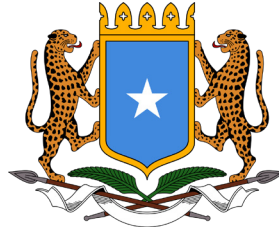**Federal Republic of Somalia**

Multidimensional Poverty Index (MPI)
For Somalia Report
2024

Federal Republic of Somalia

MULTIDIMENSIONAL POVERTY INDEX (MPI)
FOR SOMALIA
REPORT

2024

**Somalia National
Bureau of Statistics**

MINISTRY OF
LABOUR AND SOCIAL
AFFAIRS

This report presents findings from the computation of the Multidimensional Poverty Index produced by the Somalia National Bureau of Statistics (SNBS) & Ministry of Labour and Social Affairs (MoLSA) 2024.

Additional information concerning the MPI, and microdata or tables may be obtained from the Somalia National Bureau of Statistics (SNBS).

Preface

The Somalia National Bureau of Statistics (SNBS) and the Ministry of Labour and Social Affairs (MoLSA) is honored to present the first National Multidimensional Poverty Index (MPI) Report for Somalia. This ground-breaking report provides a comprehensive analysis of poverty, offering in-depth insights into the deprivations affecting the Somali population and advancing the country's commitment to evidence-based policymaking.

Based on data from the 2022 Somalia Integrated Household Budget Survey (SIHBS), this report employs the Alkire-Foster method, developed by Sabina Alkire and James Foster of the Oxford Poverty and Human Development Initiative (OPHI), adapted to Somalia's unique context. It complements monetary poverty measures by capturing the multiple, simultaneous deprivations faced by individuals. This holistic approach supports Somalia's alignment with the National Transformation Plan (NTP), Agenda 2063 of the African Union, and the United Nations Sustainable Development Goals (SDGs), particularly the Sustainable Development Goal (SDG) 1, which aims to eradicate poverty in all its forms.

The dimensions, indicators, cut-offs, and weights used in the MPI for Somalia were developed through extensive consultations with stakeholders, including experts from government institutions, academia and civil society organizations. These efforts underscore the collaborative and inclusive process that underpins this milestone achievement.

The findings reveal critical gaps in basic service provision and highlight the unequal access to fundamental needs across different population groups. By going beyond income-based metrics, the MPI enables policymakers and development partners to identify and prioritize targeted interventions that address these multidimensional challenges, fostering more informed and effective poverty reduction efforts.

This report is released at a pivotal time, coinciding with the first inclusion of Somalia in the Global Human Development Report 2024 through the Somalia Human Development Index (HDI). Together, the MPI and HDI establish robust baselines for understanding poverty and inequality, offering valuable data for planning and policymaking. These initiatives align with ongoing national efforts, such as Somalia Vision 2060 and the Somalia National Transformation Plan 2025-2029, and provide critical insights for creating a more inclusive, resilient, and equitable society.

We hope this report serves as an invaluable resource for identifying strategies to combat poverty, reduce inequality, and improve the lives of all Somali citizens.

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ACKNOWLEDGMENT

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ACRONYMS AND ABBREVIATIONS

HDI	Human Development Index
MPI	Multidimensional Poverty Index
NDP	National Development Plans
OPHI	Oxford Poverty and Human Development Initiative
SDGs	Sustainable Development Goals
UNDP	United Nations Development Programme
MOLSA	Ministry Of Labour And Social Affairs
SNBS	Somalia National Bureau of Statistics

Executive Summary Narrative

The multidimensional poverty measurement is now a firmly established fundamental approach to understanding the situation of different groups in poverty as well as a baseline for holding governments accountable for poverty response.

This report provides a picture of multidimensional poverty in Somalia, based on the 2022 Somalia Integrated Household Budget Survey (SIHBS), and presents a structure that was endorsed by various national and subnational stakeholders, and aims to reflect the realities of persons living in multidimensional poverty in Somalia.

This MPI report helps Somalia have a different approach to measuring poverty. In addition to the conventional monetary poverty measures estimated in 2023, the MPI is intended to complement monetary poverty measures, providing a comprehensive picture of the different dimensions of poverty and the multiple deprivations faced by people and households living in multidimensional poverty.

Both measures (monetary and multidimensional poverty) provide an important source of information for public policy. In the case of multidimensional poverty, the results of the national MPI for Somalia provide a road map for poverty reduction and will guide different policies aiming to reduce poverty and deprivation in the country,

The analysis used five dimensions, each with corresponding indicators. The education dimension included indicators such as school attendance and years of schooling. The health dimension focused on food security and access to healthcare. The living standard dimension considered housing, cooking fuel, and overcrowding. The services dimension looked at electricity, water, and sanitation; and the inclusion dimension consisted of indicators such as assets, shocks, and unemployment.

Key results

At the national level, the incidence of multidimensional poverty (the per centage of people who are multidimensionally poor or the poverty rate or headcount ratio) was estimated at 67.0 per cent. The intensity of deprivation, the average deprivation score across all poor persons, is 54.3 per cent. The MPI, which is the product of the incidence of poor people and the intensity of poverty, has a value of 0.363.

Multidimensional poverty is prevalent in rural and nomadic areas, with 74.3 per cent and 81.5 per cent of the nomadic population identified as multidimensionally poor, respectively. Urban areas have the lowest incidence at 61.7 per cent, with six out of ten people in urban areas being multidimensionally poor.

Based on individual indicators, the highest deprivation occurs in cooking fuel (87.8 per cent), overcrowding (66.9 per cent), and school attendance (56.2 per cent). Healthcare access shows the lowest deprivation rate at 5.9 per cent.

The per centage of Somalia's population that is both multidimensionally poor and deprived in specific indicators provides critical insights into the most severe deprivations. Nationally, the greatest challenges are in cooking fuel (63.3 per cent) and overcrowding (55.4 per cent), followed by years of schooling (47.8 per cent). Healthcare access shows the lowest deprivation at 5.4 per cent.

In urban areas, cooking fuel (58.3 per cent) and overcrowding (49.5 per cent) remain significant issues, while access to electricity (17.4 per cent) and water (16.2 per cent) is relatively better. Rural areas face deeper challenges, with cooking fuel deprivation affecting 72.9 per cent, overcrowding at 60.8 per cent, and poor housing conditions at 58.4 percent. Nomadic populations endure the highest levels of deprivation, with 78.2 per cent affected by overcrowding, 77.6 per cent experiencing low educational attainment, and 48.3 per cent lacking adequate water access.

The per centage contribution of each indicator to multidimensional poverty varies across national, urban, rural, and nomadic populations in Somalia. Nationally, education contributes 26.1 per cent and living standards 29.8 per cent, driven by school attendance (13.0 per cent), years of schooling (13.1 per cent), cooking fuel (11.6 per cent), and overcrowding (10.2 per cent).

In urban areas, living standards dominate at 30.7 per cent, with cooking fuel (11.6 per cent) and housing (9.2 per cent) as key contributors, followed by education at 24.7 per cent, primarily from school attendance (12.9 per cent). Rural areas mirror this pattern, with education contributing 24.7 per cent and living standards 30.0 per cent, notably from years of schooling (13.3 per cent) and cooking fuel (11.4 per cent).

For nomadic populations, education is the largest contributor at 36.6 per cent, with years of schooling (19.6 per cent) followed by school attendance at 17.0 per cent. being significant. Living standards contribute at 25.4 per cent, mainly through overcrowding (13.2 per cent), water (8.1 per cent) and shocks (11.1 per cent) play notable roles due to their lifestyle-specific challenges.

Bakool and Hiraan have the highest poverty levels, with 97.4 per cent and 90.1 per cent of their population multidimensionally poor, and MPI values of 0.669 and 0.517, respectively, indicating severe and widespread deprivations.

In contrast, Awdal and Lower Shabelle report significantly lower poverty, with incidences of (46.2 per cent) and (47.4 per cent) and MPI values of 0.232 and 0.230, reflecting better living conditions.

When comparing income and multidimensional poverty, this report reveals that 45.5 per cent of the population experiences both monetary and multidimensional poverty, indicating significant deprivation in essential services and living standards. This group is the most vulnerable, facing compound challenges. 24.4 per cent of the population is multidimensionally poor but not monetary poor, experiencing significant deprivation in areas like education, health, and living standards despite having income above the national poverty line. 9.6 per cent of the population is monetary poor but not multidimensionally poor, earning below the poverty line but not experiencing significant non-monetary deprivations.

This MPI report lays the foundation for transformative poverty reduction efforts in Somalia. By addressing the multidimensional nature of poverty, the government can successfully implement targeted, evidence-based policies that improve the lives of its citizens and foster inclusive development across all regions.

CHAPTER 1
INTRODUCTION

Introduction

Somalia's efforts to address poverty have been guided by the National Development Plan (NDP) to ensure a basic standard of living for all its people, particularly the most vulnerable groups. These efforts include providing social protection benefits and support for those affected by conflict and natural disasters, along with improving access to essential services.

Despite these commitments, poverty reduction in Somalia remains a persistent challenge, hindered by deeply entrenched causes such as economic fragility, displacement, and climate-induced shocks. Addressing this issue requires a multidimensional understanding of poverty, particularly given the limitations of traditional monetary poverty indicators. These conventional metrics fail to capture the complex and diverse deprivations experienced by individuals and communities in Somalia.

According to the Somalia Poverty Report in 2023 (SNBS, 2023), poverty is one of the country's primary challenges, with over half of the population (54.4 per cent) living below the poverty line, consuming less than $2.06 per day. This significant poverty rate is particularly acute among nomadic communities, with 78.4 per cent of this population

falling below the poverty line. Rural areas also face severe poverty challenges, with 65.5 per cent of the rural population living in poverty. While urban areas show a lower poverty rate at 46.1 per cent, it remains a significant concern, highlighting the multifaceted nature of poverty in Somalia. By design, the traditional monetary poverty indicators cannot fully capture the depth and diversity of deprivation faced by individuals and society.

Historically, poverty was measured using monetary metrics, focusing on income and expenditure levels. Poverty was defined as the inability to meet a minimum threshold of consumption or income. However, such measures were criticized for overlooking critical dimensions of deprivation, including education, healthcare, and living standards.

In the 1990s, Amartya Sen's capability approach revolutionized the understanding of poverty by framing it as a deprivation of fundamental capabilities rather than solely a lack of income. This paradigm shift expanded the scope of poverty measurement to include non-monetary factors, paving the way for multidimensional approaches.

Building on this foundation, the Oxford Poverty and Human Development Initiative (OPHI) and the United Nations Development Programme (UNDP) introduced the global Multidimensional Poverty Index (MPI) in 2010. The global MPI employs the Alkire-Foster method to assess poverty through two sub-indices: incidence (the proportion of people living in poverty) and intensity (the average proportion of deprivations experienced by the poor). This dual approach captures the breadth and depth of poverty, offering a robust framework for analysis and policy intervention.

The shift from traditional monetary measures to MPI represents a paradigm shift in the analysis of poverty. It links Somalia not only with global development frameworks such as the SDGs but also provides an added strong tool in addressing its peculiar challenges. The MPI, by focusing on multidimensional deprivations, empowers policymakers to prioritize investments and resources for building resilience and advancing Somalia's journey toward sustainable development.

The national MPI for Somalia report presents a more comprehensive picture of the poor's experiences and challenges. It can show the overlap of deprivations associated with many different SDGs, encourage integrated and multi-sectoral policies, and bring various ministries to the table with one common goal: reducing, if not eliminating, poverty in all its forms everywhere.

The resulting MPI provides a detailed understanding of poverty's manifestations nationwide. Disaggregating data by population subgroups and geographic areas highlights disparities and identifies the most vulnerable groups. This information equips policymakers to craft interventions that address the root causes of poverty and build resilience among affected populations. Furthermore, it helps shape vital plans in Somalia, including the Somali National Transformation Plan, Sustainable Development Goals, and the agenda of 2063.

In Somalia, the MPI serves as a critical tool for addressing the multifaceted nature of poverty. The Somali government has recognized the need for a holistic approach to poverty reduction, reflected in the development of its national MPI. This initiative aligns with National Development Plan (2020–2024) and the interim Poverty Reduction Strategy, both of which emphasize the importance of tackling poverty in all its dimensions.

The main objective of the national MPI is to provide a more holistic social policy framework, enabling policymakers to reduce poverty and inequality in all its forms. Specific objectives include the following:

1. Provide evidence to inform and guide policies and shape efficient social protection strategies and programs.

2. Enable policymakers to develop a multidimensional poverty reduction strategy.

3. Support strategies that prioritize the most marginalized populations, ensuring no one is left behind.

4. Identify key indicators and population groups for efficient multidimensional poverty reduction.

5. Complement monetary poverty statistics and guide public policy (reorientation of social policy to reduce poverty levels).

CHAPTER 2
METHODOLOGY

2024

Methodology

2.1 Alkire-Foster Method

The national MPI of Somalia is constructed using the Alkire-Foster (AF) Method. This counting-based approach to measuring multidimensional poverty was developed by James Foster and Sabina Alkire in 2011[1] and offers a nuanced way of measuring poverty, recognizing that it extends far beyond just a lack of income or material wealth. Instead, it acknowledges that poverty is a complex phenomenon, where individuals may experience multiple deprivations simultaneously in various aspects of their lives. For instance, a person might face illiteracy, poor sanitation, and malnutrition all at once.

The MPI underscores that these deprivations are often interconnected and do not occur in isolation. By identifying and analyzing these overlapping disadvantages, the AF Method allows for the construction of detailed deprivation profiles. These profiles are then used to build a comprehensive MPI, as well as its specific component indicators, offering a more holistic view of poverty and the challenges faced by those living in such conditions.

Designing a national MPI begins with selecting the purpose of the measure and the unit of identification, then it moves to select the dimensions and indicators used to measure poverty. Indicators are the specific aspects a country wants to assess, such as whether a child is attending school or if a household has access to clean drinking water. Dimensions, on the other hand, are broader categories that group these indicators, such as education or living standards. Once dimensions and indicators are selected, a deprivation cutoff is defined, this implies whether an individual is deprived or not in each indicator, leading to a detailed deprivation profile for each individual or household. After this, weights are assigned to each indicator, reflecting the relative importance of each indicator in multidimensional poverty. These weights are then used to calculate a household weighted deprivation score, which shows the per centage of total deprivations a household experience.

The deprivation score is then used to identify whether an individual or household is multidimensionally poor if their deprivation score is greater than or equal to the established multidimensional poverty cut-off.

After identifying each person or non-poor the information is aggregated into two informative statistics:

1. Incidence (H): proportion of population who are multidimensionally poor. This is sometimes referred to as the headcount ratio or the poverty rate.

2. Intensity (A): average share of weighted deprivations among the multidimensionally poor.

3. Multidimensional Poverty Index (MPI): the MPI is then calculated as a product of the incidence and the intensity (MPI = H x A).

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1 Alkire, S. and Foster, J. (2011). "Counting and Multidimensional Poverty Measurement." Journal of Public Economics

The MPI can be analyzed by individual indicators, which not only reveals the overall incidence of poverty but also provides insight into how people experience poverty by showing its specific components. The MPI helps us identify the most prevalent deprivations among those who are poor and pinpoints which indicators contribute the most to multidimensional poverty. Additionally, the MPI and its associated statistics can be further broken down by various factors, such as geographic regions, urban versus rural areas, different age groups etc. This level of detail allows for a deeper understanding of poverty's impact across different populations and locations, enabling more targeted and effective policy interventions.

2.2 Data

Somalia's national Multidimensional Poverty Index is built using data from the 2022 Somalia Integrated Household Budget Survey (SIHBS). The primary goal of this survey is to monitor welfare and establish a baseline for ongoing data collection. While the focus of the SIHBS is to gather information on household expenditure and consumption, it also collects a wide range of other socio-economic data that are vital for assessing the living conditions of the Somali population.

The survey includes modules on health, education, employment, and shocks, among others—each of which plays a crucial role in understanding the real-life experience of poverty in the country. This comprehensive dataset was selected as the most suitable foundation for constructing the MPI because of its relevance and timeliness, as well as the expectation that the SIHBS will continue to be conducted periodically in the future. This continuity allows for the analysis of trends over time, enabling a deeper understanding of how poverty in Somalia evolves and changes.

The SIHBS is designed to be representative across various population segments, including regional, urban, rural, and nomadic areas. The survey utilizes the sampling framework from the Somalia Health and Demographic Survey (SHDS 2020), which employs a stratified multi-stage probability cluster sample design. In this approach, about 35 Enumeration Areas (EAs) were selected from each of the 17 covered regions, resulting in 601 EAs spread throughout the country. Within each EA, 12 households were interviewed, leading to a successful survey of 7,212 households overall. This extensive and methodical sampling ensures that the survey accurately reflects the diverse living conditions across Somalia, making the SIHBS a robust source of data for analyzing and understanding poverty throughout the nation.

2.3 Units of identification and analysis of the National MPI for Somalia

The national MPI for Somalia uses the household as the unit of identification; therefore, we are assuming that deprivations are equally shared among household members. In addition, the unit of analysis is the individual, thus, the results should be read as multidimensionally poor individuals or people living in multidimensionally poor households.

2.4. Structure of the Somalia National MPI

The structure of Somalia's National MPI is built around five equally weighted dimensions: Health, Education, Living Standards, Services, and Inclusion, and 13 specific indicators (detailed in Table 1). The selection of these dimensions and indicators was guided by the National Development Strategy and other key governmental documents. Additionally, extensive stakeholder engagement played a crucial role in shaping the measure, ensuring that it reflects the priorities and realities of those it intends to serve.

Education

There is a well-established link between education and poverty - the more educated a person is, the lower their chances of experiencing poverty. The education dimension includes two key indicators. The first one is school attendance. This indicator identifies a household as deprived if any child of school-going age is not enrolled in school. The relevant age range is from 6 to 13, based on the primary school starting age plus one year, with an assumption that enrollment is required up to grade 8. Ensuring children are in school at this stage is crucial for long-term educational and economic stability. The second indicator, years of schooling, considers a household deprived if no member older than school age has completed at least 8 years of schooling. This reflects the importance of having at least one educated household member as a proxy for the educational opportunities and future outcomes of other members.

Health

The first indicator in the health dimension is food security. This indicator classifies a household as deprived if any member experienced limited food variety, skipped meals, ate less than expected, felt hungry but did not eat, ran out of food, or went a full day without eating due to a lack of money or resources. These experiences reflect severe food insecurity and highlight critical vulnerabilities. According to Somalia's National Development Plan, the health system is burdened by several challenges, including a high disease prevalence, insufficient institutional capacity, and limited access to healthcare services. Overcoming these obstacles is essential to safeguarding the long-term health of the population. As a result, the second indicator is access to health, which identifies a household as deprived if any member has been ill within the past month but did not seek medical advice or treatment. This indicator highlights the significant barriers to healthcare access, which can have long-term adverse effects on both individual well-being and overall productivity.

Living Standards

The living standards dimension focuses on identifying deprivations related to housing conditions and overall quality of life. The first indicator, housing, considers a household deprived if the materials used for the exterior walls, floor, or roof are made from non-durable or temporary materials. This criterion, however, does not apply to nomadic households, as their way of life as pastoralists naturally involves more temporary forms of shelter. The second indicator, cooking fuel, identifies a household as deprived if it relies on solid fuels like charcoal, firewood, crop waste, or animal dung for cooking. This is in line with SDG guidelines where the use of solid fuel imposes serious health hazards. In the case of nomadic households, deprivation is measured differently. A nomadic household is considered deprived if cooking takes place inside the living area without a separate cooking space, as nomads traditionally depend on firewood for cooking and may not have dedicated cooking facilities. Lastly, we measure household overcrowding, where a household is deprived if there are more than 3 occupants per sleeping room. This is in line with WHO (World Health Organization) guidelines.

Services

The services dimension focuses on evaluating deprivations in access to essential social services. The first indicator, electricity, considers a household deprived if its main source of lighting is candles, torches, firewood, or others, provided the household is non-nomadic. For nomads, who often live in remote areas with limited infrastructure, this criterion does not apply as their lifestyle naturally relies on less permanent energy solutions. For drinking water, a household is deemed deprived if it lacks access to an improved water source. Even if an improved water source is available, the household is still considered deprived if the water is not located within their home, yard, or piped to a nearby neighbor, and the roundtrip to collect water exceeds 30 minutes. However, in the case of nomadic households, the distance traveled to fetch water is not factored into this assessment, as their mobility and reliance on distant water sources are part of their traditional lifestyle. In terms of sanitation, a household is considered deprived if it lacks access to improved sanitation facilities or if the facilities are shared with other households, provided that the household is non-nomadic. Nomadic populations, again, are exempt from this indicator as their way of life typically involves more temporary and shared sanitation solutions.

Inclusion

A household is considered deprived in terms of assets if it does not own more than two small assets, such as a radio, bicycle, or mobile phone, and if it owns no livestock. Livestock is especially critical in many communities, serving both as an economic resource and a measure of wealth. In the shocks indicator, a household is classified as deprived if it has experienced a loss of assets or income due to unforeseen events or crises, such as natural disasters, conflict, or economic downturns. This reflects the household's vulnerability to external disruptions and its ability to recover from them. For unemployment, a household is deprived if any working-age member has been actively seeking employment or attempting to start a business in the last four weeks but remains jobless and was available to begin work within the past two weeks. This highlights the struggle for economic inclusion and the challenges of finding work in the labor market.

Note on Nomadic Populations: The selection of deprivation cutoffs was adapted to capture cultural differences between nomadic and non-nomadic populations. However, given data limitations it was not possible to capture all differences correctly.

Table 2.1 Dimensions, indicators, deprivation cutoff and weights of the National MPI for Somalia

Dimension	Indicator	Deprivation cutoff	Weight
Education	School attendance	A household is deprived if a school age child is not attending school	1/10
	Years of schooling	A household is deprived if no member older than school age has 8 years of education or more	1/10
Health	Food Security	A household is deprived if any member of the household ate only a few kinds of foods, or skipped a meal, or ate less than they thought they should, or were hungry but did not eat, or ran out of food, or went without eating for a whole day because of a lack of money or other resources	1/10
	Access health care	A household is deprived if any member had been sick in the last month and did not seek any advice or treatment for his/her condition	1/10
Living Standard	Housing	A household is deprived if the housing materials are non-permanent (exterior walls, roof, floor) and not nomadic	1/15
	Cooking fuel	A household is deprived if it cooks with solid fuels. If nomadic, the household is deprived if it does not have a separate room, OR the cooking is inside the dwelling	1/15
	Overcrowding	A household is deprived if a sleeping room is shared by more than 3 members	1/15
Services	Electricity	A household is deprived if the main source of lighting is firewood, torch, kerosene, candles or other and the household is not nomadic	1/15
	Water	A household is deprived if it does not have access to an improved source of drinking water or if the household has access to improved water but the main source of water for drinking is not located in the dwelling, yard or piped to a neighbour, AND the roundtrip time to get water is more than 30 minutes. In the case of nomadic households, the distance is not considered.	1/15
	Sanitation	A household is deprived if it does not have access to improved sanitation or shares sanitation facilities with other households, and the household is not nomadic	1/15
Inclusion	Asset	A household is deprived if it does not own more than 2 small assets and does not own any livestock	1/15
	Shocks	A household is deprived if the household experienced a reduction of assets or income due to shocks	1/15
	Unemployment	A household is deprived if any working-age member is unemployed and has been looking for a job or trying to start a business during the past 4 weeks and has been available to start a job during the last 2 weeks	1/15

2.5. Poverty Cut-off

In Somalia, a person is classified as multidimensionally poor if they experience deprivations in more than one and a half of the MPI dimensions. Specifically, this means that if the weighted total of their deprivations exceeds 35 per cent of the indicators included in the MPI, they are considered to be living in multidimensional poverty. The chosen poverty cutoff was further validated by rank robustness tests (please see annex), ensuring its reliability

CHAPTER 3
RESULTS

2024

3.1 Introduction

This chapter presents the main results of the Multidimensional Poverty Index (MPI) for Somalia, using data from the 2022 Somali Integrated Household Budget Survey (SIHBS). It focuses on the uncensored headcount ratios, national MPI, and censored headcount ratios, highlighting the incidence and intensity of poverty across the country. The findings are disaggregated by area of residence (urban, rural, and nomadic), and geographic regions.

This comprehensive analysis aims to provide a deep understanding of the dimensions of poverty in Somalia, highlighting regional disparities and the unique challenges faced by different sections of the population. The chapter also examines the overlap between the MPI and traditional measures of monetary poverty in Somalia, providing insights into the complementary nature of these measures.

3.2 Uncensored Headcount Ratio at the National level

Figure 3.1 displays the uncensored headcount ratios for each of the 13 indicators. The uncensored headcount ratio for each indicator represents the proportion of the population experiencing deprivation in that specific indicator, regardless of their overall multidimensional poverty status.

The highest levels of deprivation are observed in cooking fuel (87.8 per cent), overcrowding (66.9 per cent), school attendance (56.2 per cent), years of schooling (54.3 per cent), housing materials (53.5 per cent), food insecurity (53.2 per cent), and asset ownership (51.6 per cent). These indicators indicate widespread deficiencies with more than half the population bring deprived in essential living standards, educational attainment, and food security, which significantly impact their well-being.

In contrast, some indicators show lower rates of deprivation. Access to healthcare has the lowest deprivation rate at 5.9 per cent, therefore, almost 6.0 per cent of the population in Somalia lives in a household where someone has been sick or injured in the last month, asked for healthcare and did not receive it. Other indicators with lower deprivation rates include unemployment (11.9 per cent), electricity (22.7 per cent), and access to a clean source of water (29.5 per cent). Although these rates are lower compared to other indicators, they highlight areas where access improvements could benefit the population.

Figure 3.1 National uncensored headcount ratios Somalia, 2022
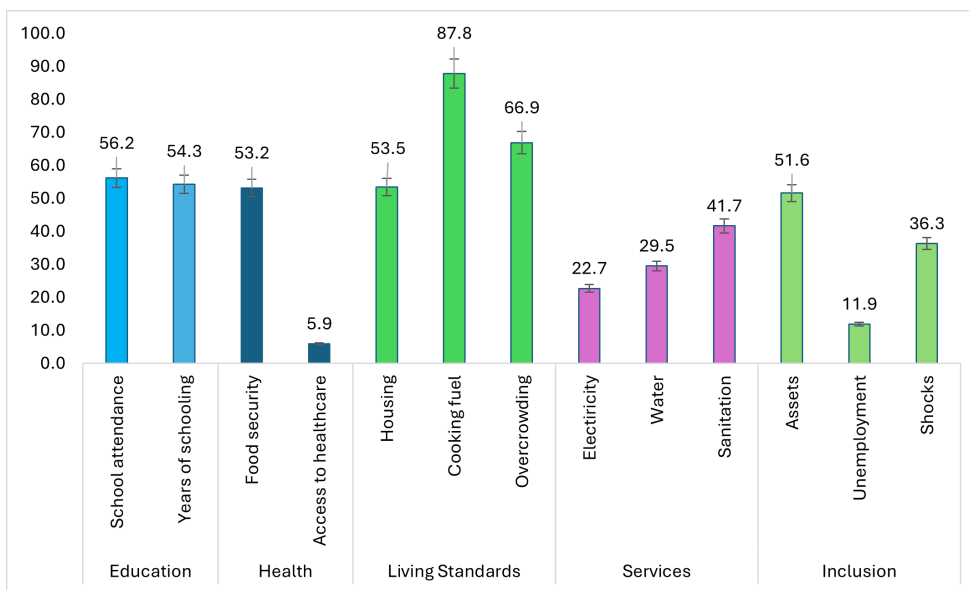
Source: calculations based on SIHBS 2022

3.3 Multidimensional Poverty in Somalia: Incidence, Intensity and MPI

Table 3.1 presents Somalia's Multidimensional Poverty Index (MPI) for 2022, with its partial indices: the incidence (H) and the intensity of multidimensional poverty (A). The incidence of multidimensional poverty in Somalia, at a 35 per cent poverty cut-off, is 67.0 per cent, meaning that slightly more than two-thirds of the population are considered multidimensionally poor according to the national MPI.

The intensity of poverty, which measures the average proportion of weighted indicators in which poor people are deprived, is 54.3 per cent. This indicates that, on average, each poor person in Somalia is deprived in over half of the weighted indicators. The national MPI value for Somalia is 0.363, calculated as the product of the multiplication of incidence of poverty (H) and the intensity of poverty (A).

The national MPI, along with its components, provide a comprehensive picture of poverty in Somalia, helping to identify where poverty is most prevalent and most severe. By considering both the headcount ratio and the intensity of poverty, this analysis captures not just the prevalence of poverty but also the breadth of deprivation experienced by the poor.

The incidence of multidimensional poverty has a margin of error due to its basis on a sample. With a 95% confidence interval ranging from 63.9 per cent to 70.0 per cent, we can say with 95% confidence that the true poverty headcount ratio for the population falls within this range.

Table 3.1 Multidimensional Poverty Index (MPI), Incidence, and Intensity of Somalia

Poverty cutoff (K)	Index	Value	Confidence interval (95%)	
K Value = 35%	MPI	0.363	0.344	0.383
	Incidence (H)	67.0	63.9	70.0
	Intensity (A)	54.3	53.4	55.2

Source: calculations based on SIHBS 2022

To understand how the composition of the national MPI can inform budgetary and policy priorities, this section analyses the variation in deprivation patterns across different population subgroups. By identifying who the poorest groups are, the disaggregated results highlight disparities and areas with concentrated poverty, allowing for targeted interventions to address the needs of the most impoverished.

Table 3.2 presents the MPI, incidence, and intensity of multidimensional poverty across urban, rural, and nomadic areas.

Rural areas exhibit the highest MPI score at 0.425, followed by nomadic areas with an MPI score of 0.395, while urban regions have the lowest MPI score at 0.335. The incidence of multidimensional poverty is highest in nomadic areas, with 81.5 per cent of the population identified as multidimensionally poor. Rural areas have a lower incidence, with 74.3 per cent of the population being multidimensionally poor. In contrast, urban areas report the lowest incidence at 61.7 per cent.

The intensity of poverty, which measures the average proportion of weighted indicators in which poor people are deprived, is highest in rural areas at 57.2 per cent. Urban areas have a slightly lower intensity at 54.3 per cent, while nomadic areas report the lowest intensity of poverty at 48.5 per cent. This shows that poor people in nomadic areas are deprived in fewer indicators compared to their counterparts in rural and urban areas. Here, it is important to highlight that by definition, nomadic groups were classified as non-deprived in indicators such as sanitation, housing, and electricity.

Table 3.2 Incidence, intensity and Multidimensional Poverty by urban, rural and nomadic areas

Area	MPI			Incidence (H)			Intensity (A)		
	Value	Confidence interval (95%)		Value	Confidence interval (95%)		Value	Confidence interval (95%)	
Rural	0.425	0.379	0.471	74.3	67.4	81.3	57.2	55.4	59.0
Urban	0.335	0.311	0.358	61.7	58.0	65.3	54.3	53.1	55.5
Nomadic	0.395	0.351	0.440	81.5	72.8	90.1	48.5	47.6	49.5

Source: calculations based on SIHBS 2022

To gain a deeper understanding of the geographic distribution and composition of poverty in Somalia, the levels of multidimensional poverty across various regions were also analyzed.

Table 3.3 shows multidimensional poverty, incidence (H), and intensity (A) across 17 regions in Somalia. Middle Juba was not sampled due to security issues while fielding the SIHBS. The regions with the highest poverty levels are Bakool and Hiraan. In Bakool, 97.4 per cent of the population is multidimensionally poor, with an intensity of 68.7 per cent; the resulting MPI is 0.669. This indicates that nearly the entire population in Bakool experiences multiple deprivations, facing, on average, more than two-thirds of the weighted deprivations. Similarly, Hiraan reports an incidence of 90.1 per cent and an intensity of 57.3 per cent, leading to an MPI of 0.517. These figures reveal that both Bakool and Hiraan suffer from profound and widespread poverty, with residents experiencing significant levels of deprivation across various indicators.

In contrast, Awdal and Lower Shabelle are significantly less multidimensionally poor compared to other regions. In Awdal, the incidence of multidimensional poverty is 46.2 per cent, while in Lower Shabelle, it is 47.4 per cent. The intensity of multidimensional poverty in these regions is 50.3 per cent and 48.6 per cent, respectively, meaning that, on average, multidimensionally poor people in these regions experience just under half of the weighted deprivations. The MPI values, derived from the product of incidence and intensity, are 0.232 in Awdal and 0.230 in Lower Shabelle, reflecting the lower poverty levels in these regions compared to other parts of the country.

Table 3.3 Multidimensional poverty by region

Region	MPI			Headcount (H)			Intensity (A)		
	Value	Confidence interval (95%)		Value	Confidence interval (95%)		Value	Confidence interval (95%)	
Bakool	0.669	0.647	0.690	97.4	96.0	98.8	68.7	66.8	70.6
Hiraan	0.517	0.481	0.553	90.1	86.2	94.1	57.3	54.8	59.8
Lower Juba	0.515	0.473	0.557	89.1	84.4	93.8	57.8	55.3	60.2
Bay	0.540	0.470	0.609	88.3	82.8	93.9	61.1	56.2	66.0
Gedo	0.535	0.466	0.604	85.8	77.5	94.2	62.3	59.5	65.1
Middle Shabelle	0.475	0.418	0.531	84.4	78.2	90.6	56.2	52.9	59.6
Sanaag	0.363	0.306	0.419	73.5	63.5	83.5	49.3	46.6	52.0
Mudug	0.393	0.318	0.468	73.0	63.6	82.3	53.9	49.1	58.7
Sool	0.341	0.280	0.401	67.7	55.4	80.1	50.3	47.4	53.2
Galgaduud	0.335	0.262	0.407	66.3	52.9	79.8	50.5	47.9	53.0
Banadir	0.329	0.286	0.372	64.0	57.1	70.9	51.4	49.0	53.8
Nugaal	0.308	0.244	0.372	60.3	50.4	70.2	51.1	47.6	54.6
Bari	0.297	0.219	0.376	57.3	42.7	72.0	51.9	50.1	53.6
Togdheer	0.294	0.233	0.354	56.1	44.9	67.4	52.3	49.6	55.1
Waqooyi Galbeed	0.269	0.209	0.330	53.5	42.3	64.6	50.4	48.2	52.6
Lower Shabelle	0.230	0.156	0.304	47.4	34.1	60.7	48.6	45.1	52.1
Awdal	0.232	0.180	0.285	46.2	35.9	56.5	50.3	47.3	53.2

Source: calculations based on SIHBS 2022

3.4 Censored Headcount Ratio by, Urban, Rural, and Nomadic areas

The censored headcount ratios highlight the per centage of Somalia's population that is both multidimensionally poor and deprived in specific indicators, helping to identify where the poorest individuals face the most severe deprivations. Addressing these deprivations is crucial to reducing the MPI and improving the living conditions of Somalia's most vulnerable populations. The results provide insight into the composition of multidimensional poverty, offering guidance for public policy to prioritize resources toward alleviating the most critical deprivations faced by the poor.

Figure 3.2 illustrates the percentage of the total population that is MPI-poor and deprived in any of the 13 indicators (censored headcount ratios), disaggregated across national, urban, rural, and nomadic areas.

At the national level, inadequate access to improved cooking fuel and overcrowding are the most pressing with 63.3 per cent and 55.4 per cent of the population being deprived and multidimensionally poor in each of these indicators, respectively. Additionally, nearly half of the Somali population reside in households that are multidimensionally poor and where no member has completed at least eight years of schooling. Similarly, nearly half live in households where a school-aged child is not attending school. On the other hand, indicators in which poor people face the lowest deprivation rates are unemployment and access to health. This remains a consistent pattern at the national level as well as for rural, urban and nomadic areas.

In both urban and rural areas, again, lack of access to cooking fuel and overcrowding presents the highest censored headcount ratios. There are also significant disparities between urban and rural regions across all indicators with rural regions exhibiting higher censored headcount ratios in ten of the 13 indicators. These differences are particularly pronounced in electricity, water, and exposure to shocks. For instance, nearly 40.0 per cent of rural residents live in a household that is poor and has experienced a loss of income or assets due to shocks, whereas this is only the case for 21.5 per cent of the urban residents. Additionally, while the censored headcount ratio

of electricity at the national level ranks third to last, 44.2 per cent of the people in rural are poor and do not have access to electricity compared to just 16.2 per cent for the urban population.

Apart from cooking fuel and overcrowding, poor people living in rural areas, face the highest levels of deprivation in housing, years of schooling and sanitation. More than half of people in rural areas live in a household that is poor and does not have an adequate roof, floor or wall or access to an improved sanitation facility. Censored headcount ratios are also high for school attendance (48.5 per cent) and food security (48.0 per cent). It is worth noting here that in terms of assets and unemployment, rural areas exhibit a lower censored headcount ratio compared to urban areas.

The nomadic population faces some of the highest deprivation rates across most indicators, reflecting the unique challenges of their lifestyle. 78.2 per cent of the nomadic population are poor and deprived of overcrowding, while 77.6 per cent of nomadic individuals are multidimensionally poor and live in a household where no adult has completed eight years of schooling. Deprivations in school attendance, food security, and vulnerability to shocks are also important, with 67.0 per cent, 65.4 per cent, and 65.7 per cent of the nomadic population deprived in these indicators respectively and multidimensionally poor.

It is important to note here that housing, electricity, and sanitation indicators are not applicable to the nomadic population in the same way they are in urban and rural contexts, as these aspects are less relevant to their way of life. The nomadic population's lifestyle revolves around mobility and resource adaptability, and traditional measures of deprivation in housing and services may not fully capture the challenges they face.

Figure 3.2 Censored headcount ratio by Urban, Rural and Nomadic areas.
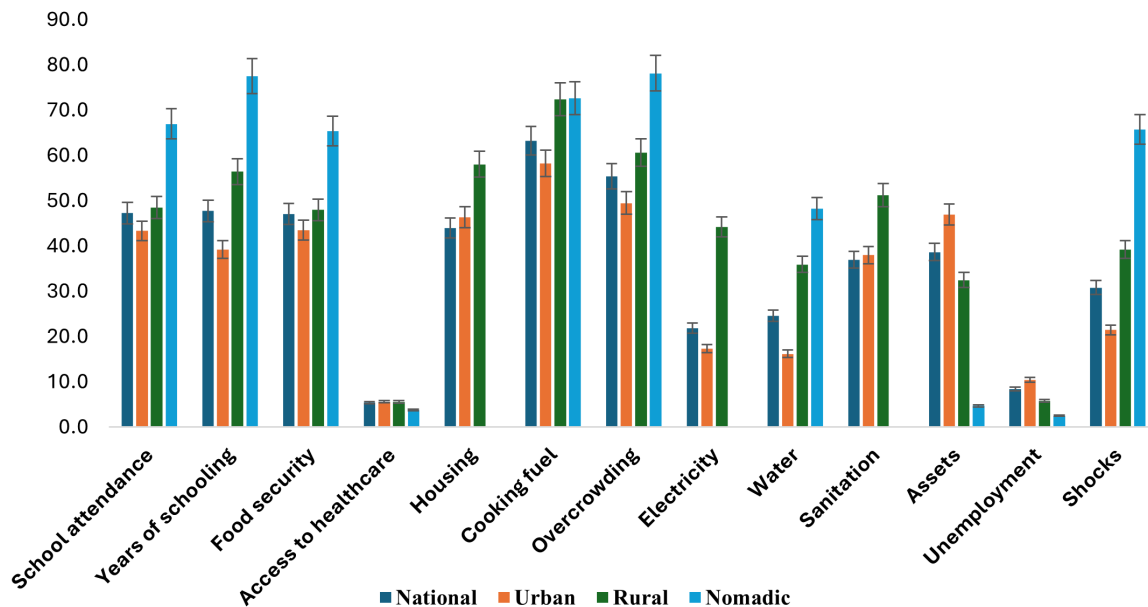
Source: calculations based on SIHBS 2022

3.5 Censored Headcount Ratios by Region

Figure 3.3 provides a detailed breakdown of the censored headcount ratios by region for the 13 indicators of the MPI, highlighting the disparities in deprivation across different regions.

Bakool emerges as the region with the highest levels of deprivation in multiple indicators. It exhibits particularly high per centages of the population being poor and deprived in cooking fuel and overcrowding, with censored headcount ratios of 97.1 per cent and 86.4 per cent, respectively, indicating severe deprivations in living standards. Additionally, Bakool shows significant deprivation in school attendance and food security, with 74.5 per cent of people living in a household with a child not attending school and multidimensionally poor, and 79.5 per cent of the population deprived in food security and being multidimensionally poor. Moreover, 88.1 per cent of the population is multidimensionally poor and deprived in terms of shocks, underscoring the region's vulnerability to environmental and economic instability.

Overall, the population living in Bay, Gedo, Lower Juba and Hiraan regions are multidimensionally poor and experience significant deprivations in cooking fuel, overcrowding, shocks, school attendance and years of schooling and sanitation indicators reflecting ongoing challenges in meeting basic living standards.

For instance, Bay region faces extreme deprivation, with 82.1 per cent of the population without access to clean cooking fuel and 74.2 per cent living in overcrowded houses and being multidimensionally poor. Similarly, sanitation and housing indicators continue to be an issue in the Bay region, with 80.1 per cent and 71.2 per cent of the population, respectively, being deprived in these indicators and poor.

Gedo follows closely with significant deprivation across various indicators. For instance, 85.6 per cent of the population in this region is deprived of cooking fuel and multidimensionally poor, while 79.2 per cent live in overcrowded households and also is multidimensionally poor. Years of schooling is also a pressing issue in Gedo, with 66.0 per cent of the population affected and multidimensionally poor, and shocks are also prevalent, impacting 60.1 per cent of the population, who at the same time is multidimensionally poor. The region shows challenges in access to healthcare, with 26.2 per cent of the population living in a household where at least one member did not have access to healthcare when need it and also are multidimensionally poor, further highlighting the difficult living conditions.

Results show that people living in Waqooyi Galbeed, Awadal, Togdheer and Lower Shabeele regions present lower levels of censored headcount ratios in school attendance, years of schooling, food security compared to the other regions of the country. In contrast, Benadir has the least deprived population in the shock's indicator with only 5.4 per cent of the population reporting to have faced a severe shock and also being multidimensionally poor.

Figure 3.3 Censored headcount ratios by region
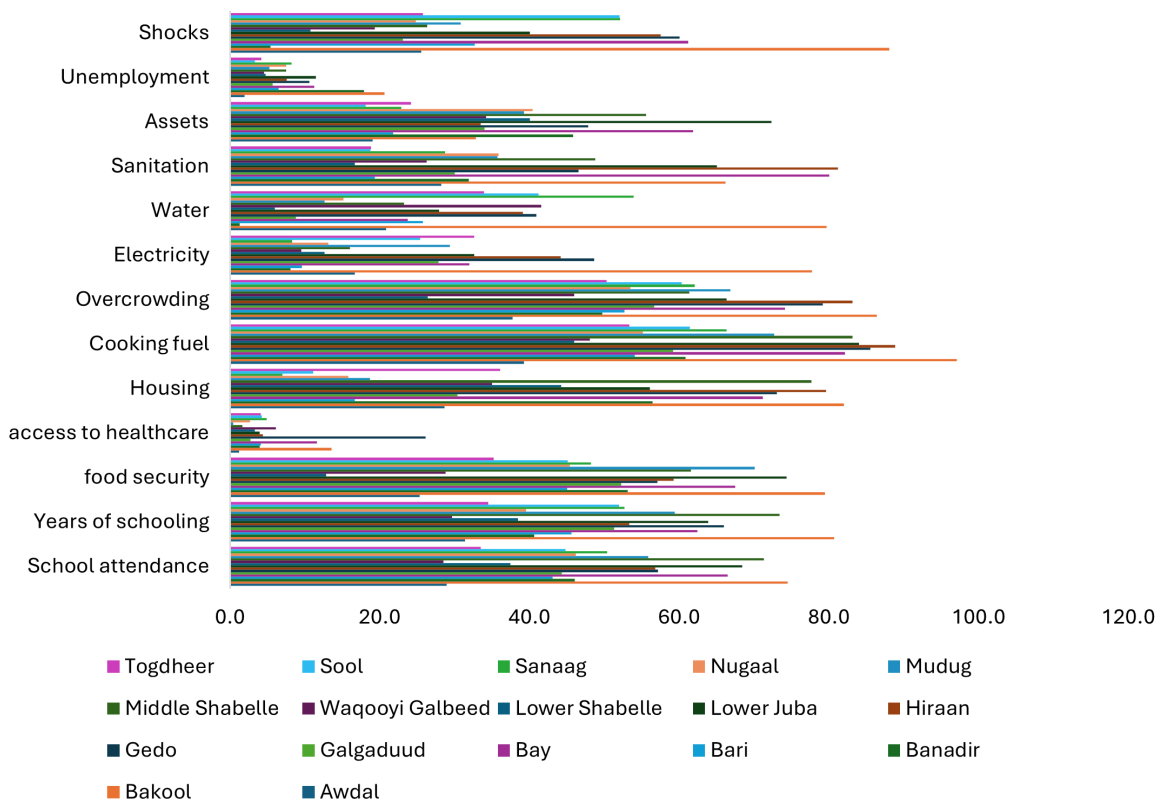
Source: calculations based on SIHBS 2022

3.6 Contribution of indicators to MPI

For a more actionable view on multidimensional poverty, it is useful to see the per centage contribution of each of the indicators to overall multidimensional poverty nationally, in urban, rural and nomadic areas (Figure 3.4). This percentage contribution is calculated by multiplying the censored headcount ratios by the weight of each indicator and dividing by the MPI value, representing its share of the MPI at each level of disaggregation.

Nationally, indicators in the dimensions of education and living standards are the main contributors to the MPI. Education indicators account for 26.1 per cent of the MPI, with important contributions from school attendance (13.0 per cent) and years of schooling (13.1 per cent). Living standards indicators contribute slightly more at 29.8 per cent, largely driven by cooking fuel (11.6 per cent) and overcrowding (10.2 per cent).

In urban areas, the living standards dimension is the leading contributor to multidimensional poverty, with a 30.7 per cent contribution. Key contributors are cooking fuel (11.6 per cent) and housing (9.9 per cent). The dimension of education follows closely with 24.7 per cent, mainly through school attendance (12.9 per cent). The smallest contribution in urban areas comes from the services dimension, specifically water, which contributes only 3.2 per cent to the urban MPI.

In rural areas, the dimensions of education and living standards remain the primary contributors to poverty, although their impact varies slightly compared to urban areas. Education contributes 24.7 per cent, with years of schooling contributing 13.3 per cent and school attendance contributing 11.4 per cent to the rural MPI. The dimension of living standards contributes 30 per cent, driven by cooking fuel (11.4 per cent) and overcrowding (9.5 per cent). The services dimension has a higher contribution in rural areas compared to urban, with electricity at 6.9 per cent and water at 5.6 per cent.

Among the nomadic population, the dimension of education is the largest contributor, comprising 36.6 per cent of the MPI. This is largely due to years of schooling (19.6 per cent) and school attendance (17.0 per cent). Living standards contribute just more than a quarter of the nomadic MPI, with overcrowding accounting for 13.2 per cent.

Due to their mobile and unique lifestyle, nomadic households are considered non-deprived in housing, electricity, and sanitation, rendering these indicators' contributions irrelevant for their MPI. However, water (8.1 per cent), contributes substantially more to MPI for nomadic populations compared to other groups as well as shocks (11.1 per cent) and food security (16.5 per cent).

Figure 3.4 Percentage contribution of each indicator to the National, Urban, Rural and Nomadic MPI
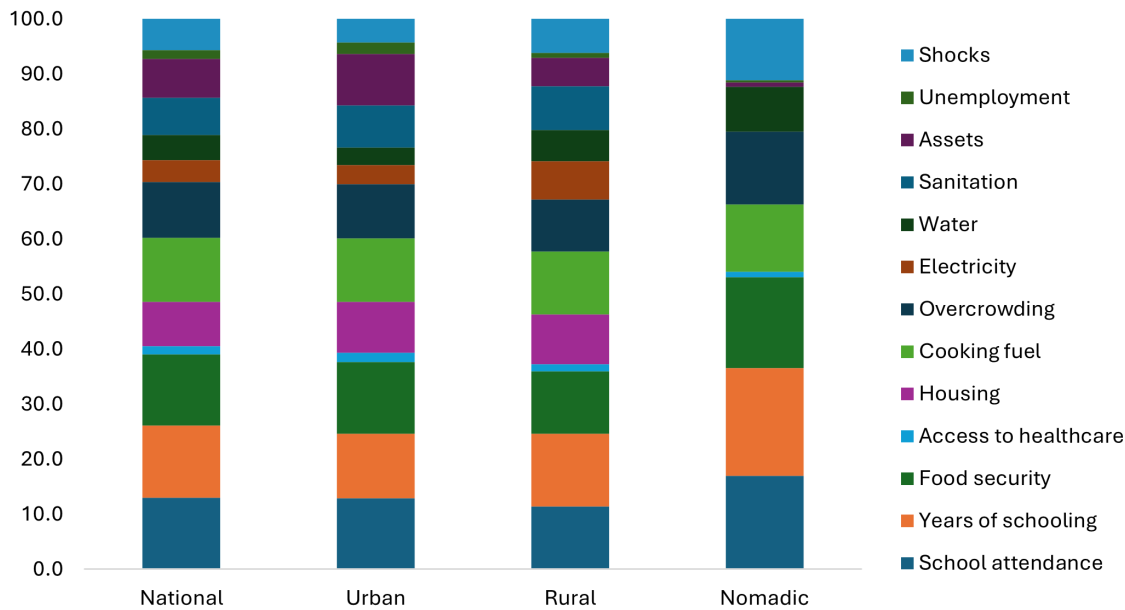
Source: calculations based on SIHBS 2022

3.7 Percentage contribution of indicators to MPI by region

Figure 3.5 presents the percentage contribution of each indicator to multidimensional poverty across various regions in Somalia.

Across all regions, indicators in the dimensions of education and living standards emerge as primary drivers of multidimensional poverty. Education consistently accounts for over 20 per cent of poverty in every region. Its impact is most pronounced in Lower Shabelle (33 per cent) and Middle Shabelle (30.5 per cent), while the lowest contribution is seen in Hiraan (21.3 per cent). Notably, years of schooling emerges as the dominant education-related deprivation in 12 out of the 17 regions, highlighting significant gaps in educational attainment nationwide.

The living standards dimension contributes more than 25 per cent to the MPI across all regions, with some variation in the specific indicators. Banadir and Lower Shabelle show the highest contributions from this dimension, driven by access to clean cooking fuel (12.3 and 13.3 per cent, respectively), housing (11.4 and 12.8 per cent, respectively), and overcrowding (10.1 and 7.6 per cent respectively). While the contributions of cooking fuel and overcrowding remain significant and relatively consistent across regions, housing exhibits significant variability ranging from just 1.3 per cent in Sanaag to 12.8 per cent in Lower Shabelle.

The health dimension's contribution to regional MPI ranges from 17.9 per cent in Mudug to 7 per cent in Lower Shabelle, with food security serving as the primary driver. This is particularly evident in Banadir (14.0 per cent), Mudug (17.8 per cent), and Galgaduud and Gedo, where food security contributes 15.7 per cent and 10.8 per cent, respectively. In contrast, access to healthcare has a smaller impact on multidimensional poverty, with contributions varying from 0.1 per cent in Mudug to 4.9 per cent in Gedo.

The services dimension highlights regional disparities in its contribution to poverty. In regions with the highest dimensional contributions, electricity and water are key drivers in Bakool, while sanitation plays a dominant role in Hiraan. In Waqooyi Galbeed, water significantly contributes 10.3 per cent to the region's MPI, whereas electricity accounts for only 2.4 per cent. Conversely, regions like Nugaal, Galgaduud, and Mudug report lower contributions from the services dimension, with no single indicator standing out as a primary driver. Banadir, which has the lowest overall contribution from the services dimension, records minimal impacts from water (0.3 per cent) and electricity (1.6 per cent).

The inclusion dimension shows similar variability across regions, with unemployment generally contributing the least. In Bay, assets and shocks each contribute 7.6 per cent, making it one of the highest in this dimension. In Lower Shabelle, assets are the dominant factor, accounting for 11.6 per cent, while shocks contribute a smaller 3.1 per cent. Sanaag stands out, with shocks being the largest contributor at 9.6 per cent, indicating significant vulnerability to external disruptions, while assets contribute just 4.2 per cent.

The variation in dimensional and indicator contributions across regions highlights distinct regional vulnerabilities. For instance, Lower Shabelle stands out with the highest contribution in the education dimension and the second-highest in living standards, while its contributions in health and services are more modest. This underscores the importance of breaking down indicators to inform effective policymaking and resource allocation.

Figure 3.5 Percentage contribution of each indicator by region
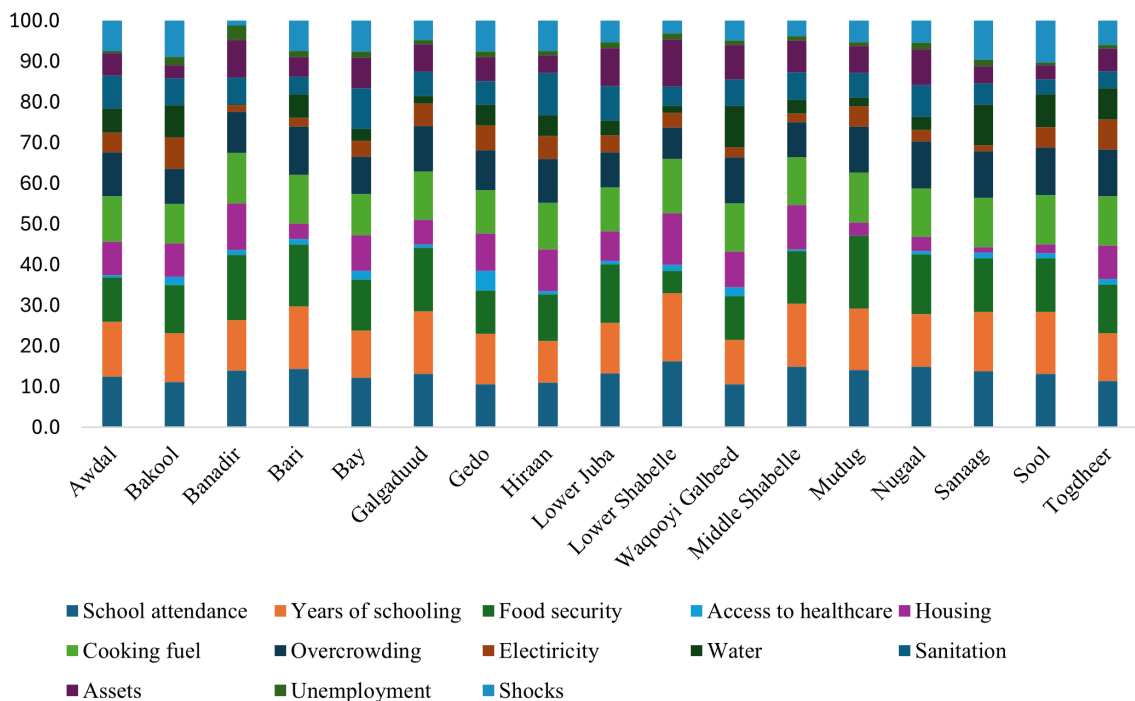
Source: calculations based on SIHBS 2022

3.8 Overlaps of multidimensional poverty and the monetary poverty

This section examines the overlap between individuals living in households classified as poor using the multidimensional poverty measure and those identified as poor through the monetary poverty approach. This is possible since the data for both measures come from the SIHBS. The goal is to assess the added value of multidimensional poverty measures. Understanding this relationship is crucial for informing policies and programs, as poverty estimates guide resource allocation and service provision to the most vulnerable populations.

Figure 3.6 shows the overlap between the incidence of multidimensional poverty and the monetary poverty measure in Somalia. The Venn diagram provides a visual representation of the intersection between two distinct categories of poverty in Somalia: the grey circle representing multidimensionally poor individuals, and the blue circle denoting those classified as poor based on conventional monetary metrics.

The overlapping area illustrates the group of people who are affected by both multidimensional poverty and income poverty, meaning they suffer from a combination of income deprivation and deficits in other critical areas of well-being. The non-overlapping sections of the diagram underscore the complexity and layered nature of poverty in Somalia.

On the one hand, the percentage of individuals falling within the grey circle but outside the overlapping area experience deprivations in non-income dimensions, such as lack of access to education, healthcare, or adequate housing, but their income levels are still above the poverty threshold. On the other hand, the percentage of individuals within the blue circle but outside the overlap area are monetary poor, living below the monetary poverty line, but do not experience the same level of deprivation in other dimensions to be classified as multidimensionally poor. This contrast between the two measures highlights how poverty in Somalia extends beyond just financial scarcity and reflects broader social and economic challenges, emphasizing the importance of using multidimensional approaches to capture the extent of deprivation experienced by individuals fully.

Figure 3.6 Overlap between the incidence of multidimensional and monetary poverty
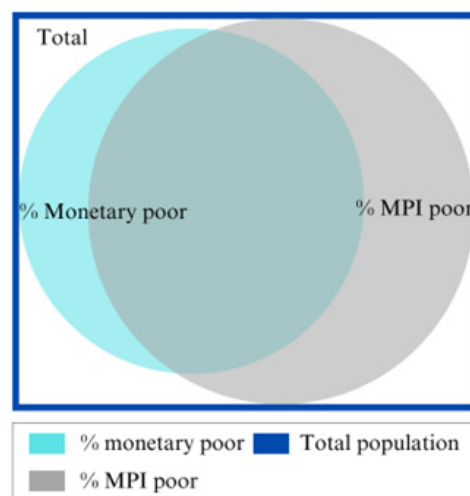
Source: calculations based on SIHBS 2022

Table 3.4 illustrates the relationship between monetary and multidimensional poverty at the 35% poverty cut-off. It reveals that 45.5 per cent of the population experiences both monetary and multidimensional poverty, indicating a substantial portion of the population faces deprivation not only in terms of income but also in essential services and living standards. This group is the most vulnerable, facing compound challenges.

Furthermore, 21.4 per cent of the population is identified as multidimensionally poor but not monetary poor, meaning these individuals experience significant deprivation in areas such as education, health, and living standards despite having income above the national poverty line.

In contrast, 8.9 per cent of the population is classified as monetary poor but not multidimensionally poor, meaning these individuals earn below the poverty line but do not face significant deprivation in other dimensions.

Finally, 24.2 per cent of the population is neither monetary nor multidimensionally poor, indicating a portion of the population manages to avoid both types of poverty.

Table 3.4 National overlaps of multidimensional poverty and monetary poverty

Multidimensional Poverty with k=35%	Monetary poverty with National Poverty Line		Total
	Non-poor	Poor	
Non-poor	24.2	8.9	33.0
Poor	21.4	45.5	67.0
Total	45.6	54.4	1.0

Source: calculations based on SIHBS 2022

CHAPTER 5

CONCLUSION AND POLICY IMPLICATIONS

CONCLUSION AND POLICY IMPLICATIONS

Non-monetary poverty measurements have increasingly gained attention in recent years, reflecting the understanding that monetary measures, which focus solely on income or consumption expenditure, fail to capture the broader dimensions of deprivation that define poverty. These non-monetary approaches extend the analysis to include various aspects of wellbeing, making them essential for developing comprehensive poverty reduction strategies. This MPI report highlights Somalia's commitment to adopting a multidimensional framework for poverty measurement, serving as a vital complement to traditional monetary assessments. Together, these measures offer a more comprehensive foundation for shaping public policies and designing targeted interventions.

The results of this report are instrumental for tracking the progress of households and individuals toward the Sustainable Development Goals (SDGs). At a critical juncture with limited time left to meet these targets, the MPI provides actionable insights to refine policies and address emerging challenges.

The findings reveal stark inequalities in multidimensional poverty across Somalia, with rural and nomadic communities experiencing the highest levels of deprivation, particularly in critical areas such as education, living standards, including housing and overcrowding, and access to essential services like clean water and sanitation. National results highlight that multidimensionally poor individuals are highly deprived in access to improved cooking fuel, overcrowding, and both education indicators.

Notably, regions such as Bakool and Hiraan exhibit the highest levels of multidimensional poverty, underscoring profound and widespread deprivation in these areas. In contrast, regions like Awdal and Lower Shabelle experience significantly lower poverty levels. While some progress has been observed, the entrenched nature of these deprivations calls for sustained and inclusive efforts to address them effectively and bridge regional disparities.

Furthermore, the disaggregation of the MPI underscores the concentration of deprivation in specific indicators like education and living standards among the poorest regions, emphasizing the need for focused resource allocation. Tailoring policy responses to address regional disparities and prioritizing interventions is critical. Programs must be designed to target the areas and populations most affected by multidimensional poverty to achieve meaningful and lasting reductions in deprivation across the country. By aligning policies with these insights, Somalia can foster inclusive growth and sustainable development, ensuring no one is left behind.

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Annex

Table A1: Uncensored Headcount Ratios National

Dimention	Indicator	Percentage of population deprived	Confidence interval (95%)	
Education	School attendance	56.2	53.6	58.7
	Years of schooling	54.3	51.6	57.0
Health	Food security	53.2	50.1	56.3
	Access to healthcare	5.9	4.9	7.0
Living Standards	Housing	53.5	49.7	57.2
	Cooking fuel	87.8	86.1	89.5
	Overcrowding	66.9	64.4	69.4
Services	Electiricity	22.7	20.0	25.5
	Water	29.5	25.9	33.2
	Sanitation	41.7	38.0	45.4
Inclusion	Assets	51.6	48.7	54.5
	Unemployment	11.9	10.5	13.3
	Shocks	36.3	33.2	39.4

Table A2: Censored headcount ratios by National, Urban, Rural and nomadic

Dimension	Indicator	National	Urban	Rural	Nomadic
Education	School attendance	47.3	43.3	48.5	67.0
	Years of schooling	47.8	39.3	56.4	77.6
Health	Food security	47.1	43.5	48.0	65.4
	Access to healthcare	5.4	5.6	5.5	3.8
Living Standard	Housing	43.9	46.4	58.1	0.0
	Cooking fuel	63.3	58.3	72.4	72.6
	Overcrowding	55.4	49.5	60.6	78.2
Services	Electricity	21.9	17.4	44.2	0.0
	Water	24.6	16.2	35.9	48.3
	Sanitation	36.9	38.0	51.3	0.0
Inclusion	Assets	38.7	47.0	32.5	4.7
	Unemployment	8.4	10.5	5.8	2.5
	Shocks	30.8	21.5	39.2	65.7

Table A3: Censored headcount ratios by region

Dimension		Awdal	Bakool	Banadir	Bari	Bay	Galgaduud	Gedo	Hiraan	Lower Juba	Lower Shabelle	Waqooyi Galbeed	Middle Shabelle	Mudug	Nugaal	Sanaag	Sool	Togdheer
Education	School attendance	29.0	74.5	46.1	43.1	66.5	44.4	57.2	56.8	68.5	37.5	28.5	71.3	55.9	46.2	50.4	44.8	33.5
	Years of schooling	31.4	80.7	40.7	45.6	62.5	51.3	66.0	53.3	63.9	38.5	29.7	73.4	59.4	39.6	52.7	52.0	34.5
Health	Food security	25.4	79.5	53.1	45.1	67.5	52.3	57.1	59.2	74.4	12.8	28.8	61.6	70.1	45.4	48.2	45.1	35.2
	access to healthcare	1.2	13.6	4.0	4.1	11.6	2.8	26.2	4.4	4.0	3.3	6.1	1.7	0.4	2.6	4.9	4.3	4.1
Living Standard	Housing	28.7	82.0	56.4	16.7	71.2	30.4	73.1	79.6	56.1	44.2	35.0	77.7	18.7	15.8	7.0	11.1	36.1
	Cooking fuel	39.2	97.1	60.9	54.0	82.1	59.2	85.6	88.9	84.1	46.0	48.0	83.2	72.7	55.1	66.3	61.4	53.4
	Overcrowding	37.8	86.4	49.8	52.7	74.2	56.7	79.2	83.2	66.4	26.4	45.9	61.4	66.8	53.5	62.0	60.3	50.3
Services	Electricity	16.6	77.8	8.1	9.6	32.0	27.9	48.7	44.1	32.6	12.6	9.5	16.1	29.4	13.1	8.3	25.4	32.7
	Water	20.9	79.7	1.3	25.8	23.8	8.8	40.9	39.1	27.9	6.0	41.6	23.3	12.6	15.1	53.9	41.2	33.9
	Sanitation	28.3	66.2	31.9	19.4	80.1	30.0	46.6	81.2	65.0	16.7	26.3	48.8	35.7	35.8	28.7	18.7	18.9
Inclusion	Assets	19.1	32.8	45.8	21.8	61.9	34.0	47.9	33.5	72.3	40.0	34.2	55.6	39.3	40.4	22.9	18.1	24.2
	Unemployment	2.0	20.6	17.9	6.5	11.3	5.7	10.6	7.6	11.5	4.8	4.5	7.5	5.3	7.5	8.2	3.3	4.2
	Shocks	25.6	88.1	5.4	32.7	61.2	23.1	60.1	57.5	40.1	10.7	19.4	26.4	30.9	24.8	52.1	52.0	25.8

Table A4: Per centage Contribution of each indicator to MPI by National Urban, Rural and Nomadic

Dimension	Indicator	National	Urban	Rural	Nomadic
Education	School attendance	13.0	12.9	11.4	17.0
	Years of schooling	13.1	11.7	13.3	19.6
Health	Food security	12.9	13.0	11.3	16.5
	Access to healthcare	1.5	1.7	1.3	1.0
Living Standard	Housing	8.1	9.2	9.1	0.0
	Cooking fuel	11.6	11.6	11.4	12.3
	Overcrowding	10.2	9.9	9.5	13.2
Services	Electricity	4.0	3.5	6.9	0.0
	Water	4.5	3.2	5.6	8.1
	Sanitation	6.8	7.6	8.0	0.0
Inclusion	Assets	7.1	9.4	5.1	0.8
	Unemployment	1.5	2.1	0.9	0.4
	Shocks	5.6	4.3	6.2	11.1

Table A5: Per centage Contribution of each indicator to MPI by region

Dimension		Awdal	Bakool	Banadir	Bari	Bay	Galgaduud	Gedo	Hiraan	Lower Juba	Lower Shabelle	Waqooyi Galbeed	Middle Shabelle	Mudug	Nugaal	Sanaag	Sool	Togdheer
Education	School attendance	12.5	11.1	14.0	14.5	12.3	13.3	10.7	11.0	13.3	16.3	10.6	15.0	14.2	15.0	13.9	13.2	11.4
	Years of schooling	13.5	12.1	12.4	15.3	11.6	15.3	12.3	10.3	12.4	16.7	11.0	15.5	15.1	12.8	14.5	15.3	11.8
Health	Food security	10.9	11.9	16.2	15.2	12.5	15.6	10.7	11.5	14.4	5.6	10.7	13.0	17.8	14.7	13.3	13.2	12.0
	Access to healthcare	0.5	2.0	1.2	1.4	2.2	0.8	4.9	0.8	0.8	1.4	2.3	0.4	0.1	0.9	1.3	1.2	1.4
Living Standard	Housing	8.2	8.2	11.4	3.7	8.8	6.1	9.1	10.3	7.3	12.8	8.7	10.9	3.2	3.4	1.3	2.2	8.2
	Cooking fuel	11.3	9.7	12.3	12.1	10.1	11.8	10.7	11.5	10.9	13.3	11.9	11.7	12.3	11.9	12.2	12.0	12.1
	Overcrowding	10.8	8.6	10.1	11.8	9.2	11.3	9.9	10.7	8.6	7.6	11.4	8.6	11.3	11.6	11.4	11.8	11.4
Services	Electiricity	4.8	7.8	1.6	2.2	4.0	5.6	6.1	5.7	4.2	3.7	2.4	2.3	5.0	2.8	1.5	5.0	7.4
	Water	6.0	7.9	0.3	5.8	2.9	1.8	5.1	5.0	3.6	1.7	10.3	3.3	2.1	3.3	9.9	8.1	7.7
	Sanitation	8.1	6.6	6.5	4.3	9.9	6.0	5.8	10.5	8.4	4.8	6.5	6.9	6.1	7.8	5.3	3.7	4.3
Inclusion	Assets	5.5	3.3	9.3	4.9	7.6	6.8	6.0	4.3	9.4	11.6	8.5	7.8	6.7	8.8	4.2	3.5	5.5
	Unemployment	0.6	2.1	3.6	1.5	1.4	1.1	1.3	1.0	1.5	1.4	1.1	1.1	0.9	1.6	1.5	0.7	1.0
	Shocks	7.3	8.8	1.1	7.3	7.6	4.6	7.5	7.4	5.2	3.1	4.8	3.7	5.2	5.4	9.6	10.2	5.9

Robustness of the MPI to Alternative Weights and Poverty Cutoffs

Robustness tests were conducted to evaluate the sensitivity of the level and composition of the measure to changes in weights and poverty cut-offs. First, the national MPI values for each pair of regions under the chosen poverty line of 35 per cent, with equal weights for the five dimensions, are compared taking into account the standard errors of the MPI. One can then assess whether it is possible to establish, for example, that i) region A is poorer than region B, ii) region B is poorer than region A, or whether iii) there is no statistical basis to establish which region is poorer. This initial ranking of regions serves as the baseline.

First, under the selected weighting structure of the national MPI (i.e. equal nested weights), pairwise comparisons were considered robust if the baseline ordering of regions remained consistent when poverty cut-offs were adjusted to k=25 per cent and k=30 per cent. Results of these tests, highlighted in the yellow column of Table A2, reveal that more than half (58.1 per cent) of the 136 possible pairwise comparisons across 17 regions show significant differences in baseline rankings. Of these, 96.2 per cent retained the same ranking when alternative poverty cut-offs were applied, confirming the robustness of the baseline order.

Second, to assess the impact of varying dimension weights on the regional rankings, pairwise comparison tests were conducted. The reference structure, with a k = 35 per cent and equal weights (20 per cent) for each dimension, was compared to five alternative structures. In these alternatives, one dimension was assigned a weight of 40%, while the remaining four were given 15% each (Table A1).

Results, summarized in the grey columns of Table A2, show that more than 80 per cent of pairwise comparisons that were significantly different under the reference structure remain consistent, with the same districts identified as poorer, when any alternative weighting scheme is applied. When analysed individually for each alternative structure (W1–W5), the proportion of consistent rankings is close to or exceeds 85 per cent across all cases. These findings confirm that district-level rankings of the national MPI are robust, even when the dimension-weighting scheme is modified.

Table A6: Alternative weighting structures

Dimensions	Indicators	W0 Equal weights	W1 40% Health	W2 40% Education	W3 40% Living standards	W4 40% Serivces	W5 40% Inclusion
Education	School attendance	1/10	2/10	3/40	3/40	3/40	3/40
	Years of schooling	1/10	2/10	3/40	3/40	3/40	3/40
Health	Food security	1/10	3/40	2/10	3/40	3/40	3/40
	Access to health	1/10	3/40	2/10	3/40	3/40	3/40
Living standards	Housing	1/15	1/20	1/20	2/15	1/20	1/20
	Cooking fuel	1/15	1/20	1/20	2/15	1/20	1/20
	Overcrowding	1/15	1/20	1/20	2/15	1/20	1/20
Services	Electricity	1/15	1/20	1/20	1/20	2/15	1/20
	Water	1/15	1/20	1/20	1/20	2/15	1/20
	Sanitation	1/15	1/20	1/20	1/20	2/15	1/20
Inclusion	Assets	1/15	1/20	1/20	1/20	1/20	2/15
	Employment	1/15	1/20	1/20	1/20	1/20	2/15
	Shocks	1/15	1/20	1/20	1/20	1/20	2/15

Table A7: Robustness test results

	Robustness to alternative values of the poverty cut-off (k)	Robustness to different weighting structures					
Baseline specifications	k = 35%	W0: National MPI structure (equal nested weights)					
Alternative specifications	k = 25% k = 30%	All alternative weighting structures	W1	W2	W3	W4	W5
Possible pairwise comparisons between 17 regions	136	136	136	136	136	136	136
Number of pairwise comparisons that are significantly different at the baseline	79	79	79	79	79	79	79
Robustness ratio (all)	122/136 (89.71%)	74/136 (54.41%)	113/136 (83.09%)	114/136 (83.82%)	105/136 (77.21%)	109/136 (80.15%)	122/136 (89.71%)
Robustness ratio (significant at baseline only)	76/79 (96.20%)	67/79 (84.81%)	74/79 (93.67%)	78/79 (98.73%)	73/79 (92.41%)	71/79 (89.87%)	75/79 (94.94%)

Table A8: Redundancy Analysis

	School attendance	Years of schooling	Food security	Access to health	Housing	Cooking fuel	Overcrowding	Electricity	Water	Sanitation	Assets	Unemployment	Shocks
Years of schooling	0.667												
Food security	0.618	0.67											
Access to health	0.617	0.647	0.633										
Housing	0.625	0.626	0.593	0.735									
Cooking fuel	0.809	0.793	0.818	0.9	0.944								
Overcrowding	0.771	0.753	0.783	0.802	0.721	0.802							
Electricity	0.654	0.784	0.737	0.335	0.841	0.991	0.835						
Water	0.567	0.624	0.592	0.371	0.538	0.738	0.785	0.434					
Sanitation	0.596	0.645	0.66	0.557	0.736	0.93	0.78	0.726	0.49				
Assets	0.585	0.557	0.541	0.486	0.623	0.883	0.674	0.587	0.429	0.613			
Unemployment	0.541	0.424	0.598	0.159	0.587	0.853	0.66	0.193	0.219	0.429	0.519		
Shocks	0.611	0.692	0.64	0.487	0.522	0.742	0.786	0.52	0.532	0.478	0.404	0.264	

	School attendance	Years of schooling	Food security	Access to health	Housing	Cooking fuel	Overcrowding	Electricity	Water	Sanitation	Assets	Unemployment	Shocks
Uncensored headcount ratio	0.561	0.549	0.532	0.06	0.536	0.8	0.669	0.225	0.294	0.417	0.516	0.12	0.363