in MPI of 0.05 or greater across the period of interest. The division of Dhaka had the district with the smallest point estimate for the absolute reduction in MPI from 2012/13 to 2019: Dhaka district showed an absolute reduction of 0.037, reducing its MPI from 0.073 to 0.036.

Figure 4.7: Absolute change in the harmonized national MPI by district, 2012/13–2019

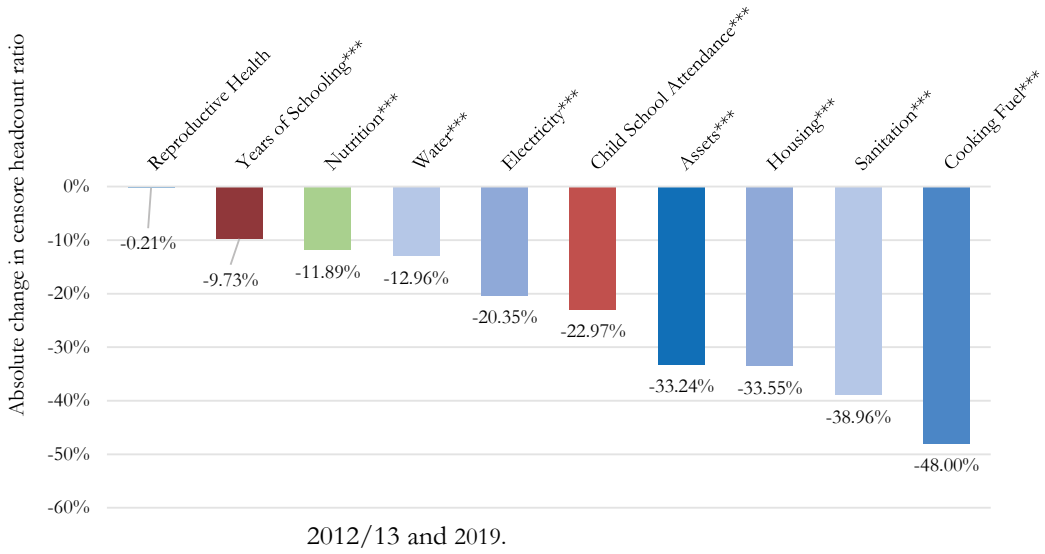


Note: Bars indicate 95 confidence intervals.

Source: Calculation based on MICS 2012/13 and 2019.

The ability to disaggregate the MPI for subnational areas is one of the key strengths of the Alkire-Foster method. Substantial differences emerge as the focus shifts from the national level to divisional and district levels. As an example, **Figure 4.8** presents the absolute change in censored headcount ratios for each indicator in Madaripur district, the district with the largest point estimate for the absolute reduction in the harmonized MPI from 2012/13 to 2019.

Figure 4.8: Absolute change in censored headcount ratios of the harmonized national MPI in Madaripur district, 2012/13– 2019

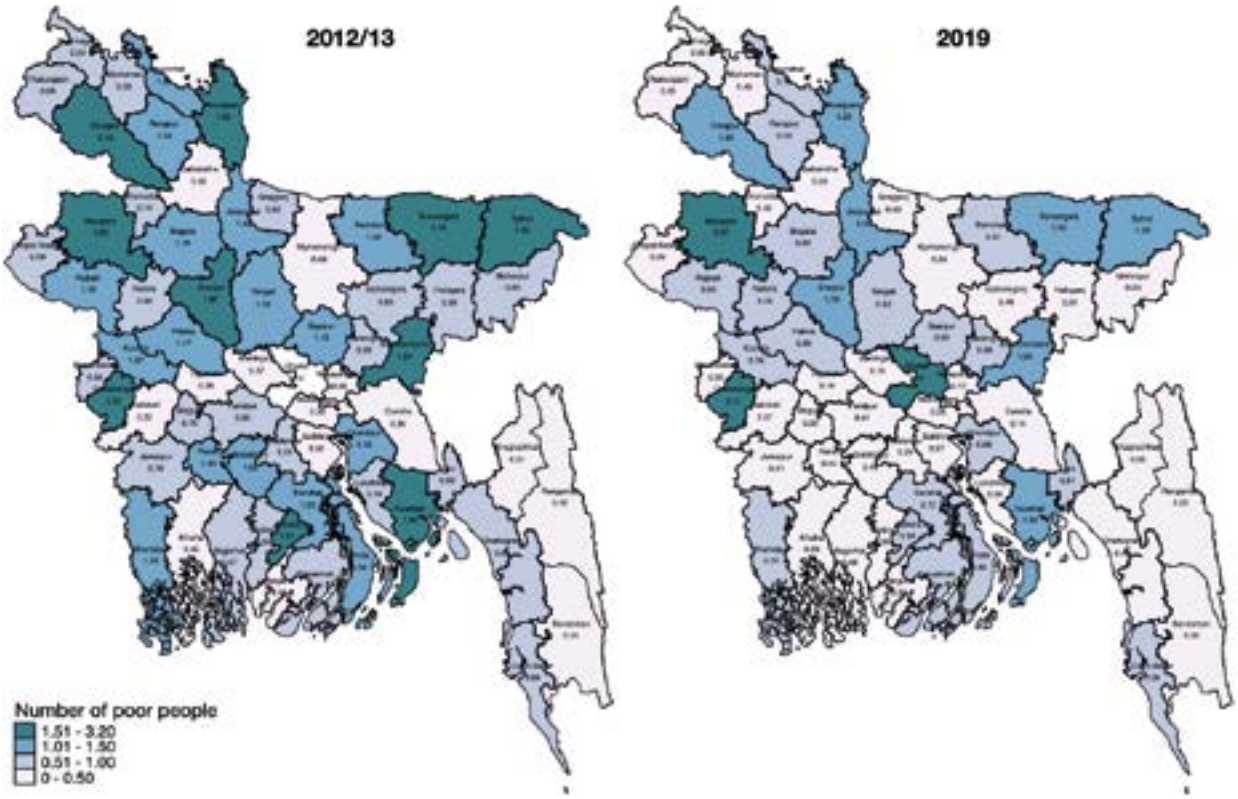


Source: Calculation based on MICS 2012/13 and 2019.

The absolute reductions in the censored headcount ratios in Madaripur are different from the profiles that emerged at the divisional level, even when compared to the Dhaka division, where Madaripur is situated. In Madaripur, the absolute reduction in the censored headcount of cooking fuel was the largest by a substantial margin at 48 percentage points and statistically different from all other reductions. This was followed by absolute reductions in sanitation (38.96 percentage points), housing (33.55 percentage points), and asset ownership (33.24 percentage points). The censored headcount ratios for malnutrition (11.89 percentage points) and years of schooling (9.73 percentage points) showed the smallest reductions, while the reduction in censored headcount for reproductive health (0.21 percentage points) remained insignificant.

Having looked at the reduction in the levels of multidimensional poverty across all districts and having seen in the Madaripur district what is behind their reduction, **Map 4.3** focuses on the number of poor people and reveals which districts are home to significant numbers of poor people in Bangladesh. What is encouraging is to see the many districts that in 2012/13 had higher numbers of people who were poor (indicated by dark blue or green) now reflect fewer numbers of poor people in 2019 (coloured light blue or blue grey).

Map 4.3: Number of multidimensionally poor people according to the harmonized national MPI by district, 2012/13 and 2019



Source: Calculation based on MICS 2012/13 and 2019.

In all the 64 districts, there was a reduction in the actual number of people who are multidimensionally poor from 2012/13 to 2019.

Despite the reduction in the number of people who are poor from 2012/13 to 2019, pockets of poverty persisted in 2019. At the district level, Cumilla is home to the largest number of poor people (approximately 3.06 million). It is followed by Chattogram (2.1 million), Mymensingh (2.07 million), Sylhet (1.3 million), and Sunamganj (1.35 million).

Change in harmonized national MPI by age group

A decomposition of the harmonized national MPI by age group reveals that children under the age of 18 carry a higher proportion of the poverty burden compared to adults aged 18 and above, but that poverty among children has fallen faster. In 2012/13, 50.20% of children were poor compared to 37.85% of adults; by 2019, 28.87% of children were poor compared to 21.44% of adults.

More specifically, in 2012/13, there were 29.98 million poor children. Thus, 45.76% of all poor people were children, as there were almost 59.72 million children in Bangladesh at that time. So children accounted for 38.88% of the total population but 45.76% of the poor (see **Table 4.2**). By 2019, there were 58.78 million children, of which 16.97 million were poor; hence, children account for 35.55% of the total population and 42.61% of all poor people – a visible improvement.

Analysis was carried out across two age brackets: a child group spanning ages 0 to 17 and an adult group comprising individuals aged 18 years and above.

Table 4.6 shows a notable decrease in the prevalence of multidimensional poverty for both children and adults. Among children, the rate decreased from 50.20% in 2012/13 to 28.87% in 2019, while for adults, it dropped from 37.85% to 21.45%. Although the level of multidimensional poverty remains higher for children than for adults, the reduction is more pronounced among children. Over the 2012/13 to 2019 timeframe, the incidence of multidimensional poverty decreased by 21.33 percentage points for children, exceeding the 16.40 percentage point reduction observed in adults. This led to the finding that 13 million children aged 0-17 exited multidimensional poverty between 2012/13 and 2019.

Table 4.6: Harmonized national MPI statistics by age groups (0-17 and 18+), 2012/13 and 2019 (with standard errors)

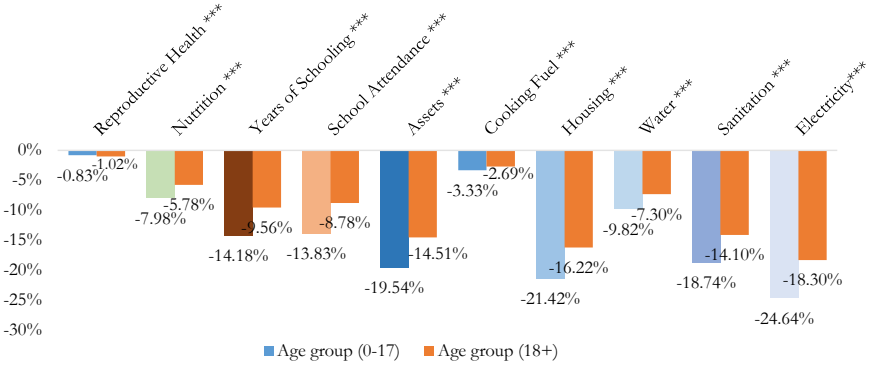
	MPI		H		A		Number of poor[16] (in '000)	
	2012/13	2019	2012/13	2019	2012/13	2019	2012/13	2019
Children (0-17)	0.239 (0.003)	0.124 (0.002)	50.20% (0.59)	28.87% (0.43)	47.96% (0.17)	42.96% (0.16)	29,979	16,972
Adults (18+)	0.171 (0.003)	0.088 (0.001)	37.85% (0.52)	21.45% (0.30)	45.06% (0.14)	41.05% (0.12)	35,540	22,857

Source: Calculation based on MICS 2012/13 and 2019.

Progress has been made in reducing deprivation across all ten indicators among children. Regarding the absolute decrease in the percentage of children experiencing multidimensional poverty and deprivation, the most significant reduction is observed in the case of access to electricity, as highlighted in Figure 4.11. This is closely followed by improvements in housing, which saw a decrease of 21.42 percentage points

Compared to adults, the reduction in the censored headcount ratios - the proportion of people who are multidimensionally poor and experiencing deprivation in an indicator – is higher among children for almost all indicators (nine out of ten indicators).

Figure 4.9: Censored headcount ratios by age groups (0-17 and 18+), 2012/13–2019



Note: Stars indicate statistical significance with *, ** and *** indicating 90%, 95% and 99% confidence intervals.

Source: Calculation based on MICS 2012/13 and 2019.

16 Population shares from MICS 2012/13 and 2019 were used for the age cohorts. The total population figures were sourced from BBS. In 2012/13 it was 153,601 and in 2019 the estimated total population was 165,371.

Table 4.7 highlights these results for more specific age cohorts. The number of children aged 0 to 9 years old who were multidimensionally poor declined from approximately 17.06 million to 9.03 million, while those children aged 10 to 17 years who were poor declined from approximately 12.91 million to 7.94 million. In total, more than 13.01 million children in Bangladesh moved out of poverty from 2012/13 to 2019, which is half of the total number of people who moved out of poverty. Furthermore, the intensity of each remaining poor child also reduced somewhat, hence MPI has an even steeper decline.

Table 4.7: Harmonized national MPI statistics by age group, 2012/13 and 2019

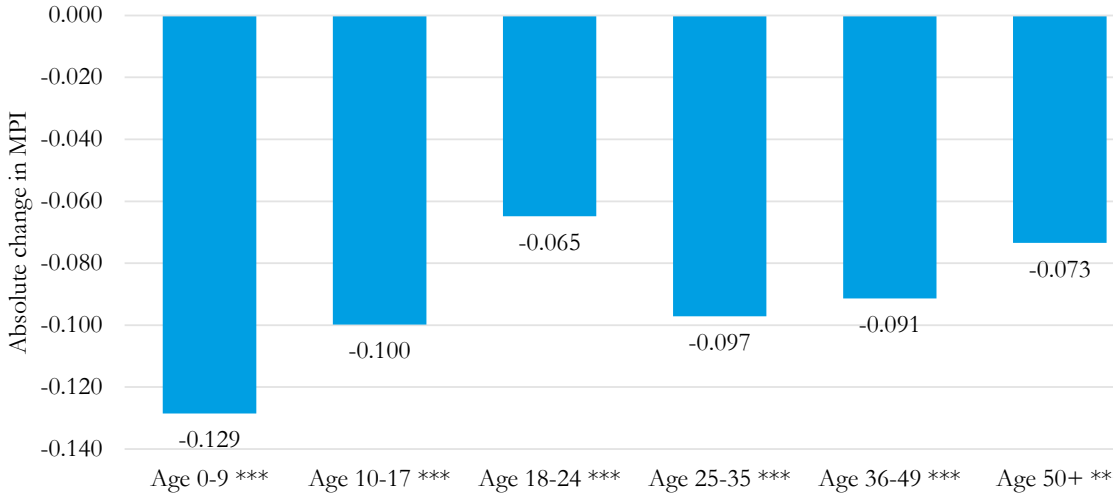
	MPI		H		A		Number of poor17	
	2012/13	2019	2012/13	2019	2012/13	2019	2012/13	2019
Age 0–9	0.252 (0.003)	0.124 (0.002)	52.11%(0.6)	28.74% (0.4)	48.40% (0.2)	43.04% (0.2)	17,064	9,030
Age 10–17	0.224 (0.003)	0.124 (0.002)	47.89% (0.6)	29.01% (0.4)	46.82% (0.2)	42.88% (0.2)	12,917	7,941
Age 18–24	0.142 (0.003)	0.077 (0.002)	32.25% (0.5)	18.63% (0.4)	43.93% (0.2)	41.24% (0.2)	6,182	3,951
Age 25–35	0.184 (0.003)	0.087 (0.002)	39.82% (0.5)	20.86% (0.3)	46.17% (0.2)	41.56% (0.2)	10,821	5,895
Age 36–49	0.182 (0.003)	0.090 (0.002)	39.49% (0.5)	21.49% (0.3)	45.97%(0.2)	41.94% (0.2)	8,650	5,712
Age 50+	0.169 (0.003)	0.095 (0.002)	38.54% (0.5)	23.90% (0.3)	43.75% (0.1)	39.84% (0.1)	9,887	7,299
						Total	65,521	39,827

Note: Standard errors in parentheses. The number of the poor is in thousands. Numbers vary slightly from Table 4.7 due to rounding.

Source: Calculation based on MICS 2012/13 and 2019.

There were significant decreases in each of the poverty statistics – MPI, incidence and intensity – for each age group. Looking at the absolute change in MPI across the age groups (see **Figure 4.10**), the absolute reduction of nearly 13 percentage points for those aged 0 to 9 was the largest. At the other end of the scale, reductions for those aged 18 to 24 and those aged 50 and above (6.5 percentage points and 7.3 percentage points, respectively) were the smallest.

Figure 4.10: Absolute change in the harmonized national MPI by age group, 2012/13–2019



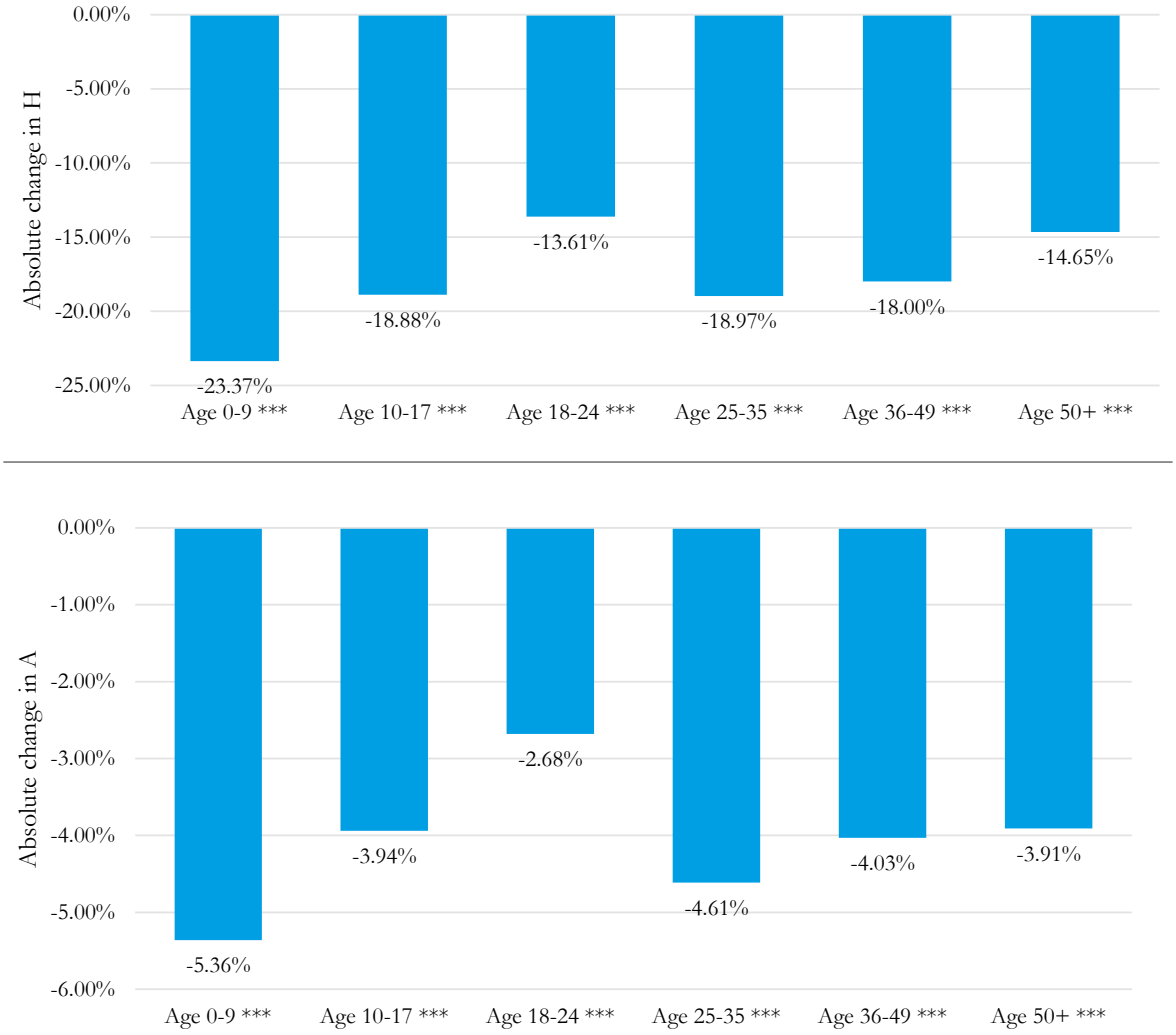
Note: Stars indicate statistical significance with *, ** and *** indicating 90%, 95% and 99% confidence intervals.

Source: Calculation based on MICS 2012/13 and 2019.

17 The population shares for age groups were sourced from MICS 2012/13 and 2019. The total population was provided by BBS: for 2012/13 it was 153,601 and for 2019 it was 165,371.

Figure 4.11 shows that the reduction in MPI for the age group 0 to 9 years old was underpinned by significant absolute reductions in both the incidence and the intensity of multidimensional poverty. The absolute reduction in incidence for the youngest age group was 23.37 percentage points and the absolute reduction in intensity was 5.36 percentage points. For individuals aged 18 to 24, who have the lowest proportion of people who are poor in 2012/13 and 2019, the absolute reduction in intensity (2.68 percentage points) was the smallest of any age group.

Figure 4.11: Absolute change in the incidence (H) and intensity (A) of the harmonized national MPI by age group, 2012/13–2019



Note: Stars indicate statistical significance with *, ** and *** indicating 90%, 95% and 99% confidence intervals.

Source: Calculation based on MICS 2012/13 and 2019.

4.6 Conclusion

Harmonized national MPI

Huge strides have been made in reducing multidimensional poverty across all areas, divisions, districts and age groups in Bangladesh from 2012/13 to 2019. The significant decreases in multidimensional poverty, across all the statistics of MPI, incidence, and intensity, should be applauded and provide a strong foundation for future efforts.

A momentous 25.68 million people moved out of poverty in only six and a half years. In 2019, Bangladesh was well on track to achieve the Sustainable Development Goals' target of reducing multidimensional poverty by half. However, the data presented here were collected prior to the start of the COVID-19 pandemic. An effort should be made as soon as it is feasible to examine the current state of poverty in order to inform policies moving forward. Building on the trends and successes detailed in this report, it will be necessary to strengthen those initiatives that have borne positive results in the past and develop new ones for those areas that are lagging. In this way, the great achievements before the COVID-19 pandemic can be sustained in a post-pandemic revitalization.

Trends in multidimensional poverty

The harmonized national MPI for Bangladesh has decreased from 0.197 to 0.101, driven by decreases in both the headcount ratio or incidence of poverty (also known as H) and the intensity of poverty (also known as A). Whereas nearly half (42.7%) of the total population was MPI poor in 2012/13, this proportion reduced to nearly one-fourth (24.1%) of people in 2019. Despite population growth over the time period, the actual number of people who are MPI poor in Bangladesh significantly declined from 66 million people in 2012/13 to 40 million in 2019, meaning that approximately 26 million people moved out of poverty between those years.

Statistically significant reductions in the proportion of people who are poor and deprived in a given indicator (censored headcount ratio) were seen across nine of the ten indicators of the harmonized national MPI. Particularly strong reductions were seen in electricity, housing, asset ownership, and sanitation, reflecting concerted efforts across a range of social services and goods.

With the high proportion of the Bangladesh population living in rural areas, it is encouraging to see that efforts in poverty reduction are equally impressive across rural and urban areas. An absolute reduction of 0.061 in the harmonized national MPI is observed in urban areas, while rural areas witnessed an absolute reduction of 0.105. Censored headcount ratios in rural areas declined most in the electricity indicator, with housing, asset ownership and sanitation also seeing strong reductions. In urban areas, it was the latter three indicators that saw the greatest reductions between 2012/13 and 2019.

While the amount of reduction in the harmonized national MPI varied, reductions were still significant across all eight divisions and all 64 districts. The report details the different factors at play behind these reductions, from differential changes in the incidence or intensity of poverty to differential changes in levels of deprivation in the individual indicators.

Looking at the harmonized national MPI by age group reveals that in 2019, children under the age of 18 carried a higher proportion of the poverty burden, with 28.87% of them being MPI poor compared to 21.45% among adults aged 18 and above. In 2012/13, multidimensional poverty affected 37.85% of adults and 50.2% of children. So the poverty gap between children and adults has narrowed over time, with children lowering their MPI by 21.33 percentage points, which is more than adults (16.4 percentage points) – an equalising trend. Approximately 13 million children in this age group (0-17) moved out of poverty between 2012/13 and 2019.

The significant decreases in multidimensional poverty – across all the statistics of MPI, incidence and intensity – have been profiled at national, divisional and district levels, as well as for rural and urban areas and for major age groups. These decreases should be applauded and should provide a strong foundation for future efforts. Major improvements in electricity, housing, assets and sanitation drove this change across all divisions.

Crucially, the poorest were not left behind, as, for example, the poorest age group (children aged 0-9 years) and some of the poorest divisions (Mymensingh) saw the fastest reductions in MPI. The ability to look at both components of the MPI – the headcount ratio (H) and the intensity (A) – and to be able to decompose and examine what indicators are driving poverty reduction efforts at the national and various subnational levels of

geography is a real strength of the methodology. And indeed, both H and A were reduced substantially at all levels. When read in conjunction with the national MPI report, this report provides the information to assist in the development of a comprehensive, nuanced, and coordinated approach to tackling poverty in Bangladesh.

In conclusion, it should be noted that the data presented here were collected prior to the start of the COVID-19 pandemic. Whilst the impact of this pandemic is yet to be fully understood, it is likely that the significant progress outlined in this report will have been tempered to some extent. What is needed is a concerted effort to place those who are poor at the centre of policy and programmes aimed at reorienting society as a result of the pandemic. Initiatives that have borne positive results in the past need to be strengthened, and new ones developed for those areas and subgroups that are left behind.

CHAPTER 05:
POLICY RECOMMENDATIONS

Sustaining the National MPI as an Official Poverty Measure: The continuous and sustained publication and use of the MPI as an official national measure of poverty in Bangladesh is recommended. This will ensure its role as a complementary measure to existing monetary poverty indicators, as the national MPI is designed to provide a more comprehensive and nuanced understanding of poverty in multiple dimensions and ensures that poverty is addressed holistically.

Tracking multidimensional poverty: The national MPI provides the baseline estimates on Bangladesh's MPI, the incidence of multidimensional poverty, and the intensity of poverty, as well as the indicator composition of deprivation among the poor across all districts, divisions, and subgroups. To effectively track multidimensional poverty and work towards reducing this figure in the future, a system for regular updating of the National MPI should be instituted. This entails conducting periodic assessments to capture changes in multidimensional poverty over time. In addition, policy leaders should set clear benchmarks and targets for reducing the MPI figure, so policymakers can focus their efforts on specific areas and dimensions where improvements are most needed, and celebrate success.

Geographical targeting: The MPI offers a breakdown of multidimensional poverty at regional, divisional, and subgroup levels. This information is invaluable for targeting interventions and allocating resources to areas and communities where poverty is most prevalent or where the number of poor is the highest. For instance, multidimensional poverty is more prevalent and widespread in rural regions. In all targeted regions, the indicator composition of poverty can guide high-impact strategic interventions.

Monitoring and evaluating SDG 1: To effectively monitor and evaluate SDG Target 1, which aims to 'end poverty in all its forms everywhere,' Bangladesh should leverage the 2019 Multidimensional Poverty Index (MPI) as a valuable tool. The government should commit to regularly updating the national MPI as well as including its indicators in the census and other surveys. This ensures that the MPI remains a relevant and accurate measure to track progress over time.

Guiding policy and programmatic interventions: The findings from the MPI also help in reviewing and adjusting policies and programs. The government should be prepared to modify its poverty reduction strategies in response to the evolving data. This flexibility ensures that interventions remain relevant and effective. For instance, **in** terms of percentage contributions to the national MPI, school attendance is the highest contributor. Therefore, ensuring that children complete at least primary schooling would reduce multidimensional poverty. Educational interventions may involve implementing and strengthening policies that promote free and compulsory primary education and reduce school dropout rates. Establishing scholarship and financial assistance programs to help disadvantaged students cover the costs of schooling, including uniforms and transportation may help.

Similarly, high deprivations in housing, sanitation, and internet access also merit urgent government interventions. Programmatic interventions such as the construction of affordable housing for low-income families, or upgrading informal settlements by providing access to basic services such as clean water, sanitation, connectivity and electricity could be explored. This can enhance the living conditions of impoverished communities.

Additionally, due to the higher relative weight given to child nutrition, emphasis on this indicator will affect

multidimensional poverty immediately and also have lasting effects on the lives of children. Thus, interventions such as early childhood feeding programmes, as well as maternal benefits and maternal health programmes, can go a long way in improving the health of children.

Directing Sectoral Resource Allocation: The MPI can guide sectoral resource allocation by identifying the dimensions and indicators in which the poor face the most deprivation. For instance, if a particular division or subgroup experiences high levels of deprivation in education and health, this knowledge can inform resource allocation and policy formulation in these sectors. Prioritize resource allocation in the poorest regions, such as Sylhet division and Bandarban districts, to accelerate poverty reduction.

In essence, the National MPI serves as a vital tool in Bangladesh because it offers a robust estimate for assessing multidimensional poverty. The National MPI not only exposes the extent of multidimensional poverty and its regional disparities but also provides valuable insights into the interconnected deprivations experienced by different subgroups. Such comprehensive information is indispensable for shaping effective policies aimed at reducing poverty in all its dimensions across the country.

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APPENDIX A:
THE MULTIDIMENSIONAL POVERTY INDEX: METHODOLOGY AND PROPERTIES

The Alkire-Foster Method

Suppose at a particular point in time, there are n people in Bangladesh and their wellbeing is evaluated by d indicators.[18] We denote the achievement of person i in indicator j by $x_{ij} \in \mathbb{R}$ for all $i = 1, \ldots, n$ and $j = 1, \ldots, d$. The achievements of n persons in d indicators are summarized by a $n \times d$ dimensional matrix X, where rows denote persons and columns denote indicators. Each indicator is assigned a weight based on the value of a deprivation relative to other deprivations. The relative weight attached to each indicator j is the same across all persons and is denoted by w_j, such that $w_j > 0$ and $\sum_{j=1}^{d} w_j = 1$.

For single-dimensional analysis, people are identified as poor as long as they fail to meet a threshold called the 'poverty line' and non-poor otherwise. In multidimensional analysis based on a counting approach – as with the adjusted headcount ratio – a person is identified as poor or non-poor in two steps. In the first step, a person is identified as deprived or not in each indicator subject to a deprivation cut-off. We denote the deprivation cut-off for indicator j by z_j and the deprivation cut-offs are summarized by vector z. Any person i is deprived in any indicator j if $x_{ij} < z_j$ and non-deprived, otherwise. We assign a deprivation status score g_{ij} to each person in each dimension based on the deprivation status. If person i is deprived in indicator j, then $g_{ij} = 1$; and $g_{ij} = 0$ otherwise. The second step uses the weighted deprivation status scores of each person in all d indicators to identify the person as poor or not. An overall deprivation score $c_i \in [0,1]$ is computed for each person by summing the deprivation status scores of all d indicators, each multiplied by their corresponding weights, such that $c_i = \sum_{j=1}^{d} w_j g_{ij}$. A person is identified as poor if $c_i \geq k$, where $k \in (0,1]$; and non-poor, otherwise.[19] The deprivation scores of all n persons are summarized by vector c.

After identifying the set of poor and their deprivation scores, we obtain the adjusted headcount ratio (M_0). Many countries refer to this as the MPI or Multidimensional Poverty Index. The focus axiom requires that while measuring poverty the focus should remain only on those identified as poor.[20] This entitles us to obtain the censored deprivation score vector $c(k)$ from c, such that $c_i(k) = c_i$ if $c_i \geq k$ and $c_i(k) = 0$, otherwise. The M_0 is equal to the average of the censored deprivation scores:

$$M_0 = MPI = \frac{1}{n}\sum_{i=1}^{n} c_i(k).$$

Properties of the national MPI

We now outline some of the features of M_0 that are useful for policy analysis. The first is that M_0 can be expressed as a product of two components: the share of the population who are multidimensionally poor – the multidimensional headcount ratio (H) – and the average of the deprivation scores among the poor only – intensity (A). Technically:

18 The meaning of the terms 'dimension' and 'indicator' are slightly different in Alkire and Foster (2011) and in Alkire and Santos (2010). In Alkire and Foster (2011), no distinction is made between these two terms. In Alkire and Santos (2010), however, the term 'dimension' refers to a pillar of wellbeing and a dimension may consist of several indicators.

19 For $k = 100\%$, the identification approach is referred to as the intersection approach; for $0 < k \leq \min\{w_1, \ldots, w_d\}$, it is referred to as the union approach (Atkinson, 2003); and for $\min\{w_1, \ldots, w_d\} < k < 1$, it is referred to as the dual cut-off approach by Alkire and Foster, or more generally as the intermediate approach.

20 In the multidimensional context, there are two types of focus axioms. One is deprivation focus, which requires that any increase in already non-deprived achievements should not affect a poverty measure. The other is poverty focus, which requires that any increase in the achievements of non-poor persons should not affect a poverty measure. See Bourguignon and Chakravarty (2003) and Alkire and Foster (2011).

$$M_0 = MPI = \frac{q}{n} \times \frac{1}{q} \sum_{i=1}^{n} c_i(k) = H \times A;$$

where q is the number of poor.[21] This feature has an interesting policy implication for inter-temporal analysis. A certain reduction in M_0 may occur either by reducing H or by reducing A. This difference cannot be understood by merely looking at M_0. If a reduction in M_0 occurs by merely reducing the number of people who are marginally poor, then H decreases but A may not. On the other hand, if a reduction in M_0 occurs by reducing the deprivation of the poorest of the poor, then A decreases, but H may not.[22]

The second feature of M_0 is that if the entire population is divided into m mutually exclusive and collectively exhaustive groups, then the overall M_0 can be expressed as a weighted average of the M_0 values of m subgroups, where weights are the respective population shares. We denote the achievement matrix, the population, and the adjusted headcount ratio of subgroup ℓ by X^{ℓ}, n^{ℓ}, and $M_0(X^{\ell})$, respectively. Then the overall M_0 can be expressed as:

$$M_0 = \mathrm{C-MPI} = \sum_{\ell=1}^{m} \frac{n^{\ell}}{n} M_0(X^{\ell})$$

This feature is also known as subgroup decomposability and is useful for understanding the contribution of different subgroups to overall poverty levels.[23] Note that the contribution of a subgroup to overall poverty depends both on the poverty level of that subgroup and that subgroup's population share.

The third feature of M_0 is that it can be expressed as an average of the censored headcount ratios of indicators weighted by their relative weight. The censored headcount ratio of an indicator is the proportion of the population that is multidimensionally poor and is simultaneously deprived in that indicator. Let us denote the censored headcount ratio of indicator j by h_j. Then M_0 can be expressed as:

$$M_0 = \mathrm{C-MPI} = \sum_{j=1}^{d} w_j h_j = \sum_{j=1}^{d} w_j \left[\frac{1}{n} \sum_{i=1}^{n} g_{ij}(k) \right]$$

Where $g_{ij}(k) = g_{ij}$ if $c_i \geq k$ and $g_{ij}(k) = 0$, otherwise. Similar relationships can be established between A and the deprivations among the poor. Let us denote the proportion of poor people deprived in indicator j by h_j^p. Then, dividing both sides of the above relationship by H, we find:

$$A = \frac{MPI}{H} = \sum_{j=1}^{d} w_j \frac{h_j}{H} = \sum_{j=1}^{d} w_j h_j^p$$

Breaking down poverty in this way allows an analysis of multidimensional poverty to depict clearly how different indicators contribute to poverty and how their contributions change over time. Let us denote the contribution of indicator j to M_0 by ϕ_j. Then, the contribution of indicator j to M_0 is:

$$\phi_j = w_j \frac{h_j}{MPI} = w_j.$$

21 This feature is analogous to that of the poverty gap ratio, which is similarly expressed as a product of the headcount ratio and the average income gap ratio among the poor.

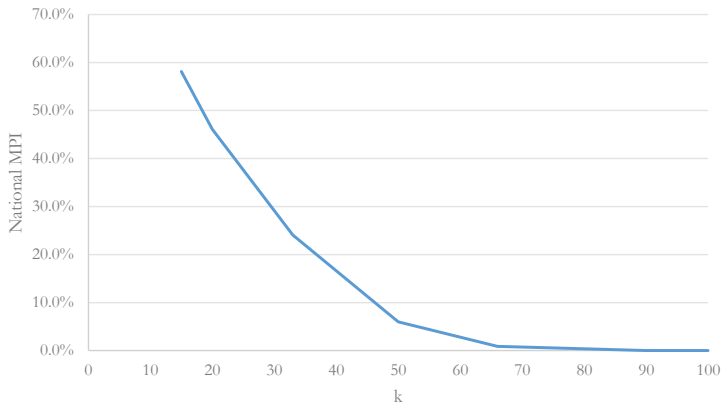
22 Apablaza and Yalonetzky (2011) have shown that the change in M_0 can be expressed as $\Delta M_0 = \Delta H + \Delta A + \Delta H \times \Delta A$, where Δx is referred to as change in x.

23 See Foster, Greer, and Thorbecke (1984) for a discussion of this property.

APPENDIX B:
ROBUSTNESS ANALYSIS OF THE NATIONAL MPI

This section illustrates some robustness tests for the national MPI. In Figure B.1, the national MPI value is plotted over all *k*-values. With increasing *k*, the national MPI decreases. The graph suggests that there are no sharp discontinuities or jumps in the national MPI value around the chosen *k*-value of 33.3%.

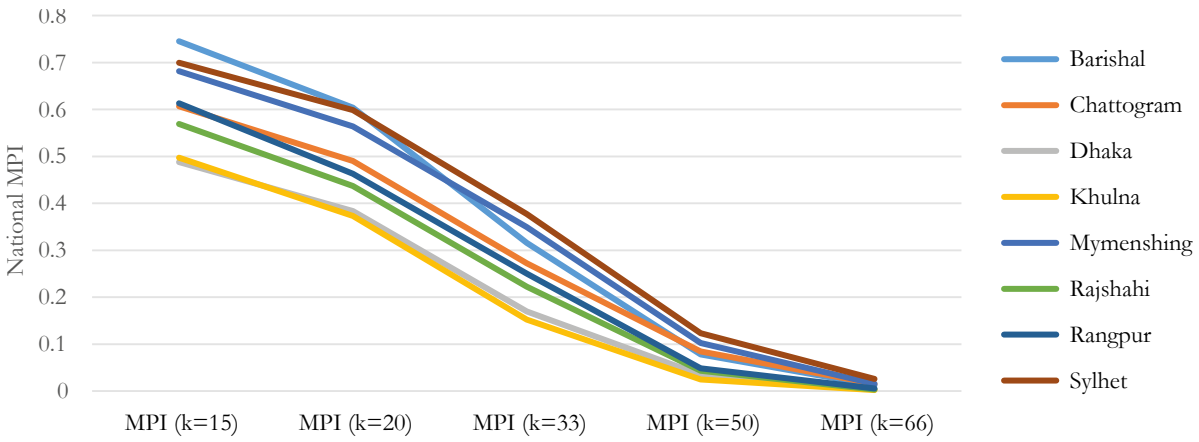
Figure B.1: National MPI for Different Values of the Poverty Cut-off



Source: Based on calculations with MICS 2019.

In Figure B.2, the national MPI value is plotted over all *k*-values for all divisions. This kind of dominance analysis reveals whether the national MPI can be used to rank divisions. Plotting confidence bands as well, it is obvious that Sylhet is the poorest region for all *k*-values higher than 45%. Confidence bands do not intersect with those of other divisions beyond a *k*-value of 45%. For *k*-values below 45%, confidence intervals intersect with those of Barishal and Mymensingh. Thus, it is not possible to define a clear ranking for this interval of *k*-values. For several pairs of regions, as confidence bands are overlaid or intersect, no ranking is possible. However, the two least poor divisions are Dhaka and Khulna across all values of *k*. As their confidence bands are on top of each other, they are not statistically different, but they are statistically different from all other divisions.

Figure B.2: Divisions' MPI for Different Values of the Poverty Cut-off



Source: Based on calculations with MICS 2019.

APPENDIX C:
MPI, H, AND A FOR DIFFERENT CUT-OFFS (NATIONAL MPI)

	k=33			k=20			k=50		
	H	**MPI**	**A**	**H**	**MPI**	**A**	**H**	**MPI**	**A**
Area									
Rural	0.270	0.119	0.442	49.7%	0.180	36.2%	6.8%	0.040	58.1%
Urban	0.135	0.059	0.436	32.9%	0.110	33.4%	2.9%	0.017	57.7%
Division									
Barishal	0.316	0.141	0.447	60.4%	0.216	35.8%	7.8%	0.046	58.6%
Chattogram	0.272	0.124	0.454	49.0%	0.181	36.9%	8.4%	0.049	58.6%
Dhaka	0.170	0.073	0.433	38.3%	0.130	33.9%	3.4%	0.020	57.0%
Khulna	0.152	0.064	0.421	37.3%	0.122	32.8%	2.5%	0.014	56.0%
Mymenshing	0.349	0.158	0.453	56.4%	0.216	38.4%	10.2%	0.060	58.4%
Rajshahi	0.223	0.094	0.424	43.7%	0.151	34.6%	4.3%	0.024	56.8%
Rangpur	0.250	0.106	0.423	46.3%	0.163	35.3%	4.8%	0.027	56.7%
Sylhet	0.377	0.177	0.469	59.9%	0.235	39.3%	12.3%	0.074	60.1%
Age group									
0-9	0.286	0.130	0.454	52.1%	0.192	36.9%	8.4%	0.050	58.9%
10-17	0.288	0.130	0.451	51.6%	0.191	37.0%	8.4%	0.049	58.1%
18-24	0.180	0.078	0.435	39.5%	0.135	34.1%	3.9%	0.023	57.4%
25-35	0.209	0.091	0.438	43.4%	0.151	34.8%	4.9%	0.029	58.2%
36-49	0.218	0.096	0.442	42.5%	0.151	35.7%	5.5%	0.032	57.9%
50+	0.241	0.102	0.423	45.2%	0.158	35.0%	4.1%	0.023	56.8%
Household head's sex									
Male	0.241	0.106	0.442	46.4%	0.166	35.7%	6.0%	0.035	58.1%
Female	0.239	0.105	0.440	43.5%	0.157	36.1%	5.5%	0.032	57.5%

Source: Based on calculations with MICS 2019.

APPENDIX D:
NATIONAL MPI, CENSORED HEADCOUNT RATIOS BY SUBGROUP FOR POVERTY CUT-OFF K=33%

	Electricity	Sanitation	Water	Housing	Cooking Fuel	Assets	Internet	Child School Attendance	Years of Schooling	Nutrition	Reproductive Health
Area											
Rural	5.6%	23.0%	9.9%	24.9%	13.4%	21.4%	23.6%	11.8%	12.0%	9.8%	3.1%
Urban	1.4%	11.2%	4.5%	8.4%	5.6%	10.2%	11.1%	7.2%	6.2%	5.1%	1.8%
Division											
Barishal	11.1%	29.2%	23.7%	30.3%	13.1%	27.1%	26.9%	11.5%	11.3%	12.4%	3.3%
Chattogram	7.8%	23.9%	11.9%	24.1%	13.7%	23.0%	22.1%	14.2%	9.6%	10.3%	3.9%
Dhaka	1.1%	14.4%	4.7%	12.3%	5.7%	12.4%	14.1%	8.7%	8.9%	6.0%	1.9%
Khulna	2.3%	12.5%	7.7%	13.5%	7.9%	11.0%	13.4%	5.6%	6.5%	5.0%	1.8%
Mymenshing	7.4%	30.5%	9.9%	33.4%	11.5%	28.0%	32.5%	16.1%	18.7%	12.7%	3.7%
Rajshahi	2.9%	19.3%	4.7%	20.7%	12.0%	16.6%	20.6%	7.7%	11.6%	7.2%	2.4%
Rangpur	6.6%	18.4%	3.0%	24.1%	14.2%	18.9%	24.4%	8.5%	13.5%	8.1%	2.2%
Sylhet	4.6%	31.6%	19.0%	34.0%	26.9%	31.5%	30.4%	20.6%	12.6%	17.0%	5.0%
Age group											
0-9	5.6%	24.4%	10.4%	25.3%	13.9%	22.5%	25.0%	10.6%	11.7%	16.2%	3.2%
10-17	5.4%	24.3%	10.6%	25.4%	13.9%	22.5%	24.7%	20.1%	12.6%	6.8%	2.4%
18-24	3.6%	15.1%	7.0%	15.8%	9.2%	13.7%	14.3%	8.4%	4.0%	8.1%	4.0%
25-35	4.0%	17.8%	7.5%	18.3%	10.2%	16.1%	18.1%	6.5%	8.0%	10.3%	3.7%
36-49	4.2%	18.3%	7.9%	19.3%	10.5%	17.1%	19.4%	11.6%	11.2%	5.7%	1.8%
50+	5.0%	20.8%	8.7%	22.1%	11.7%	20.1%	21.5%	7.8%	15.0%	4.8%	2.2%
Household head's sex											
Male	4.7%	20.4%	8.7%	21.4%	11.8%	18.8%	21.0%	10.9%	10.3%	9.1%	2.9%
Female	5.0%	21.0%	9.1%	20.7%	11.0%	20.7%	20.1%	10.0%	15.0%	5.8%	1.7%

APPENDIX E:
RESULTS BY DISTRICT, NATIONAL MPI

	Population	Population share	MPI	Lower 95% CI	Upper 95% CI	H	Lower 95% CI	Upper 95% CI	A	Lower 95% CI	Upper 95% CI	Number of poor (in 000)
Bagerhat	1,607	0.97%	0.107	0.091	0.123	25.3%	21.7%	29.0%	42.3%	41.1%	43.5%	407
Bandarban	482	0.29%	0.325	0.253	0.397	65.4%	52.6%	78.1%	49.7%	47.8%	51.6%	315
Barguna	1,008	0.61%	0.126	0.108	0.143	29.0%	25.1%	32.8%	43.4%	42.3%	44.4%	292
Barishal	2,565	1.55%	0.119	0.097	0.141	27.7%	23.2%	32.3%	43.0%	41.2%	44.8%	712
Bhola	1,928	1.17%	0.214	0.182	0.245	45.1%	38.6%	51.6%	47.4%	45.9%	48.8%	870
Bogura	3,715	2.25%	0.093	0.073	0.114	22.5%	18.0%	27.0%	41.4%	40.1%	42.7%	836
Brahmanbaria	3,314	2.00%	0.136	0.105	0.167	29.3%	23.3%	35.3%	46.5%	44.9%	48.1%	971
Chandpur	2,642	1.60%	0.090	0.071	0.110	21.3%	16.8%	25.7%	42.5%	40.9%	44.0%	563
Chattogram	9,191	5.56%	0.092	0.072	0.111	20.8%	16.7%	24.9%	44.1%	42.8%	45.4%	1,912
Chuadanga	1,229	0.74%	0.055	0.046	0.064	13.5%	11.2%	15.8%	40.6%	39.4%	41.7%	166
Cumilla	6,227	3.77%	0.073	0.060	0.086	17.9%	14.7%	21.1%	40.6%	39.4%	41.9%	1,112
Cox's Bazar	2,830	1.71%	0.229	0.196	0.262	47.7%	41.3%	54.1%	47.9%	46.4%	49.4%	1,350
Dhaka	14,811	8.96%	0.039	0.030	0.047	9.2%	7.2%	11.2%	42.2%	41.1%	43.3%	1,360
Dinajpur	3,303	2.00%	0.062	0.048	0.076	14.6%	11.5%	17.7%	42.5%	41.0%	43.9%	483
Faridpur	2,174	1.31%	0.091	0.072	0.110	21.3%	16.9%	25.7%	42.5%	40.9%	44.1%	464
Feni	1,653	1.00%	0.058	0.045	0.070	14.0%	11.0%	17.0%	41.2%	39.5%	42.9%	231
Gaibandha	2,553	1.54%	0.129	0.109	0.150	30.3%	25.8%	34.8%	42.7%	41.4%	44.0%	773
Gazipur	5,291	3.20%	0.041	0.029	0.054	9.6%	6.9%	12.3%	43.0%	41.5%	44.6%	510
Gopalganj	1,302	0.79%	0.098	0.084	0.113	23.5%	20.2%	26.8%	41.8%	40.5%	43.1%	306
Habiganj	2,376	1.44%	0.175	0.148	0.203	38.5%	32.9%	44.1%	45.6%	44.2%	47.0%	914
Joypurhat	952	0.58%	0.086	0.072	0.099	20.9%	17.7%	24.1%	41.0%	39.9%	42.0%	199
Jamalpur	2,516	1.52%	0.138	0.111	0.166	31.1%	25.5%	36.7%	44.5%	42.9%	46.1%	782
Jashore	3,064	1.85%	0.044	0.036	0.053	10.6%	8.6%	12.6%	42.0%	40.3%	43.7%	324
Jhalokati	660	0.40%	0.088	0.073	0.103	20.8%	17.5%	24.1%	42.3%	40.9%	43.7%	137
Jhenaidah	1,998	1.21%	0.035	0.026	0.044	8.7%	6.5%	10.8%	40.1%	38.7%	41.5%	173
Khagrachhari	716	0.43%	0.173	0.136	0.211	36.9%	29.3%	44.5%	46.9%	45.0%	48.7%	264
Khulna	2,603	1.57%	0.065	0.046	0.083	15.2%	11.5%	18.9%	42.5%	39.9%	45.1%	396
Kishoreganj	3,285	1.99%	0.168	0.144	0.193	36.1%	31.3%	40.9%	46.6%	45.1%	48.1%	1,186
Kurigram	2,321	1.40%	0.168	0.142	0.194	39.2%	33.7%	44.7%	42.8%	41.6%	44.0%	911
Kushtia	2,141	1.29%	0.051	0.040	0.062	12.2%	9.6%	14.8%	41.8%	40.4%	43.2%	262
Lakshmipur	1,943	1.17%	0.163	0.125	0.201	35.2%	28.2%	42.2%	46.3%	44.0%	48.7%	684
Lalmonirhat	1,423	0.86%	0.100	0.085	0.115	24.0%	20.8%	27.1%	41.7%	40.7%	42.7%	341
Madaripur	1,300	0.79%	0.106	0.088	0.123	25.1%	21.0%	29.2%	42.1%	41.0%	43.2%	326
Magura	1,029	0.62%	0.086	0.072	0.100	20.7%	17.5%	23.8%	41.6%	40.4%	42.7%	213
Manikganj	1,566	0.95%	0.058	0.042	0.074	14.1%	10.4%	17.7%	41.0%	39.4%	42.5%	220
Meherpur	703	0.43%	0.045	0.037	0.053	11.1%	9.0%	13.1%	40.5%	39.4%	41.6%	78
Maulvibazar	2,139	1.29%	0.141	0.115	0.168	30.5%	25.5%	35.5%	46.3%	44.5%	48.2%	652
Munshiganj	1,634	0.99%	0.067	0.051	0.083	15.5%	11.9%	19.0%	43.2%	41.3%	45.1%	253
Mymensingh	5,938	3.59%	0.159	0.137	0.181	35.0%	30.3%	39.7%	45.4%	44.5%	46.4%	2,080

	Population	Population share	MPI	Lower 95% CI	Upper 95% CI	H	Lower 95% CI	Upper 95% CI	A	Lower 95% CI	Upper 95% CI	Number of poor (in 000)
Naogaon	2,770	1.68%	0.069	0.055	0.084	17.0%	13.6%	20.4%	40.9%	39.9%	41.9%	470
Narail	785	0.47%	0.091	0.074	0.109	21.3%	17.5%	25.1%	42.9%	41.7%	44.0%	168
Narayanganj	3,930	2.38%	0.065	0.053	0.078	15.4%	12.7%	18.1%	42.5%	41.1%	43.9%	605
Narsingdi	2,598	1.57%	0.092	0.070	0.114	21.2%	16.7%	25.7%	43.4%	41.6%	45.3%	550
Natore	1,850	1.12%	0.070	0.056	0.085	17.1%	13.6%	20.5%	41.2%	40.1%	42.3%	315
Chapai nawabganj	1,826	1.10%	0.125	0.105	0.146	28.8%	24.4%	33.2%	43.6%	42.3%	44.9%	525
Netrokona	2,340	1.42%	0.179	0.152	0.207	38.2%	32.9%	43.6%	46.9%	45.3%	48.6%	894
Nilphamari	2,085	1.26%	0.104	0.086	0.121	24.6%	20.7%	28.5%	42.2%	41.1%	43.2%	513
Noakhali	3,634	2.20%	0.158	0.118	0.198	33.5%	26.3%	40.6%	47.2%	44.7%	49.7%	1,216
Pabna	2,895	1.75%	0.108	0.086	0.129	25.1%	21.0%	29.3%	42.8%	40.9%	44.7%	728
Panchagarh	1,176	0.71%	0.116	0.098	0.133	26.6%	22.9%	30.3%	43.5%	42.1%	44.9%	313
Patuakhali	1,724	1.04%	0.140	0.118	0.162	31.1%	26.4%	35.8%	45.1%	43.9%	46.3%	536
Pirojpur	1,196	0.72%	0.124	0.104	0.144	28.5%	24.3%	32.7%	43.4%	42.1%	44.7%	341
Rajshahi	2,900	1.75%	0.062	0.048	0.077	15.1%	11.9%	18.4%	41.2%	39.8%	42.6%	439
Rajbari	1,196	0.72%	0.091	0.073	0.109	21.1%	17.1%	25.1%	43.3%	42.3%	44.3%	252
Rangamati	649	0.39%	0.216	0.172	0.260	45.9%	37.2%	54.6%	47.1%	45.2%	48.9%	298
Rangpur	3,158	1.91%	0.094	0.079	0.109	22.9%	19.3%	26.4%	41.0%	40.1%	41.8%	722
Shariatpur	1,301	0.79%	0.125	0.102	0.148	28.8%	24.0%	33.7%	43.3%	41.8%	44.7%	375
Satkhira	2,188	1.32%	0.092	0.077	0.107	21.4%	18.0%	24.7%	43.2%	42.1%	44.4%	468
Sirajganj	3,340	2.02%	0.130	0.108	0.152	29.4%	24.7%	34.1%	44.3%	43.2%	45.4%	982
Sherpur	1,512	0.91%	0.152	0.134	0.170	35.6%	31.6%	39.5%	42.7%	41.5%	44.0%	538
Sunamganj	2,715	1.64%	0.225	0.190	0.260	47.4%	40.9%	53.8%	47.5%	46.0%	48.9%	1,286
Sylhet	3,885	2.35%	0.157	0.126	0.188	33.3%	27.2%	39.3%	47.3%	45.9%	48.7%	1,292
Tangail	4,059	2.45%	0.070	0.057	0.083	16.8%	13.8%	19.7%	41.8%	40.4%	43.1%	681
Thakurgaon	1,528	0.92%	0.091	0.076	0.105	21.4%	18.2%	24.5%	42.6%	41.4%	43.7%	327

APPENDIX F:
CENSORED HEADCOUNT RATIO BY DISTRICT, N-MPI

	Electricity	Sanitation	Water	Housing	Cooking Fuel	Assets	Internet	Child School Attendance	Years of Schooling	Nutrition	Reproductive Health
Bagerhat	5.5%	22.2%	20.7%	24.1%	14.8%	18.8%	21.7%	9.5%	6.0%	9.2%	3.0%
Bandarban	46.4%	61.3%	51.2%	64.0%	58.7%	61.7%	61.8%	29.9%	25.2%	18.7%	5.3%
Barguna	13.8%	27.9%	23.0%	28.6%	4.8%	26.0%	24.8%	9.4%	11.0%	10.6%	1.9%
Barishal	4.9%	24.8%	22.2%	26.8%	10.6%	21.9%	23.1%	8.8%	9.6%	11.5%	3.3%
Bhola	16.7%	42.4%	37.6%	43.5%	20.1%	40.5%	38.8%	15.8%	18.7%	20.7%	4.5%
Bogura	4.1%	19.5%	1.4%	20.5%	14.1%	17.6%	21.2%	4.9%	12.3%	8.6%	1.9%
Brahmanbaria	1.4%	26.1%	6.2%	25.7%	2.4%	23.6%	23.8%	18.8%	15.2%	11.5%	5.0%
Chandpur	4.3%	17.7%	12.6%	19.3%	10.4%	18.9%	14.8%	11.4%	4.3%	8.3%	2.2%
Chattogram	1.3%	18.8%	9.5%	16.4%	12.0%	17.0%	16.8%	10.5%	7.0%	8.1%	3.1%
Chuadanga	1.5%	8.6%	1.2%	11.8%	8.6%	9.7%	13.0%	4.8%	6.8%	4.3%	1.5%
Cumilla	0.2%	13.2%	3.3%	14.7%	1.8%	13.5%	13.4%	10.8%	5.0%	7.5%	3.1%
Cox's Bazar	18.9%	43.7%	14.6%	44.1%	40.6%	44.5%	42.1%	25.3%	17.6%	16.7%	6.5%
Dhaka	0.0%	7.9%	2.2%	1.5%	2.4%	5.6%	6.5%	6.1%	5.0%	4.0%	0.7%
Dinajpur	2.8%	11.3%	3.0%	14.4%	7.4%	10.1%	14.4%	4.8%	8.3%	4.4%	1.6%
Faridpur	5.2%	16.7%	6.9%	19.3%	9.3%	16.4%	16.9%	11.3%	8.3%	7.6%	1.4%
Feni	0.1%	12.1%	2.4%	11.7%	6.4%	10.3%	10.9%	6.7%	3.9%	6.0%	2.5%
Gaibandha	7.4%	25.0%	5.3%	28.5%	14.0%	23.5%	29.6%	9.8%	16.3%	12.2%	1.3%
Gazipur	0.5%	8.7%	1.1%	4.6%	3.3%	7.0%	8.5%	5.6%	5.6%	2.8%	1.2%
Gopalganj	0.6%	19.7%	13.5%	22.3%	9.3%	17.2%	23.2%	8.8%	9.4%	8.6%	2.0%
Habiganj	4.1%	34.6%	14.6%	35.9%	22.6%	30.4%	28.5%	22.0%	12.8%	16.9%	4.8%
Joypurhat	0.8%	17.2%	2.4%	20.0%	15.9%	15.0%	19.1%	6.5%	10.8%	6.6%	1.6%
Jamalpur	9.1%	26.7%	3.8%	29.7%	10.9%	26.0%	29.6%	9.6%	20.9%	11.2%	2.6%
Jashore	0.9%	7.3%	3.7%	8.6%	6.7%	6.8%	8.4%	3.6%	5.1%	4.0%	1.9%
Jhalokati	4.4%	19.8%	11.2%	19.8%	13.3%	17.8%	19.4%	8.5%	5.1%	6.8%	2.1%
Jhenaidah	0.8%	7.4%	1.5%	7.9%	0.6%	6.2%	8.2%	3.0%	5.4%	2.5%	0.7%
Khagrachhari	26.7%	30.7%	27.3%	36.1%	27.2%	34.5%	33.7%	14.4%	15.3%	8.9%	3.4%
Khulna	2.8%	13.5%	10.1%	12.7%	6.4%	13.0%	13.5%	5.5%	6.7%	4.7%	1.2%
Kishoregonj	3.4%	31.7%	13.6%	33.5%	10.0%	28.2%	32.2%	18.4%	20.8%	14.0%	4.0%
Kurigram	17.1%	27.3%	1.6%	38.1%	22.2%	33.8%	39.0%	13.1%	24.7%	9.8%	2.1%
Kushtia	1.2%	10.5%	3.1%	11.2%	3.3%	9.6%	11.5%	4.4%	6.5%	3.7%	1.7%

	Electricity	Sanitation	Water	Housing	Cooking Fuel	Assets	Internet	Child School Attendance	Years of Schooling	Nutrition	Reproductive Health
Lakshmipur	19.7%	31.7%	23.4%	32.5%	15.4%	31.1%	26.7%	17.2%	11.6%	12.5%	5.0%
Lalmonirhat	8.5%	12.6%	0.8%	23.5%	12.3%	19.4%	23.8%	7.7%	12.1%	8.9%	2.4%
Madaripur	1.0%	18.0%	13.2%	21.5%	10.0%	17.6%	24.1%	10.8%	11.1%	7.3%	4.1%
Magura	2.4%	17.3%	7.6%	18.8%	10.3%	14.1%	18.3%	8.2%	8.5%	7.3%	2.3%
Manikganj	1.5%	12.7%	3.1%	13.1%	1.8%	10.3%	11.7%	5.8%	9.1%	2.7%	1.5%
Meherpur	0.9%	7.8%	2.1%	9.7%	5.3%	7.4%	10.3%	3.2%	6.5%	3.7%	1.0%
Maulvibazar	7.6%	23.6%	13.8%	27.4%	15.2%	23.6%	26.1%	17.3%	13.0%	11.4%	3.9%
Munshiganj	1.3%	14.4%	2.7%	8.8%	9.0%	12.2%	12.8%	7.3%	8.1%	5.9%	1.3%
Mymensingh	7.7%	29.8%	10.1%	33.1%	9.9%	26.8%	31.8%	19.4%	17.0%	12.4%	4.0%
Naogaon	3.1%	14.0%	7.1%	16.4%	4.0%	12.0%	16.2%	4.7%	10.0%	4.3%	1.9%
Narail	4.0%	17.2%	10.9%	19.4%	9.9%	15.6%	17.6%	8.8%	7.9%	8.1%	3.1%
Narayangonj	0.2%	13.1%	2.3%	6.9%	2.1%	10.3%	12.1%	10.6%	7.3%	4.2%	3.7%
Narsingdi	0.3%	19.9%	2.1%	18.7%	8.9%	16.9%	17.3%	11.1%	10.1%	7.8%	2.1%
Natore	2.5%	14.5%	2.8%	16.2%	4.6%	14.2%	16.2%	6.4%	10.1%	3.6%	1.8%
Chapai Nawabganj	4.2%	26.9%	11.6%	26.2%	16.4%	17.8%	25.1%	12.5%	13.3%	8.5%	4.2%
Netrokona	7.8%	34.5%	18.8%	37.6%	14.6%	31.0%	35.6%	18.2%	18.1%	16.2%	3.8%
Nilphamari	5.0%	16.8%	3.3%	23.6%	12.9%	19.3%	23.8%	8.5%	11.8%	9.6%	2.5%
Noakhali	15.0%	30.8%	14.4%	31.2%	16.6%	26.9%	26.4%	16.9%	10.9%	14.8%	6.0%
Pabna	1.3%	21.5%	3.8%	22.3%	16.2%	19.0%	24.4%	9.5%	13.1%	8.5%	2.5%
Panchagarh	9.6%	19.0%	0.4%	25.6%	20.7%	15.8%	25.7%	10.1%	10.5%	11.6%	3.9%
Patuakhali	19.1%	27.7%	21.0%	29.3%	9.6%	27.0%	25.2%	12.8%	11.5%	10.3%	4.2%
Pirojpur	5.0%	27.2%	18.1%	27.1%	19.9%	24.3%	25.4%	12.4%	7.6%	10.1%	2.2%
Rajshahi	1.4%	13.3%	7.4%	14.1%	8.3%	10.2%	12.7%	5.1%	6.9%	5.0%	1.3%
Rajbari	3.2%	16.6%	4.9%	20.1%	9.8%	15.4%	18.0%	6.9%	12.5%	7.9%	2.3%
Rangamati	33.2%	42.1%	40.2%	44.6%	39.7%	42.2%	40.5%	13.9%	19.4%	12.9%	2.7%
Rangpur	3.0%	18.7%	5.2%	21.8%	11.7%	17.3%	21.7%	7.5%	12.2%	5.6%	2.5%
Shariatpur	3.9%	22.6%	14.8%	26.9%	8.4%	25.6%	21.8%	14.9%	11.6%	10.0%	3.0%
Satkhira	4.4%	18.5%	16.4%	19.2%	16.0%	14.0%	18.7%	8.2%	8.4%	6.1%	2.0%
Sirajganj	4.2%	25.9%	2.6%	28.2%	16.3%	23.5%	27.5%	12.4%	15.1%	9.9%	4.0%
Sherpur	2.7%	32.2%	4.0%	33.9%	13.4%	30.5%	34.8%	11.0%	22.4%	10.6%	3.9%
Sunamganj	5.9%	38.8%	28.6%	45.8%	33.6%	41.4%	42.1%	26.3%	17.0%	19.5%	4.5%
Sylhet	2.2%	28.1%	16.4%	26.8%	29.9%	28.4%	24.3%	16.9%	8.7%	18.1%	6.1%
Tangail	0.5%	13.3%	1.8%	15.2%	8.6%	12.2%	14.7%	5.5%	10.2%	5.3%	2.1%
Thakurgaon	3.3%	15.3%	0.3%	20.2%	20.3%	11.3%	19.8%	8.6%	10.9%	6.2%	3.1%

APPENDIX G:
HARMONIZED NATIONAL MPI

Figure A.1: **Absolute change in the harmonized national MPI by district and starting point, 2012/13–2019**

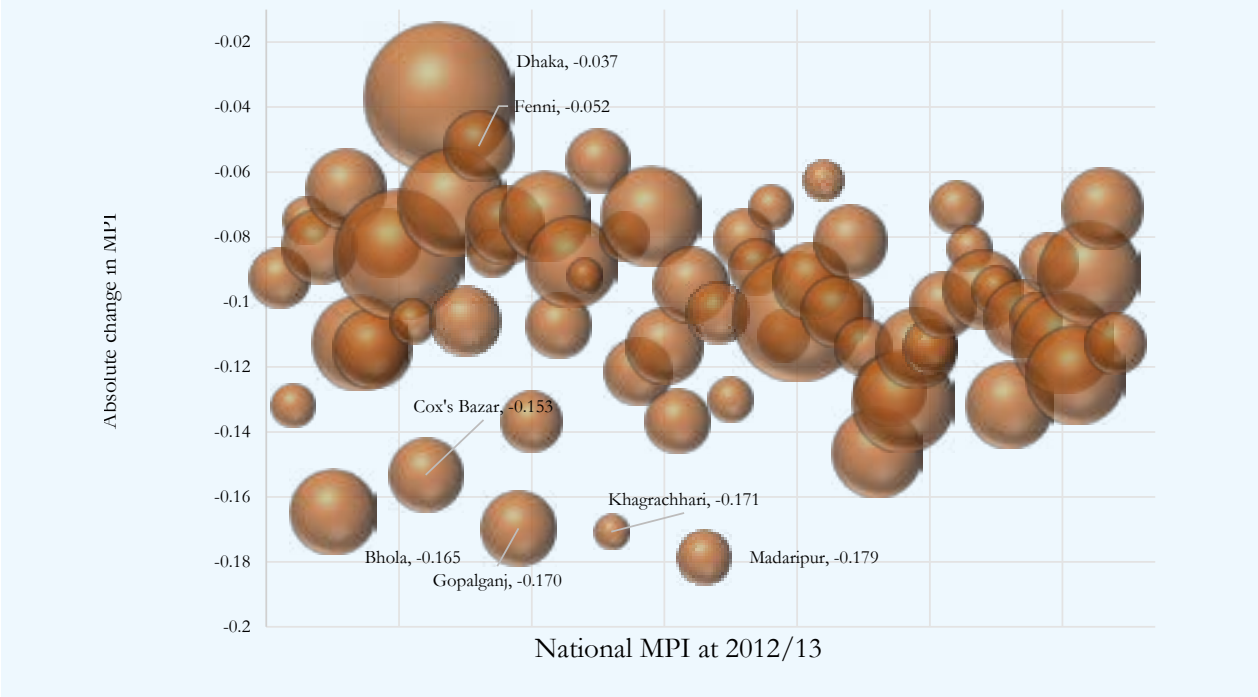


Table A.1: District-wise trends in demographics and number of poor according to the harmonized national MPI

	Population share		Total population		H		Number of poor	
districts	2012/13	2019	2012/13	2019	2012/13	2019	2012/13	2019
Bagerhat	1.01%	0.97%	1,555	1,607	42.77%	27.33%	665	439
Bandarban	0.27%	0.29%	422	482	82.43%	66.31%	348	320
Barguna	0.61%	0.61%	934	1,008	43.23%	29.80%	404	300
Barishal	1.57%	1.55%	2,415	2,565	42.77%	28.16%	1,033	722
Bhola	1.21%	1.17%	1,855	1,928	72.34%	47.92%	1,342	924
Bogura	2.35%	2.25%	3,606	3,715	32.05%	18.56%	1,156	689
Brahmanbaria	1.98%	2.00%	3,035	3,314	54.12%	32.09%	1,642	1,063
Chandpur	1.65%	1.60%	2,535	2,642	44.25%	22.53%	1,122	595
Chapainawabganj	1.14%	1.10%	1,754	1,826	48.34%	26.82%	848	490
Chattogram	5.27%	5.56%	8,092	9,191	37.71%	22.91%	3,052	2,106
Chuadanga	0.78%	0.74%	1,196	1,229	30.35%	11.54%	363	142
Cox's Bazar	1.62%	1.71%	2,485	2,830	40.00%	20.32%	994	575
Cumilla	3.74%	3.77%	5,747	6,227	71.61%	49.15%	4,116	3,061
Dhaka	8.64%	8.96%	13,276	14,811	16.08%	8.95%	2,134	1,325
Dinajpur	2.06%	2.00%	3,170	3,303	28.43%	12.31%	901	407
Faridpur	1.31%	1.31%	2,013	2,174	44.50%	23.62%	896	514
Feni	1.00%	1.00%	1,532	1,653	27.22%	17.02%	417	281
Gaibandha	1.64%	1.54%	2,512	2,553	44.41%	26.84%	1,116	685
Gazipur	2.52%	3.20%	3,877	5,291	26.35%	8.99%	1,022	475
Gopalganj	0.79%	0.79%	1,216	1,302	56.29%	23.44%	684	305
Habiganj	1.45%	1.44%	2,233	2,376	65.57%	43.89%	1,464	1,043
Jamalpur	1.57%	1.52%	2,414	2,516	31.58%	16.22%	762	408
Jashore	1.90%	1.85%	2,926	3,064	51.45%	30.84%	1,505	945
Jhalokati	0.47%	0.40%	720	660	31.24%	10.56%	225	70
Jhenaidah	1.22%	1.21%	1,875	1,998	39.30%	21.59%	737	431
Joypurhat	0.63%	0.58%	961	952	22.34%	9.44%	215	90
Khagrachhari	0.43%	0.43%	655	716	67.97%	38.48%	445	276
Khulna	1.59%	1.57%	2,445	2,603	33.96%	17.61%	830	458
Kishoreganj	2.01%	1.99%	3,083	3,285	59.09%	37.31%	1,822	1,226
Kurigram	1.43%	1.40%	2,201	2,321	48.58%	33.87%	1,069	786
Kushtia	1.34%	1.29%	2,059	2,141	36.77%	12.26%	757	263
Lakshmipur	1.20%	1.17%	1,841	1,943	58.28%	35.89%	1,073	697
Lalmonirhat	0.87%	0.86%	1,331	1,423	40.64%	20.44%	541	291
Madaripur	0.79%	0.79%	1,213	1,300	58.06%	25.04%	704	325
Magura	0.63%	0.62%	971	1,029	37.80%	17.23%	367	177
Manikganj	0.95%	0.95%	1,464	1,566	44.42%	15.82%	650	248
Maulvibazar	1.34%	1.29%	2,051	2,139	28.04%	9.17%	575	196
Meherpur	0.45%	0.43%	692	703	51.07%	34.55%	353	243
Munshiganj	0.99%	0.99%	1,528	1,634	31.11%	14.84%	475	242
Mymensingh	3.53%	3.59%	5,422	5,938	55.87%	34.88%	3,029	2,071

	Population share		Total population		H		Number of poor	
districts	2012/13	2019	2012/13	2019	2012/13	2019	2012/13	2019
Naogaon	1.78%	1.68%	2,735	2,770	37.80%	16.20%	1,034	449
Narail	0.49%	0.47%	753	785	39.56%	21.05%	298	165
Narayanganj	2.11%	2.38%	3,236	3,930	28.66%	14.84%	927	583
Narsingdi	1.55%	1.57%	2,375	2,598	41.22%	22.24%	979	578
Natore	1.18%	1.12%	1,807	1,850	32.64%	15.91%	590	294
Netrokona	1.54%	1.42%	2,358	2,340	62.83%	38.73%	1,482	906
Nilphamari	1.27%	1.26%	1,955	2,085	47.67%	22.19%	932	463
Noakhali	2.17%	2.20%	3,332	3,634	57.16%	36.53%	1,904	1,327
Pabna	1.75%	1.75%	2,687	2,895	43.65%	20.70%	1,173	599
Panchagarh	0.69%	0.71%	1,054	1,176	49.99%	25.39%	527	299
Patuakhali	1.05%	1.04%	1,606	1,724	50.14%	31.08%	805	536
Pirojpur	0.75%	0.72%	1,155	1,196	43.42%	28.98%	502	347
Rajbari	0.72%	0.72%	1,107	1,196	32.83%	14.95%	363	179
Rajshahi	1.79%	1.75%	2,753	2,900	42.18%	22.12%	1,161	641
Rangamati	0.41%	0.39%	636	649	65.61%	48.73%	417	316
Rangpur	1.99%	1.91%	3,055	3,158	45.42%	18.71%	1,388	591
Satkhira	1.35%	1.32%	2,081	2,188	51.84%	32.82%	1,079	718
Shariatpur	0.79%	0.79%	1,212	1,301	41.06%	20.67%	498	269
Sherpur	0.93%	0.91%	1,424	1,512	43.72%	26.51%	623	401
Sirajganj	2.14%	2.02%	3,292	3,340	56.94%	33.84%	1,874	1,130
Sunamganj	1.73%	1.64%	2,651	2,715	67.39%	49.75%	1,786	1,351
Sylhet	2.44%	2.35%	3,748	3,885	51.31%	34.20%	1,923	1,329
Tangail	2.47%	2.45%	3,800	4,059	31.39%	15.19%	1,193	617
Thakurgaon	0.96%	0.92%	1,476	1,528	46.01%	19.44%	679	297

Note: Population and number of poor are in thousands

Table A.2: **Harmonized national MPI statistics, 2012/13 and 2019**

	MPI					H					A				
	2012/13	2019	Abs.Ch.	t-value	P value	2012/13	2019	Abs.Ch.	t-value	P value	2012/13	2019	Abs.Ch.	t-value	P value
National	0.197	0.101	-0.097	-27.93	***	42.7%	24.1%	-18.6%	-26.91	***	46.3%	41.9%	-0.044	-21.26	***
Area															
Rural	0.2183	0.1132	-0.105	29.330	***	47.0%	27.0%	-20.0%	-28.93	***	46.5%	42.0%	-4.5%	-20.22	***
Urban	0.1175	0.0559	-0.062	-8.810	***	26.1%	13.6%	-12.6%	-8.47	***	44.9%	41.2%	-3.7%	-6.86	***
Division															
Barishal	0.242	0.139	-0.103	-11.54	***	50.4%	32.5%	-17.9%	-10.44	***	48.1%	42.9%	-5.3%	-9.98	***
Chattogram	0.232	0.127	-0.105	-10.92	***	47.7%	29.4%	-18.3%	-10.16	***	48.6%	43.2%	-5.4%	-9.81	***
Dhaka	0.153	0.070	-0.083	-11.68	***	33.9%	17.1%	-16.7%	-11.2	***	45.1%	40.7%	-4.4%	-10.15	***
Khulna	0.151	0.060	-0.091	-17.98	***	34.3%	15.3%	-19.0%	-17.66	***	44.0%	39.4%	-4.6%	-11.75	***
Mymensingh	0.263	0.148	-0.116	-11.28	***	56.3%	34.7%	-21.6%	-10.61	***	46.8%	42.5%	-4.3%	-7.44	***
Rajshahi	0.168	0.078	-0.090	-12.92	***	38.1%	19.8%	-18.3%	-12.64	***	44.2%	39.4%	-4.8%	-9.91	***
Rangpur	0.186	0.087	-0.099	-15.6	***	42.7%	21.8%	-20.9%	-14.99	***	43.5%	39.9%	-3.6%	-9.9	***
Sylhet	0.288	0.182	-0.106	-8.15	***	58.2%	40.5%	-17.8%	-7.36	***	49.5%	45.0%	-4.6%	-7.39	***
Age group															
Age 0–9	0.2522	0.1237	-0.129	-29.13	***	52.1%	28.7%	-0.234	-28.4	***	48.4%	43.0%	-5.4%	-19.84	***
Age 10–17	0.2242	0.1244	-0.1	-24.32	***	47.9%	29.0%	-0.189	-23.09	***	46.8%	42.9%	-3.9%	-16.34	***
Age 18–24	0.1417	0.0769	-0.065	-18.46	***	32.2%	18.6%	-0.136	-17.97	***	43.9%	41.2%	-2.7%	-9.81	***
Age 25–39	0.1839	0.0867	-0.097	-25.84	***	39.8%	20.9%	-0.19	-24.38	***	46.2%	41.6%	-4.6%	-19.62	***
Age 36–49	0.1816	0.0901	-0.091	-25.19	***	39.5%	21.5%	-0.18	-24.01	***	46.0%	41.9%	-4.0%	-17.02	***
Age 50+	0.1686	0.0952	-0.073	-23.31	***	38.5%	23.9%	-0.146	-21.09	***	43.7%	39.8%	-3.9%	-19.95	***

Note: Absolute change (Abs.Ch.) is the absolute change between 2012/13 and 2019, t-statistics (t) and P value denoting statistical significance on the absolute change.

Table A.3: Harmonized national MPI statistics by district, 2012/13 and 2019

	MPI					H					A				
	2012/13	2019	Absolute change	tval	pval	2012/13	2019	Absolute change	tval	pval	2012/13	2019	Absolute change	tval	pval
Bangladesh	0.197	0.101	-0.097	-27.9	***	42.7%	24.1%	-18.6%	-26.9	***	46.3%	41.9%	-4.4%	-21.26	***
Bagerhat	0.203	0.110	-0.093	-5.83	***	42.8%	27.3%	-15.5%	-4.64	***	47.4%	40.3%	-7.1%	-8.14	***
Bandarban	0.457	0.326	-0.132	-3.26	***	82.4%	66.3%	-16.1%	-2.39	*	55.5%	49.1%	-6.4%	-3.72	***
Barguna	0.200	0.125	-0.075	-5.43	***	43.2%	29.8%	-13.4%	-4.48	***	46.2%	41.9%	-4.3%	-6.87	***
Barishal	0.198	0.116	-0.083	-3.97	***	42.8%	28.2%	-14.6%	-3.57	***	46.4%	41.0%	-5.4%	-3.82	***
Bhola	0.380	0.216	-0.165	-7.6	***	72.3%	47.9%	-24.4%	-6.42	***	52.6%	45.0%	-7.5%	-7.1	***
Bogura	0.136	0.071	-0.065	-4.13	***	32.1%	18.6%	-13.5%	-3.95	***	42.5%	38.3%	-4.2%	-2.87	***
Brahmanbaria	0.253	0.140	-0.112	-4.31	***	54.1%	32.1%	-22.0%	-4.22	***	46.7%	43.8%	-3.0%	-2.74	**
Chandpur	0.205	0.090	-0.114	-6.11	***	44.3%	22.5%	-21.7%	-5.67	***	46.2%	40.1%	-6.2%	-5.87	***
Chattogram	0.177	0.095	-0.082	-3.66	***	37.7%	22.9%	-14.8%	-3.39	***	47.0%	41.7%	-5.3%	-4.01	***
Chuadanga	0.129	0.044	-0.085	-7.26	***	30.4%	11.5%	-18.8%	-6.79	***	42.6%	38.1%	-4.5%	-4.89	***
Cumilla	0.184	0.078	-0.106	-7.12	***	40.0%	20.3%	-19.7%	-6.07	***	46.0%	38.4%	-7.6%	-7.41	***
Cox's Bazar	0.379	0.226	-0.153	-6.83	***	71.6%	49.2%	-22.5%	-5.63	***	52.9%	45.9%	-7.0%	-6.83	***
Dhaka	0.073	0.036	-0.037	-2.77	**	16.1%	9.0%	-7.1%	-2.64	**	45.4%	40.4%	-5.0%	-3.06	***
Dinajpur	0.118	0.049	-0.069	-4.95	***	28.4%	12.3%	-16.1%	-4.96	***	41.6%	39.9%	-1.7%	-1.44	
Faridpur	0.200	0.094	-0.106	-4.73	***	44.5%	23.6%	-20.9%	-4.49	***	45.0%	39.9%	-5.1%	-4.78	***
Feni	0.118	0.066	-0.052	-3.83	***	27.2%	17.0%	-10.2%	-3.3	***	43.3%	38.7%	-4.6%	-3.9	***
Gaibandha	0.192	0.107	-0.085	-5.43	***	44.4%	26.8%	-17.6%	-5.18	***	43.3%	40.0%	-3.3%	-3.2	***
Gazipur	0.113	0.036	-0.076	-5.84	***	26.4%	9.0%	-17.4%	-6.13	***	42.7%	40.3%	-2.4%	-1.8	
Gopalganj	0.263	0.093	-0.170	-9.98	***	56.3%	23.4%	-32.9%	-9.87	***	46.6%	39.6%	-7.0%	-6.66	***
Habiganj	0.330	0.194	-0.137	-5.67	***	65.6%	43.9%	-21.7%	-4.89	***	50.4%	44.1%	-6.3%	-5.75	***
Joypurhat	0.134	0.060	-0.074	-5.78	***	31.6%	16.2%	-15.4%	-5.48	***	42.4%	37.2%	-5.2%	-5.13	***
Jamalpur	0.236	0.129	-0.107	-5.58	***	51.5%	30.8%	-20.6%	-5.27	***	45.9%	41.7%	-4.2%	-3.94	***
Jashore	0.129	0.042	-0.087	-7.95	***	31.2%	10.6%	-20.7%	-8.32	***	41.3%	39.3%	-2.0%	-1.9	
Jhalokati	0.179	0.087	-0.092	-6.48	***	39.3%	21.6%	-17.7%	-5.63	***	45.6%	40.5%	-5.1%	-4.51	***
Jhenaidah	0.092	0.035	-0.057	-6.67	***	22.3%	9.4%	-12.9%	-6.38	***	41.0%	37.2%	-3.8%	-3.78	***

	MPI					H					A				
	2012/13	2019	Absolute change	tval	pval	2012/13	2019	Absolute change	tval	pval	2012/13	2019	Absolute change	tval	pval
Khagrachhari	0.347	0.176	-0.171	-5.85	***	68.0%	38.5%	-29.5%	-5.51	***	51.0%	45.8%	-5.3%	-4.13	***
Khulna	0.149	0.070	-0.080	-5.71	***	34.0%	17.6%	-16.4%	-5.36	***	44.0%	39.5%	-4.5%	-3.5	***
Kishoregonj	0.283	0.162	-0.121	-6.1	***	59.1%	37.3%	-21.8%	-5.76	***	48.0%	43.4%	-4.5%	-3.95	***
Kurigram	0.213	0.139	-0.074	-3.82	***	48.6%	33.9%	-14.7%	-3.58	***	43.8%	41.1%	-2.7%	-2.87	***
Kushtia	0.161	0.048	-0.114	-9.12	***	36.8%	12.3%	-24.5%	-9.1	***	43.8%	38.7%	-5.1%	-5.26	***
Lakshmipur	0.296	0.159	-0.137	-4.06	***	58.3%	35.9%	-22.4%	-4.07	***	50.8%	44.4%	-6.4%	-3.26	***
Lalmonirhat	0.175	0.080	-0.095	-7	***	40.6%	20.4%	-20.2%	-6.64	***	43.0%	39.0%	-3.9%	-4.94	***
Madaripur	0.279	0.100	-0.179	-11.3	***	58.1%	25.0%	-33.0%	-10.1	***	48.0%	40.0%	-8.0%	-8.92	***
Magura	0.171	0.067	-0.103	-7.63	***	37.8%	17.2%	-20.6%	-6.79	***	45.1%	38.9%	-6.2%	-6.53	***
Manikganj	0.191	0.061	-0.130	-7.94	***	44.4%	15.8%	-28.6%	-7.94	***	43.0%	38.6%	-4.4%	-4.84	***
Meherpur	0.115	0.034	-0.081	-6.19	***	28.0%	9.2%	-18.9%	-6.01	***	41.0%	37.4%	-3.6%	-4.44	***
Maulvibazar	0.242	0.153	-0.089	-4.25	***	51.1%	34.6%	-16.5%	-4.04	***	47.5%	44.4%	-3.1%	-2.81	**
Munshiganj	0.132	0.061	-0.071	-4.88	***	31.1%	14.8%	-16.3%	-5.39	***	42.3%	40.9%	-1.4%	-0.91	
Mymensingh	0.259	0.149	-0.111	-6.24	***	55.9%	34.9%	-21.0%	-5.89	***	46.4%	42.6%	-3.8%	-4.06	***
Naogaon	0.167	0.062	-0.104	-7.04	***	37.8%	16.2%	-21.6%	-6.71	***	44.1%	38.5%	-5.7%	-5.93	***
Narail	0.178	0.084	-0.094	-6.49	***	39.6%	21.1%	-18.5%	-5.89	***	45.0%	40.0%	-4.9%	-4.89	***
Narayangonj	0.123	0.060	-0.063	-4.07	***	28.7%	14.8%	-13.8%	-3.94	***	42.8%	40.4%	-2.3%	-2.23	*
Narsingdi	0.192	0.089	-0.103	-4.22	***	41.2%	22.2%	-19.0%	-4.3	***	46.5%	39.9%	-6.6%	-3.76	***
Natore	0.143	0.062	-0.081	-5.22	***	32.6%	15.9%	-16.7%	-4.94	***	43.9%	38.9%	-5.0%	-4.54	***
Chapai Nawabganj	0.223	0.110	-0.114	-5.11	***	48.3%	26.8%	-21.5%	-4.83	***	46.1%	40.8%	-5.3%	-4.25	***
Netrokona	0.317	0.171	-0.146	-7.45	***	62.8%	38.7%	-24.1%	-6.7	***	50.4%	44.1%	-6.3%	-5.29	***
Nilphamari	0.214	0.087	-0.127	-8.62	***	47.7%	22.2%	-25.5%	-8.04	***	44.9%	39.2%	-5.7%	-7.35	***
Noakhali	0.296	0.165	-0.130	-3.89	***	57.2%	36.5%	-20.6%	-3.79	***	51.7%	45.3%	-6.5%	-3.4	***
Pabna	0.196	0.082	-0.114	-5.26	***	43.7%	20.7%	-23.0%	-5.3	***	44.9%	39.5%	-5.4%	-3.88	***
Panchagarh	0.218	0.104	-0.114	-7.34	***	50.0%	25.4%	-24.6%	-7.5	***	43.6%	41.0%	-2.6%	-2.81	***
Patuakhali	0.236	0.135	-0.101	-5.09	***	50.1%	31.1%	-19.1%	-4.76	***	47.1%	43.5%	-3.6%	-3.97	***
Pirojpur	0.193	0.122	-0.071	-4.77	***	43.4%	29.0%	-14.4%	-4.65	***	44.4%	42.1%	-2.3%	-2.33	*
Rajshahi	0.141	0.057	-0.084	-4.93	***	32.8%	15.0%	-17.9%	-4.75	***	42.9%	38.3%	-4.6%	-4.61	***
Rajbari	0.186	0.090	-0.096	-5.56	***	42.2%	22.1%	-20.1%	-5.52	***	44.2%	40.8%	-3.4%	-3.47	***

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	2012/13	2019	Absolute change	tval	pval	2012/13	2019	Absolute change	tval	pval	2012/13	2019	Absolute change	tval	pval
Rangamati	0.321	0.225	-0.096	-3.27	***	65.6%	48.7%	-16.9%	-3.11	***	49.0%	46.2%	-2.8%	-2.25	*
Rangpur	0.203	0.072	-0.132	-8.95	***	45.4%	18.7%	-26.7%	-8.6	***	44.8%	38.4%	-6.4%	-8	***
Shariatpur	0.241	0.136	-0.105	-5.17	***	51.8%	32.8%	-19.0%	-4.67	***	46.4%	41.3%	-5.1%	-5.05	***
Satkhira	0.189	0.083	-0.105	-5.45	***	41.1%	20.7%	-20.4%	-5.27	***	46.0%	40.3%	-5.7%	-5.58	***
Sirajganj	0.196	0.109	-0.088	-4.37	***	43.7%	26.5%	-17.2%	-4.35	***	44.9%	40.9%	-4.0%	-3.31	***
Sherpur	0.248	0.135	-0.112	-7	***	56.9%	33.8%	-23.1%	-6.77	***	43.5%	40.0%	-3.5%	-3.62	***
Sunamganj	0.346	0.223	-0.122	-5.37	***	67.4%	49.8%	-17.6%	-4.61	***	51.3%	44.9%	-6.4%	-5.15	***
Sylhet	0.248	0.157	-0.091	-3.44	***	51.3%	34.2%	-17.1%	-3.46	***	48.4%	46.0%	-2.4%	-2	*
Tangail	0.130	0.059	-0.071	-5.28	***	31.4%	15.2%	-16.2%	-4.99	***	41.3%	38.6%	-2.7%	-2.83	***
Thakurgaon	0.191	0.078	-0.113	-7.93	***	46.0%	19.4%	-26.6%	-7.96	***	41.4%	40.1%	-1.3%	-1.48	

General Economics Division (GED)
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