NAMIBIA MULTIDIMENSIONAL POVERTY INDEX (MPI) REPORT 2021

Contents.

Namibia Statistics Agency
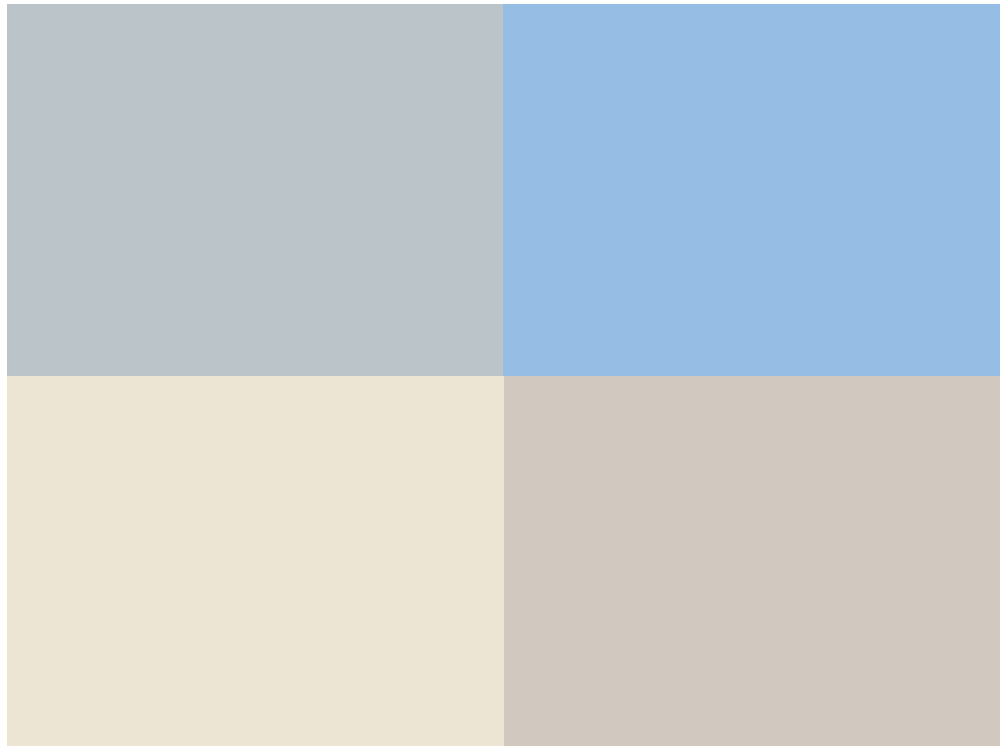
Mission Statement

Leveraging on partnerships and innovative technologies, to produce and disseminate relevant, quality, timely statistics and spatial data that are fit-for-purpose in accordance with international standards and best practice.

Vision Statement

Be a high performance institution in quality statistics delivery.

Core Values

Integrity
Excellent Performance
Accuracy
Team Work
Accountability
Transparency

List of Figures.

List of Tables.

Preface.

The main purpose of this report is to present multidimensional poverty measurement and analysis for Namibia at national and regional levels. In so doing, this report details how the Namibia Multidimensional Poverty Index (MPI) was conceptualized and constructed using data collected by Namibia Statistics Agency (NSA) through the Namibia Household Income and Expenditure Survey (NHIES) 2015/2016 (the latest such survey we have). The Namibia MPI is based on the Alkire-Foster method (a flexible technique for measuring poverty or wellbeing) and provides another powerful tool in NSA's ongoing efforts to measure poverty and deprivations in the country.

Unlike the monetary poverty analysis that is often reported in the NHIES which is based on income only, the MPI has the advantage of being fully decomposable from a variety of demographic and social variables (such as availability of safe drinking water, education, access to health and nutrition as well as social protection) that keeps people trapped in poverty. MPI also reveals the interconnections among those variables that lead to these deprivations. Hence, the MPI will enable policymakers to better allocate resources and more effectively formulate targeted policies.

One of the key indicators of the SDGs is measurement of poverty in all its dimensions. Hence, the construction of the MPI will assist in providing data to monitor progress towards SDG indicators (specifically indicator 1.2.2). The NSA will endeavor to continue publishing and enhancing the MPI once new data set becomes available in order to provide evidence that will inform poverty reduction strategies as per the National Development Plans (NDPs).

This report, therefore, seeks to create a reliable and nationally owned mechanism that can credibly identify those that are mostly deprived, beyond the traditional money-metric measures of poverty. This is particularly important given that poverty, especially in an upper middle-income country like Namibia, is complex and multifaceted and as such, requires a multidimensional approach for measuring it. Hence, the MPI has been adopted and adapted to nationally defined sets of dimensions and indicators that reflect the country context and development priorities for Namibia.
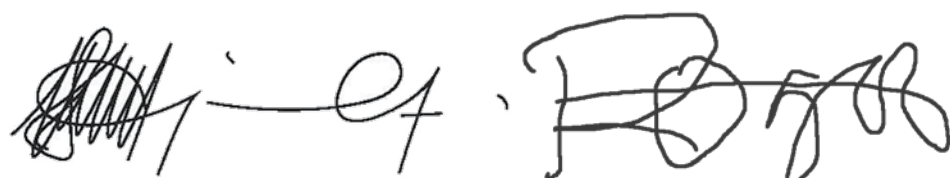
Foreword.
NPC | National Planning Commission

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The production process of this report is the result of the on-going partnership and collaboration between the NSA, UNDP, UNFPA, UNICEF and other UN agencies. The immense technical expertise from Oxford Poverty and Human Development Initiative (OPHI) resulted in the development of capacity and skills of the NSA and other line ministries' staff members, as well as the supervision of the report. Furthermore, OPHI provided technical support throughout the process of developing the national MPI.

We will forever remain thankful to these partners and the entire stakeholders in our quest to provide data and statistics for the development of the land of the brave, Namibia. Furthermore, we would like to thank UNICEF for the financial support in producing this informative report.

We are excited to have this MPI report to serve as a strategic tool to inform budgeting and policymaking, whilst also providing baseline data for measuring progress towards eliminating poverty in all its forms.

ALEX SHIMUAFENI
Statistician-General and CEO

RACHEL ODEDE
Representative UNICEF-NAMIBIA

In Namibia, over the past years, mapping poverty and understanding the root causes thereof has taken center stage at the course of national development through National Development Plans (NDPs). Income Poverty rates have, therefore, fallen over the years as per the Namibia Household and Income and Expenditure Survey (NHIES) reports. In 2004, the proportion of households that were poor stood at 27.6 percent. This figure has since fallen to 17.4 percent in 2016. Similarly, the proportion of severely poor households has fallen from 13.8 per cent to 10.7 percent over the abovementioned timeframe. These figures represent effective policy interventions towards improving the standards of living and enhancing the wellbeing of the Namibian population. Notwithstanding the afore-mentioned success, the levels of uneven decline in these figures across the regions remains an issue.

As the study of poverty evolved, it came clear that poverty is a multidimensional concept relating not only to lack of resources to acquire basic goods and services, but also to a state of deprivations resulting from exclusion. A more truth-reflecting measure of poverty can therefore not be based solely on monetary measure but rather on multiple dimension measure of poverty.

This multi-dimensional poverty index report is another milestone in directing the process of National Development Planning and adds value to previous knowledge. The measure used gives broader insight in setting development priorities custom-made to address the needs of regions across the country. As per the Fifth National Development Plan, prioritizing the alleviation of poverty in Namibia required accurate and in-depth understanding of the different dimensions of poverty that people face.

The concept of sustainable development takes center stage during national development planning in Namibia. This means that our development planning is anchored towards the upliftment of both current and future generations and responds to the SDGs. This multi-dimensional index, therefore, enhances efforts by the country to rigorously strive to end poverty in all its forms in all corners of the country for generations to come. The index reveals the magnitude of poverty in the regions, within ethnic groups, areas

Executive summary.

of residence and the country at large. Understanding how different groups of the population are deprived and what they are deprived of, will help policy makers in making targeted policies which will create efficiency and help in allocation of resources in the country.

May this measure, and report thereof, create a platform for national dialogue for policy formulation to lift Namibians out of multi-dimensional poverty.

OBETH MBUIPAHA KANDJOZE
Director-General of the National Planning Commission

The MPI is a multidimensional measure of poverty developed by the Oxford Poverty and Human Development Initiative (OPHI) at the University of Oxford. The index assesses the simultaneous deprivations that are experienced by people in a society, based on several identified dimensions of poverty in a particular setting.

Whilst drawing from the Global MPI, the National MPI for Namibia has been adjusted and contextualized to better reflect the specific context and development priorities of the country. As per the Global MPI, the National MPI is based on three dimensions: 'Living standards', 'Health' and 'Education', albeit measured across 11 indicators, deemed by the national MPI steering committee to be reflective of the Namibian context, and informed by available data. Poverty indices were also decomposed across various population sub-groups such as Urban/rural, Region, Sex of head of household, Main language spoken in the household, Household-size and age-group.

Based on data from the Namibian Household Income and Expenditure Survey (NHIES 2015/16), the multidimensional poverty incidence (H) is reported at 43.3 percent, meaning that 43.3 percent of the population of Namibia are multidimensionally poor. The average intensity (A) is 44.0 percent, meaning that poor people in Namibia experience, on average, 44.0 percent of the weighted deprivations. The Multidimensional Poverty Index (MPI), which is the product of H and A (H*A), is 0.191, therefore the poor in Namibia face 19.1 percent of the possible deprivations if everyone was poor and deprived in all the indicators included in the index.

With regards to **area of residence,** the rural area population was multidimensionally poorer than the urban population, reported at 59.3 and 25.3 percent, respectively. This indicates that persons in rural areas have a higher chance of experiencing multiple deprivations than those in urban areas. Poverty indices were also examined across the fourteen (14) administrative **regions** of Namibia. An obvious gradient was observed in the headcount ratios by region, whereby the incidence of multidimensional poverty was highest in Kavango West (79.6 %), Kavango East (70.0 %) and Kunene (64.1 %).

The report also examines performance across characteristics of household heads. With regards to **sex of the heads of households**, results show that the incidence of multidimensional poverty is higher among female-headed households (with a rate of 46%), than male-headed households (with a rate of 41%). With regards to the **main language spoken** in the household decomposition, the highest headcount ratio of multidimensional poverty was reported amongst the population whose main language spoken at home was Khoisan (93%), followed by Rukavango (68%) and Zambezi languages (54%). The population whose main spoken language was English, and German reported the lowest headcount ratios of multidimensional poverty, each with 3 percent.

Another decomposition was on **household size**. The results indicate that as household size increases, the rate of multi-dimensional poverty also increases. The headcount ratio is highest for households that have 16 or more members, at 72.8 percent compared to 33.4 percent for a household with less than 6 members. A breakdown of the poverty indices by **age group** was also considered. The highest headcount ratio is reported among children of 1-4 years (56%), 5-9 years (50%) and 10-14 years (48%). The lowest headcount ratio (33%) is reported for the age group of 25-29 years, to imply that of all persons aged 25-29 years, 33 percent are multidimensionally poor.

A **child-specific** analysis on the MPI was also carried out in the report, from which approximately 16 percent of children aged 0-17 years in Namibia are both multi-dimensionally and monetarily poor. Further, the proportion of children who are multi-dimensionally poor is remarkably higher in rural areas than in urban areas. About 64 percent of children who live in rural areas are multidimensional poor compared to 30 percent in urban areas, following the general population trend. There are also regional level disparities in deprivation rates. In 5 of the 14 regions in Namibia, the percentage of children who are multi-dimensionally poor is above 60 percent, including Kavango West (82.3%), Kavango East (74.7%), and Kunene (69.2%). The lowest rates are found in the regions of Erongo (15.7%) and //Karas (21.1%).

In conclusion, it is noted that whilst progress has been made in reducing monetary poverty to 16.7 percent, more than 43.3 percent of Namibia's population are still living in multidimensional poverty. This calls for a deliberate and coordinated policy response to deal with the various deprivations that continue to impact on the wellbeing of many households and their children. The NSA will endeavor to continue publishing and enhancing the MPI once new data set becomes available, to provide evidence to inform poverty reductions strategies as per the National Development Plans (NDPs) whilst also providing a strategic tool for monitoring progress towards SDGs as well as NDPs implementation.

1. Introduction.

This section looks at the definition of Multidimensional poverty as well as the motivation for producing an MPI for Namibia.

1.1 What is the Multidimensional Poverty Index (MPI)

The MPI is a multidimensional measure of poverty developed by the Oxford Poverty and Human Development Initiative (OPHI) at the University of Oxford. The index assesses the simultaneous deprivations that are experienced by people in a society, based on several identified dimensions of poverty in a particular setting.

Many countries now measure multidimensional poverty alongside monetary poverty. This means that a country will estimate and release two complementary official national measures of poverty. The monetary poverty measure assesses income or consumption-expenditure poverty, according to national poverty lines. The multidimensional poverty measure reflects relevant non-monetary aspects of poverty that may exist. Multidimensional poverty considers the many overlapping deprivations that poor people experience at various levels of society.

The MPI reflects both the incidence of poverty – what proportion of people are poor - and the intensity of poverty – how poor they are. As such, the measure reveals who is poor, the dimensions they are poor in and the breadth of their deprivations. The MPI is broken down by different dimensions and indicators, to provide useful information for the targeting of public resources. Furthermore, it can also be disaggregated by population sub-groups, to help in ensuring that no one is left behind, as called for by the United Nation's 2030 agenda for sustainable development.

Since 2010, OPHI and UNDP have jointly computed and published the global MPI in the Human Development Report to compare acute multidimensional poverty across more than 100 developing countries. However, this measure is intended for international comparability and is not adapted for the specific circumstances of a given country. Thus, many countries have developed their own national MPIs to inform targeted policy interventions at national and sub-national levels.

2. Methodology.

1.2 Purpose of Namibia's MPI

The national MPI for Namibia was designed mainly for two main reasons. The first is to provide updated multidimensional poverty statistics to inform policy and programmatic design and implementation. A national MPI can guide coordinated policy actions by several Offices, Ministries and Agencies (OMAs), provide clear goals and targets for each indicator, and act as a monitoring and accountability tool. Secondly, the measure is aimed at complementing monetary poverty statistics released by the NSA, by providing an understanding of the multidimensional nature of poverty and the various deprivations faced by different groups of people in Namibia, by location and demographic groups. The evidence generated on the drivers of multidimensional poverty will be used to monitor progress on NDPs and Sustainable Development Goals (SDGs), particularly SDG 1, of reducing, by half, the proportion of men, women and children of all ages living in poverty in all its dimensions by 2030.

This chapter presents the methodology adopted for this study. It begins with a description of the Alkire-Foster method, which is then followed by an explanatory of the data source. The chapter further presents the structure of Namibia's national MPI, in terms of dimensions; indicators; deprivation cut-offs and weights. The chapter further discusses the limitations and usage of the index. Thereafter, it concludes with a presentation of the institutional framework put in place to guide and coordinate the development of the index.

2.1 The Alkire-Foster methodology

Namibia's national MPI is based on the Alkire-Foster (AF) methodology, a flexible technique for measuring poverty or wellbeing developed by Sabina Alkire and James Foster at OPHI. The AF methodology can incorporate different dimensions and indicators to create measures adapted to specific contexts.

In summary, the AF methodology first identifies who is poor, by constructing a poverty profile for each individual or household, which shows which indicators they are deprived in, according to the deprivation cut-offs. These deprivations are aggregated into a weighted deprivation score. The weights for each dimension and each indicator are based on normative judgments related to the purpose of the measure. The next step was to choose a poverty cut-off, k. An individual is classified to be living in multidimensional poverty if his/her deprivation score meets or exceeds the poverty cut-off k, of the weighted indicators.

After identifying each person as poor or non-poor, the information was aggregated into three informative statistics.

- The *incidence of poverty* (denoted by H), which is the proportion of people identified as multidimensionally poor, also referred to as the "headcount ratio". It is the percentage of people out of the total population whose weighted deprivation score is greater than or equal to the poverty cut-off k.

- The *intensity of poverty* (denoted by A), which is the average proportion of weighted indicators in which poor people are deprived—the average deprivation score across all poor people.

- The MPI is computed as the product of these two components [i.e., MPI= H x A]. The MPI always ranges from zero to one, and a higher number signifies greater poverty. This method not only identifies who is poor but also provides an innovative means by which one can incorporate how acute or intense the situation of multidimensional poverty is for the poor.

2.2 Unit of identification and analysis

The unit of identification refers to the level at which deprivations are measured. It is therefore the entity that is identified as poor or non-poor – usually the individual or the household. Namibia's MPI uses a household as the unit of identification. All members for a given household are collectively classified as poor or non-poor depending on each indicator. This implies that individual-level indicators like those on education or nutrition are combined across household members. A specific example is that for the Namibia MPI, if there's at least one school-aged child who is not going to school (therefore deprived in the indicator), then all his/her household members are also considered to be deprived in the indicator.

This approach allows the measure to include indicators that are specific to certain age groups (for instance, school attendance), while acknowledging intra-household caring and sharing – for example, educated household members reading for other members or household members being affected by a child's malnutrition.

The unit of analysis refers to how the results are reported and analyzed. Namibia's MPI uses the individual (person) as the unit of analysis. That is, the results presented in this report are based on the percentage of people who are identified as poor rather than the percentage of households.

2.3 Namibia MPI poverty cut off

The Namibia MPI uses a poverty cut-off of 30 percent. Therefore, a person is considered to be multidimensionally poor if he or she is deprived in 30 percent or more, of the sum of the weighted indicators. The chosen cut-off nearly reflects the global MPI i.e. 33 percent, which suggests that a person must be deprived in at least one full dimension's worth of indicators to be considered multidimensionally poor.

2.4 Structure of Namibia MPI

A number of factors guided the creation of Namibia's MPI. Mainly, the selection of dimensions, indicators, and cut-offs was determined through a consultative process of the Steering Committee (summarized in section 2.7), drawing on expertise from many different sectors and reflecting National Development Plans (NDPs) and priorities.

Other factors that were considered include the availability of data from the selected data source as well as an examination of the global MPI and its dimensions and indicators (see report at https://ophi.org.uk/global-mpi-2020/). The global MPI consists of three dimensions: 'Living standards', 'Health' and 'Education', measured across 10 indicators.

While the Namibia MPI retains these three dimensions, the indicators have been adjusted to better reflect the specific context and priorities of the country.

As a result, Table 1 presents the dimensions, indicators and the deprivation cut-offs that were established as the most suitable from the data source for Namibia:

Table 1: Structure of the MPI

DIMENSION	DIMENSION WEIGHT	INDICATOR	INDICATOR WEIGHT WITHIN DIMENSION (%)
Education	1/3	SCHOOL ATTENDANCE: A household is deprived if at least one school aged child (aged 7-17 years) is not attending school.	2/15
		YEARS OF SCHOOLING: A household is deprived if all household members aged 16 years or older have not completed 7 years of schooling.	1/5
Living standards	1/3	DRINKING WATER: A household is deprived if it does not have access to improved drinking water[1] (according to SDG-6).	1/18
		SANITATION: A household is deprived if its sanitation facility is not improved[2] (according to SDG-6) or it is improved but shared with other households.	
		HOUSING: A household is deprived if it has inadequate housing – the roof or wall are made of rudimentary materials[3] - OR the dwelling is an improvised housing unit.	
		TRANSPORTATION ASSETS: A household is deprived if it does not own at least one of these assets: car, bus or bakkie.	
		ICT: A household is deprived if it does not own any of these assets: radio, TV, smartphone, or computer; and the household does not have internet access at home or elsewhere.	
		COOKING AND LIGHTING ENERGY: A household is deprived if it uses unclean sources[4] for cooking and lighting.	
Health	1/3	ACCESS TO CLINIC/HOSPITALS: A household is deprived if a hospital or clinic is more than a 20-km distance or more than 30 minutes one way from home.	1/15
		FOOD SECURITY: A household is deprived if it did not have enough food in the 7 days prior to the survey.	2/15
		CHILD NUTRITION: A household is deprived if it has at least one child under 5 who is underweight or stunted.	

[1]Piped (tap) water into dwelling; piped (tap) water on site or in yard/plot; public tap/standpipe; private tube well/borehole; protected dug well; protected spring and bottled water.
[2]Pit latrine with slab; pit latrine without slab/open pit; bucket toilet; no facilities/bush or field, other) or it is improved but shared with other households.
[3]Wooden poles, sticks and grass, sticks, mud, clay and/or cow-dung, thatch, grass, other or none
[4]Paraffin, firewood, charcoal, coal, animal dung, other or none for cooking energy; and Wood or wood charcoal, other, none, battery lamp/torch/cell phone, candles and paraffin for lighting energy.

As listed in Table 1, Namibia's MPI has 11 indicators in total.

EDUCATION - Under this dimension, the two (2) indicators of *school attendance* and *years of schooling* resemble those found in the global MPI. The indicators aim to monitor and evaluate the fifth NDP's primary education completion rate to 100 percent by the year 2022, as well as the Ministry of Education, Arts and Culture's 2013 implementation of universal, free primary education. Additionally, the indicators are attributed to SDG 4, whose target is *to ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.* Furthermore, within this dimension the indicator for years of schooling is allocated a higher weight of 60 percent, with the normative justification that a household where all adults have not completed seven (7) years of schooling may have a higher chance of being in poverty more than a household with many children and only few of them are not going to school. This justification was per the advice given by the Ministry of Education, Arts and Culture.

LIVING STANDARD - This dimension has the highest number of indicators, six (6). The indicators are equally weighted within the dimension, to reflect their equal importance as described in the SDGs and NDP5 targets. The *drinking water* and *sanitation* indicators are based on SDG 6, which aimed at *ensuring availability and sustainable management of water and sanitation for all.* These indicators, which are also part of the Global MPI, are further motivated by SDG 3, which calls *to ensure healthy lives and promote well-being for all at all ages.*

Goal 11 of the SDGs targets *to make cities and human settlements inclusive, safe, resilient and sustainable.* The first target of this goal, which is to ensure access for all to adequate, safe and affordable housing and basic services and to upgrade slums, motivated the MPI's indicator on housing. The NDP5 highlights that as of 2016, 19 percent of the Namibian population were living in improvised housing units, while only 53.4 percent of the population had access to improved sanitation. Furthermore, while the proportion of households with access to safe water was reported high for urban areas at 98 percent in 2016, the rural population proportion was much lower at about 84 percent. The indicators are therefore aimed at providing information on these deprivations.

Furthermore, the indicator on transportation assets is built on the basis of the second target of SDG 11. It targets *to provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations including women, children, persons with disabilities and the elderly.* In order to provide information linked to safe and accessible transport in Namibia, the MPI therefore considered ownership of transportation assets as opposed to only having access.

Cooking and lighting energy is another crucial indicator, which is intended to highlight the type of fuel/energy used by households and is attributed to the quality of ventilation and respiratory health. The NDP5 targets to promote renewable energy and accelerate rural electrification. The last indicator under this dimension is ICT, which states that a household is deprived if it does not own any of these assets: radio, TV, smartphone, or computer; and

the household does not have internet access at home or elsewhere. The NDP5 targets by 2022, that Namibia has universal access to information, affordable communication and technology infrastructure and services.

HEALTH - Lastly, three indicators measure the dimension of health. The SDG 3 targets to *achieve universal health coverage, including access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.* Furthermore, the NDP5's desired outcome on healthcare is that "by 2022, all Namibians will have access to quality health care". Finally, the indicators on *food security* and *child nutrition* are linked to SDG 2, which calls *to end hunger, achieve food security and improved nutrition and promote sustainable agriculture.* The NDP5 targets that "By 2022, the proportion of food insecure households has dropped from 25 percent to 12 percent and food production has increased by 30%". Within this dimension, *access to clinics/hospitals* is comparably allocated a lesser weight of 20 percent, and the distance of 20 km or 30 minutes' threshold was provided and guided by the Ministry of Health and Social Services (MoHSS).

2.5 Namibia MPI data source

As the MPI requires a complete deprivation profile for each unit (individual or household), information on all indicators must be available for each person and come from the same source of data. Amongst the nationally representative surveys and censuses in Namibia, the 2015/16 Namibia Household Income and Expenditure Survey (NHIES) which is conducted every 5 years, was selected for two main reasons. Firstly, the year-long survey collects data across several socio-economic indicators. Secondly, since the monetary poverty statistics are deduced from the NHIES, using it allows for comparisons of monetary and non-monetary poverty rates, which provides useful information in describing the nature of poverty in the country.

2.6 Limitations and usage of Namibia MPI

Since 2003/4, poverty in Namibia has been officially measured through the Cost of Basic Needs approach, which is monetary-based. However, the consideration of non-monetary dimensions in understanding poverty has gained importance in poverty analysis, especially with the UN's 2030 Sustainable Development Goals (SDGs) calling for an end of poverty in all its forms and leaving no one behind.
Namibia's MPI is not intended to replace the money-metric poverty statistics, which is based on national poverty lines (namely, the food poverty line, the lower-bound poverty line and the upper-bound poverty line). Rather, the MPI should be considered as a complementary measure to these money-metric measures, by providing an assessment of deprivation of basic survival needs.

As mentioned above, Namibia's MPI is based on the 2015/16 NHIES. While the dimension of economic activity was deemed critical to the measure, this survey could not provide desirable indicators on labor force (unemployment) for this dimension. However, this limitation will be addressed in the future NHIES, as a continuous improvement of the MPI measure. Additionally, the survey's sample design does not allow for disaggregation of results in geographical areas below regions, such as towns and constituencies.

2.7 Institutional framework

The structure of the measure is the result of a series of discussions led by the Namibia Statistics Agency (NSA), National Planning Commission (NPC), United Nations Children's Fund (UNICEF) Namibia, United Nations Development Programme (UNDP) - Namibia and the United Nations Population Fund (UNFPA) – Namibia.

The design and computation of the National MPI has included consultations and discussions with the national Steering Committee, which was comprised of various OMAs (Ministry of Finance, Ministry of Education, Arts and Culture, Ministry of Agriculture, Water and Land Reform, Ministry of Urban and Rural Development, Namibia University of Science and Technology, University of Namibia, Institute for Public Policy Research, National Planning Commission, Ministry of Gender Equality, Poverty Eradication and Social Welfare, Ministry of Health and Social Services), to ensure that the MPI is tailored to local context using Namibia-specific indicators to provide a comprehensive understanding of country-level multidimensional poverty.

These consultations were necessary for stakeholders to understand their roles of revising the measure every ten years and making sure the proposed indicators are collected in the survey The NSA as the lead institution in the development of the NAMPI is responsible for updating the estimations which would be done every five years.

3. Poverty measures based on total population.

This section presents the multidimensional poverty results for Namibia, based on the 2015/16 NHIES data. Firstly, the national multidimensional poverty results are presented, followed by the disaggregated results across demographic characteristics such as region and urban and rural; age groups; household size; main spoken language and, sex of head of household. In conclusion, the section presents a regional comparison of multidimensional poverty to the traditional monetary poverty results.

3.1 Profiling multidimensional poverty in Namibia

a. Uncensored headcount ratios of the MPI indicators

The uncensored headcount ratio of an indicator is defined as the proportion of the total population that is deprived in that specific indicator, regardless of whether they are multidimensionally poor or not.

Figure 1 shows the proportion of the population that is deprived in each of the 11 indicators of the MPI. At national level, the highest deprivation levels were reported in Transportation Assets (proportion of people from households that do not own at least a car, bus or bakkie) at 76.2 percent. This is followed by Sanitation (proportion of people from households where sanitation facility is not improved (according to SDG guidelines) or it is

improved but shared with other households) at 68.9 percent, and then by Cooking and Lighting Energy (proportion of people from households that uses unclean sources for cooking and lighting) at 64.8 percent.

The lowest deprivation levels were reported in ICT (proportion of people from households who do not own any of these assets: radio, TV, smartphone, or computer; and the household does not have internet access at home or elsewhere) at 3.4 percent. This is followed by School Attendance (proportion of people living in a household where at least one school-aged child is not attending school) at 9.6 percent and Years of Schooling (proportion of people from households where all members aged 16 years or older have not completed seven (7) years of schooling) at 10.1 percent.

Figure 1. National Uncensored Headcount Ratio
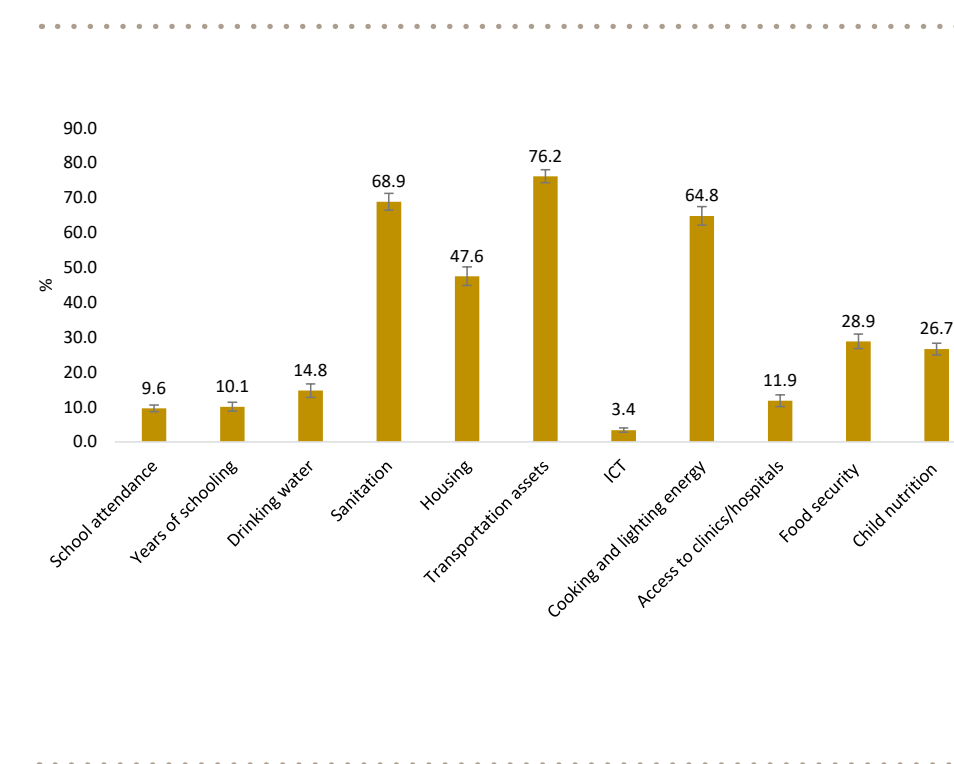
b. The level of multidimensional poverty in Namibia

Table 2 shows the three main measures of multidimensional poverty: Headcount ratio (H), Intensity (A) and the Adjusted headcount ratio (MPI). The Headcount ratio (H) represents the proportion of persons identified as multidimensionally poor, out of the total population, based on the selected poverty cutoff. The intensity (A) index represents the average proportion of weighted indicators in which poor people are deprived. The Adjusted headcount ratio (MPI), which is the product of the incidence (H) and intensity (A) of poverty, represents the deprivations poor people are experiencing as a share of the total possible deprivations that could be experienced if the entire population was poor and deprived in all indicators. The MPI always ranges from zero to one, and a higher number signifies greater poverty.

From Table 2, the incidence of multidimensional poverty (H) in Namibia is 43.3 percent. This is the proportion of people who are deprived in at least k=30 percent of the weighted indicators. The intensity of multidimensional poverty (A) is 44.0 percent, which means that on average, those who are multidimensionally poor are deprived in about 44.0 percent of the weighted indicators. The National MPI is 0.191.

Table 2. Incidence, intensity and Multidimensional Poverty Index

Poverty cutoff (k value)	Index	Value	Confidence Interval	
k=30%	Headcount ratio (H, %)	4.3	41.0	45.6
	Intensity (A, %)	44.0	43.2	44.9
	MPI	0.191	0.180	0.202

c. Censored headcount ratios of the MPI indicators

It is important to understand how people are poor according to different indicators, as this information is vital to shaping policies to reduce poverty. Figure 2 shows the censored headcount ratio for each of the weighted indicators. This is the share of the population that is deprived in that indicator and is also multidimensionally poor. The National MPI can also be computed as the sum of the weighted censored headcount ratios. This implies that, reducing any of the indicators' censored headcount ratios changes the overall multidimensional poverty index MPI.

From Figure 2, results show that at national level, the highest proportion of people that are multidimensionally poor and deprived per specific indicator are reported for Transportation Assets (41.2%). This means that 41.2 percent of the population is deprived in Transportation Assets and also multidimensionally poor. This is followed by Sanitation (40.4%), Cooking and Lighting Energy (40.0%) and Housing (30.9%). The lowest censored headcount ratio is reported for ICT (3.1%) and Access to Clinics/Hospitals (8.5%).

Figure 2. National Censored Headcount Ratio
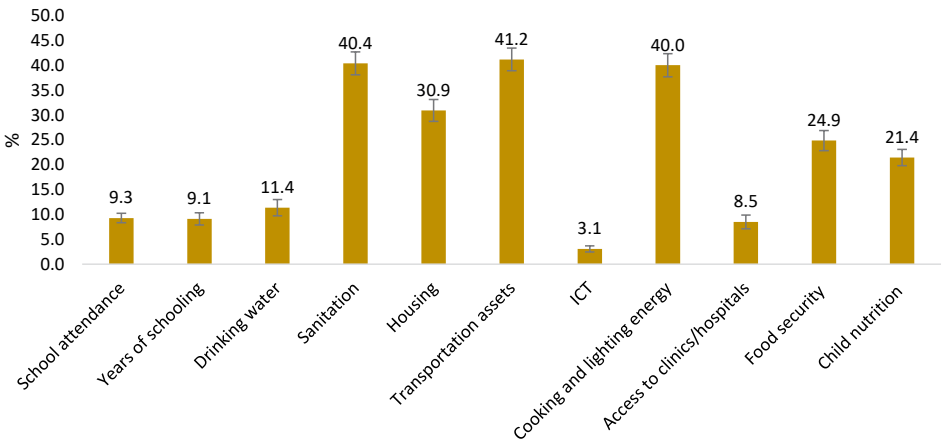
d. Percentage contribution of each indicator to MPI

One of the advantages of the Alkire-Foster methodology is that the MPI can look at the contribution of each dimension/indicator to the overall poverty score to see what is contributing more or less at a particular point in time.

Figure 3 shows the percentage contribution of each weighted indicator to the overall national multidimensional poverty index. The graph shows that the indicators that contribute the highest to multidimensional poverty in Namibia are Food Security (17.4%), Child Nutrition (15.0%), Transportation Assets (12.0%), Sanitation (11.8%), and Cooking and Lighting Energy (11.7%). The least contributors to poverty are ICT (0.9%), Access to Clinic/ Hospital (3.0%) and Drinking Water (3.3%), this is because these indicators have low censored headcount ratios and hence, they contribute so little.

9.7	6.4	3.3	11.8	9.0	12.0	0.9	11.6	3.0	17.4	15.0

0.0   10.0   20.0   30.0   40.0   50.0   60.0   70.0   80.0   90.0   100.0

%

- School attendance
- Sanitation
- ICT
- Food security
- Years of schooling
- Housing
- Cooking and lighting energy
- Child nutrition
- Drinking water
- Transportation assets
- Access to clinics/hospitals
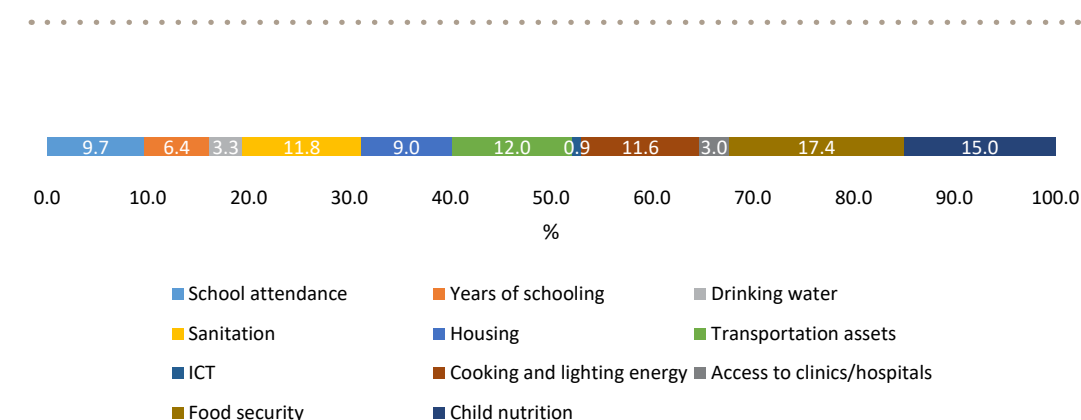
3.2. Disaggregation of Poverty Measures

In order to examine the disparities in the prevalence and distribution of multidimensional poverty in Namibia, a section on the MPI results disaggregated across various population sub-groups is presented. This provides a better understanding of the nature of multidimensional deprivations, which can enable targeted policy interventions, for instance improving standards of living in both urban and rural areas.

The following section presents results for poverty indices by different sub groups/ characteristics: Urban/Rural, Region, Sex of head of household, Main language spoken in the household, Household-size and Age-group.

a. Performance across Urban/Rural

Table 3 shows the decomposition of poverty results across the urban and rural areas in Namibia. Of the total urban population in the country, 25.3 percent are multidimensionally poor. The proportion out of the rural area total population that is multidimensionally poor is 59.3 percent.

The intensity levels indicate the proportion of indicators in which multidimensionally poor people are deprived. On average, every poor individual in urban areas is deprived in 39.6 percent of the weighted indicators, compared to 45.7 percent for poor individuals in rural areas.

Furthermore, the MPI for urban areas is reported at 0.100, which is lower than the rural areas MPI of 0.271. This reveals that multidimensional poverty is relatively more prevalent in rural areas.

Figure 4 indicates whether the difference that was reported in the incidence of multidimensional poverty across urban and rural areas from Table 3, is statistically significant. Since there is no overlap in the confidence intervals between urban and rural areas, the difference is statistically significant. Therefore, persons in rural areas have a significantly higher chance of experiencing multiple deprivations than those in urban areas.

Table 3. Poverty Measures by Urban/Rural

Area	Population share (%)	H			A			MPI		
		Value (%)	CI		Value (%)	CI		Value (%)	CI	
Urban	47.0	25.3	22.2	28.3	39.6	38.6	40.6	0.100	0.087	0.113
Rural	53.1	59.3	56.5	62.2	45.7	44.7	46.8	0.271	0.256	0.287
National	100	43.3	41.0	45.6	44.0	43.2	44.9	0.191	0.180	0.202

Figure 4. Incidence of Multidimensional Poverty (H) by Urban/Rural Residence
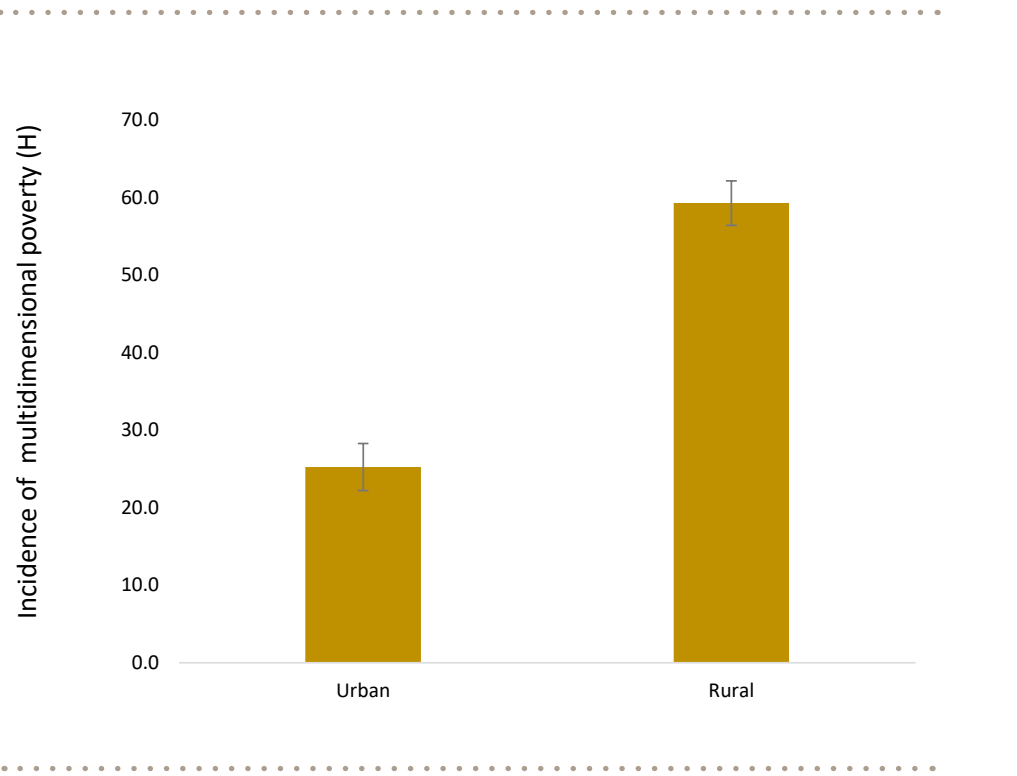
b. Performance across Region

Table 4 shows the decomposition of poverty results across the fourteen (14) administrative regions of Namibia. The incidence of multidimensional poverty is highest in Kavango West (79.6%), Kavango East (70.0%) and Kunene (64.1%).

As for the poverty intensity levels, Kunene region reported the highest rate of 59.2 percent, which indicates that on average, the multidimensionally poor individuals in the region are deprived in about 59 percent of the weighted indicators.

This is followed by Otjozondjupa (50.9%) and Kavango West (48.5%). The MPI is highest in Kavango West (0.386), Kunene (0.379) and Kavango East (0.332).

Table 4. Poverty Measures by Region

Region	Population share (%)	H			A			MPI		
		Value (%)	CI		Value (%)	CI		Value (%)	CI	
//Karas	3.8	19.6	12.9	26.2	39.4	35.8	43.1	0.077	0.047	0.107
Erongo	7.7	16.6	11.7	21.6	38.0	35.9	40.1	0.063	0.044	0.083
Hardap	3.8	26.9	18.3	35.5	40.4	38.4	42.4	0.109	0.071	0.146
Kavango East	5.8	70.0	62.3	77.7	47.4	45.0	49.7	0.332	0.291	0.372
Kavango West	4.0	79.6	73.0	86.2	48.5	46.7	50.3	0.386	0.348	0.424
Khomas	17.6	25.5	19.5	31.4	39.5	37.3	41.6	0.101	0.076	0.125
Kunene	4.0	64.1	54.2	74.1	59.2	55.0	63.3	0.379	0.304	0.455
Ohangwena	11.4	56.6	50.3	62.8	42.7	41.3	44.2	0.242	0.212	0.272
Omaheke	3.3	51.4	38.0	64.9	43.8	40.5	47.1	0.225	0.171	0.280
Omusati	11.2	50.7	43.8	57.7	41.2	39.1	43.2	0.209	0.177	0.241
Oshana	8.1	33.1	27.1	39.1	37.8	36.3	39.3	0.125	0.102	0.148
Oshikoto	8.3	50.0	43.1	56.9	42.8	40.6	45.0	0.214	0.181	0.247
Otjozondjupa	6.8	40.5	31.5	49.5	50.9	45.2	56.6	0.206	0.149	0.264
Zambezi	4.3	60.7	51.8	69.5	42.9	41.2	44.6	0.261	0.224	0.297
National	100.0	43.3	41.0	45.6	44.0	43.2	44.9	0.191	0.180	0.202

Figure 5 indicates whether the differences that were reported in the incidence of multidimensional poverty across regions from Table 4, are statistically significant. Since the confidence interval reported for Kavango West, Kavango East and Kunene do overlap, it can be concluded that persons from these regions have equal chance of experiencing multiple deprivations. Figure 5 also reveals that there is a significant difference in the incidence reported for Khomas and Zambezi regions, since there is no overlap in their confidence intervals.

Figure 6 shows the spatial distribution of the incidence of multidimensional poverty in the country, as well as the intensity levels. Just as observed in Table 4, Figure 6 indicates that Kavango West, Kavango East and Kunene regions have the highest rates of both the prevalence and the depth of multidimensional poverty. In contrast, Karas and Erongo regions are amongst those with the lowest rate for both the incidence and severity of multidimensional poverty.

Figure 5. Incidence of Multidimensional Poverty (H) by Region

Figure 6. Poverty Measures (Headcount and Intensity) by Region
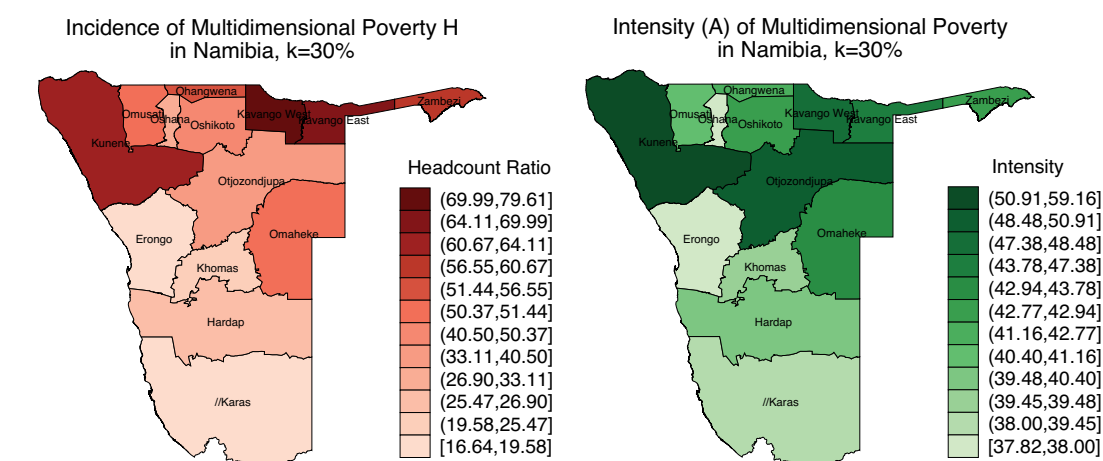
Figure 7 shows the spatial distribution of the incidence of multidimensional poverty in the country, i.e., regional multidimensional poverty rates and number of poor people by region respectively. The analysis was necessary to show that there may be some regions with relatively lower incidence rates, but high numbers of poor people because they have larger populations. Figure 7 indicates that Kavango West, Kavango East and Kunene regions have the highest rates of multidimensional poverty. However, in terms of the population counts, the regions with the highest number of poor people are Ohangwena, Khomas and Omusati.

Figure 7. Poverty Measures (Headcount rate and actual count of people) by Region

Incidence of Multidimensional Poverty H in Namibia, k=30%

Number of people living in multidimensional poverty in Namibia, k=30%
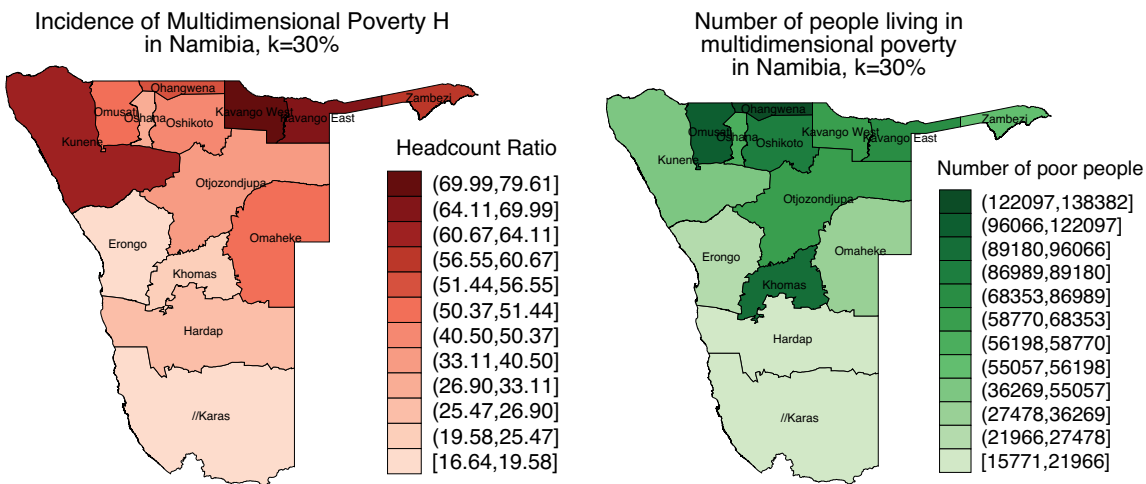
c. Performance across Sex of Head of Household

Table 5 shows the decomposition of poverty results between male and female-headed households in Namibia. Of the total population that comes from female-headed households, 46.2 percent are multidimensional poor. Conversely, the proportion out of the male-headed households' population is lower at about 40.8 percent.

The intensity levels indicate that on average, every poor individual in a female-headed household is deprived in about 43.4 percent of the indicators, compared to about 44.7 percent for poor individuals in male-headed households.

Furthermore, the MPI for the population that resides in female-headed households is reported at 0.201, while the population that resides in male-headed households reported an MPI of 0.182.

Table 5. Poverty Indicators by Sex of Head of Household

Sex of head of house-hold	Population share (%)	H			A			MPI		
		Value (%)	CI		Value (%)	CI		Value (%)	CI	
Female	47.2	46.2	43.5	48.9	43.4	42.3	44.5	0.201	0.187	0.214
Male	52.8	40.8	38.0	43.5	44.7	43.6	45.9	0.182	0.169	0.196
National	100	43.3	41.0	45.6	44.0	43.2	44.9	0.191	0.180	0.202

Figure 8 indicates whether the difference that was reported in the incidence of multidimensional poverty across female and male headed households from Table 5, is statistically significant. Although the incidence for female-headed households is higher than that of the male-headed households, as reported in table 5, the difference is not statistically significant since there is an overlap in the confidence intervals.

Figure 8. Incidence of Multidimensional Poverty (H) by Sex of Head of Household
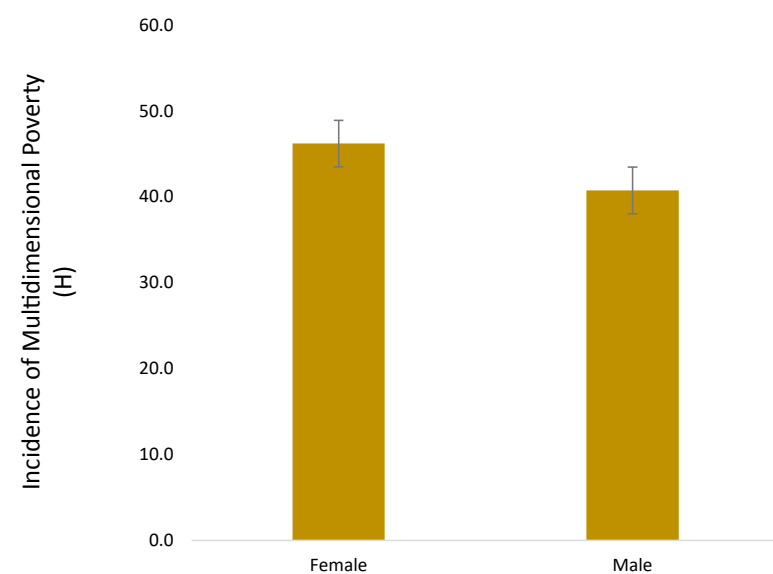
d. Performance across Main language spoken in the Household

Table 6 shows the decomposition of poverty results across different language groups spoken in Namibia. The highest headcount ratio of multidimensional poverty is reported amongst the population whose main language spoken at home is Khoisan (93.4%), followed by Rukavango (67.8%) and Zambezi languages (54.2%). The population whose main spoken language is English and German reported the lowest headcount ratios of multidimensional poverty, each with about 3 percent.

The intensity levels indicate that on average, the depth of poverty is higher amongst the population whose main spoken language at home is Khoisan (61.5 %), Otjiherero (54.3%), Other African languages (47.5%) and Rukavango (47.2%). The lowest intensity ratio is reported amongst the population whose main spoken language is other European (37.2%), which indicates that of this population sub-group, those that are multidimensionally poor are deprived in 37.2 percent of the total number of indicators.

Furthermore, the highest MPI was reported for the population that mainly speaks Khoisan, at 0.575.

Table 6: Poverty Indicators by Main Spoken language

Language	Population share (%)	H			A			MPI		
		Value (%)	CI		Value (%)	CI		Value (%)	CI	
Khoisan	1.4	93.4	85.9	100.9	61.5	54.5	68.6	0.575	0.482	0.667
Zambezi languages	4.3	54.2	45.0	63.5	42.5	40.8	44.1	0.230	0.193	0.267
Otjiherero	8.8	43.6	35.6	51.7	54.3	50.5	58.0	0.237	0.185	0.288
Rukavango	11.4	67.8	62.9	72.7	47.2	45.8	48.6	0.320	0.294	0.346
Nama/Damara	12.0	43.3	37.9	48.8	43.4	41.5	45.4	0.188	0.162	0.214
Oshiwambo	51.3	42.9	39.9	45.8	40.6	39.7	41.4	0.174	0.160	0.188
Setswana	0.2	15.0	0.4	29.6	40.3	31.8	48.8	0.060	0.001	0.120
Afrikaans	6.5	7.4	4.0	10.8	38.2	34.2	42.3	0.028	0.014	0.043
German	0.2	2.6	-2.7	7.9	38.9	38.9	38.9	0.010	-0.011	0.031
English	1.1	3.3	-0.7	7.3	39.6	29.7	49.4	0.013	-0.004	0.030
Other European	0.4	9.9	1.7	18.1	37.2	33.2	41.3	0.037	0.009	0.065
Other African	0.7	14.6	9.2	20.1	47.5	43.0	51.9	0.069	0.045	0.094
Other	1.7	14.8	5.8	23.9	43.7	38.0	49.4	0.065	0.022	0.108
National	100.0	43.3	41.0	45.6	44.0	43.2	44.9	0.191	0.180	0.202

Figure 9 indicates whether the differences that were reported in the incidence of multidimensional poverty across main language spoken in Table 6 are statistically significant or not. Since the standard error bars reported for persons whose main spoken language is Khoisan does not overlap with other languages, it can be concluded that persons who mainly speak Khoisan have a significantly higher chance of experiencing multiple deprivations. Figure 9 also reveals that there is no significant difference in the incidence reported for Zambezi languages, Otjiherero, Nama/Damara and Oshiwambo languages, since there is an overlap in their standard error bars.

Figure 10 shows the distribution of the number of multidimensionally poor people across main language spoken. The analysis was necessary to show that there may be some languages with relatively lower incidence rates, but high numbers of poor people because they have larger populations. While table 6 indicates that the highest incidence rates were reported for Khoisan, followed by Rukavango and Zambezi languages, figure 10 shows that out of the multidimensionally poor people, the highest population counts were reported for people who mainly speak Oshiwambo (50.7%), Rukavango (17.9%) and Nama/Damara (12.0%) languages.

Figure 9. Incidence of Multidimensional Poverty (H) by Main Language Spoken

Figure 10. Distribution of the Number of Multidimensionally Poor People by Main Language Spoken
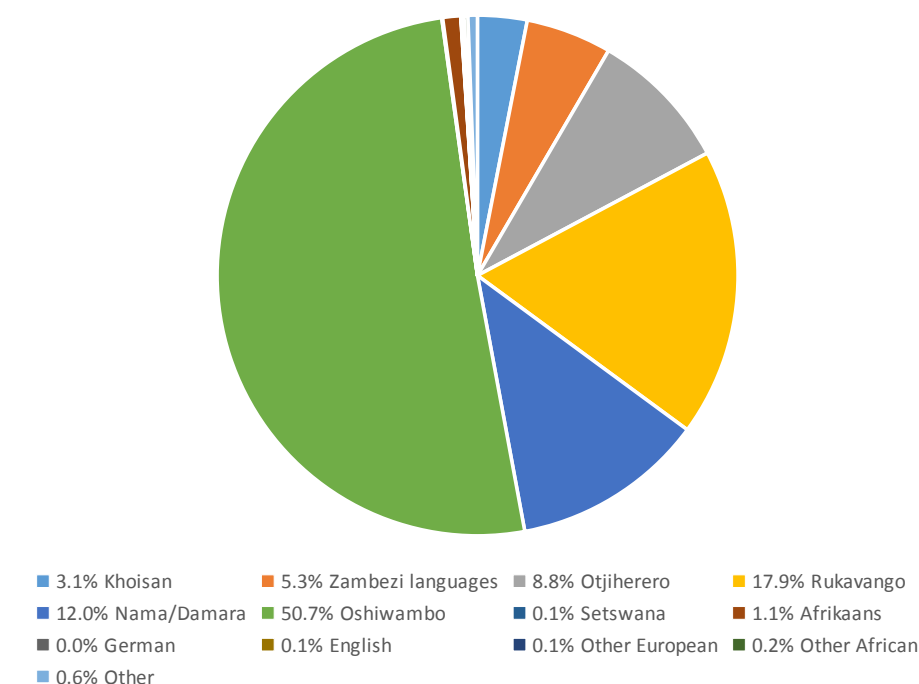
e. Performance across Household size

Table 7 shows the decomposition of poverty results across various household size groups in the country.

Table 7 indicates that the headcount ratio increases as the household size increases. The highest headcount ratio is found among households that have 7 or more members, reported at 55.2 percent and the lowest is reported for the households with less than 4 members, reported at 31.1 percent.

The highest intensity level of multidimensional poverty is reported amongst persons whose household size is 4-6; and 7 or more members at 44.5 percent each.

The MPI value is highest for the population that resides in households with 7 or more members.

Table 7. Poverty Measures by Household Size

HH Size	Population share (%)	H			A			MPI		
		Value (%)	CI		Value (%)	CI		Value (%)	CI	
1-3	23.3	31.1	28.8	33.4	41.6	40.9	42.4	0.129	0.120	0.139
4-6	36.7	38.2	35.6	40.8	44.5	43.5	45.5	0.170	0.158	0.182
7+	40.0	55.2	51.7	58.7	44.5	43.3	45.8	0.246	0.229	0.263
National	100	43.3	41.0	45.6	44.0	43.2	44.9	0.191	0.180	0.202

Figure 11 indicates whether the differences that were reported in the incidence of multidimensional poverty across household size from Table 7, are statistically significant. Since the confidence intervals do not overlap for all the reported household sizes, it can be concluded that the chances of experiencing multiple deprivations increase as household size also increase.

Figure 11. Incidence of Multidimensional Poverty (H) by Household Size
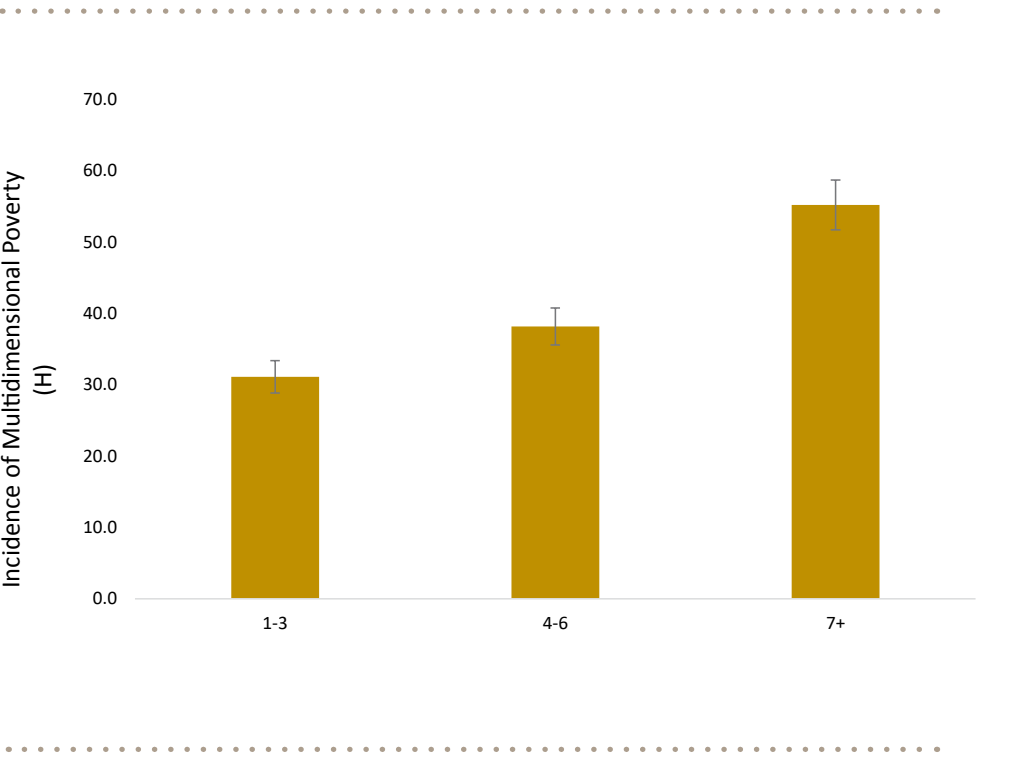
f. Performance across Age Groups

Table 8 shows the decomposition of poverty results across various age groups in the country.

The highest headcount ratio is reported for the younger age groups i.e. 0-4 years (56.2%), 5-9 years (49.9%) and 10-14 years (48.5%). The lowest headcount ratio (32.7%) is reported for the age group of 25-29 years, to imply that of all persons aged 25-29 years, about 33 percent are multidimensionally poor.

The highest intensity level of multidimensional poverty is reported amongst the 5-9 years' age group (45.7%). The depth of poverty is lowest for the age group of 25-29 years (41.0 %).

Furthermore, the highest MPI value was reported for the population aged 0-4 years.

Figure 12 indicates whether the differences that were reported in the incidence of multidimensional poverty across age groups from Table 8, are statistically significant or not. Since the confidence intervals reported for age group 0-4 does not overlap with any other age group, it can be concluded that persons aged 0-4 years have a significantly higher chance of experiencing multiple deprivations. Figure 12 further shows that there is no significant difference in the incidences reported for age groups 5-9, 10-14, 15-19 and 61+ since there is an overlap in the confidence intervals, while there is no significant difference between the age groups 20-24, 25-29, 30-34 and 35-60.

Figure 12. Incidence of Multidimensional Poverty (H) Age Groups

Table 8. Poverty Indicators by Age Groups (years)

Age groups	Population share (%)	H			A			MPI		
		Value (%)	CI		Value (%)	CI		Value (%)	CI	
0-4	13.6	56.2	53.5	59.0	45.2	44.2	46.3	0.254	0.240	0.269
5-9	11.9	49.9	47.0	52.9	45.7	44.4	47.0	0.228	0.213	0.244
10-14	10.4	48.5	45.4	51.5	44.8	43.7	45.8	0.217	0.202	0.232
15-19	10.7	46.3	43.2	49.4	43.4	42.3	44.5	0.201	0.186	0.216
20-24	10.2	36.9	34.0	39.9	42.0	40.8	43.1	0.155	0.142	0.169
25-29	9.0	32.7	29.9	35.4	41.0	39.9	42.1	0.134	0.123	0.145
30-34	7.2	35.0	32.1	37.9	43.5	42.3	44.7	0.152	0.139	0.166
35-60	21.0	37.1	34.7	39.4	43.7	42.8	44.6	0.162	0.151	0.173
61+	6.1	45.4	42.3	48.4	44.5	43.5	45.4	0.202	0.187	0.216
Total	100	43.3	41.0	45.6	44.0	43.2	44.9	0.191	0.180	0.202

3.3. Decomposition of Censored Headcount Ratios

This sub-section presents the censored headcount ratio of indicators across urban/rural and regions. The censored headcount ratio of a certain indicator is defined as the proportion of the total population that is deprived in that specific indicator, and also multidimensionally poor.

Figure 13 shows the censored headcount ratios between urban and rural areas. Results show that overall, rural areas have the highest proportion of people that are multidimensionally poor and deprived in all the indicators compared to urban areas. Cooking and Lighting Energy, as well as Sanitation are the two indicators with the highest censored headcount ratios for rural and almost in urban areas respectively. The lowest censored headcount ratio for urban areas is reported for Drinking Water (0.5%) while for rural areas, ICT reported the lowest at 5.1 percent.

Figure 13. Censored Headcount Ratios by Urban/Rural
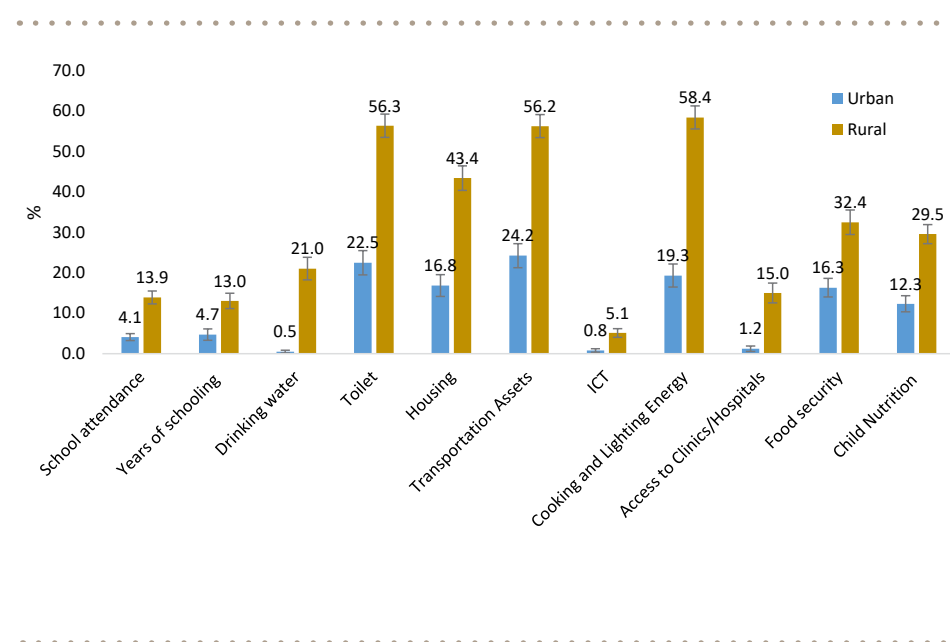
Table 9 on page 44, shows the censored headcount ratios across the 14 administrative regions of Namibia. The table shows that ICT is the only indicator with the lowest proportion of people that are poor and deprived across all regions. Indicators such as Sanitation, Housing, Transportation Assets, and Cooking and Lighting Energy are amongst the indicators with the highest proportions of people that are poor and deprived in those specific indicators across all regions. Furthermore, the table shows that Kunene is one of the regions that has the highest proportion of the poor and deprived in most of the indicators such as Cooking and Lighting Energy (63.0%), Transportation Assets (61.3%), Sanitation (59.3%) and Housing (52.6%).

Similarly, Erongo is among the regions with the lowest proportion of its population that is poor and deprived in most of the indicators i.e. ICT (0.4 %), Drinking Water (2.7 %), School Attendance (3.5 %) and Access to Clinics/Hospitals (4.8 %).

Table 9. Censored Headcount Ratios by Regions

Region	Population share (%)	School attendance	Years of schooling	Drinking water	Sanitation	Housing	Transportation Assets	ICT	Cooking and Lighting Energy	Access to Clinics/ Hospitals	Food security	Child Nutrition
//Karas	3.8	3.5	6.2	2.7	13.6	10.4	19.0	0.4	13.9	4.8	9.3	9.9
Erongo	7.7	3.9	2.2	2.2	15.0	12.8	14.5	0.7	10.2	1.7	10.8	4.6
Hardap	3.8	6.4	8.6	1.2	21.1	18.5	26.2	2.7	19.7	3.7	12.5	11.7
Kavango East	5.8	11.1	13.4	28.9	68.4	52.9	68.7	8.9	69.2	8.0	60.2	30.9
Kavango West	4.0	14.4	21.3	32.1	76.2	71.0	78.2	6.7	79.3	11.8	63.8	33.8
Khomas	17.6	4.3	4.2	0.0	23.7	16.9	24.5	0.7	16.9	2.8	15.2	13.6
Kunene	4.0	37.4	36.5	36.0	59.3	52.6	61.3	11.7	63.0	31.0	36.6	21.5
Ohangwena	11.4	7.9	8.4	19.5	54.7	41.4	54.1	1.6	56.3	12.0	24.7	35.6
Omaheke	3.3	18.1	17.2	5.8	42.3	26.5	47.3	6.4	49.6	24.6	15.8	22.4
Omusati	11.2	8.2	8.0	16.7	50.2	32.0	46.3	3.0	50.5	6.9	18.9	31.2
Oshana	8.1	4.8	4.5	1.6	26.9	22.1	31.7	0.9	32.1	1.2	17.3	16.2
Oshikoto	8.3	9.4	7.3	12.2	49.3	32.3	46.5	1.9	49.5	14.3	26.9	25.1
Otjozondjupa	6.8	17.7	13.1	9.3	34.6	25.9	38.3	4.3	34.6	14.8	25.3	21.0
Zambezi	4.3	7.9	6.5	13.7	58.7	57.1	59.2	6.3	58.8	3.4	51.7	17.9

3.4. Comparison of the MPI to the monetary measure

As mentioned earlier, since 2003, Namibia has adopted the Cost-Of-Basic-Needs Approach (CBNA) to measure monetary poverty. To-date, three poverty lines have been released by the NSA, namely, the Food Poverty Line (FPL) – threshold for food poverty; The Lower Bound Poverty Line (LBPL) – threshold for the severely poor; and the Upper Bound Poverty Line (UBPL) – threshold for the poor.

This sub-section presents a comparison between the Multidimensional Poverty index and the 2015/16 monetary poverty rates by region using the UBPL. Table 10 (page 46) and Figure 14 show a comparison of the monetary and multidimensional poverty rates, and indicates that Kavango East, Kavango West, Kunene, Omaheke, Omusati, Zambezi regions are amongst those with the highest poverty rates for both measures. Conversely, Erongo and Karas regions are amongst those with the least poverty rates for both monetary and multidimensional poverty measures.

Figure 14. Spatial comparison of poverty measures

Incidence of Multidimensional Poverty H in Namibia, k=30%

Headcount Ratio
(69.99,79.61]
(64.11,69.99]
(60.67,64.11]
(56.55,60.67]
(51.44,56.55]
(50.37,51.44]
(40.50,50.37]
(33.11,40.50]
(26.90,33.11]
(25.47,26.90]
(19.58,25.47]
[16.64,19.58]

Money–metric poverty measure based on the Upper Bound Poverty Line (UPBL) in Namibia

Poverty rate
(37.9,41.5]
(34.2,37.9]
(33.4,34.2]
(27.8,33.4]
(20.2,27.8]
(17.15,20.2]
(14,17.15]
(10.7,14]
(9.7,10.7]
(9.2,9.7]
(4.7,9.2]
[3.7,4.7]
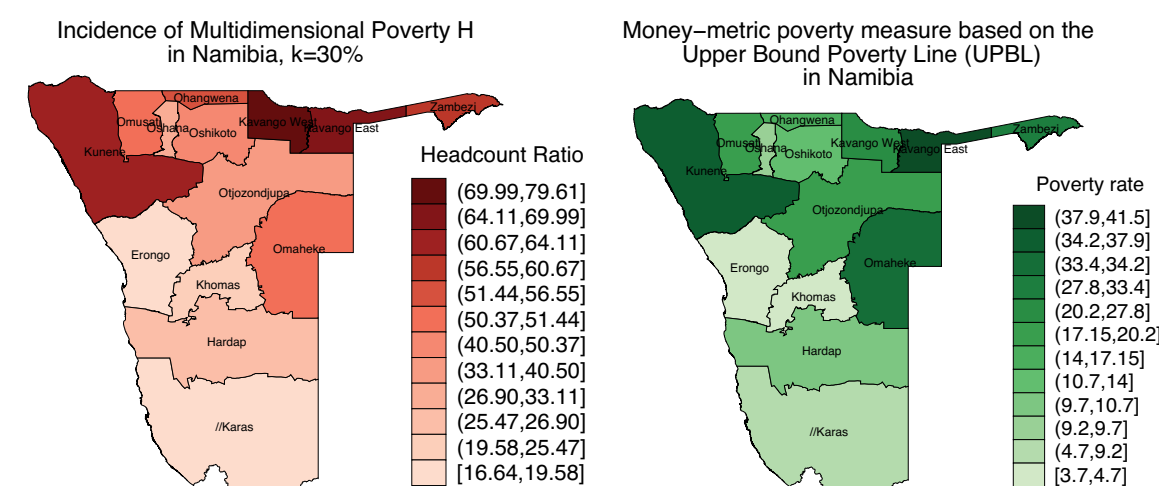
Table 10. Comparison of poverty measures, by regions

Region	Total Population	Monetary poor		MPI poor	
//Karas	80561	7409	9.2	15771	19.6
Erongo	165138	6106	3.7	27478	16.6
Hardap	81650	8726	10.7	21966	26.9
Kavango East	124286	51538	41.5	86989	70.0
Kavango West	85863	23854	27.8	68353	79.6
Khomas	377192	17846	4.7	96066	25.5
Kunene	85883	32536	37.9	55057	64.1
Ohangwena	244704	35738	14.6	138382	56.6
Omaheke	70511	24087	34.2	36269	51.4
Omusati	240629	48520	20.2	122097	50.7
Oshana	175053	16930	9.7	57966	33.1
Oshikoto	178370	25010	14.0	89180	50.0
Otjozondjupa	147087	29045	19.7	59574	40.5
Zambezi	92630	30910	33.4	56198	60.7
Namibia	2149556	358254	16.7*	931345	43.3

*Cautionary note: The monetary poverty rate differs from the one published in the NHIES 2015/16 basic report, due to a difference in sample size based on the MPI methodology

Given that monetary poverty assessment using consumption expenditure has been the conventional measure of poverty in Namibia, it is crucial to compare the two measures in this contextual analysis. Figure 15 presents the comparison between multi-dimensional poverty with the consumption expenditure poverty estimate. Figure 15 indicates that approximately 12.5 percent of people in Namibia are both multi-dimensionally and monetary poor. The figure further displays that 30.8 percent of the population are multi-dimensionally poor but not monetary poor, suggesting that income alone is not a good predictor of poverty across the population. Moreover, 52.5 percent of people are neither multi-dimensionally nor monetary poor.

Figure 15. Venn Diagram Showing Overlaps between National Monetary and Multidimensional Poverty Rates*
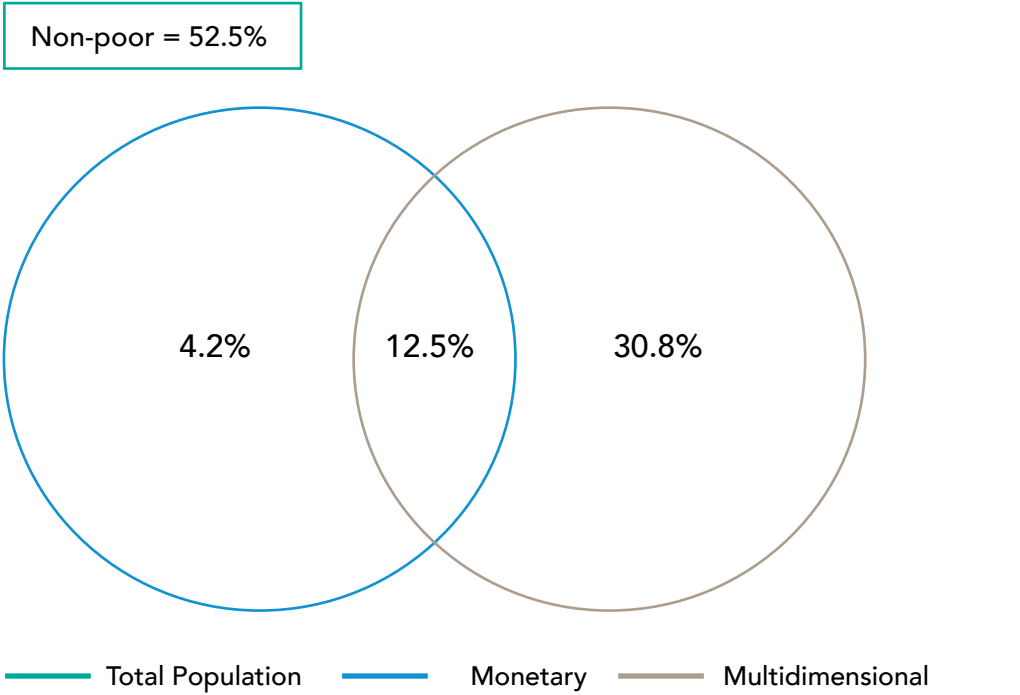
Non-poor = 52.5%

4.2%   12.5%   30.8%

—— Total Population   —— Monetary   —— Multidimensional

*Cautionary note: The monetary poverty rate differs from the one published in the NHIES 2015/16 basic report, due to a difference in sample size based on the MPI methodology

4. Poverty measures based on the child population.

This section presents the multidimensional poverty results that are mainly based on children, aged 0-17 years, whose population share is 42.6 percent out of the total population. In order to provide an insight on the nature and depth of multidimensional poverty amongst children in Namibia, the sections begin by comparing poverty measures between children (aged 0-17 years) and adults (aged 18 years or older). The section further presents a decomposition of the child-based poverty measures, across various demographic characteristics. The section concludes with a comparison of child multidimensional and monetary poverty rates.

## 4.1 Profiling child-based multidimensional poverty in Namibia

a. Uncensored headcount ratios of the MPI indicators

Figure 16 shows the proportion that is deprived in each of the 11 indicators of the MPI, by the two-age groups: children and adults. The data show that children (0-17) are more deprived in all indicators compare adults. While the highest deprivation levels were reported in Transportation Assets, Cooking and Lighting Energy and Sanitation for both age groups, the proportions are relatively higher amongst the children population.

The lowest deprivation levels amongst the children population were reported in ICT (3.8%), followed by School Attendance (10.5%) and thirdly by Access to Clinics/Hospitals (12.5%).

Figure 16. Child and Adult Specific National Uncensored Headcount Ratio
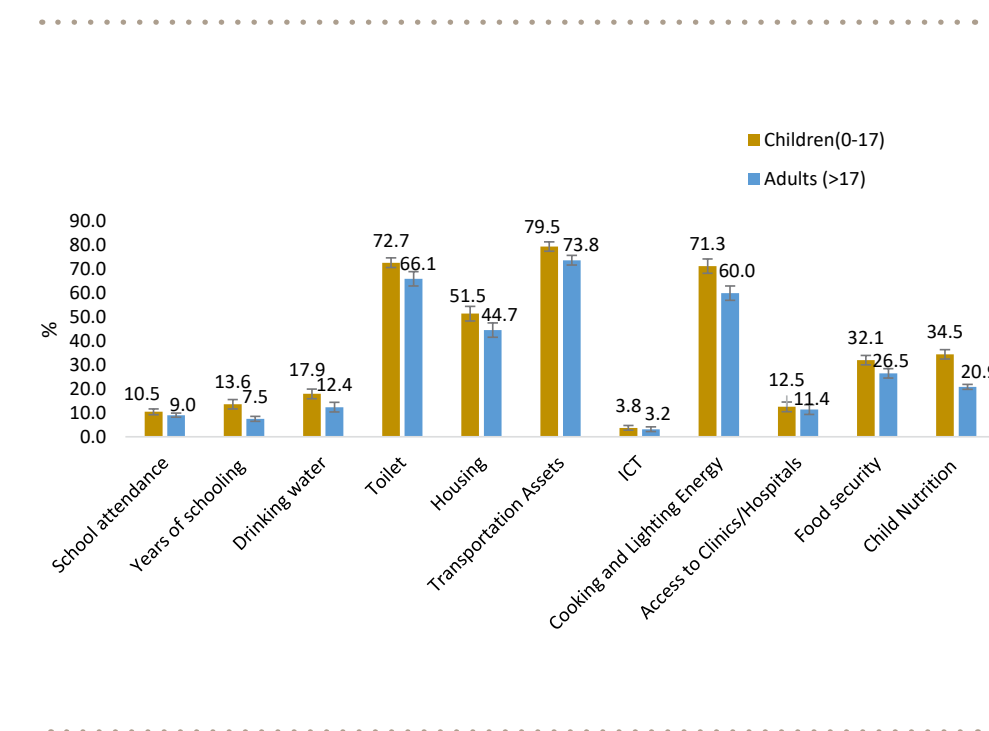
b. The level of multidimensional poverty amongst children in Namibia

Table 11 shows the three main indicators of multidimensional poverty; Headcount ratio (H), Intensity (A) and the Adjusted headcount ratio (MPI) based on the two population age groups (children and adults).

The table shows that out of the population of children in Namibia 51.3 percent are living in multidimensional poverty. The intensity of multidimensional poverty (A) amongst the children population is 45.1 percent, while the adult population's intensity rate is reported at 43.0 percent.

The MPI is 0.231 for children (0-17 years), which is higher than of adults (18+ years) of 0.161.

Table 11. Child and Adult Specific Incidence, intensity and Multidimensional Poverty Index

	Population share (%)	H		A		MPI		
		Value (%)	CI	Value (%)	CI	Value (%)	CI	
Children (0-17)	42.6	51.3	0.49	0.54	45.1	0.44	0.46	0.231	0.218	0.244
Adults (>17)	57.4	37.4	0.35	0.40	43.0	0.42	0.44	0.161	0.151	0.171
National	100	43.3	41.0	45.6	44.0	43.2	44.9	0.191	0.180	0.202

c. Child and Adult-based censored headcount ratios of the MPI indicators

Figure 17 shows the censored headcount ratio per each of the indicators, for the two (2) age groups. From Figure 17, results show that for both age groups, the highest proportion of people that are multidimensionally poor and deprived per specific indicator are reported for Inadequate transportation assets, followed by adequate sanitation, cooking and lighting energy and adequate housing. It is worth noting that the censored headcount ratios are relatively higher for the children population, in all indicators. The lowest censored headcount ratio for the children population is reported for ICT equipment (3.4%) and Access to clinics/hospitals (9.9%).
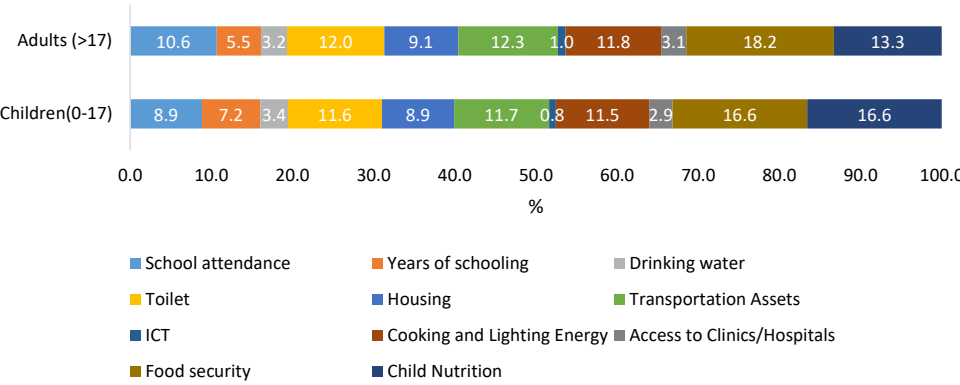
Figure 17. Child and Adult Specific National Censored Headcount Ratio
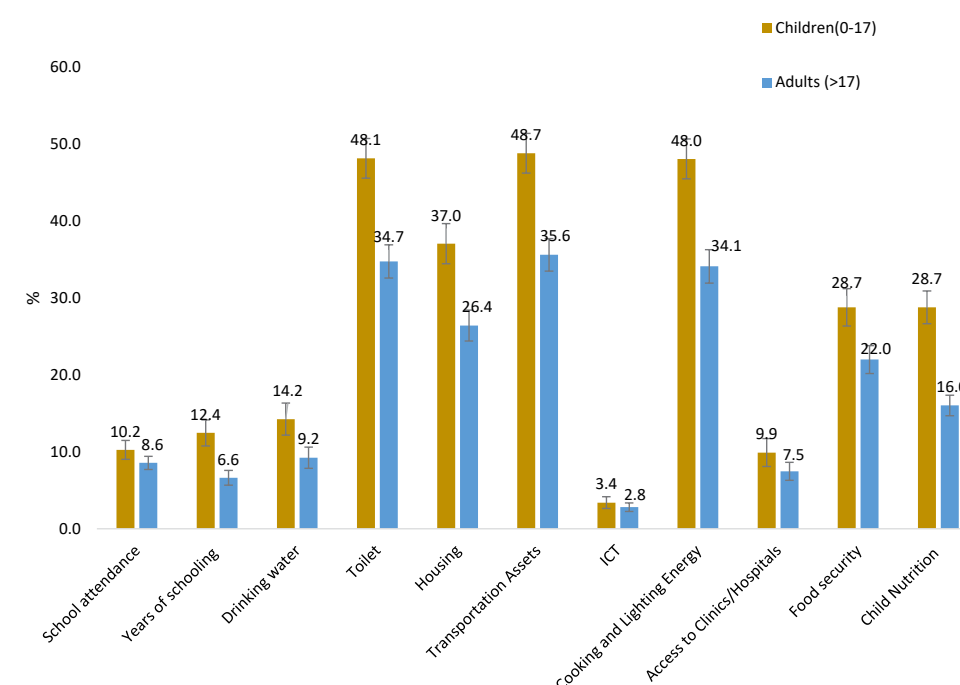
d. Percentage contribution of each indicator to the child and adult specific MPI

Figure 18 shows the percentage contribution of each weighted indicator to the overall multidimensional poverty index for the respective age group populations, children and adults. Figure 18 shows that the indicators that contribute the highest to children multidimensional poverty in Namibia are Food Security and Child Undernutrition all at 16.6 percent, Inadequate Transportation Assets (11.7%), Sanitation (11.6%), and Unsafe Cooking and Lighting Energy (11.5%).

Figure 18. Percentage Contribution of each Indicator to Child and Adult MPI

	School attendance	Years of schooling	Drinking water
Toilet	Housing	Transportation Assets
ICT	Cooking and Lighting Energy	Access to Clinics/Hospitals
Food security	Child Nutrition	

4.2. Decomposition of child-based poverty indicators

In order to examine the disparities in the prevalence and distribution of children multidimensional poverty in Namibia, this section presents the decompositions of child-based multidimensional poverty indicators across Urban/rural areas, Region, Sex of head of household, and child specific age-groups.

a. Performance across Urban/Rural

Table 12 shows the decomposition of child poverty results across the urban and rural areas in Namibia. Of the total population of children in urban areas, about 30.4 percent are multidimensional poor, while, the proportion out of the total population of children in rural areas that is multidimensionally poor is 64.4 percent.

The intensity levels indicate the proportion of indicators in which multidimensionally poor children are deprived. On average, every poor child in urban areas is deprived in 40.3 percent of the indicators, compared to 46.5 percent for poor children in rural areas. Furthermore, MPI for rural areas is reported at 0.299, which is higher than the MPI value for urban areas reported at 0.123.

Table 12. Child-based Poverty measures by urban/rural

Area	Population share (%)	H		A		MPI	
		Value (%)	CI	Value (%)	CI	Value (%)	CI
Urban	38.6	30.4	26.6 34.3	40.3	39.2 41.4	0.123	0.106 0.139
Rural	61.4	64.4	61.4 67.3	46.5	45.3 47.7	0.299	0.283 0.316
National	100.0	51.3	48.7 53.8	45.1	44.1 46.1	0.231	0.218 0.244

Figure 19 indicates whether the difference that was reported in the child-based incidence of multidimensional poverty across urban and rural areas from table 12 is statistically significant. Since there is no overlap in the confidence intervals between urban and rural areas, the difference is statistically significant. Therefore, children in rural areas have a significantly higher chance of experiencing multiple deprivations than those in urban areas.

Figure 19. Child-Based Incidence of Multidimensional Poverty (H) by Urban/Rural
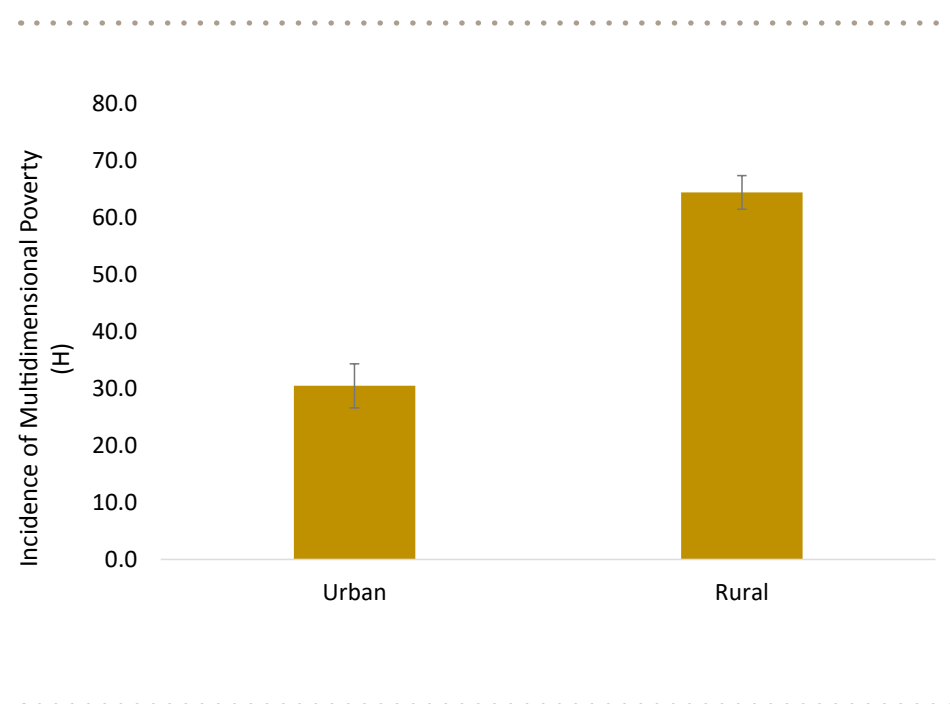
b. Performance across Regions

Table 13 (page 56) shows the decomposition of children-based poverty results across the fourteen (14) administrative regions of Namibia. The incidence of multidimensional poverty is highest in Kavango West (82.3%), Kavango East (74.7%) and Kunene (69.2%). As for the child poverty intensity levels, Kunene region reported the highest rate of 62.9 percent, which indicates that on average, the multidimensionally poor children in the region are deprived in about 63 percent of the indicators. This is followed by Otjozondjupa, reported at 52.6 percent.
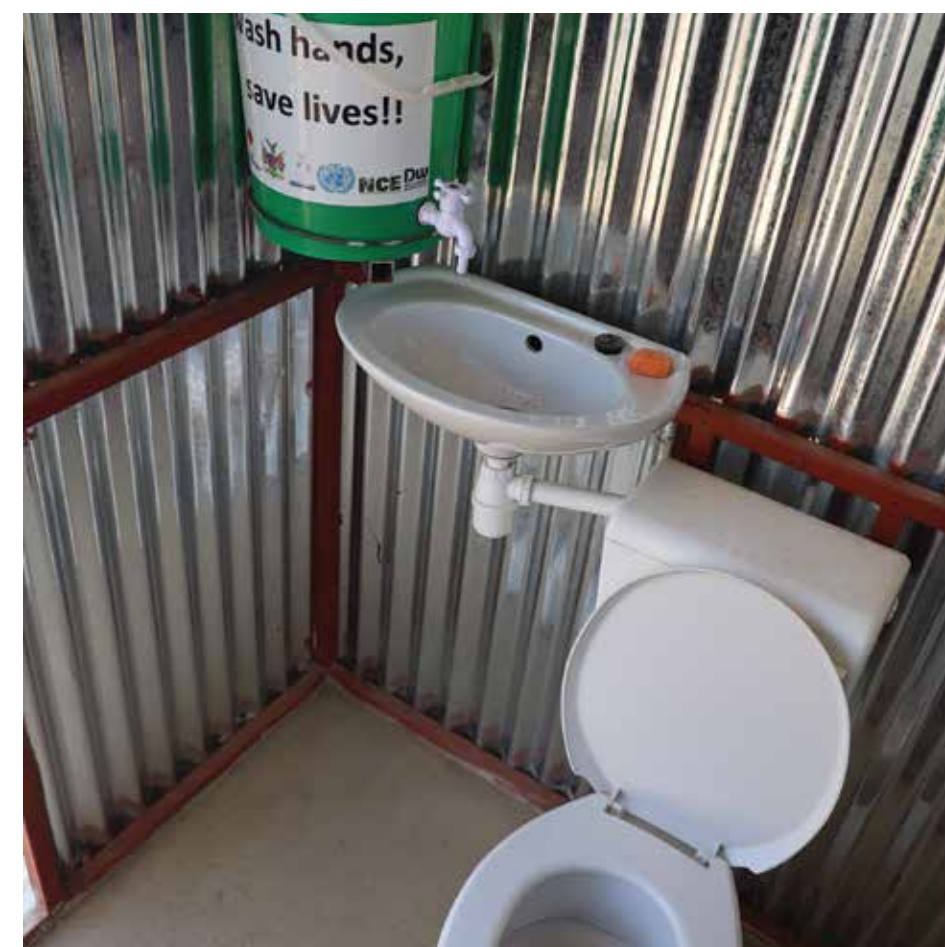
Table 13. Child-based Poverty measures by urban/rural

Region	Population share (%)	H			A			MPI		
		Value (%)	CI		Value (%)	CI		Value (%)	CI	
//Karas	3.1	21.1	13.4	28.9	39.8	35.1	44.5	0.084	0.048	0.121
Erongo	5.7	15.7	9.2	22.1	37.5	34.8	40.3	0.059	0.033	0.084
Hardap	3.4	30.0	19.3	40.6	40.3	38.0	42.6	0.121	0.074	0.167
Kavango East	6.7	74.7	67.5	81.9	48.7	46.1	51.3	0.363	0.323	0.404
Kavango West	5.2	82.3	76.1	88.5	48.9	47.2	50.6	0.402	0.365	0.439
Khomas	13.3	32.6	24.3	40.9	40.2	37.9	42.4	0.131	0.096	0.166
Kunene	4.5	69.2	58.5	79.8	62.9	58.5	67.3	0.435	0.348	0.522
Ohangwena	13.9	64.1	58.1	70.0	43.3	41.9	44.8	0.278	0.248	0.307
Omaheke	3.4	53.6	37.7	69.6	43.7	39.6	47.8	0.234	0.170	0.298
Omusati	12.6	55.8	48.7	62.9	41.6	39.5	43.8	0.232	0.199	0.266
Oshana	7.5	38.5	31.1	45.9	38.1	36.6	39.6	0.147	0.118	0.175
Oshikoto	9.1	57.4	50.5	64.4	43.5	40.8	46.1	0.250	0.214	0.285
Otjozondjupa	6.9	43.5	33.5	53.6	52.6	46.3	58.9	0.229	0.163	0.295
Zambezi	4.7	66.2	57.4	75.0	44.0	42.0	46.0	0.291	0.253	0.330
National	100.0	51.3	48.7	53.8	45.1	44.1	46.1	0.231	0.218	0.244

Figure 20 indicates whether the differences that were reported in the child-based incidence of multidimensional poverty across regions from Table 13, are statistically significant. Since the confidence intervals reported for //Karas, Erongo and Hardap regions do overlap, it can be concluded that persons from these regions have equal chance of experiencing multiple deprivations. Figure 20 also reveals that there is a significant difference in the incidence reported for Kunene and Oshana regions, since there is no overlap in their confidence intervals.

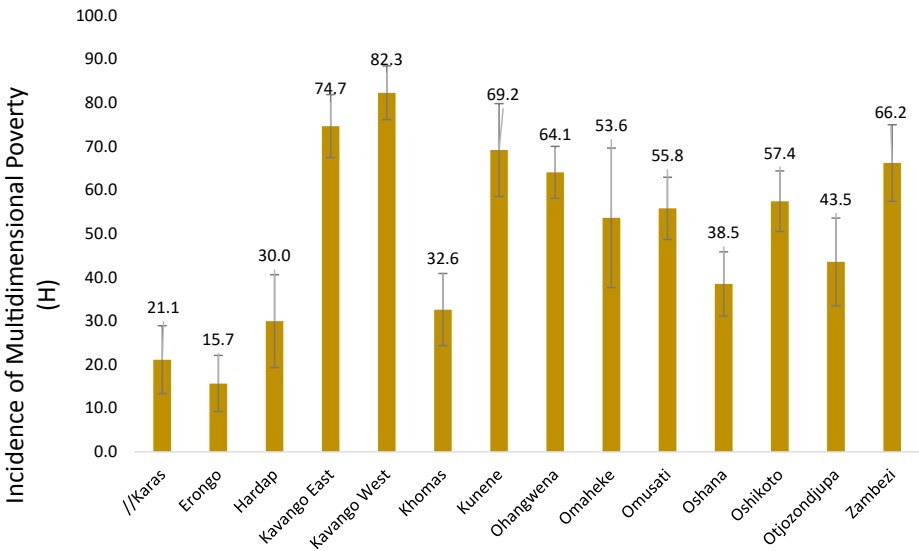## Figure 20. Child-Based Incidence of Multidimensional Poverty (H) by Region

Figure 21 shows the spatial distribution of the prevalence of child multidimensional poverty in the country, as well as the intensity levels.

The figure also indicates that Kavango West, Kavango East and Kunene regions have the highest rates of both the prevalence and the depth of child multidimensional poverty in the country.

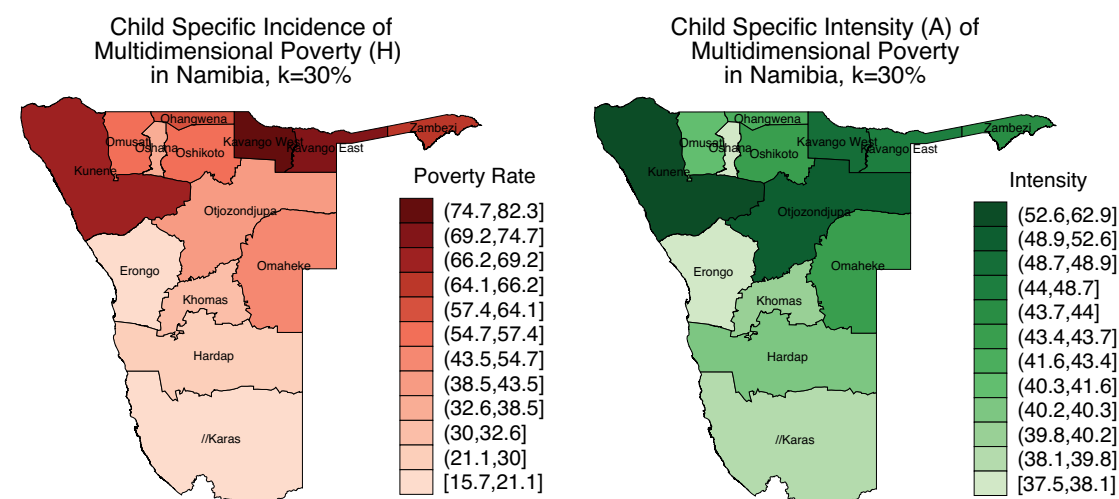Figure 21. Spatial Distribution of Child Poverty Measures by Region

Figure 22 shows the spatial distribution of the incidence of multidimensional poverty amongst children aged 0-17 years in the country, i.e., regional multidimensional poverty rates and number of poor people by region respectively. The analysis was necessary to show that there may be some regions with relatively lower incidence rates, but high numbers of poor people because they have larger populations. Figure 22 indicates that Kavango West, Kavango East and Kunene regions have the highest rates of multidimensional poverty. However, in terms of the population counts of children, the regions with the highest number of multidimensionally poor children are Ohangwena, Omusati and Oshikoto.

Figure 22. Child-based Poverty Measures (Headcount rate and actual count of children) by Region
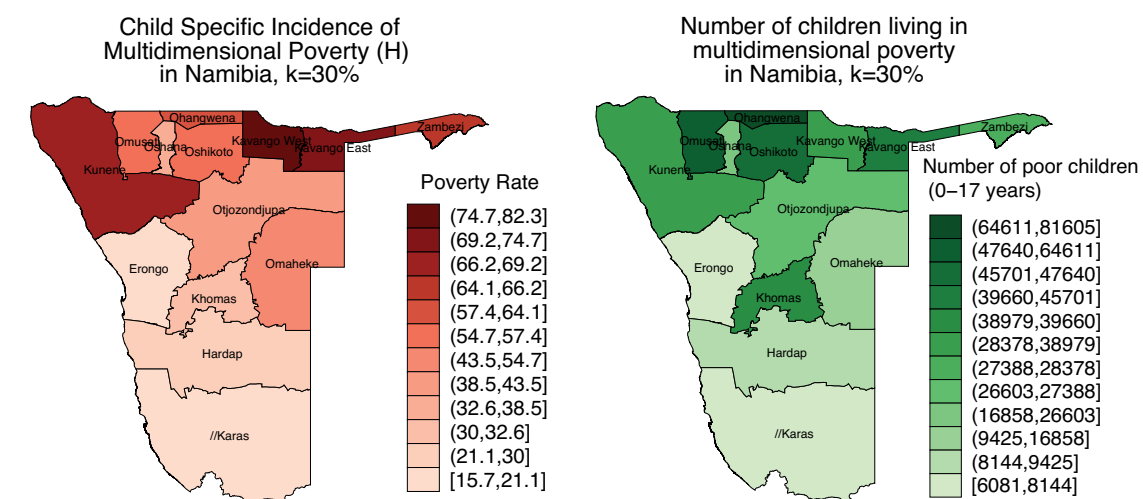
c. Performance across Sex of head of Household

Table 14 shows the decomposition of child poverty results between male and female headed households in Namibia. Of the total children population that resides in female headed households, about 53 percent are multidimensional poor. Conversely, the proportion out of the children population that resides in male headed households who are multidimensional poor is about 50 percent.

The intensity levels indicate that on average, every multidimensionally poor child in a female headed household is deprived in 44.5 percent of the weighted indicators compared to 45.8 percent for the poor children in male headed households.

Furthermore, the MPI for the children population who resides in female headed households is reported at 0.234 while for those children residing in male headed households is reported at 0.228

Table 14. Child-based Poverty measures by Sex of head of household

Sex of head of house-hold	Population share (%)	H			A			MPI		
		Value (%)	CI		Value (%)	CI		Value (%)	CI	
Female	53.1	52.7	49.7	55.6	44.5	43.2	45.7	0.234	0.219	0.249
Male	46.9	49.7	46.3	53.0	45.8	44.5	47.2	22.8	21.1	24.5
National	100.0	51.3	48.7	53.8	45.1	44.1	46.1	0.231	0.218	0.244

Figure 23 indicates whether the difference that was reported in the child-based incidence of multidimensional poverty across female and male headed households from Table 14, is statistically significant. Although the child-based incidence for female-headed households is higher than that of the male-headed households, as reported in table 14, the difference is not statistically significant since there is an overlap in the confidence intervals.

Figure 23. Child-Based Incidence of Multidimensional Poverty (H) by Sex of Head of Household
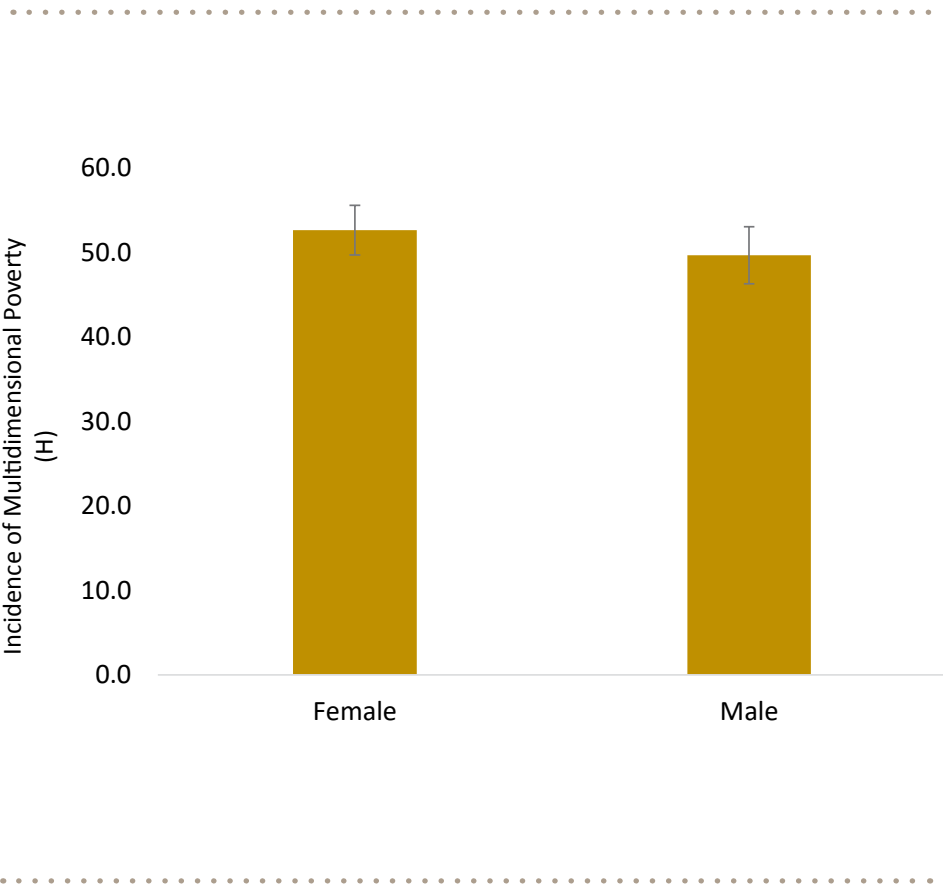
d. Performance across child-specific age group

Table 15 shows the decomposition of child-based poverty results across child-specific age groups.

The highest headcount ratio is reported for the age group of 2-4 years (57.3%) followed by the age group of 1 years or less (54.7%).

The table further shows that the intensity levels of child-based multidimensional poverty is fairly constant across age groups, the highest reported for the 2-4 years' age group (45.6%) and the lowest reported for the 15-17 years' age group (44.2%).

Furthermore, the highest MPI was reported for children in the age-group of 2-4 years, at 0.261.

Table 15. Child Poverty Indicators by age-groups

Age group	Population share (%)	H			A			MPI		
		Value (%)	CI		Value (%)	CI		Value (%)	CI	
<=1	13.2	54.7	51.4	58.0	44.7	43.6	45.8	0.245	0.229	0.260
2-4	18.7	57.3	54.3	60.2	45.6	44.4	46.8	0.261	0.246	0.277
5-14	52.4	49.2	46.5	52.0	45.3	44.2	46.4	0.223	0.209	0.237
15-17	15.7	47.9	44.6	51.2	44.2	43.0	45.4	0.212	0.196	0.227
National	100	51.3	48.7	53.8	45.1	44.1	46.1	0.231	0.218	0.244

Figure 24 indicates whether the differences that were reported in the child-based incidence of multidimensional poverty across age groups from Table 15, are statistically significant or not. Although the child-based incidence reported for age group 2-4 is more than that of age group <= 1, the difference is not statistically significant since there is an overlap in the confidence intervals.

Figure 24. Child-Based Incidence of Multidimensional Poverty (H) by Age Groups
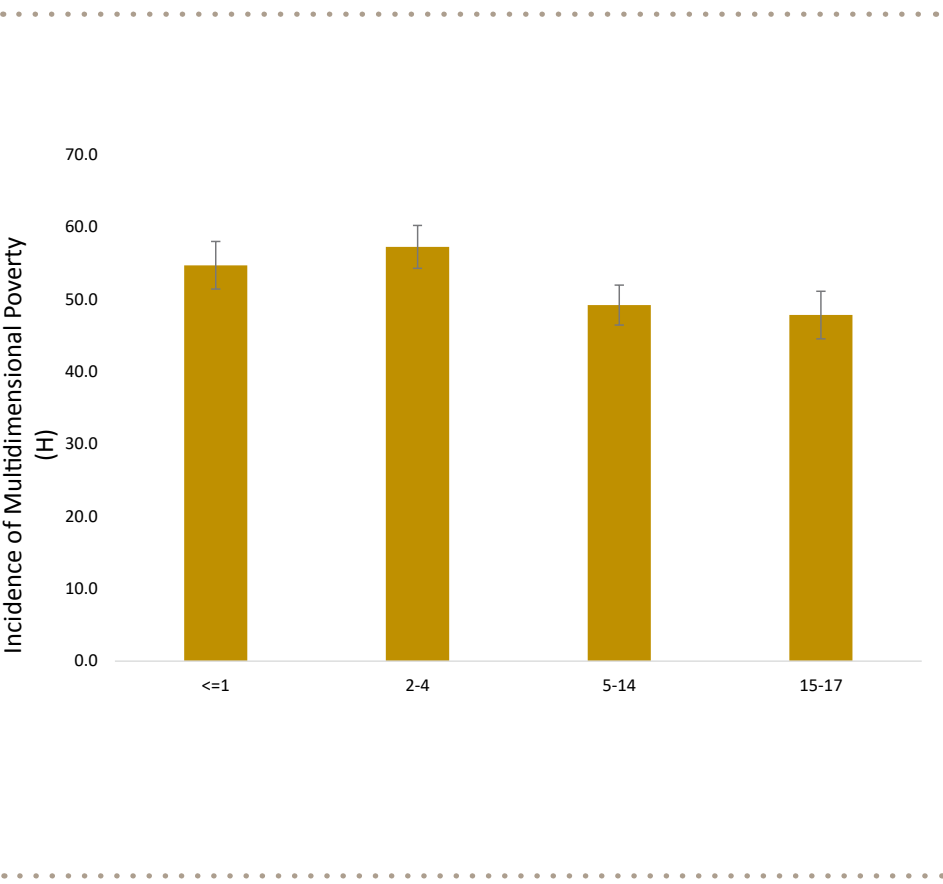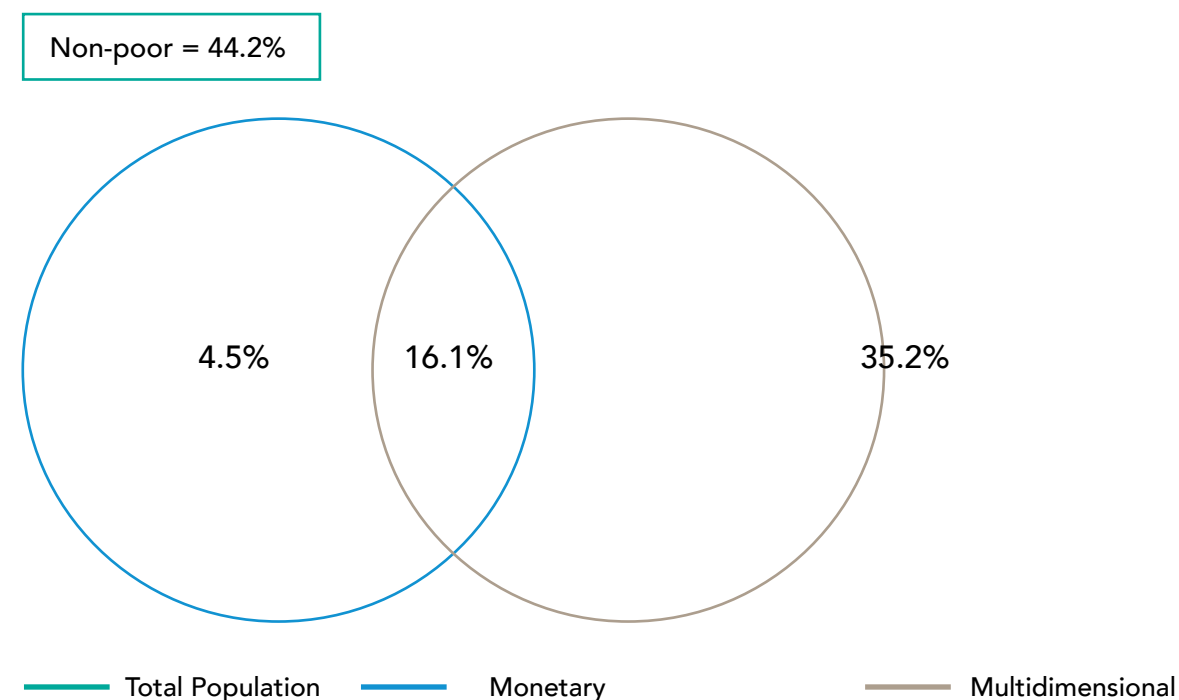
Robustness checks.

4.3. Comparison of the child-based MPI to the monetary measure

Figure 25 indicates that approximately 16.1 percent of children aged 0-17 years in Namibia are both multi-dimensionally and monetary poor. About 35.2 percent of children are multi-dimensionally poor but not monetary poor, suggesting that income alone is not a good predictor of poverty among children. The figure further shows that that 44.2 percent of children are neither multi-dimensionally nor monetary poor.

Figure 25. Comparison between monetary and non-monetary child poverty rates*

Non-poor = 44.2%

4.5%   16.1%   35.2%

— Total Population — Monetary — Multidimensional

Cautionary note: The monetary poverty rate differs from the one published in the NHIES 2015/16 basic report, due to a difference in sample size based on the MPI methodology

Robustness checks were carried out in order to assess the stability of the MPI measures and confirm that the results presented would not have been significantly different, even if a poverty cut off (k) that is different from 30% was used. Table 16 presents the Spearman and Kendall tau b rank correlation coefficients using the poverty cut-off k=30%, and the ranking of the 14 regions for alternative poverty cut-offs of 20% and 40%. Table 16 shows that the Kendall Tau-b is 0.87 at k=20% and 0.89 at k=40% indicating that among the whole population, the regional rankings are preserved to a large extent under these alternative choices.

Similar results are obtained when using the Spearman coefficient. Table 16 shows that Spearman coefficient is 0.96 at k=20% and 0.97 at k=40%. This means that the rank correlation between the poverty cut-offs (from 20% to 30%, from 30% to 40%) is preserved to a large extent under these alternative choices.

Table 16. Spearman and Kendall Tau-b

		K=30%
Alternative k=20%	Spearman	0.96
	Kendall Tau-b	0.87
Alternative k=40%	Spearman	0.97
	Kendall Tau-b	0.89

Way forward.

To test the stability of the measure, various computations of the headcount ratio (H) were calculated based on various poverty cut-offs (k). Figures 26 shows the distribution of H across various poverty cut-offs, for all 14 regions. The figure indicates that the poverty rates are quite stable, as the order of the regions remains fairly similar across all values of k.

Figure 26. Headcount Ratio Across Regions Based on Different Poverty Cutoffs
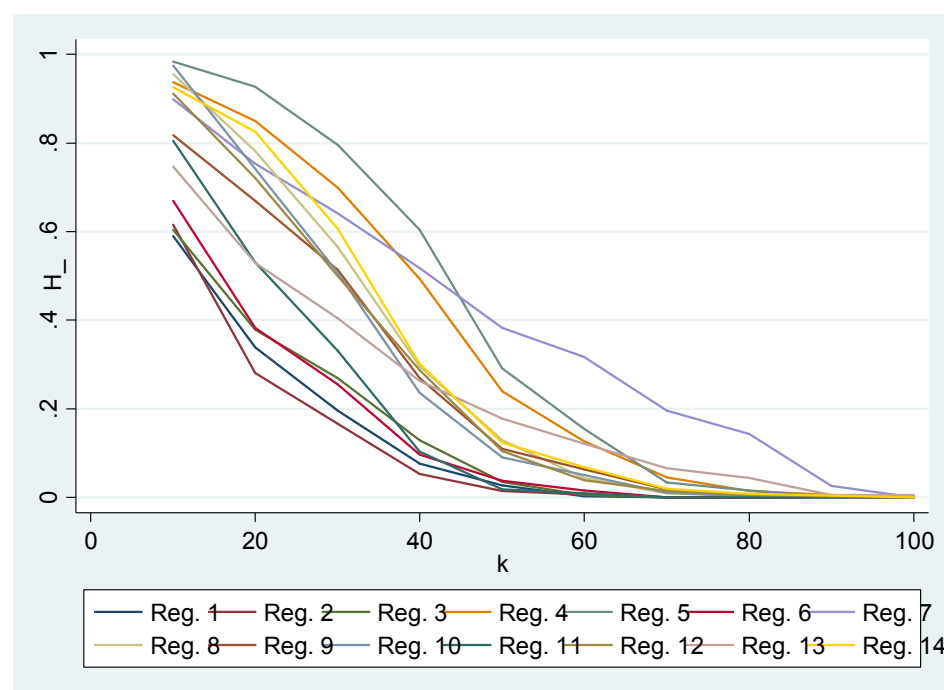
Note: The Namibian regions are alphabetically ordered and then ordered as Reg. 1 to Reg. 14, where //Karas is Reg. 1 and Zambezi is Reg. 14

We acknowledge the shortcomings of the Namibian MPI (particularly pertaining to the Economic activity dimension and Land ownership), which was constrained by the availability of data.

The Agency's long-term vision for the Namibian MPI is to continue generating this index whenever new NHIES data becomes available, to allow for comparisons with monetary poverty measurement.

The next NHIES is tentatively planned for 2022/23 pending funding, hopefully this would have provided enough time for policy interventions. Further, the MPI will be used to report on the SDG 1 as well as a monitoring tool for the National Development Plans (NDPs).