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for every child

A practical guide to monetary poverty analysis

Informing policies and programmes to address child poverty

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Contents

Acknowledgements

List of boxes

List of Figures

List of Tables

List of Examples

Acronyms

ADePT	Automated DEC Poverty Tables
BIA	Benefit Incidence Analysis
CAPMAS	Central Agency for Public Mobilization and Statistics (Egypt)
CBN	Cost of Basic Needs
CGE	Computable general equilibrium model
CI	Confidence Interval
CONEVAL	National Council for the Evaluation of Social Development Policy (Mexico)
CPI	Consumer Price Index
DHS	Demographic and Health Survey
EHII	Estimated Household Income Inequality
EPRC	Economic Policy Research Centre
EU-SILC	EU Statistics on Income and Living Conditions
FAO	Food and Agriculture Organization of the United Nations
FGT	Foster-Greer-Thorbecke indices
GCECP	Global Coalition to End Child Poverty
GDP	Gross Domestic Product
GSR	Goods and services required
HDI	Human Development Index
HIECS	Household Income, Expenditure and Consumption Survey
IDD	Income Distribution Database
IDS	Institute of Development Studies
IFPRI	International Food Policy Research Institute
ILO	International Labour Organization
IMF	International Monetary Fund
IPL	International Poverty Line
LDCs	Least Developed Countries
LIS	Luxembourg Income Study Database
LSMS-ISA	Living Standards Measurement Study-Integrated Surveys on Agriculture
MICS	Multiple Indicator Cluster Survey
MODA	Multiple Overlapping Deprivation Analysis
NDSD	National Department of Social Development (South Africa)
NSCB	National Statistical Coordination Board (Philippines)
NSO	National Statistics Office
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
OPHI	Oxford Poverty and Human Development Initiative
PMT	Proxy Means Test
PPP	Purchasing Power Parity
RCT	Randomized Control Trial
SDGs	Sustainable Development Goals
SSI	Type of questionnaire?
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UNPRPD	United Nations Partnership on the Rights of Persons with Disabilities
UN-WIDER	United Nations University
USAID	United States Agency for International Development
WB	World Bank
WDI	World Development Indicators
WHO	World Health Organization
WSPDB	World Social Protection Database

Introduction

UNICEF has long advocated and provided technical support for measuring child poverty and developing national responses to reduce it. The Sustainable Development Goals (SDGs) provided a major boost to these efforts by including goals and targets on multidimensional and monetary child poverty, calling on countries to commit to both poverty measurement and action. The SDGs hold countries accountable to halve multidimensional child poverty according to national definitions by 2030. Aligned with the SDGs, UNICEF's Strategic Plan has a specific target of increasing the *number of countries where measurement, analysis and advocacy has led to policies and programmes responding to child poverty.*

Box 1. **Child poverty in the SDGs and UNICEF´s Strategic Plan (2017–2021 and 2022–2025)**

SDGs - Goal 1: No poverty

Target 1.1: By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day.

> **Indicator 1.1.1**: Proportion of the population below the international poverty line, by sex, age, employment status and geographical location (urban/rural).

Target 1.2: By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.

> **Indicator 1.2.1**: Proportion of the population living below the national poverty line, by sex and age.

> **Indicator 1.2.2**: Proportion of men, women and children of all ages living in poverty in all its dimensions, according to national definitions.

Relevant UNICEF Strategic Plan indicators:

Number of countries with nationally owned measurement and reporting on child poverty (monetary and multidimensional).

Number of countries where measurement, analysis or advocacy has led to policies and programmes to reduce child poverty.

Routine national measurement of child poverty, both multidimensional and monetary, is central. Without knowing how many and which children are living in multidimensional and monetary poverty, we cannot know what progress is being made, or the impacts particular policies and programmes are making on child poverty.

Comprehensive monetary child poverty analysis can lead to tangible results in the lives of children living in poverty, and as of 2020 some 35 UNICEF country offices support national capacity building for the measurement of monetary child poverty. Indeed, some of the most impactful UNICEF-supported child poverty analysis has been monetary child poverty analysis, and the COVID-19 crisis has further highlighted the importance of good quality child poverty analysis.

Monetary child poverty is typically defined as a share of children living in households below the poverty line. Virtually every developing country now has its own national monetary poverty line, so both conceptually and practically the definition and subsequent measurement and monitoring of child monetary poverty at the national level will be straightforward. Even so, many countries still do not routinely report a specific child poverty rate.

SDG Guide to End Child Poverty (2017)

Objectives

The central objective of this guidance note is to provide guidance and expand the child poverty analytical toolbox, in order to improve the lives of children living in poverty. It was developed with the aim of supporting UNICEF staff and other partners working in the area of child poverty as they advance reduction in monetary child poverty, by:

1. Undertaking and/or supporting impactful monetary child poverty[1] analysis, linking it to policy recommendations and programmes.
2. Engaging stakeholders in the area of child poverty reduction, such as national statistical offices, ministries of finance, International Financial Institutions and other key players, to ensure that they disaggregate national monetary poverty measures by children, as well as reflect children's needs in their analysis.

The guide provides an overview of analytical approaches to capture monetary child poverty and seeks to provide readers with a thorough understanding of how monetary poverty is defined, how analysis of monetary child poverty can enhance our knowledge, and how such an understanding and analysis can inform policy and

programme design to address poverty, with a specific focus on child poverty. The guidance is selective; it does not intend to cover all aspects of monetary poverty analysis.

It is worth mentioning that this is not a step-by-step guide which can be quickly adopted by all countries, but rather a guide that provides an overview in terms of tools and methods which can be used to undertake monetary child poverty analysis for impact. Readers with no prior poverty analysis experience are recommended to supplement their knowledge by exploring the references provided in this guidance note. Further, as a guide to monetary poverty analysis, it provides a foundation for policy advice, rather than specific policy advice, which inevitably will be country specific.

As the majority of national monetary poverty analyses rely on microdata, usually derived from nationally representative household survey data, this guidance note showcases how to conduct practical analysis based on these surveys. This is supplemented by numerous examples of poverty analysis for informing policies and programmes to address child poverty, each ending with analytical lessons containing key observations[2].

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1   Throughout the note, the term "monetary child poverty" is used and refers to children in monetary poor households.
2   The analytical lessons are generic examples of how analysis can be interpreted to inform policies and programmes. Though these lessons highlight potential lessons for policymakers, they should not be replicated blindly

This guidance note builds upon the Global Coalition to End Child Poverty (GCECP) and UNICEF's SDG Guide to End Child Poverty (2017), with which we encourage all partners to acquaint themselves[3]. The guide identifies five indicative milestones on a pathway to address child poverty, namely:

1. Building a national pathway to end child poverty
2. Measuring child poverty
3. Putting child poverty on the map: child poverty advocacy
4. Reducing child poverty through policy and programme change
5. Achieving the SDGs: ending extreme poverty and halving it by national definitions

The guide further builds upon UNICEF's Global Social Protection Programme Framework (2019), which outlines that child poverty analysis is the foundation of social protection policies and programmes. Some of the other key references on analysis of monetary poverty are: the World Bank's *Handbook on Poverty and Inequality* (Haughton and Khandker, 2009) and *Poverty and Shared Prosperity 2018: Piecing Together the Poverty Puzzle* (World Bank, 2018); the working papers 'New Estimates of Extreme Poverty for Children' (Newhouse, Suarez-Becerra and Evans,2016) and 'Global Estimate of Children in Monetary Poverty: An Update' (Silwal et al., 2020); the *Guidance on Monetary Child Poverty Profiling* (Evans and Calderon, 2014); and *A Unified Approach to Measuring Poverty and Inequality--Theory and Practice:Streamlined Analysis with ADePT Software* (Foster et al., 2013), which include practical examples using the software program ADePT, also featured in this report.

Lastly, although the focus of this guidance note is monetary child poverty analysis, it is extremely important for countries to also engage in the measurement of multidimensional child poverty, as money is in no way a panacea for poverty and exclusion. As described by Amartya Sen, the real measure of human progress is the freedom people have to make choices in areas they have reason to value, such as education, health, nutrition and political participation (Sen, 1999). Monetary child poverty analysis may not capture how children are deprived in key aspects of their lives, including nutrition, education, health, water and sanitation. In fact, monetary resources may in some instances reflect a lack of child well-being, for example when children are working and contributing to household income when they should be in school (Evans and Calderon, 2014).

> **Money is not a panacea for poverty and exclusion.**

Figure 1 highlights the importance of carrying out both multidimensional and monetary child poverty analysis, and the distinct advantage of each for influencing policies and programmes to address child poverty, as well as the feedback loop between the two.

This guidance note is organized as follows:

- **Chapter 1** lists resources that provide an important foundation to start planning a monetary poverty analysis, focusing on key institutional partners and data needs.
- **Chapter 2** outlines the basics concepts of monetary poverty, including the construction of poverty lines, as well as welfare aggregates, application of different poverty lines, within country and across time, as well as across countries.
- **Chapter 3** shows examples of monetary poverty analysis informing policies and programmes.
- **Chapter 4** delves specifically into the area of social protection, as a recognized SDG1 strategy to reduce poverty, showing examples of social protection analysis and highlighting the targeting and impact for poor children.

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3   UNICEF and GCECP (2017): A world free from child poverty: A guide to the tasks to achieve the vision.

1. Planning monetary poverty analysis

Key take-aways:

- Knowing and coordinating with key partners working on monetary poverty analysis is the best starting point. The important partners for monetary poverty to coordinate and engage with include:
    - National statistical offices, usually responsible for data collection.
    - Ministries of finance and planning, often responsible for publication of poverty-oriented work.
    - The World Bank, which often takes lead on monetary poverty analysis and has rich data bases for cross country comparison.
    - UN agencies, such as UNDP, ILO and FAO also play a key role.
    - Ministries or agencies charged with poverty analysis and/or implementation of poverty reducing programmes.
    - Civil society and research institutes.
- The profile and characteristics of child poverty and the efficiency of existing programmes are often not well known. Documentation through data analysis can provide a good starting point for discussions on how to best reduce child poverty.
- Early involvement in the planning of new data collection can have high returns. Monetary poverty analysis is usually based on multipurpose household surveys, which are planned years in advance, and ensuring a few key questions are included can make a large difference in terms of analysis and policy advice. This could include, for example, questions about access to existing social protection programmes.
- Analysis undertaken in direct partnership with government and partners is more likely to lead to policy analysis that is primed for implementation.

A world free from child poverty can be achieved, and each country will follow their own path for ending child poverty. The key policy agenda is outlined in the GCECP's Putting Children First: A Policy Agenda to End Child Poverty (2016). In addition, GCECP and UNICEF's *SDG Guide to End Child Poverty* (2017) distils the knowledge and experience to support national processes to achieve Sustainable Development Goal (SDG) 1 on ending poverty. A key first step is to review the *SDG Guide to End Child Poverty* for a more complete overview of policies and potential processes to be aware of when planning monetary poverty analysis. This section will highlight a few select aspects, pertaining to monetary poverty in particular.

Undertaking the right analysis. When selecting the type of analysis to use and the focus of the analysis, it is important to consider the political context in which the results will be received. On the other hand, a good/clear analysis can support and advance current policies, but also potentially change the entire political landscape, opening the potential for policy advances that were previously not possible. A good starting point for undertaking the right analysis relies on a thorough understanding of both the political context as well as the insights that can be achieved by different types of analysis, that ultimately will be interdependent with data. Reflecting on this, the following sections list some of the partners that are likely key for political buy-in, context and implementation, as well as different data sources which come with different advantages and disadvantages.

1.1. Key partnerships

Identifying the key country-level actors in poverty measurement can help develop partnerships that can make an impact/advocate for a change in the lives of children living in poverty. Same partners can also be key in defining the details and identifying what focus to undertake. While these actors vary significantly by context, below is a short list of institutions which play a major role in poverty measurement in many countries:

National statistical offices (NSOs): Typically, these are government agencies responsible for collecting, analysing, publishing, and disseminating statistics relevant to the economy, population and society. They will likely play the lead role in collecting poverty data and lead on SDG reporting. They should be able to disaggregate child poverty relatively easily from existing poverty measures. They also often conduct the census, family expenditure/income survey and lead (or support) other household surveys, including Multiple Indicator Cluster Surveys (MICS), Living Standards Measurement Surveys (LSMS) or Demographic and Health Surveys (DHS).

Ministries of finance and planning/ sectoral ministries: While actors across government and outside use poverty analysis, ministries responsible for finance and planning often play leading roles in the analysis and reporting of poverty. Their support in building and using child poverty measures is often a crucial foundation

for the successful ownership and use of child poverty analysis, including informing policies and programmes to address policies as well as budgetary decisions which impact on poverty. For policy use of monetary poverty analysis, it is also important to involve sectoral ministries.

The World Bank: This agency has been leading the work on monetary poverty analysis, particularly in lower- and middle-income countries, and provides rich resources on global monetary poverty measurement as well as country level reports on poverty analysis. More recently, in response to the Atkinson Commission report *Monitoring Global Poverty* (2017), the World Bank has also outlined its immediate commitment to show global poverty profiles for children (aged 0–17), as well as work on multidimensional poverty as an additional and complimentary approach using a dashboard of indicators as well as a multidimensional poverty index (MPI). In addition to the the World Bank, UN partners play a major role in poverty measurement, including UNDP.

Universities and research institutions: Some of the most capable individuals cutting edge knowledge on poverty measurement and analysis can be found at universities and research institutions, and involving them either in the work or as reviewers can be beneficial. In some cases, independent institutions are chosen to lead poverty measurement and help ensure credibility of results. In Mexico, for example, the Congress endowed

The National Council of Evaluation of Social Development Policy (CONEVAL) with a highly independent structure for poverty measurement and monitoring. The Economic Policy Research Centre (EPRC) in Uganda is another example of an autonomous, independent think-tank that conducts research on socioeconomic issues.

Civil society and NGOs: These actors play an important role in advocating to keep the poorest children and

families central to the agenda. Interviews, stories or qualitative studies of children living in poverty can shed light on the issue of child poverty and influence the government to establish a child poverty measure. For example, in countries where there is no official measurement of child poverty, estimates by civil society organizations or local research institutions can help raise public awareness, which in turn puts pressure on governments to support child poverty measurement.

1.2. Data for analysis

When planning an analysis of child poverty, different sources of data can be considered. Different data sources will determine the kind of analysis which can be done. Other factors which determine the analysis are, for example, analytical skills and capacity, budget availability, as well as the time frame from planning to publication of results.

There are three main options for data sources. As these are outlined extensively in various poverty monitoring-related guidance and handbooks, they will be only briefly outlined here:

1. Utilizing existing survey data.
2. Involvement in data collection undertaken by others.
3. Undertaking own data collection.
4. Supporting enhanced data collection through administrative registries.

Option 1: Utilizing existing survey data.
This is the most common source for most poverty analysis, and may include household income and budget surveys, living standards surveys etc. All the examples in this guidance note are based on such data. There are some limitations relying only on existing household survey data, including the lack of variables measured at the individual level.

Option 2: Involvement in data collection undertaken by others.
Good internal UNICEF planning can have high pay-off and avoid data shortcomings**.** National statistical offices and other institutions undertaking large-scale surveys, including those with consumption data, plan such surveys well in advance. By being proactive and

having a clear research agenda in mind, it is possible to influence the survey at the design stage, laying the groundwork for more detailed and child-relevant analysis.

Option 3: Undertaking own data collection.
Where there are available financial and human resources, undertaking one's own data collection has the potential to answer specific and in-depth questions. Undertaking comprehensive and representative household surveys requires substantial knowledge, skills and expertise relevant to the many stages, including research design and supervision of the implementation.

Another consideration for data is its format, which also partially defines the type of analysis that can be undertaken. Some key types of data include:

‣ **Cross-sectional data.**
The most commonly used household survey data is cross-sectional data, where each household is interviewed once, and the survey seeks to represent the nation or subsamples of the population, or some other group. MICS, DHS, labour market surveys and most household expenditure surveys provide cross-sectional data, providing a snapshot of the situation. Cross-sectional data, especially data representing an entire country, provide useful descriptive statistics on child poverty, coverage of social protection programmes, and can also be used to indicate the accuracy of programme targeting, amongst many other things. Different types of analysis are covered in more depth in Chapter 3 and 4. With several rounds of data at hand, cross-sectional data can also

provide information on trends. However, for robust measurement of the impact of expansion of social protection programmes and targeting during such an expansion, panel data (see below) is better. As each child or household is observed multiple times in panel data, ideally before and after inclusion in programmes, panel data is better suited for such analysis. However, even panel data can be biased as entry into the programmes is not random.

▸ **Panel data.**
Panel data (or time series data) is data that includes at least two observations at two different points in time for the same person or household. This data is less common for national representative surveys, though some countries do implement such surveys, and several are available through the World Bank's Living Standards Measurement Study-Integrated Surveys on Agriculture (LSMS-ISA) programme.

▸ **Specialised surveys.**
There are various specialised surveys used to measure impact of policies and programmes on

poverty. For example, a Randomized Control Trial (RCT) involves specialised data collection as RCT data is based on the implementation of some experiment or reform, where part of the sample receives a "treatment", while the other part of the sample does not.

Cross-sectional data, especially data representing an entire country, provide useful descriptive statistics on child poverty, coverage of social protection programmes, and can also be used for some indication of accuracy of targeting of programmes, amongst many other things. Different types of analysis are covered in more depth in Chapter 3 and 4. With several rounds of data at hand, cross-sectional data can also inform on trends. However, for robust measurement of the impact of expansion of social protection programmes and targeting during such an expansion, panel data is better. As each child or household is observed multiple times in panel data, ideally before and after inclusion in programmes, panel data is better suited for such analysis. However, even panel data can be biased as entry into the programmes is not random.

2. Key aspects of monetary poverty measurement

Key take-aways:

- Monetary poverty is defined at household level, not individual level. Members of a household are defined as poor if they have a consumption or income level below the poverty line threshold.
- A monetary poor child is a child living in a monetary poor household.
- Key poverty lines to be familiar with:
    - There is no definitive poverty measure/line, but the definition (both monetary and multidimensional) should resonate among the general public and decisions makers.
    - **An absolute poverty line** is defined at a certain level where a household cannot meet basic need (for example adequate nutrition, shelter etc.). An absolute poverty line is most commonly used in middle and low-income countries.
    - **A relative poverty line** is defined in relation to the overall income/consumption distribution in a given country, for example a poverty line which is equal to 60 per cent of the median income in the country, as utilized by the European Union (EU).
    - **International poverty lines** rely on purchasing power parity (PPP). They are different from national poverty lines and can be used to compare poverty across countries.
- Welfare measured by income or consumption:
    - Consumption is the preferred measure of poverty, as it measures the level of welfare achieved as an outcome, while income reflects the potential level of welfare that can be achieved. A rich set of guidelines exists to guide the construction of consumption aggregates.
    - Income aggregates are used in countries where data on consumption is not rich enough. Income aggregates should capture disposable income.
- Monetary poverty is most commonly presented by Foster-Greer-Thorbecke indices, including:
    - Headcount index of incidence of poverty (the share of the population that is living in poverty).
    - Depth of poverty (poverty gap), which can be used to estimate the total cost of eliminating poverty.
    - Poverty severity (squared poverty gap) which takes into account the inequality among those living in poverty.
- Poverty can be dynamic as well as structural: while some households remain in chronic poverty across generations, others move in and out of poverty

This chapter outlines the key concepts and methods used to define monetary poverty largely based on recommendations outlined by World Bank publications. It highlights the key components of constructing a poverty line and welfare aggregates and provides key references for establishing a new poverty line or generating a welfare aggregate, either measured by consumption or income, as well as how to update the poverty line over time.

Monetary poverty is defined at the household level and not at the child level. Monetary poverty is defined at the household level with the assumption that resources are shared within the same household. The two key challenges in defining individual child poverty are: (1) to define the minimum needs of children of different ages in different locations and circumstances, and (2) to measure how many of such needs are met for every individual child. Appendix 3 has a longer discussion of the challenges and potential solutions of individual

Key papers and practical approaches to monetary poverty analysis

Key papers that highlight processes and definitions of monetary poverty that this section builds upon on include Ravallion (1998, 2001); Kamanou et al. (2005); Haughton and Khandker (2009); and Foster et al. (2013) "abstract": "A Unified Approach to Measuring Poverty and Inequality: Theory and Practice is an introduction to the theory and practice of measuring poverty and inequality, as well as a user's guide for analyzing income or consumption distribution for any standard household dataset using the World Bank's ADePT software. The approach taken here considers income standards as building blocks for basic measurement, then uses them to construct inequality and poverty measures. This unified approach provides advantages in interpreting and contrasting the measures and in understanding the way measures vary over time and space. Several recent initiatives have lowered the cost of accessing household datasets. The ADePT software enables users to analyze microdata from household surveys and other sources and generate print-ready, standardized tables and charts. It can also be used to simulate the impact of economic shocks, cash transfers and other policy instruments on poverty, and inequality. The software automates analysis, helps minimize human errors, and encourages development of new economic analysis methods. Of interest to teachers and students as well as to

policy practitioners, A Unified Approach to Measuring Poverty and Inequality will empower researchers to plumb greater depths in searching for regularity in larger and larger datasets. This book should help to enrich discussion and analysis relating to the World Bank's recent effort toward defining new targets and indicators for promoting work on eradicating poverty and enhancing shared prosperity." The handbook on poverty and inequality provides tools to measure, describe, monitor, evaluate, and analyze poverty. It provides background materials for designing poverty reduction strategies. This book is intended for researchers and policy analysts involved in poverty research and policy making. The handbook began as a series of notes to support training courses on poverty analysis and gradually grew into a sixteen, chapter book. Now the Handbook consists of explanatory text with numerous examples, interspersed with multiple-choice questions (to ensure active learning, while specific references are included in the sections below. Unlike some development indicators, for example the Human Development Index (HDI) that historically originates within a single organization, monetary poverty, and how to measure it, does not have such a single original source. The empirical application reflects this organic development over time, with variations in methods across countries. Based on both the theoretical and empirical work originating within the World Bank, monetary poverty is increasingly similarly defined, though alternatives and notable variations continue to exist.

child monetary poverty, but such approaches are generally not advanced enough for general applications. Children's needs, as opposed to adults' needs, can be reflected in monetary poverty through measurement of welfare with adult equivalence scales, which is covered in more detail towards the end of this section.

If resources within a family are not split fairly in a household according to needs, this could result in an individually poor child living in that household, even though the household itself is not classed as poor and the child is therefore not counted as a poor child. Such a situation is illustrated in Figure 2, showing a non-poor family, with some family members not meeting minimum needs. Also note that the opposite can be true: a child can be living in a poor family but not be individually poor. The concepts of minimum needs, poverty line and consumption are elaborated further below. This issue is not only a challenge for measuring monetary poverty; multidimensional poverty measures also face some of the same challenges, as some indicators are household-based and not directly allocated to the child. However, some indicators in many surveys can be measured at the level of the child, for example nutrition for children under 5, as well as certain health and education indicators.

Figure 2 shows in the transparent boxes the minimum needs for not being poor, while the filled boxes indicate consumption. In the image on the left, each individual's needs are compared to consumption, showing which

family members are classed as poor (in red). The image on the right defines the poverty status of all household members based on the family average (non-poor). The latter is how monetary poverty is measured in practice.

Monetary poverty is a simple construct, but the implementation is more complex. Monetary poverty measures the share of people with consumption or income level below a certain threshold, defined as the poverty line. This is illustrated in Figure 3, example A, where the blue line is the distribution of people ranked from poorest to richest. The area in the left tail, to the left of the poverty line, highlights people living in poverty, and everything to the right of this line represents the non-poor, with the richest being the far-right tail. All those with an income or consumption level below the poverty line (the black line) are considered poor. However, the implementation of this simple construct is notably more complex. There are two key components to bear in mind:

1. The consumption or income distribution; and
2. The poverty line.

The following section provides an overview of the construction of these two key components to enable a critical understanding of the elements, while at the same time providing examples which reference the implementation of the methodologies in practice. The four scenarios in Figure 3 illustrate how monetary poverty can change according to changes to poverty lines and welfare measures.

Figure 1. Individual and household defined poverty

Individual poverty status

Household poverty status
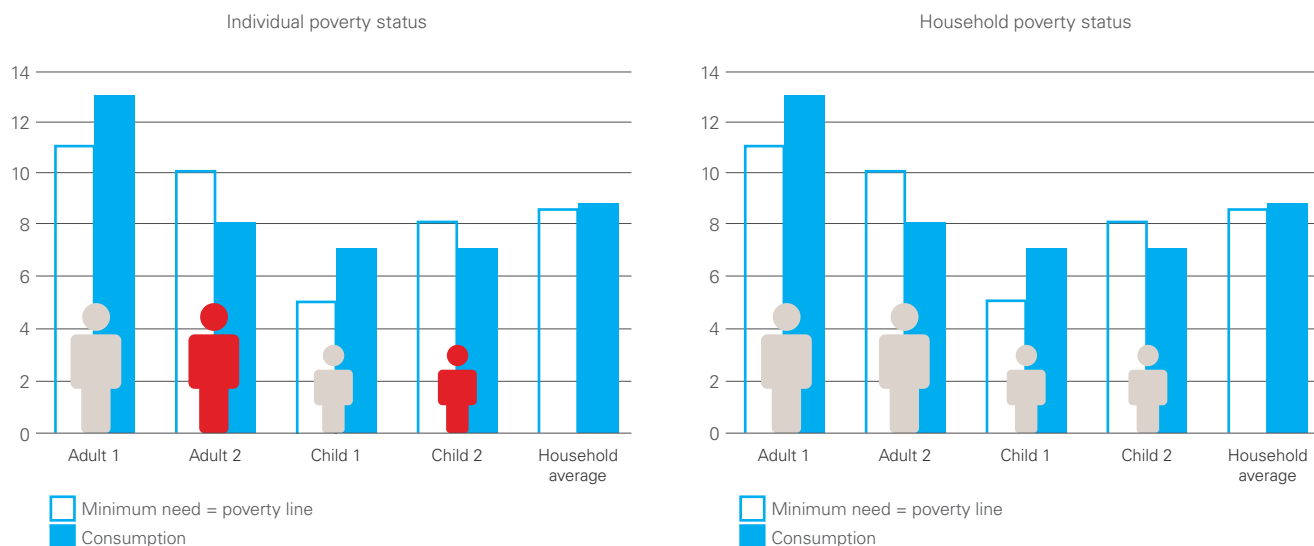
Figure 2. Examples of how monetary poverty changes according to changes in poverty lines and welfare aggregates
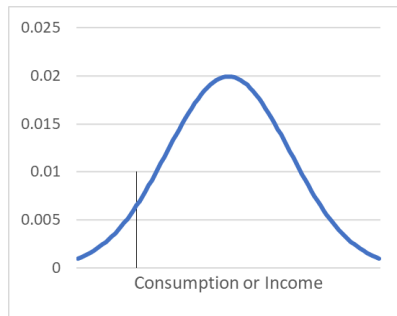
A. A threshold defines the poor and non-poor. The monetary poor is the group to the left of the poverty line, that have an income or consumption below the minimum threshold defined by the poverty line.
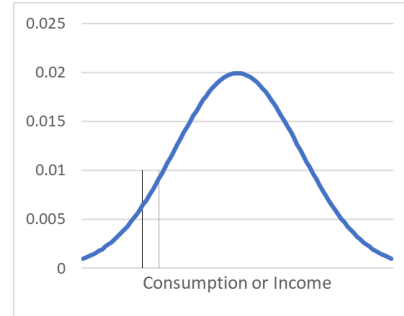
B. A higher poverty line. One can make several well-argued choices that will impact the absolute value for a poverty line (the threshold for being considered poor). An upward shift in the poverty line, for same consumption distribution, increases the share of the population being poor, as illustrated by the light grey poverty line.
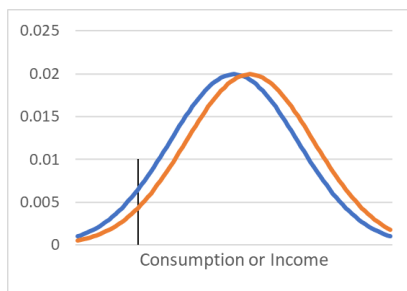
C. An upward shift in the measurement of welfare, for the same poverty line, decreases the share of the population being poor. Measured welfare can increase if, for instance, food consumed outside the household or income from gifts were not included in the welfare aggregate but are now included.
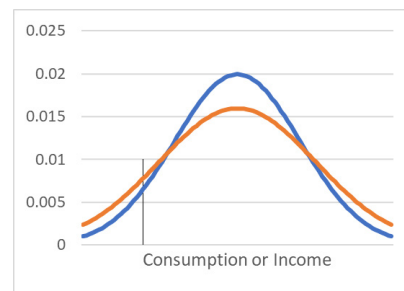
D. A change in the shape of the welfare distribution. Even with the same mean and same poverty line, poverty rates can be different. Income or consumption measured with greater error, maybe due to quality of data collected or change in questionnaire, can lead to larger distribution tails (high or low consumption/income), meaning that monetary poverty would therefore also be higher (assuming the poverty rate is below 50%).

2.1. Poverty lines

A poverty line is a tool that is meant to help professionals and politicians design policies that benefit those most in need. A poverty line is a tool that is meant to help design policies that benefit those most in need. Hence, to be relevant, it is important that the poverty line resonates as being reasonable with the general public and professionals. Several methods exist supporting arguments for a reasonable poverty line and opinions vary greatly on what constitutes a reasonable poverty line. Reflecting this, academics have argued different ways to define a poverty line anchored in data and concepts. The sections below highlight different poverty lines and discuss the advantages as well as disadvantages to each.

"It can be agreed that a sustained increase in average living standards is likely to lead eventually to more generous perceptions of what 'poverty' means in a given society."

Ravallion (1998)

2.1.1. Absolute and relative poverty lines

The first important distinction to make is whether a poverty line is absolute or relative. An absolute poverty line defines a specific threshold that is fixed over time in real terms, while relative poverty lines are defined as a proportion of the consumption/income distribution. As a practical guide, this guidance note will not reflect upon this debate, but only cover what this means for how monetary poverty is measured in practice. Both relative and absolute poverty lines are generally based on the household as the unit, so if a household is poor, all members of the household, including children, are defined as poor. The special needs of children can indirectly impact the absolute poverty line (see further discussion below), while children's needs can also influence the welfare aggregate (either consumption or income) through the use of equivalent scales (see Section 2.3).

Low-income countries commonly adopt absolute poverty lines that are designed to reflect the basic minimum required for living or survival. Hence, the poverty line is usually fixed in real terms over time. Consequently, absolute poverty lines need to be updated at some point as they lose their relevance as countries grow wealthier and the poverty rate approaches zero (fewer people in number and/or as a proportion live in absolute poverty – more and more people live above this absolute poverty line). The cost of basic needs is a common method to establish an absolute poverty line and is explained in more detail in the subsequent section. When price information is unavailable, the food energy intake method is an alternative. Figure 3 shows that absolute poverty lines are most prevalent in low- and middle-income countries.

Relative poverty lines are more common in rich countries and are a function of the welfare distribution itself, and only fall if the poor have welfare gains relative to others.

Relative poverty lines are generally only found in high-income countries. For instance, countries in the EU use a poverty line that is equal to 60 per cent of the median income. However, the USA uses an absolute poverty line. Further, it is possible for relative poverty to be increasing even when the income or consumption of the poorest is increasing, as long as the growth at the median (in the case of the EU) is higher than growth among the poorest. Box 2 illustrates how the trend in poverty can differ if one uses an absolute or relative poverty line. The relative poverty line will, due to its definition, rely on the overall distribution, and therefore also reflect inequality. However, that does not mean that all countries with similar levels of inequality, as measured by the World Bank Gini index, have same levels of relative poverty (Marx and Bosch, no date). Some suggestions for axioms guiding the setting of a relative poverty line can be found in Ştefănescu and Ştefănescu (2015).

Figure 3. Use of absolute and relative poverty lines
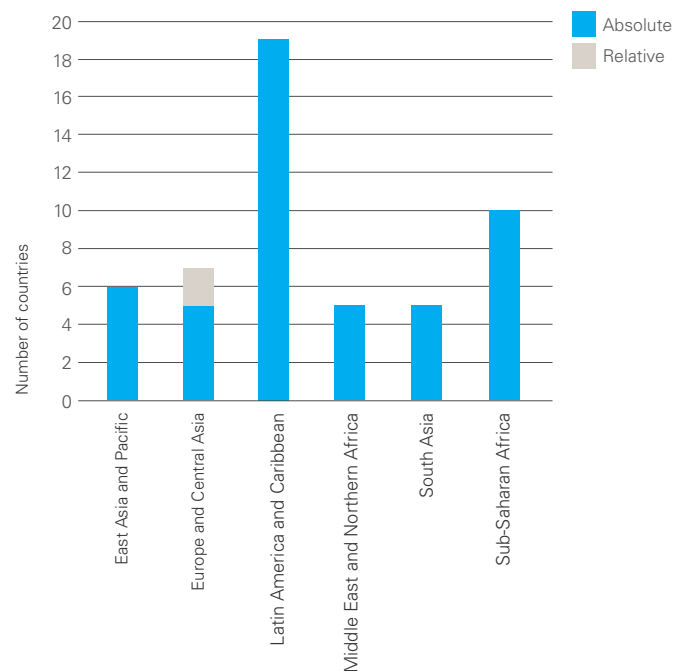
Source: Own data collection. Data covers 57 non-high-income countries up to 2017.

Box 2. Lithuania poverty trend using an absolute and relative poverty line

The national poverty line in Lithuania is a relative poverty line, based on 60 per cent of the median income after social transfers (as used in most EU countries). This is compared to the highest international poverty line at US$5.50 PPP, which is an absolute poverty line (international poverty lines are covered in a subsequent section). Figure 5 illustrates how poverty declined notably from 2004 to 2007, and how poverty increased after the 2008 financial crisis, before declining again by 2011. This is all measured by the absolute poverty line. Based on the official relative poverty line, the entire period shows a similar level of poverty. This indicates that growth, both positive and negative, impacted both the lower part of the distribution and the median in similar proportions.

Figure 4. Lithuania poverty trend using an absolute and relative poverty line

Poverty rate %

National poverty line (relative poverty line)

International poverty line 5.50 PPP (absolute povertyline)
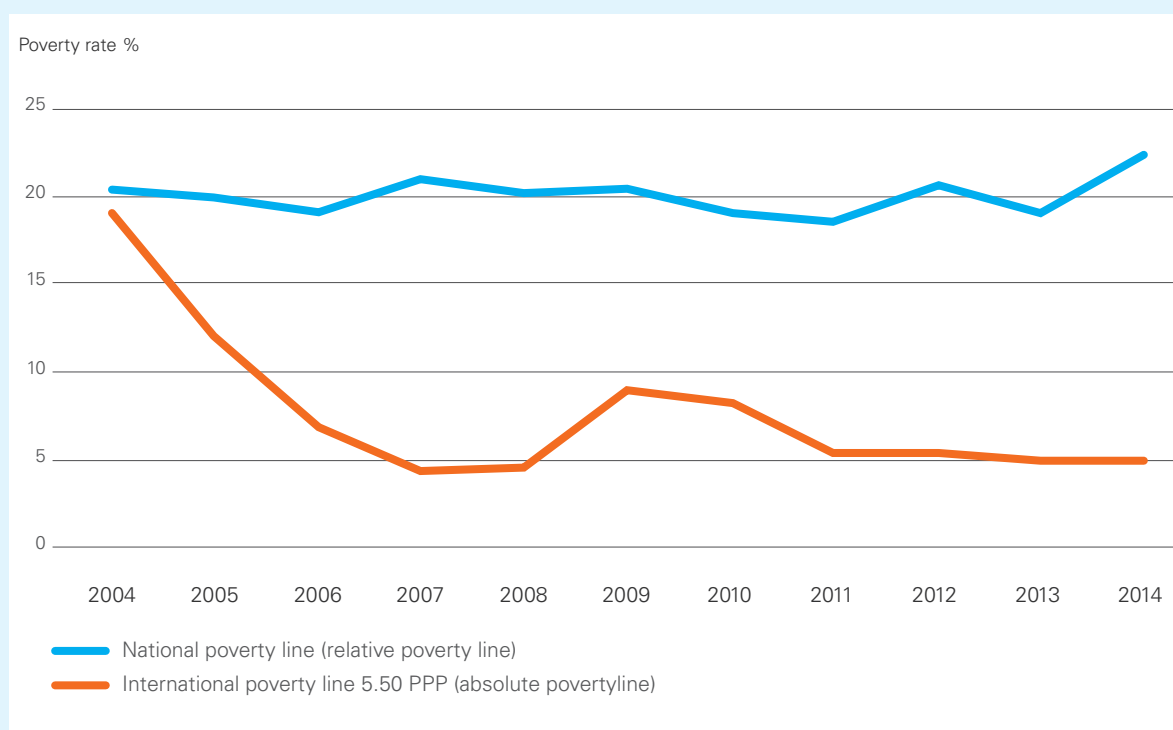
Source: World Development Indicators. The international poverty line is an absolute poverty line based on $5.50 PPP, while the national poverty line is a relative poverty line based on 60 per cent of the median income after social transfers. The latter is the poverty line used in most EU countries.

2.1.2. Practical aspects of absolute poverty lines

Absolute poverty lines are usually anchored to the physical need for calories. To estimate the minimum threshold for poverty, a direct link to calories is usually used:

1. First, a minimum intake of calories is set. In many countries, the minimum requirement for adequate calories for an average household is set at 2,100 calories per person per day (Haughton and Khandker, 2009), however there is notably variation across countries in this threshold. In Malawi, the average caloric need across household was found to be 2,400 (see Box 3).

2. Second, the caloric threshold has to be transformed into a monetary value. For this, the Cost of Basic Needs (CBN) method is recommended. An alternative – applicable in cases where prices are not available – is the Food Energy Method. However, empirical applications of this method have revealed serious flaws when applied over different domains (like urban/rural) and across time, and the method is therefore not recommended (Haughton and Khandker, 2009).

CBN poverty lines first cost the minimum food caloric threshold (often referred to as a food poverty line), and secondly add a value for minimum non-food consumption. The cost of basic needs, as documented by Ravallion (1998), is a two-step method that first estimates the cost of acquiring adequate food consumption, and secondly adds a component for a similar minimum consumption of non-food items. Consumption of non-food includes everything that is not eatable, like shelter, school fees, shoes and clothing etc. The poverty line is split into a food and non-food component, as the food component is anchored in the cost of achieving a minimum of calories, while non-food does not have a similar anchor. Household consumption data is needed for setting a poverty line though CBN providing information on the consumption of individual food and non-food items, and their quantity (weight) and value. Such data is found in household surveys that have a consumption expenditure section, that is also used to create the consumption expenditure aggregate measuring welfare. Appendix 9 shows such a section of the questionnaire from Malawi.

There are different ways to cost the minimum food requirement (food poverty line). The costing of the minimum caloric threshold (food poverty line) is conducted in different ways in different countries. Frequent used methods are:

1. *Price per kcal among the poor*. Ravallion (1998) suggests using the food consumption pattern of those that are around the food poverty line itself. This is done by calculating the average cost per calorie of those around the poverty line. Malawi, for example, uses this method (see Box 3). This is a consistent choice in that the food poverty line is based on the actual consumption of the poor. The method is circular as the poverty line does not exist when the reference population is chosen. Hence, the costing is done repeatedly until the reference population is consistent with the poverty line. However, note that the poverty line only reflects calories, and does not necessarily reflect adequacy from a nutritional point of view as those around the food poverty line might have a diet that is nutritiously inadequate.

2. *A representative food basket*. Some countries define the food poverty line via a representative basket of foods that is costed. The representative basket can be based on actual consumption of the poor (though it does not need to be). In some countries, different food baskets are defined for different locations, like urban/rural or regions, while some define the basket based on nutritional guidelines. An example of this approach is the People's Democratic Republic of Lao (Lao PDR) (Pimhidzai et al., 2014), where the food poverty line is based on 35 specific food items.

The claims for the basic needs approach should be stated carefully. It cannot be said to provide a purely physiological foundation for measuring poverty, since at each stage a significant degree of judgment is being exercised.

Monitoring Global Poverty (2017)

> What goes into the basket of goods is what defines poverty. Child poverty may be underestimated if child related costs are not duly considered – for example the cost of childcare services are a significant expenditure for households in many countries.
>
> *Ferrone, 2021 (forthcoming training on child wellbeing)*

The non-food component of the CBN is often based on the non-food expenditures of those around the food poverty line. People, including the poorest, also have non-food consumption. Unfortunately, there is not a concept similar to calories needed per person for non-food expenditures to anchor the non-food component. For this reason, there is less consensus on how to set the non-food component (Haughton and Khandker, 2009). Often the non-food minimum expenditure level is set as the share of expenditures allocated to non-food for those that are seen as poor or food poor. The latter can be argued as essential expenditures, as people forego food consumption for non-food consumption, despite barely consuming enough food (Ravallion, 1998). Lao PDR, the Philippines, South Africa and Malawi utilize versions of this approach (National Statistical Coordination Board, 2000; NSO, 2005; Pimhidzai et al., 2014). See also the Malawi example in Box 3.

Changing poverty lines over time. Absolute poverty lines need updates over time for correction of inflation. An absolute poverty line, like the MK 44.3 for Malawi in Box 3, needs to be updated over time to stay relevant as prices increase. One could recalculate the poverty line using the Cost of Basic Needs approach above; however, this will lead to numerous problems and the poverty line would be unlikely to reflect an absolute threshold fixed over time (Ravallion, 2001). Consequently, this approach is not recommended. Instead, it is rrecommended to

adjust the poverty line for price changes over time. Adjusting the poverty line can be done based on different data sources, for different reference populations, and through difference price indices. First, there is the source of price data. One source is the consumer price index (CPI) data, collected for estimates of inflation by national statistical offices. A second source is the survey data used for estimation of the consumption expenditure aggregate (see below), that often includes unit prices of goods. Both sources have advantages and disadvantages. CPI data often comes from larger markets and therefore tend to have an urban bias and might not reflect the prices faced by rural households. Further, poorer households (even urban ones) might face different prices than those available at markets. Hence, utilizing CPI data might not fully reflect price developments over time faced by poor households. Survey price data is available for all households and price indices can therefore be constructed to reflect the prices faced by the poor and have better representation of rural prices. However, price data from surveys can also be of poorer quality which might outweigh the benefits of better representation in survey data.

Secondly, prices for food and non-food might not increase at the same pace. For instance, in Indonesia, prices of food increased by 160 per cent over three years, while non-food only increased by 81 per cent. Hence, not only did prices increase, there was also a large shift in relative prices in Indonesia (Haughton and Khandker, 2009). To ensure that price increases are correctly reflected in an updated poverty line, the food and non-food component of the poverty line can be inflated separately. Usually, non-food is weighted higher in the overall CPI index as it represents the population, while the poverty line has a lower non-food weight as it is based on the poorer population. For applied examples of adjustments see South Africa (Statistic South Africa, 2018) and Malawi (NSO, 2005), and for a general description of challenges in analysing poverty over time, see Haughton and Khandker (2009).

Box 3. Malawi's Cost of Basic Needs (CBN) Poverty Line

The CBN poverty line in Malawi is based on the following steps:

Food poverty line:

1. The household survey was used to make a population average of the World Health Organization (WHO) calorie requirements for different ages (Table 1), resulting in an average requirement of 2,400 calories per day per person. Note that since this is an average of all household members, the average reflects children's needs as well as adults.

Table 1. Caloric needs according to WHO

Age in years	Calorie requirement per day
<1	820
1-2	1150
2-3	1350
3-5	1550
5-7	1800
7-10	1950
10-12	2075
12-14	2250
14-16	2400
16-18	2500
18+	2464

2. The fourth and fifth percentile of the consumption aggregate distribution was chosen as the reference population and the calories were costed at 11.48 MK per 1,000 calories (the median value was used (value between 10.83 and 11.57)). Table 2 illustrates that the cost per calorie vary notable across deciles. For instance, one calorie cost 8 MK on average in the first decile, but 21 MK in the tenth decile. This highlights that the costing method can have a substantial impact on the poverty line, and thereby the poverty level.

Table 2. Cost per calorie by deciles of the consumption expenditure distribution

Decile	Mean	Median
1	9.02	8.67
2	10.18	9.61
3	10.97	10.36
4	11.65	10.83
5	12.21	11.57
6	13.17	12.16
7	14.35	13.22
8	15.49	14.44
9	17.20	15.64
10	23.86	21.13

3. The food poverty line, also applied as the ultra-poor poverty line in Malawi, is set at 27.5 MK per person per day (2,400*0.01148).

Non-food component:

4. The non-food component (all non-food items which were included in the questionnaire) is calculated as the weighted average non-food expenditures (such as clothing, education, etc.) for those close to the food poverty line. The average expenditure is kernel weighted which means that that those that are very close to the food poverty line are given most weight and those further away are given less weight. Households with food expenditure per capita either five per cent below or above the food poverty line were included in the kernel weighted average. The non-food component of that total poverty line is 16.8 MK per person per day.

Poverty line:

5. The poverty line is 44.3 MK per person per day (food component 27.5 + non-food component 16.8) and is applied to households based on their per capita expenditures (i.e. children and adults are treated equally).

Source: NSO (2005)

Box 4. One size does not fit all: disability-related costs and poverty measurements

Not all children and adults have the same consumption needs, and monetary poverty measurements often do not reflect well those differences. This is particularly true for children and adults with disabilities (Banks, 2020).

Due to barriers and lack of support in their communities, persons with disabilities and their families face significant costs to cover basic disability related necessities, such as additional transport, assistive devices, rehabilitation, home adaptation, etc., in addition to higher health care costs (Mitra, 2017).

Different methods are used to estimates those costs, capturing different realities (Mont and Cote, 2020). These include: i) Assessing the difference in standards of living between otherwise similar households with and without persons with disabilities (standard of living method), for example a study in China estimated that the additional costs for households with children with disabilities ranged between 18 to 31 per cent of average income; or ii) Assessing the costs of goods and services required (GSR) to achieve equal participation, estimated in South Africa to be up to eight times the poverty line in 2015 (National Department of Social Development (NDSD), 2015).

In addition, households of persons with disabilities face significant opportunity costs, as family members, usually women and girls, often miss out on work or education to provide the required support. In South Africa, households of children with disabilities could secure on average only 70 per cent of the income earned by households with children with no disabilities, reaching only 80 per cent even when including social protection benefits (NDSD, 2015).

All these costs exert downward pressure on persons with disabilities and their household, limiting the capacity to convert income and consumption into the welfare and participation of children with disabilities (Braithwaite and Mont, 2009), as well as of children without disabilities living in household with a person with disabilities.

Monetary poverty measurements rarely take into account these disability-related costs and therefore underestimate the actual poverty and vulnerability of children with disabilities and their families.

Adjusting for disability costs, poverty estimates for households containing persons with disabilities increased from 18 per cent to 34 per cent in Cambodia, 21.1 per cent to 30.8 per cent in Bosnia Herzegovina (ILO, 2017), and 38.5 per cent to 52.9 per cent in Ghana (Asuman, Ackah and Agyire-Tettey, 2020). Recent analysis in the Lebanon Labour Force and Household Living Conditions Survey (ILO and UNICEF, 2021) shows that 47 per cent of households with a child with disabilities are in the first quintile, but this increases to 54 per cent when considering disability-related costs.

This underestimation impedes the understanding of policy makers on the actual situation of children with disabilities. Therefore, more efforts are needed to factor disability-related costs into poverty measurement and social protection interventions. While there has been an increase in studies on the costs of adults with disabilities, UNICEF will support more research on the disability-related costs of children with disabilities and their impact on child poverty rates.

References: *Asuman, Ackah and Agyire-Tettey (2020); Banks (no date); Braithwaite and Mont (2009); ILO (2017); ILO and UNICEF (2021); Loyalka et al. (2014); Mitra et al.(2017); Mont and Cote (2020); and NDSD (2016).*

Occasionally, new absolute poverty lines are considered. There are no fixed rules on when an absolute poverty line is obsolete and a new one is needed, but common reasons include:

- *Consumption patterns have changed notably,* meaning the line no longer represents quality of life as lived by most people. As countries grow and policies change, the consumption pattern of households can also change. If changes are so large that the original food basket is no longer representative of consumption, this can also be a reason to reconsider the poverty line.
- *The poverty line is no longer relevant.* As countries grow, the poverty line threshold may no longer help inform the policy debate. This is particularly the case in middle-income and richer countries. Countries can consider redefining a new higher poverty line (either absolute or relative), select an inequality goal, or use a combination indicator like the World Bank's shared prosperity goal that focuses on growth among the 40 per cent poorest population (World Bank, 2018).
- *Past applied methodology or survey questionnaires are not up to best practice.* In this scenario, the poverty measure methodology practice has evolved, and some countries choose to update to current best practice. Similarly, the questionnaire behind the welfare aggregate may need updating, rendering past poverty lines obsolete, and comparability difficult. A typical example of the latter is the improved data collection on food consumed outside the household. This part of consumption has historically been poorly captured but is increasingly forming a larger part of overall expenditures. A change to data collection tools, for example, was one key reason for recalculation of the poverty lines in South Africa (Statistic South Africa, 2015).

In either case, it is good practice to generate poverty statistics backwards with the new poverty line (if possible), to show the impact of change in poverty that has occurred.

A comparison to other countries, can also provide guidance on the level of poverty line currently used, as illustrated in Figure 6.

Figure 5. National poverty lines and economic development
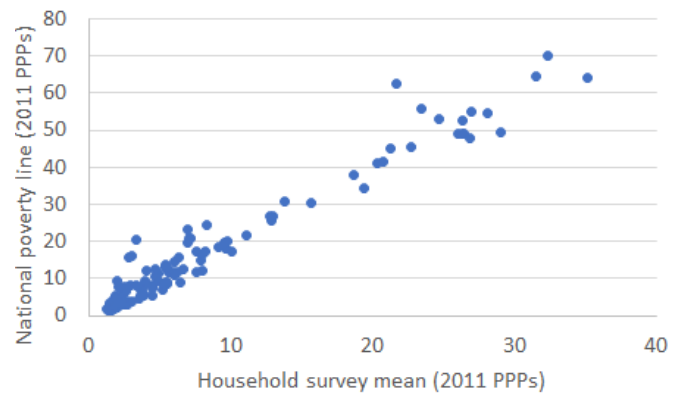
Source: Jolliffe and Prydz (2016)163–184, 2009.

2.1.3. The use of multiple, local and international poverty lines

In addition to the single national poverty line, there are several others commonly used, including:

- **Multiple national poverty lines, which refine the ability of designing policies towards people living in poverty**. Some countries utilize multiple national poverty lines. In such cases, those below the lower, more stringent, poverty line are often referred to as the extreme or ultra poor. Analysis with several poverty lines can be informative as characteristics and policies might differ according to different groups, i.e. the poorest, the poor, and those vulnerable to poverty (but currently living above the poverty line). See also Section 3.3, which offers a more advanced analysis of risk of poverty.
- **Local poverty lines, which can better reflect local conditions, but require more data for robustness and can cause political challenges**. Any of the discussed poverty lines can be applied at the national level or the local level. There are advantages and disadvantages to both. A national poverty line is simpler to apply, while it might fail to reflect some important regional variations. Local poverty lines can reflect local circumstances more accurately but can also raise political questions when different monetary poverty lines are applied in different locations, including neighbouring locations. Note that

consumption and income aggregates are corrected for price differences, so variation in local poverty lines reflect variations in consumption patterns and not just rice variations. Development of local poverty lines is also demanding in terms of data requirements and can raise questions of robustness. See, for instance, the discussion around such poverty lines in Mozambique (Alfani et al., 2012).

- **International poverty lines compare poverty across countries and are based on purchasing power parity (PPP) exchange rates**. When applying poverty lines internationally, one cannot take the official exchange rate and calculate the same poverty line in each country, as exchange rates do not accurately reflect consumption expenditures (or the purchasing power). For instance, a meal bought in one country is cheaper than the same meal in another country, evaluated in the same currencies using official exchange rates. The PPP exchange rates are an attempt to overcome such differences as they reflect the cost of living across countries. The World Bank has developed a set of international poverty lines, which they apply to all countries using PPP exchange rates. Use of the PPP exchange rates to poverty lines is not unproblematic

(Reddy and Lahoti, 2015; Jolliffe and Prydz, 2016). There are debates about the relevance of using the US$1.90 per day measure as well as the use of PPP, and although not a focus of this guidance note, we encourage colleagues to read up on these (for more on international poverty lines, including debates around the use of international poverty lines, refer to Appendix 7). Currently, these poverty lines are set at US$1.90, US$3.20 and US$5.50 of consumption expenditures per day per capita. Note that the SDG Indicator 1.1.1 is based on the international poverty line and SDG 1.2.1 is based on national poverty lines. UNICEF headquarters works closely with the World Bank for the official reporting on SDG 1.1.1 indicator, for global, regional and national estimates on extreme poverty ($1.90 PPP) as well as the other poverty lines of $3.20 and $5.50 (for more on this, please see the World Bank and UNICEF reports on extreme child poverty (including *New Estimates of Extreme Child Poverty* (2016)) and and the *Global Estimate of Children in Monetary Poverty: An Update* (Silwal et al., 2020). Combining national, international (see Section 2.6) and multidimensional (see Section 3.5) poverty lines can provide robustness and enrich the completeness of poverty analysis.

2.2. Welfare measured by consumption or income

The World Bank's preferred measure for monetary poverty is consumption per capita (Jolliffe et al., 2014). A common alternative is the use of income. This section outlines some of the key differences, advantages and disadvantages of using consumption and income for welfare aggregates for monetary poverty.

Undertaking monetary poverty analysis will always include the use of an income or consumption aggregate, as one of these are needed to define monetary poverty. in most low- and middle-income countries, and even in many high-income countries, such aggregates come from surveys. Appendix 6 outlines the surveys and data needs for monetary poverty analysis, as well as more details on the recommendations for how to define consumption and income aggregates.

Consumption, as opposed to income, is the preferred measure of well-being for several reasons. First,

consumption measures the level of welfare achieved as an outcome, while income more reflects the potential level of welfare that can be achieved if income is used for consumption. A second important aspect is that consumption is smoothed over time, thereby better reflecting the overall welfare level at any given time. This reflects that, irrespective of when income is earned or when food is harvested, households will seek to smooth the consumption over the year, to have a steady consumption over time. Consider a farmer, for instance, faced with a poor harvest who might have very low income or even no income. However, by drawing on savings, borrowing from friends and relatives, and other coping mechanisms, the farmer manages to have some consumption, despite having no income. Similarly, in good harvest times, the farmer will store or sell harvest to save income for later consumption. Households relying on wages can also be hit by spells of unemployment, resulting in very low reported levels

of income. Hence, consumption may thus provide a smoother, less volatile measure of living standards than income. In poorer countries, especially, with a large proportion of the population working outside the wage sector, the use of income is especially problematic as few have any wages to report, and estimation of earnings from self-employment is difficult at best. For an overview of the advantages and disadvantages of consumption and income, please see Figure 6, while more details are covered in Jolliffe et al. (2014).

The lack of properly measured consumption data is usually why many countries rely on income for monetary poverty. This is especially the case in Latin America, where national surveys are mostly labour force surveys which record employment and income, but do not capture consumption. This is similarly the case for some high-income countries. The majority of low and middle-income countries outside Latin America use consumption expenditure for monetary poverty measurement (Figure 7).

Figure 6. Advantages and disadvantages of consumption and income aggregates

Advantages	Disadvantages
Income	
• Less complex to measure, given the limited number of income sources. • Lower cost of data collection.	• Likely to be underreported, especially if obtained illegally. • Can vary over the life cycle and seasonally, not reflecting welfare. • The links between income and household welfare or utility are not always direct. • Income from informal and home production (including agriculture) can be hard to estimate.
Consumption	
• Shows the current level of welfare achieved as an outcome. • Smooths out irregularities, better reflecting long-term average well-being. • Less understated than income, especially for non-wage income.	• Challenges in valuating rare expenditures in terms of average welfare, for instance durable goods and weddings. • Lack of access to credit can limit full smoothing (for instance via borrowing and social networks) both over life cycle and seasonally.

Figure 7. Low- and middle-income countries using income and consumption for monetary poverty

Source: Own data collection. Notes: Data covers 57 non-high-income countries up to 2017.
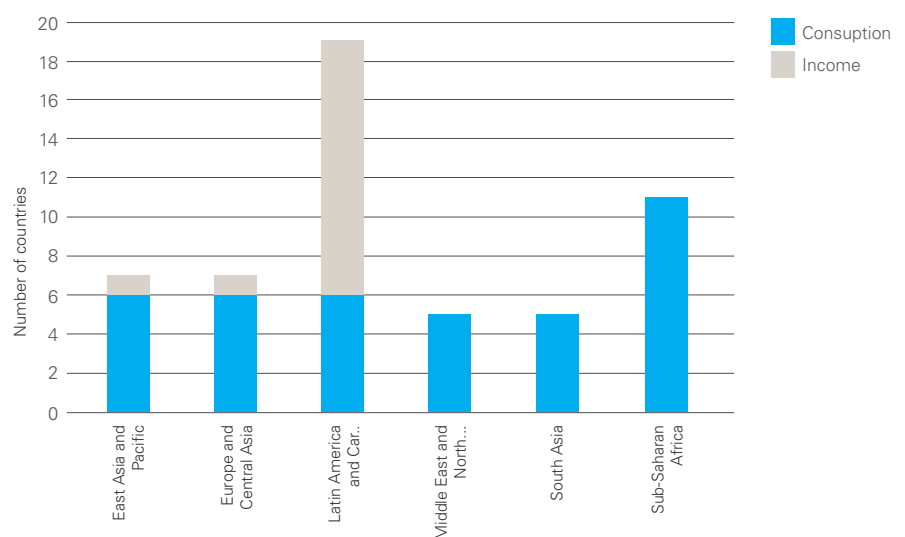
Welfare aggregates should be corrected for prices faced by households. Households in different locations face different prices for same goods, which should be reflected in the welfare aggregate, so that the welfare aggregate can reflect all households' true standard of living. The common practice for treatment of such price differences differs for consumption and income aggregates. Consumption aggregates data is taken from surveys and collected within different reference periods, often between 1-2 weeks for food consumption and between 1- 12 months for non-food items. The data is then converted into same reference period, often a year or a month. Further, many household surveys designed to capture poverty are implemented over 12 months, with interviews in all locations for all 12 months. This sample design helps to capture seasonality and is representative of an annual average. Hence, to correct for the different prices faced by households, the consumption data is usually corrected for both spatial price differences (different locations) and temporality (different times of interview). Spatial and temporal inflation indices to correct for the different prices faced by households in different locations at different times can either be based on price data collected from the CPI or the unit prices in the household survey. Most consumption aggregates correct for such price differences. Information on income, on the other hand, is either collected by asking households directly in surveys about their income the past 12 months or from register data. For unclear reasons, the common practice for income aggregates is to not correct for spatial or temporal price differences.

2.3. Child poverty and use of equivalence scales

The treatment of household composition, especially children, can have a large influence on the level and profile of poverty. Households differ in their composition: some are large, some are small, some have many children, others none etc. There is general agreement that household composition matters in terms of whether a household is identified as poor, and also some agreement that the impact of household composition on minimum consumption needs is different at different stages of child development, but there is no agreement on how to best deal with this. Two key aspects are usually debated around household composition: 1) economies of scale; and 2) different individual needs. The former captures

Box 5. How equivalence scales can make the same family poor or non-poor

Example: Using a simple equivalence scale with children having half theneedsof adults, this example shows the same family of four with two children and two adults.Measured by per capita they are poor, but when usingadult equivalencescales they are not.

	A poor household measured by per capita		Not a poor household measured by adult equivalence	
Total consumption		100		100
Poverty line		30		30
	Per capita household size	4	Adult equivalnce household size	3
	Consumption per capita (100/4)	25	Consumption per adult equivalent(100/3)	33

that larger households can share some resources and also benefit from bulk purchases, while the latter usually captures that children have different needs than adults, especially from a caloric intake point of view, but also for consumption of non-food items. The latter could also reflect disabilities or different needs by gender, for example. Sensitivity analyses of OECD countries suggest that while the level and, in particular, composition of income poverty is affected by the use of different equivalence scales, trends over time and rankings across countries are much less affected (Burniaux et al., 1998).

Measured in per capita, children are more likely to live in poverty than adults. Using the international poverty line of US$1.90 in PPP terms and per capita poverty measures, poverty is generally found to be much higher among children than among working adults and elders (Batana, Bussolo and Cockburn, 2013; Newhouse, Suarez-Becerra and Evans, 2016; Munoz Boudet et al., 2021; Silwal et al., 2020), as illustrated in Figure 10. Further, higher poverty rates among children are found for any given poverty line and also for the depth of poverty. Child poverty rates remain above 17 per cent, and are greater than adult poverty rates, for all reasonable two-parameter equivalence scales (Newhouse, Suarez-Becerra and Evans, 2016).

Both per capita and equivalence scales are commonly used. Countries in Europe mostly follow the recommendation of EURO stat and base poverty on income per adult equivalence, which is also common in Latin America (Figure 8 and Figure 9). Many countries in Africa, South and East Asia, as well as in the Middle East, use consumption per capita (Figure 9). Note that any use of equivalence scales will, compared to per capita, lead to a lower poverty rate as the household size is lowered for some households, leading to relative more resources for each household member, given a fixed poverty line. Importantly, Figure 9 illustrates the mechanics of the use of equivalent scales. In a true analysis using either welfare aggregate, both the poverty line and the welfare aggregate should be based on the same approach (Ravallion, 2015).

Using equivalence scales lowers child poverty relative to per capita measured poverty. The use of equivalence scales has special implications for the analysis of children in poverty, as children are more likely

to be found in larger households, and are treated as adults in the per capita application. Applying equivalence scales will therefore, relatively, lower monetary poverty especially among households with children. In a 2016 World Bank policy research working paper, the authors show that child poverty rates remain above 17 per cent, and are greater than adult poverty rates, for all reasonable two-parameter equivalence scales. Unlike children, the elderly are usually found to be relatively poorer when applying equivalent scales (as illustrated in Figure 11), so comparison between children and adults can also vary depending on how adults are defined.

Figure 7. Number of countries using equivalent scales and per capita aggregates
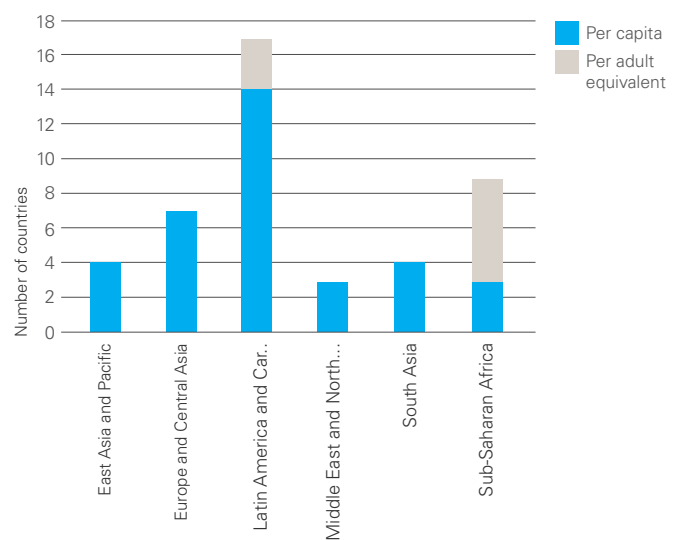
Source: Own data collection

Figure 9. World headcount poverty rate by age (measured per capita)
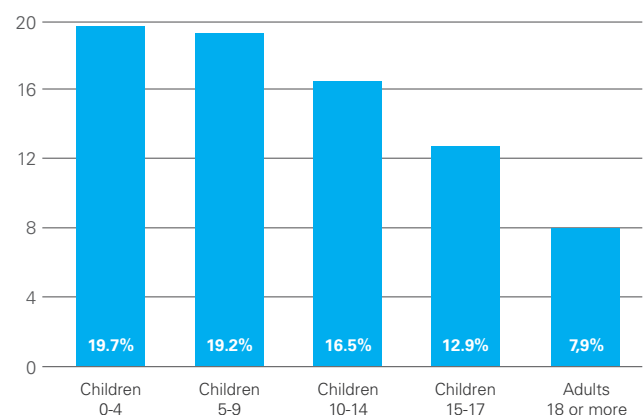
Source: Silwal et al., 2020

Not utilizing equivalence scales will lead to higher poverty in regions where households are large and contain many children, such as Sub- Saharan Africa, compared to regions where households are small and contain few children, such as Europe and Central Asia and to some extent East Asia and Pacific and Latin America and the Caribbean. Note that both the poverty line and the welfare aggregate should be based on the same approach, either using per capita or an adult equivalent scale measure (Ravallion, 2015).

Figure 11 illustrates how poverty can vary across different age groups by use of some commonly applied equivalent scales. The relative high level of child poverty observed when using the per capita measure is clearly visible in the dark blue line. The figure also shows how the profile of poverty, in this case across ages, varies with the choice of equivalent scale. The square root scale and OECD original have similar poverty rates for children under 14, while they differ notably for the elder population. This highlights that the choice of equivalent scales is crucial for both the level and the profile of poverty. Unfortunately, there is no agreement on which of the at least 50 different proposed equivalent scales are most appropriate to use.

Figure 10. Impact of equivalent scales on poverty by age group
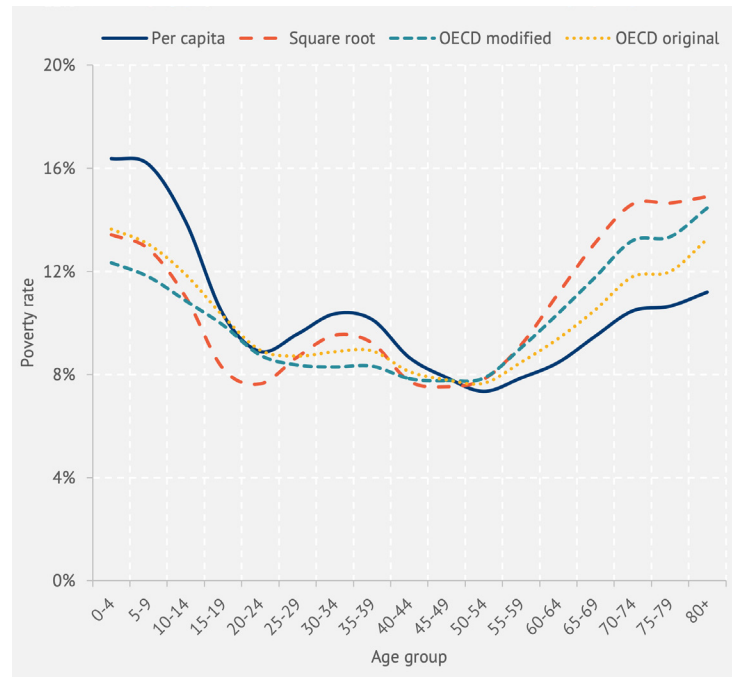
Source: Gelders (2021). Notes: Figure cover 32 countries in Africa and Asia.

2.4. Monetary poverty indices beyond the headcount

Monetary poverty is most commonly presented by Foster-Greer-Thorbecke indices (FGT). The three most common FGT indices are:

1. *The headcount index or incidence of poverty*, which is the share of a given population that is poor.
2. *Depth of poverty (poverty gap)*, average distance for those living in poverty to the poverty line. It is obtained by adding up all the shortfalls of the poor (the non-poor group has a shortfall of zero) and dividing the total by the population. As such, the depth of poverty is also an estimate of the financial cost of bringing every person living in poverty up to the poverty line (assuming perfect targeting). The ability of costing the minimum funds needed to eradicate poverty is an advantage of monetary poverty analysis.
3. *Poverty severity (squared poverty gap)*, which takes into account not only the distance separate those living in poverty from the poverty line (the poverty gap) , but also the inequality among those living in poverty. Therefore, a higher weight is placed on those households who are further away from the poverty line.

Box 6. **Poverty headcount and poverty gap in Togo and Benin**

The poverty headcount, gap and severity are often highly correlated, but as illustrated in Figure 12, there can also be differences. Togo and Benin have almost identical poverty gaps, but a 2.5 percentage point difference in their poverty headcount rate. Hence, when evaluated based on poverty rates, Togo seems slightly better off than Benin. However, measured by the poverty gap, they face same challenge in terms of poverty. Recall that the poverty gap is also an estimate of the theoretical cost of eradicating poverty, given perfect targeting (see above). Hence, despite a 2.5 percentage point difference in the poverty rate, it would take the same amount of resources to eradicate poverty in Togo and Benin.

Figure 11. Poverty headcount and poverty gap in Togo and Benin, 2016
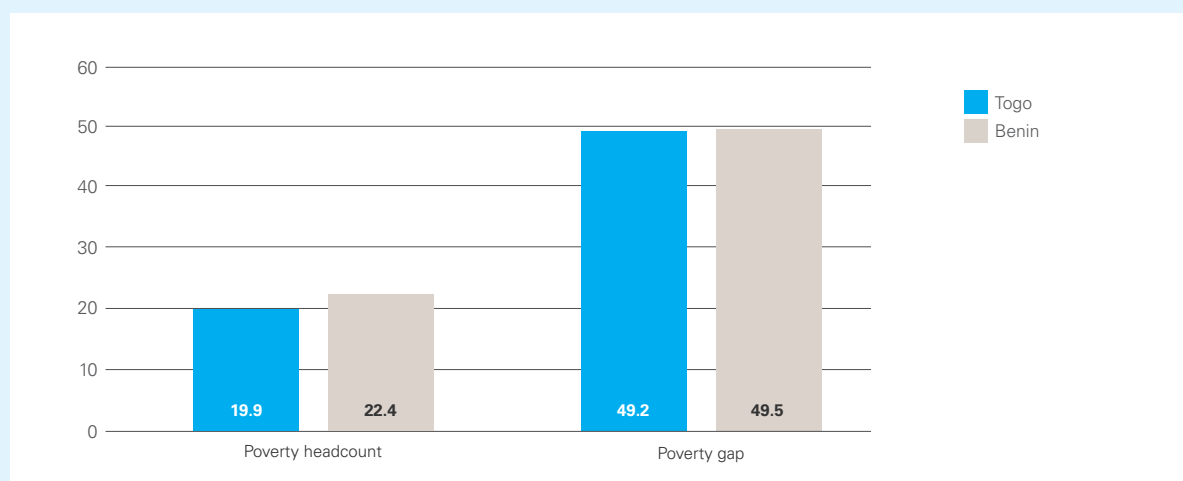
Source: World Development Indicators (2016). Poverty is based on the international US$1.90 PPP poverty line.

2.5. Monetary poverty over time

Trends in poverty over time are of great interest but require comparable data. Guidance on the analysis of poverty over time is available in Chapter 11 of the World Bank's *Handbook on Poverty and Inequality* (Haughton and Khandker, 2009). The following key aspects are worth keeping in mind:

• *Consumption/income data need to be collected and treated in the same way in both years*. There is plenty of literature showcasing how changes to survey questionnaires lead to different measures of consumption and income, which can render

poverty headcounts incomparable. From a survey design point of view, there can be difficult trade-offs between implementing improvements to survey design and keeping comparability over time. The timing of field work should also be identical (or 12 months), as seasonality can influence measured welfare.

• *The comparison must be in real numbers*. This means that either the poverty line or the consumption/income aggregate needs to be corrected for temporal inflation between years (see Section 2.1.2 on the updating of poverty lines).

Panel data, but also cross-sectional data, are informative on poverty dynamics. Through the use of panel data (when the same households are observed twice at different points in time), analysis can show how many households moved out of poverty, stayed poor, were never poor, and how many became poor. Unfortunately, such data is not available in most countries. Studies show poverty mobility differs by country. See, for instance, panel data analysis for the USA (Edwards, 2015), Bangladesh (Gautam and Faruqee, 2016) and Uganda (McKay, 2012). Information on poverty mobility is key for the assessment of chronic poverty and vulnerability, and is a key focus area for UNICEF

(see the 2019 Global Social Protection Programme Framework). As panel data is not an option across all countries, an alternative method that proxies movements in poverty over time based on cross-sectional data has been explored. Absent actual panel household survey data, synthetic panel data was constructed for more than 20 countries in sub-Saharan Africa, which entailed employing repeated cross sections spanning, on average, a six-year period for each country (Dang and Dabalen, 2019).4 Two rounds of household surveys can also be used to evaluate growth over time, and its impact on those living in poverty and children.

2.6. International comparison of poverty

International comparison of poverty is usually based on existing World Bank databases. Benchmarking poverty against other countries can provide additional insights and the use of international poverty lines for national analysis can also highlight new aspects. As described above, both poverty lines and welfare aggregates vary in response to methodological choices, such as how the poverty line is costed if using the cost of basic needs and whether the consumption aggregate includes housing cost and use value of durables goods etc. These choices and variation in the underlying data make international comparison challenging. However, the World Bank publishes poverty numbers that are based on international poverty lines at US$1.90, US$3.20 and US$5.50 (all in PPP). The international poverty line is applied to a large database that seeks to make consumption and income data as comparable as possible, and control for the different prices. Data for all available countries and different poverty lines (users can also define their own) can be accessed at the World Bank's PovcalNet database (World Bank, no date) or directly via the statistical packages Stata and R (Atamanov et al., 2019). Note that the international comparable data in this database use poverty numbers measured in per capita terms without making any correction for the composition of the household. For

further documentation and discussion on the usefulness and challenges in international and comparable poverty statistics, see Chien and Ravallion, 2001; Ferreira et al., 2016; Jolliffe and Prydz, 2016; and Reddy and Lahoti, 2016we have sought to minimize changes to the real purchasing power of the earlier $1.25 line (in 2005 PPPs).

The World Development Indicators database, maintained by the World Bank, provides an overview of national and international poverty lines and as outlined above in the section on international poverty lines, it is expected that the World Bank PovcalNet data and the WDI databases will provide international poverty statistics for children as per SDG requirements.

For comparison of wealthier countries that rely on income for poverty measurement, see also the OECD Income Distribution Database (*OECD Income Distribution Database*, no date). For comparison of inequality and wealth, also be aware of the United Nations University (UNU-WIDER) World Income Inequality database, the Standardized World Income Inequality Database, the World and Wealth Income Database, Estimated Household Income Inequality dataset (EHII) and the Global Consumption and Income Project.

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4   See also Hérault and Jenkins (2018) for an evaluation of approaches based on high-income countries

3. Analysis of monetary poverty

Key take-aways:

• In many countries, official poverty lines play a key role for government policy and can be the basis for determining eligibility for government programmes.
• Profiling the characteristics of children and their families living in poverty is therefore essential for informing policy debates and seeking efficient solutions reducing child poverty.
• There are numerous child poverty analytical angles which can inform policies and programmes, including:
    - **Descriptive profiling** of those living poverty, for example poverty by age groups; child poverty and household size; child poverty and parent's education.
    - **Profiling through regression analysis** – to tease out which of the many correlates of child poverty are more dominant than others.
    - **Risk of poverty and vulnerability** – monetary poverty can be expressed and analysed as the probability of being poor.
    - **Sensitivity of different poverty lines** and adult equivalent scales.
    - **Trends** – analysis of child poverty over time can be linked to policy changes and growth.
    - The **overlap between monetary and multidimensional child poverty** can showcase different groups of children living in poverty, requiring different policy and programme approaches.

One has to look ahead to the uses to which the indicators— both monetary and non-monetary— may be put in policy design. In the United States, the official poverty line has come to play a central role in government policy; it is the basis for determining eligibility for many federal and state government programs.

World Bank (2017) Monitoring Global Poverty: Report of the Commission on Global Poverty

In data-rich countries, there are many options for modelling and simulations of how various programmes can impact on child poverty. Examples of such simulations include the recent consensus study report A Roadmap to Reducing Child Poverty, which identifies evidence-based programmes and policies for reducing the number of children living in poverty in the United States by half within 10 years (National Academies of Sciences Engineering and Medicine, 2019). Through reviews and simulations, the roadmap explored 20 different programme and policy options,

and laid the groundwork for the establishment of the American Family Act (2021) with the potential to cut child poverty in the USA in half. Similarly, through modeling, a child poverty study in the UK examined the cost-effectiveness of several policy options against the child poverty goal, as well as the preferred combination of them as a package (Hirsch, 2006). In countries where we would rely on household surveys for such analysis, the options are fewer but still extremely useful, as outlined in the sections below.

If monetary poverty is an issue, then monetary transfers to the poor are a critical part of the solution (Watkins and Quattri, 2019). However, only 1 in 4 children globally receive social protection benefits, and the regions with the highest rates of child poverty have the lowest social protection coverage (ILO, 2021).

Various analytical approaches can be used to profile child poverty and the impact of programmes, using household surveys. For example, modelling exercises point to the potential for marked poverty-reduction effects if transfers are properly targeted and on a sufficient scale. In 2018, simulations based on household surveys in Ghana, Liberia and Niger suggested consumption gains of 12–17 per cent from transfers of $50 per household every month, cutting poverty rates by 40 per cent. Applied on a regionwide basis, this could potentially take 116 million children out of poverty (Watkins and Quattri, 2019).

> While exercises of this type illustrate the case for targeting, there is a need for caution. Whatever their intention, targeted approaches often bypass the poor, and deliver less at higher costs. (Kidd, 2015). One review of 38 social protection pro-grammes found that only one – the Pantawia pro-gramme in the Philippines, targeting households with children – reached more than half of the poorest 20% of households it targeted (Kidd and Athias, 2019). There are also wider political econo-my questions around the sustainability of transfer programmes targeting sub-groups of the poor with limited political influence, while excluding middle-income groups with a stronger voice.
>
> *Watkins and Quattri (2019) Child poverty in Africa:*
> *An SDG emergency in the making.*

Further examples include, among others, the UNICEF-supported analysis on *Enhancing equity for children in the context of the reform of energy subsidies in Egypt* (Cockburn et al., 2014), which uses the Egyptian Household Income, Expenditure and Consumption Survey to highlight, through simulations, the potential negative impact on child poverty of subsidy removal, as well as the potential positive impact of the introduction of child cash benefits financed with a part of the budget savings generated by the reform. Fuel subsidies were recently removed in Egypt, freeing up resources for two cash assistance schemes to support vulnerable populations, including one targeted to poorer households with additional benefits available to children (UNICEF, no date).

In Namibia, UNICEF supported the development of a tax-benefit micro-simulation system (NAMOD) to simulate the costs and reductions in poverty associated with changes to the welfare system such as increasing the size of grants, introducing new grants, changing eligibility, etc. This analysis is based on analysis of the National Household Income and Expenditure Survey (Wright, Noble and Barnes, 2014).

Profiling the characteristics of those living in poverty is essential for informing the policy debate and seeking efficient solutions reducing child poverty. A profile of those living in poverty can be many things, but usually the objective is to inform policy in order to improve circumstances for those living in poverty. As countries vary in many aspects including obstacles to child poverty reduction, there is not a set list one can follow blindly to make the right child poverty profile applicable for all countries. However, certain aspects are included in most poverty profiles, and this section illustrates these common elements. For inspiration, see for instance the many World Bank Poverty Assessments that are produced regularly, and the poverty analysis based on ADePT (Foster et al., 2013) "abstract" : "A Unified Approach to Measuring Poverty and Inequality: Theory and Practice is an introduction to the theory and practice of measuring poverty and inequality, as well as a user's guide for analyzing income or consumption distribution for any standard household dataset using the World Bank's ADePT software. The approach taken here considers income standards as building blocks for basic measurement, then uses them to construct inequality and poverty measures. This unified approach provides advantages in interpreting

and contrasting the measures and in understanding the way measures vary over time and space. Several recent initiatives have lowered the cost of accessing household datasets. The ADePT software enables users to analyze microdata from household surveys and other sources and generate print-ready, standardized tables and charts. It can also be used to simulate the impact of economic shocks, cash transfers and other policy instruments on poverty, and inequality. The software automates analysis, helps minimize human errors, and encourages development of new economic analysis methods. Of interest to teachers and students as well as to policy practitioners, A Unified Approach to Measuring Poverty and Inequality will empower researchers to plumb greater depths in searching for regularity in larger and larger datasets. This book should help to enrich

discussion and analysis relating to the World Bank's recent effort toward defining new targets and indicators for promoting work on eradicating poverty and enhancing shared prosperity.", 2013.

There are numerous monetary child poverty analytical angles which can provide useful information for policies and programmes aimed at addressing child poverty. The following aspects are covered in the following sections: 1) Descriptive profiling of the poor; 2) Profiling through regression analysis; 3) Risk of poverty and vulnerability; 4) Sensitiveness to poverty lines and adult equivalent scales; 5) Child poverty over time; 6) Linking child monetary and multidimensional poverty; and 7) Access and barriers to key services, including benefit incidence analysis.

3.1. Descriptive profiling of children in monetary poor households

An analysis of child poverty will often start out with some basic tabulations of poverty according some key dimensions. To highlight the difference between poverty in general and child poverty, these tables often include poverty according to the age and number of children in the family, which can then be cross-tabulated with location (urban/rural, regions), household size, parental education level, sex of head of household, ethnicity or language, to mention a few. Note that more elaborate profiling of child poverty comes from the regression analysis in the next section, but descriptive statistics and illustrations should also be included. If data is available for several years, trends should also be illustrated.

Disaggregating the official national household-based poverty numbers by children's age, as is required for in SDG indicator 1.2.1, is easy and straightforward to do. The SDGs require countries to set baselines and targets for 2030 on monetary child poverty, as outlined in the SDG indicators and the child poverty indicators in UNICEF's Strategic Plan, which are aligned with the SDG indicators.

UNICEF may provide support to governments in setting baselines to measure SDG child poverty

indicator 1.2.1: *Proportion of population living below the national poverty line, by sex and age*. Disaggregating such poverty statistics by children's age is a simple tabulation as illustrated below in Example 3.1. Any child living in a poor household is considered poor and one can easily tabulate different parts of the population, including children, according to their poverty status. As a minimum, the indicator should be aggregated for the age group 0-17 years, but highlighting additional age groups can be useful, for example 0-5 years, 6-10 years, 11-14 years and 15-17 years. It is common practice to disaggregate for the 0-14 years age group, however this is not the official age group for children (0-17 years), which should be used.

In some countries, poverty rates are reported only at the household level, i.e. the number/percentage of households living below the poverty line, not the number/percentage of individuals living below the poverty line. In such instances, monetary child poverty can be reported as 'the percentage of households with children' living in poverty (Evans and Calderon, 2014). This is, however, not recommended practice; the preferred approach is to report on the percentage of children living in monetary poor households.

Example 3.1: Poverty by age groups.

A poverty profile with disaggregation by age group and the population distribution by age group can show both how children are affected by monetary poverty in comparison to the whole population, or the working population etc., as highlighted above in the section on SDG child poverty indicators. It can also show if children are disproportionately affected by poverty. Table 3 (an example from an actual country, which we will call Country X) shows the headcount rate by age group (column two), the distribution of the poor, as well as the distribution of the population by age (columns three and four).

Analytical lessons: The poverty headcount rate is highest for the population under the age of 14 and then increases again for the 65 years and older age group.

Table 3. Poverty by age group (Country X)

Age	Poverty Headcount Rate	Standard Errors	Distribution of the Poor	Standard Errors	Distribution of Population	Standard Errors
0-5	10.1	1.05	6.6	0.69	5.1	0.18
6-14	10.7	0.78	11.9	0.86	8.8	0.23
15-19	7.1	0.80	5.8	0.65	6.4	0.20
20-24	5.5	0.73	4.8	0.64	7	0.22
25-29	5.8	0.71	4.9	0.59	6.7	0.21
30-34	6.9	0.76	5.8	0.63	6.6	0.21
35-39	7.6	0.78	5.8	0.60	6	0.19
40-44	7.7	0.90	6.5	0.77	6.7	0.21
45-49	6.6	0.68	6	0.61	7.2	0.21
50-54	4.2	0.48	4.7	0.54	8.8	0.24
55-59	6.3	0.73	6.5	0.76	8.2	0.24
60-64	7.3	0.86	4.8	0.57	5.2	0.18
65+	11.8	0.57	25.9	1.15	17.4	0.31
Total	7.9	0.21	100		100	

Source: Serbia 2007, using ADePT.

Example 3.2: Child poverty and household size.

A key issue to highlight to policy makers is the simple but powerful message that poverty rates change according to household size. Most, if not all, countries show that households with children, particularly households with many children, are among the poorest.

Analytical lessons. This example from Country X in Figure 12 shows how the poverty rate increases dramatically with the number of children under the age of 6 in each household. Households with two children have a poverty rate of around twice (14 per cent) those with one or no children under 6 (7-8 per cent). Households with three or more children under 6 have more than three times the poverty rate of those without or with one child, at a poverty rate of 32 per cent. Though making up five per cent of the population in poverty, the households with three or more children only make up one per cent of the general population. Hence, in this country, children in general are only marginally poorer than average (Example 3.1), but children in households with many children are much poorer than others (Figure 12).

Figure 12. Number of children under 6 in household and poverty rate (Country X)
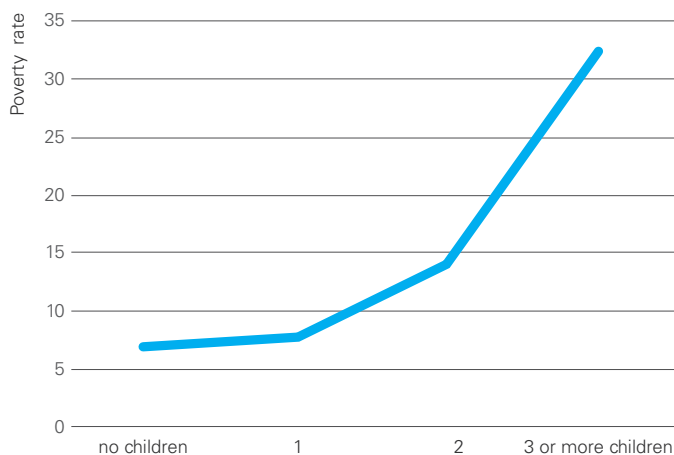
Source: Serbia 2007, using ADePT.

Example 3.3: Child poverty and parental education level.

To focus the analysis on children, a second data set is uploaded to ADePT. This dataset is a subset of the original data and only include households that have children. ADePT automatically generates all table for both datasets. The feature is designed for analysis of growth (Example 3.6 returns to this) so changes between the two data set are also calculated, which should be ignored for the current use. Table 4 shows the poverty rate by education and for all households, and the subset of households that have children. While this example is for level of education, similar

tables can also be automatically generated in ADePT for urban/rural, regional locations, gender of the household head, etc.

Analytical lessons: In this example, children living in poor households overwhelmingly live in households where no one has finished any primary education (54.9 per cent of the poor households with children) (column 4). The high concentration of poor children in households with little education is not because the households with children are more likely to be poor than other households with little education (poverty rate of 12.8 and 15, respectively, column 1 and 2). The concentration of poor households with children among the least educated is a reflection of those with little education being more likely to have children than the population at large (39 per cent and 25.8 per cent of the population respectively, columns 5 and 6). Hence, the higher concentration of poor children among the least educated seems driven by birth patterns across education levels more than poverty per se. Note that part of the pattern could also be explained by households with many children being poorer due to care responsibilities.

These are a few selected examples of the possible types of descriptive profiling, although the options go beyond what is outlined above. For example, exploring child poverty rates of female-headed households, between households with or without a household member with a disability, ethnicity, language groups etc, should be explored where data allows.

Table 4 Poverty distributions by education level for all and child households (Country X)

	Poverty Headcount Rate		Distribution of the Poor		Distribution of Population	
Column	**1**	**2**	**3**	**4**	**5**	**6**
	All HHs	**Child HHs**	**All HHs**	**Child HHs**	**All HHs**	**Child HHs**
Without school or incomplete primary	15.0	12.8	49.1	54.9	25.8	39.0
Primary school	10.5	12.6	26.4	24.2	19.8	17.5
Vocational schools from 1-3 years	6.7	8.1	10.3	8.0	12.2	8.9
Vocational schools 4 years	3.8	4.4	12.0	11.2	25.1	23.0
High school	1.5	3.9	1.0	1.2	4.9	2.7
College	1.1	1.2	0.7	0.5	5.2	3.8
University	0.6	0.0	0.5	0.0	6.9	5.1
Total	7.9	9.1	100.0	100.0	100.0	100.0

Source: Country X 2007, using ADePT.

3.2. Profiling child poverty through regression analysis

A regression analysis can be used to tease out which of the many correlates of poverty are more important than others. A consumption regression with consumption on the left side and a range of explanatory variables on the right-hand-side shows how consumption and poverty correlates multiple factors at the same time. Frequent explanatory variables are education, location (urban/rural and regions), demographics (gender of household head, number and age of children, adults and elders, and household size), or other variables of interest. Importantly, a coefficient in a consumption regression can be interpreted as the correlation with education, for instance, while controlling for the household size and all other aspects included in the regression. However, it's important to keep in mind that a regression like this cannot be interpreted as causality. A regression analysis can be implemented in most statistical packages, and is also a standard output of ADePT.

Example 3.4: Consumption regression.
Utilizing a regression of consumption on education, location (urban/rural and regions), demographics (gender of household head, number and age of children, adults and elders, and household size), Table 5 shows both results for the whole country, as well as for rural, urban, as well as north, south and central regions of Malawi.

Analytical lessons. Table 6 shows that when a household in Country X adds a child aged 0–6 to their household, the probability of poverty is increased substantially. The probability of poverty increases by 35 per cent for urban households, while for rural households the poverty probability increases by 21 per cent. Similarly, adding two children under 6 to a household with no children is associated with 70 and 36 per cent higher probability of being poor in urban and rural areas, respectively (Table 6). A household head completing any education above primary level is 59-60 per cent less likely to be poor, and the impact of education on probability of poverty is very similar in rural and urban areas, although there is a difference between the urban and rural probability of being poor when a household head has a university degree.

Table 5 Consumption regression (Malawi)

	Country	Rural	Urban	North	Central	South
Female household head	-0.138***	-0.147***	-0.074	-0.149***	-0.154***	-0.132***
Household size	-0.277***	-0.274***	-0.319***	-0.224***	-0.316***	-0.272***
Household size squared	1.369***	1.308***	2.016***	0.997***	1.676***	1.293***
Number of children 0-4	-0.084***	-0.071***	-0.143***	-0.088***	-0.066***	-0.097***
Number of children 5-10	-0.041***	-0.036***	-0.049*	-0.019	-0.033***	-0.053***
Number of children 11-14	-0.022**	-0.009	-0.063*	-0.019	-0.022	-0.022
Highest education: some primary	0.052**	0.077***	0.053	-0.072	0.057*	0.060**
Highest education: completed primary	0.128***	0.183***	0.134	-0.108	0.167***	0.165***
Highest education: post primary	0.403***	0.390***	0.667***	0.098	0.421***	0.512***
Additional variables not shown	x	x	x	x	x	x
R square	0.470	0.421	0.508	0.406	0.498	0.466

Source: World Bank (2007): Malawi Poverty and Vulnerability Assessment: Investing in Our Future.

3.3. Risk of poverty - monetary child poverty measured as vulnerability

Household income and consumption are dynamic and responsive to crises and opportunities, meaning that households can move in and out of poverty. Accordingly, there is often a high proportion of the population at risk of falling into poverty. For this reason, exploring those who are 'near poor', for example 20 per cent higher than the national poverty line, may provide an indication of the proportion of children vulnerable to falling into poverty, who may need to be reached by social protection programmes (Rossi et al., 2014). The COVID-19 crisis, for example, highlighted the vulnerabilities of the non-poor to poverty.

Monetary poverty can be expressed as the probability of being poor, which is one of many ways vulnerability can be defined analytically. Vulnerability is an important consideration in UNICEF´s approach to poverty reduction; for an overview of the vulnerability literature and analytical definitions using cross-sectional microdata, see Klasen and Waibel (2013); Fujii (2016); and Gallardo (2018).

Example 3.5: Increase in vulnerability to poverty with each additional child.
Using a probit model, with household poverty status as the response variable, one can estimate

household probability of being poor according to their various characteristics. The regression is similar to the consumption regression in Example 3.4, but the response variable is poverty status as opposed to the welfare aggregate. Further, based on this regression, one can estimate the likelihood of poverty with a household change in one dimension, while keeping the other dimensions unchanged.

Analytical lessons: Table 6 shows that when a household in Country X adds a child aged 0–6 to their household, the probability of poverty is increased substantially. The probability of poverty increases by 35 per cent for urban households, while for rural households the poverty probability increases by 21 per cent. Similarly, adding two children under 6 to a household with no children is associated with 70 and 36 per cent higher probability of being poor in urban and rural areas, respectively (Table 6). A household head completing any education above primary level is 59-60 per cent less likely to be poor, and the impact of education on probability of poverty is very similar in rural and urban areas, although there is a difference between the urban and rural probability of being poor when a household head has a university degree.

Table 6 Changes in the probability of being poor (per cent) (Country X)

Demographic event, child born in the family:	Urban	Rural
Change from having no children 0-6 years old to having 1 child	34.8	21.3
Change from having no children 0-6 years old to having 2 children	70.4	36.2

Education of the household head	Urban	Rural
Without school or incomplete primary	(base)	(base)
Primary school	-20.3	-25.2
Vocational schools from 1-3 years	-60.0	-59.3
Vocational schools 4 years	-69.8	-67.1
High school	-80.5	-79.4
College	-89.3	-88.1
University	-95.8	-89.5

Source: Country X 2007, using ADePT.

Box 7. Impact of the COVID-19 pandemic on poverty

The COVID-19 pandemic has induced a global health and socio-economic crisis of unprecedented scale. To contain the outbreak, many countries have implemented lockdown measures and restrictions to movements with significant economic and social costs.

Early projections from the International Monetary Fund (IMF) in April 2020 indicated a downturn of 3 per cent in global GDP, which has since been updated regularly by the World Bank and IMF. Several organizations have analyzed the poverty implications of these growth scenarios:

- Using a computational general equilibrium model, researchers from the International Food Policy Research Institute (IFPRI) estimated up to **140 million people** falling into extreme poverty in 2020, an increase of 20 per cent from previous levels.
- Another estimate from the United Nations University (UNU-WIDER) projected a **420–580 million** increase in the number of extreme poor in the worst-case scenario where per capita income contracts by 20 per cent.
- World Bank researchers also estimated the potential change in global poverty, considering a variety of growth and inequality scenarios: under the downside scenario, COVID-19 could push **100 million people** into extreme poverty.
- In terms of child poverty, UNICEF and Save the Children estimates up to **142 million children** falling into poverty (as defined nationally) in a pessimistic scenario.

Though the magnitude is different, all these projections indicate a dangerous increase in global poverty levels, potentially reversing the progress achieved in the past decades.

With timely and adequate interventions, governments can avoid the worst scenarios from materializing. Experience from the 2008 financial crisis shows that countries who respond with strong social protection measures along with fiscal stimulus packages are able to cushion the impact on families and children. Positively, as of June 2021, over 190 countries have planned and introduced social protection measures in response to the pandemic mostly in the form of cash assistance, reaching about 1.2 billion people. Fifty-eight per cent of these cash-based measures are new, one-off transfers, while the rest are due to the expansion and/or adaption of existing programmes. On average, the duration of the transfers is three months, while the benefit amount is double that of usual. Yet, regional and country level analysis show that these measures may not be adequate.

Various poverty projections at global, regional and country levels indicate the widespread and protracted nature of the shock, requiring a comprehensive package of responses including universalistic social protection measures implemented for a longer period of time. More importantly, countries need to avoid austerity and maintain social spending to ensure continuity and adequacy of essential social services for children. The pandemic has highlighted that without strong systems in place, years of progress can be reversed in a short space of time when major shocks occur. With climate emergency, forced displacement and other crises looming, the time to invest in shock-responsive, universalistic, child-sensitive social protection systems is now, in order to achieve an effective and sustained reduction in child poverty.

3.4. Child poverty over time

Poverty can be dynamic as well as structural: while some households remain in chronic poverty across generations, others move in and out of poverty. Countries with several years of comparable data on poverty trend analysis can highlight any of the areas already outlined but importantly can show how these have or have not changed over time. This insight provides valuable policy lessons on policy changes and growth experience. Several rounds of comparable consumption data can also be decomposed into changes in poverty and inequality over time, and into growth incidence (as shown in Example 3.6 below).

Figure 13 Growth incidence curve of Georgia between 2003 and 2006
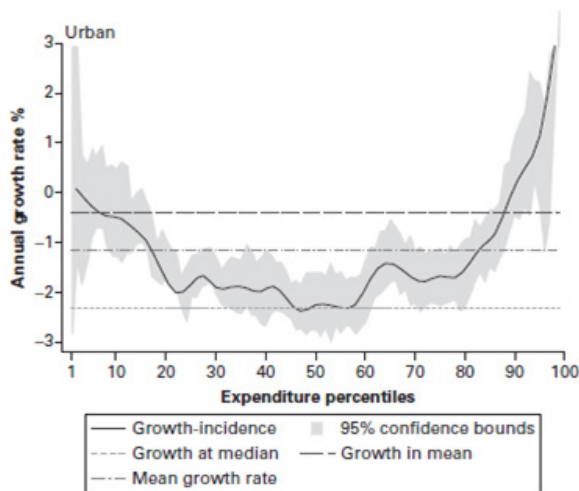
Source: Foster et al. (2013)

Example 3.6: Growth incidence curve.

With two rounds of data, growth experiences can be split into growth in different parts of the consumption or income distribution, as illustrated in Figure 15. Such analysis shows the reduction or increase in welfare in all parts of the distribution, and not just the movement in welfare around the poverty line, as reflected in the change in poverty headcount over time. Growth in welfare, and thereby reduction in poverty, concentrated in certain parts of the distribution, for instance close to the poverty line, could indicate that current policies are successful at reaching the marginal poor, but not reaching the extreme poor.

Analytical lessons: The example shown in Figure 15 highlights that between 2003 and 2006, almost all urban households in Georgia experienced negative growth, i.e. consumption expenditures fell. The largest reduction in consumption expenditures was for the middle class (those between the twentieth and eightieth percentile). For the poorest, the reduction in consumption was modest, and not significantly different from zero. Similarly, the richest had positive growth in consumption expenditure. Hence, this indicates that Georgia was successful in shielding the very poorest from a loss in consumption (though also with a large variation as illustrated by the large 95 confidence interval), while the middle class suffered most during the crisis.

Box 8. Poverty Dynamics in Egypt

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Poverty in Egypt has been on the rise since 2000. The latest official poverty headcount (HIECS 2017/18) for families below the lower poverty line stands at 32.5 per cent, almost 5 percentage points more than 2015 (HIECS 2015/16). The picture provided by the official and other poverty lines is, however, static and does not capture the complex movements (or transitions) in and out of different types of poverty. For instance, the increase of 5 percentage points since 2015 does not capture how people have moved among extreme, lower and upper poverty statuses/lines. Understanding poverty dynamics matters to comprehend the quality and sustainability of any progressive (out of poverty) movement, as well as to understand how persistent and severe any regressive (into poverty) movement might be. When complemented by an analysis of why these movements in or out of different poverty statuses happen over time, this type of research also helps to identify which policies can protect families from falling into deeper poverty and promoting their graduation out of poverty.

In collaboration with the Ministry of Planning and based on the need for a deeper understanding of how poverty evolved in Egypt, in 2018 UNICEF proposed a study to capture poverty transitions across time. As panel data was not available, the study was carried out using cross-sectional data from the National Household Survey by applying the Synthetic Panel Data technique as a way to capture poverty transitions.

In collaboration with a team from the University of Cairo, technical staff from the National Planning Institute and the Central Agency for Public Mobilization and Statistics (CAPMAS), UNICEF led the development of the poverty dynamics study in three steps, namely: (i) Building synthetic panels; (ii) Applying the nationally defined classes of consumption and define poverty transitions; and (iii) Measuring marginal contributions to the odds of falling into a lower poverty status and exiting from a poverty status.

Advice from national technical experts as well as the direct involvement of the Deputy Minister, who was himself an economist and acquainted with the technique, were crucial to encourage ownership of the study's results. Following the initial study that looked at transitions between 2012 and 2015, the Ministry of Planning asked UNICEF to produce an updated analysis with the newly available datasets from 2017. As of May 2020, the second study is being finalized. Table 7 below includes a preliminary poverty transition matrix for the upcoming study.

Table 7: Average of the lower and upper bounds of the transition matrix between 2015 and 2017

Upper Bound Using Averaging Predicted Expenditures	Extreme Poor 2017	Lower Poor 2017 (National Poverty Line)	Upper Poor 2017	Non-Poor 2017
Extreme Poor 2015	81.3%	16.6%	1.5%	0.7%
Lower Poor 2015	12.7%	72.7%	11.4%	3.2%
Upper Poor20 15	3.2%	29.7%	52.0%	15.0%
Non-Poor 2015	0.4%	5.3%	15.8%	78.6%

Source (CAPMAS, 2019; CAPMAS, 2016) and author's calculation

The transition matrix confirms, overall, that regressive dynamics have taken place between 2015 and 2017. The table with the transitions presents: (i) in its diagonal (cells in black), the percentage of families that did not change their poverty status; (ii) on the right of the matrix (cells in green), the percentage of families from a poverty status that moved in an upwards trajectory and therefore improved their status; (iii) on the left side of the matrix (cells in yellow) the percentage of families that moved in a downwards trajectory and therefore worsened their status.

For instance, if we consider families in the lower poverty group, we notice that 72.7 per cent remained in the same group in 2017, while 12.7 per cent fell into extreme poverty. A total of 11.4 per cent and 3.2 per cent moved up respectively into the upper poverty and non-poor group. It is worth noting that 30 per cent of the vulnerable fell back into poverty, reversing previous poverty reduction gains.

In addition to providing a clear picture of poverty transitions, the study measured the marginal contributions of different determinants of poverty in these transitions. For instance, the study identified that large household size, as well as the percentage of children below 18 years old in the household, remains associated with a higher probability of falling into deeper poverty and is associated with less odds of escaping poverty.

The poverty transition and marginal contribution analysis are essential to form UNICEF's recommendations to the government on how to adjust social policies for years to come. In particular, the comparison of marginal contributions over time will be important to understand whether similar drivers of poverty persist and help understand how different policies may have contributed to protecting people from poverty.

3.5. Monetary and multidimensional child poverty

Monetary and multidimensional poverty are linked but distinct measures. A rich literature on multidimensional poverty measurements is available, covering both the advantages and disadvantages (Santos, no date; Alkire and Foster, 2011; Thorbecke, 2013; UNICEF, 2021). For an overview and practical guidelines on how to analyse multidimensional poverty, please refer to the SDG Guide to End Child Poverty (2017).). Roelen (2017) reviews both the theoretical and empirical literature on the relationship between multidimensional and monetary poverty and concludes that the two constructs are linked but distinct. The monetary poverty approach focuses on the capability to acquire and is more focused on private funds, whereas the multidimensional poverty approach is focused on outcomes, and is more dependent on public goods and services.

There is growing literature comparing the two poverty approaches for children, which can serve as inspiration for further work (De Neubourg et al., 2012; Roelen, 2017; Ballón et al., 2018; Ferrone, Rossi and Brukauf, 2019; Kim, 2019). Two key areas are important when highlighting the overlaps and differences between monetary and multidimensional poverty, namely:

1. Comparison of trends and levels of each measure; and
2. Descriptive analysis of overlaps and lack thereof along different dimensions, describing the poor.

Figure 14 below highlights the importance of carrying out both multidimensional and monetary child poverty analysis, and the distinct advantage of each for influencing policies and programmes to address child poverty, as well as the feedback loop between the two.

Figure 14. Policies and programmes to address child poverty

Approaches that adress multidimensional and monetary child povety

- Addressing social stigma and discrimination
- Child-sensitive social protection and social welfare sercices
- Budget engagemet
- Explicitinclusion of child povrty in nacional policies
- Pro-poor economic growth

Multidimensional Child Poverty

Providing access and ensuring use of quality services for the most deprived children (particualry those facing multiple deprivations).

Dimensions of focus will vary depending on national appoaches to multidimensional child poverty, but may include:

- Health
- Education
- Nutrition
- Water
- Sanitation
- Living conditions
- Information
- Protection

NOTES:

The policy areas will vary bz the particular multidimensional measure [see Table 2.2 In Milestone 2 for example]

Many areas are likely to have strong knowledge, ongoing work and sectoral leads on how to achieve progress.

While all stages of a child's life are vital early childhood and adolescence are emerging as crucial moments in children's development which are not always fully considered or well captured in indicators.

Monetary poverty is a crucial driver of multidimensional child poverty.

Children growing up in multidimensional poverty will more likely to be (or head) households in monetary poverty as adults.

Monetary Child Poverty

Supportingfamilies and households to have a minimum income and ensuring financial barriers don't prevent children from reaching their potential.

Supporting livelihoods and employment: employment and livelihood support; adolescent transitions; laws and regulations to promote decent work (such as minimum wage and parental leave); wuality affordable childcare; preventing child labour as a response.

Direct financial support to families with children: such as child grants or family benefits; non-child directed benefits can also support children in poverty.

Reducing the cost of basic goods and services: including user-free abolition for crucial services,and addressing the prices of crucial goods such as food, housing and energy.

Source: UNICEF (2017): SDG Guide to End Child Poverty

Comparison of poverty levels for multidimensional and monetary poverty can be illustrative, but also requires caution. The starting point for comparison is often the share of poor children according to each measure. Such comparisons will show more or less children being poor according to either measure, which can be illustrative when offering policy recommendations. However, here one should keep in mind that both measures include some arbitrariness that could easily shift conclusions in different directions. The number of deprivations included in multidimensional poverty measures, for example, may be determined by the availability of indicators in data sources. Such decisions, as well as the number of deprivations chosen as the threshold for poverty status, will define the share of children being multidimensionally poor. Similarly,

the choice of poverty line (see Sections 1 and 2) will also define the share of children identified as being monetarily poor.

It is therefore critical that a comparison of multidimensional and monetary poverty analysis goes beyond a comparison of poverty levels and focuses on the full distribution. An analysis utilizing the entire distribution of both measures is more robust to underlying definitions and data (see, for instance, Example 3.7 below). Further, trends in levels might be more informative than levels themselves, as examples show that they do not necessarily go hand-in-hand and the movements in and out of poverty might also differ (Roelen, 2017; Kim, 2019). As these approaches are distinct, with several aspects of Multiple Overlapping Deprivation Analysis (MODA) depending heavily on public expenditures, while monetary poverty more

reflects private funds, one should also expect different developments over time.

Descriptive analysis can highlight both similarities as well as differences in monetary and multidimensional poverty. Descriptive statistics are very useful to highlight the overlap and complementariness of the two poverty measures. Such data can be presented in numerous ways, but certain aspects to keep in mind are: the overlap between each of the separate dimensions in multidimensional poverty and monetary poverty; multidimensional poverty along the full range of the consumption distribution (see Example 3.7); differences between spatial location (urban/rural, districts); or differences for different age groups, to mention a few. All descriptive tools can be used, but the Venn diagram (see Example 3.8) might be particularly useful.

Figure 15. Child poverty profile and children in monetary poor households (Country X)
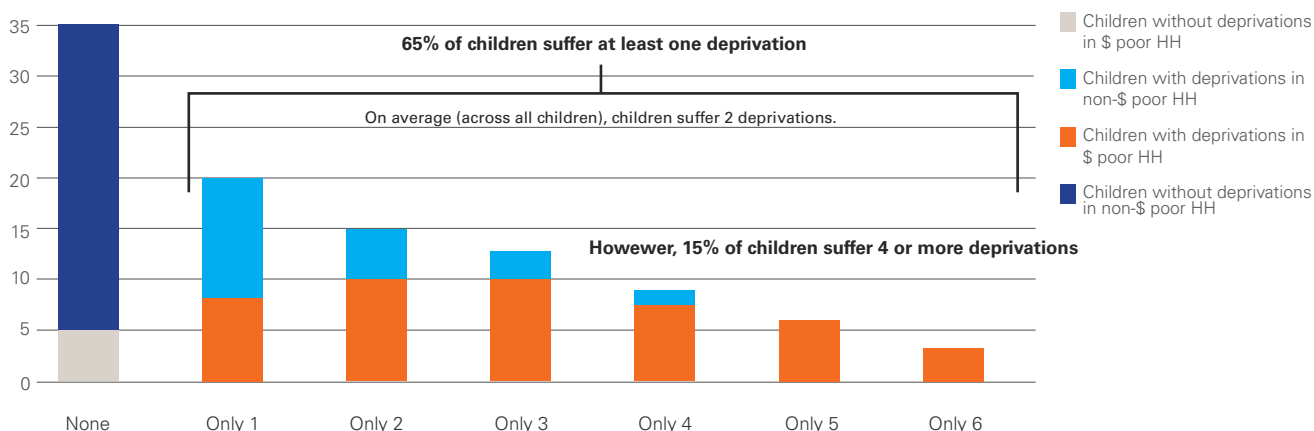
Source: Enrique Delamonica, own calculations

Example 3.7: Multidimensional poverty along the consumption distribution for urban and rural areas.

To illustrate how the number of child deprivations relate to monetary poverty and consumption, Figure 16 shows the smoothed average number of deprivations across the consumption distribution, with the red line indicates the poverty line. On a technical note, one should also show or check the underlying distribution of consumption, as smoothed averages can be very sensitive

to observations in the tails of the distribution. Use of confidence intervals in such illustrations are therefore recommended. For instance, the interpretation of Figure 16 could be very different if only a few observations have consumption values below 25, as much of the correlation between the two components are observed here and the interpretation would therefore rest on a limited number of observations and not be robust or relevant to the whole population.

Figure 16. Number of deprivations and consumption in urban and rural areas (Mozambique)
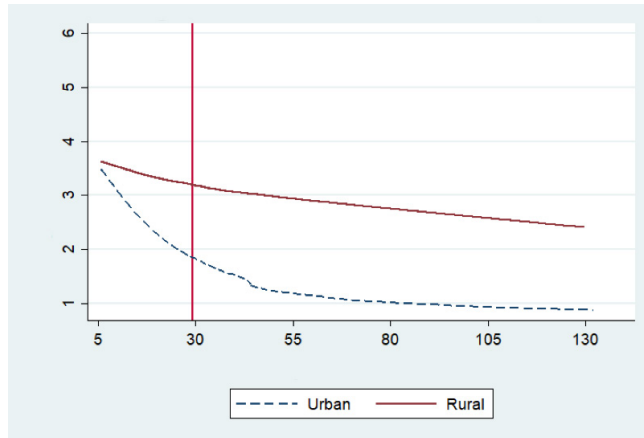
Source: Ferrone, Rossi and Brukauf (2019)

Analytical lessons. Figure 16 shows a strong correlation between consumption and the number of child deprivations in urban areas in Mozambique. In rural areas, on the other hand, there is much less correlation, showing that most children, irrespective of their parents' wealth, suffer from deprivations in rural areas. Such a pattern could indicate that access to services is a key issue, as even those with wealth are unable to cover their children's multidimensional poverty needs. An analysis of access and barriers to services, as outlined below, could shed more light on such potential problems. Similarly, Figure 17 shows that deprivations in water, sanitation, housing and to some degree protection are a largely linear function of consumption in both urban and rural areas. Hence, for each per cent of lower consumption a household has, there is a fixed per cent higher likelihood that a child is deprived in those dimensions. Health and nutrition, on the other hand, have limited correlation with consumption, except for the poorest. For nutrition, the correlation shifts dramatically exactly at the poverty line, which can indicate that the poverty line captures the hardship of covering basic food needs.

Figure 17. Single deprivations and consumption (Mozambique)
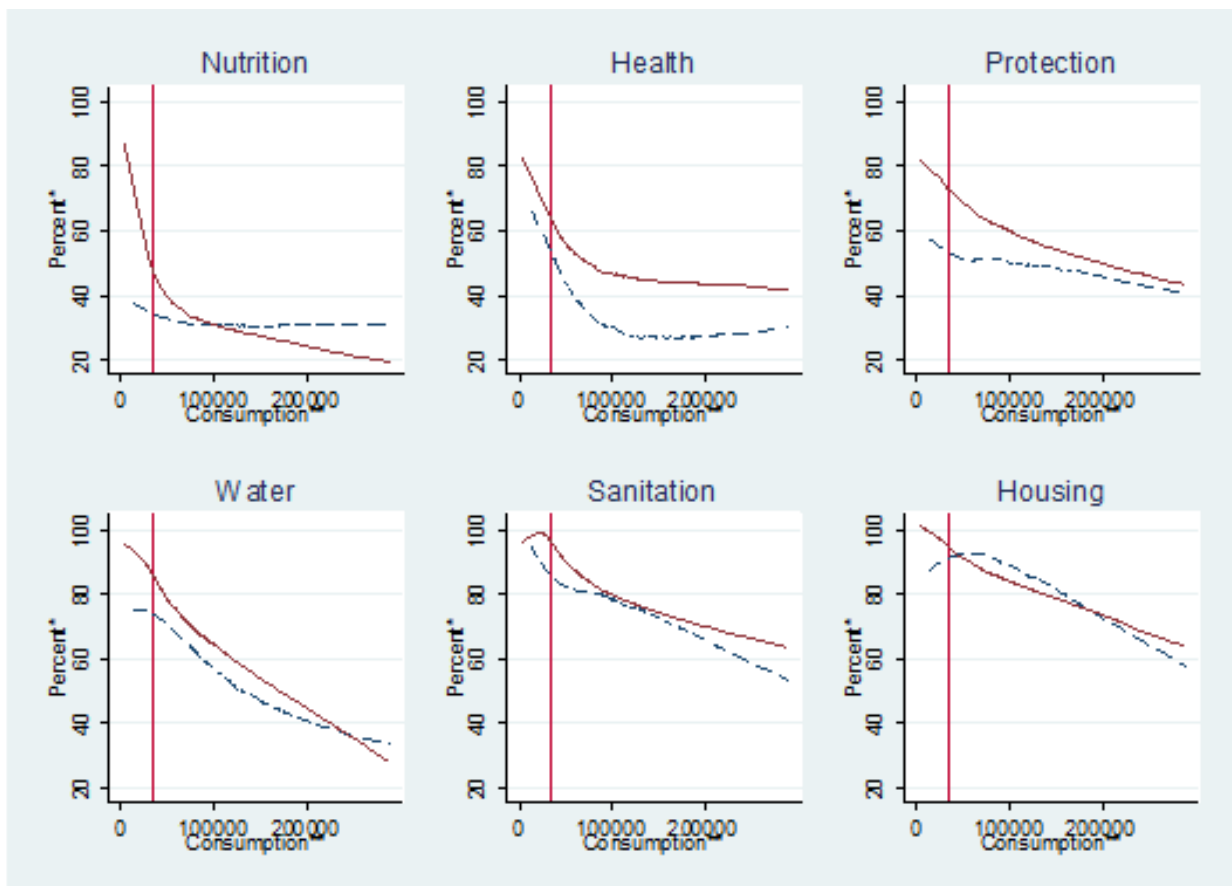
Source: National Bureau of Statistics (NBS) and United Nations Children's Fund (UNICEF), 2018.

Example 3.8: Overlaps in monetary and multidimensional poverty.

A Venn diagram can illustrate different aspects of multidimensional poverty ratels to monetary poverty. Figure 18 shows aggregated numbers for 119 countries where populations were identified as both monetarily and multidimensionally poor. Here, 11.8 per cent of the population was identified as monetarily poor, while 18.5 per cent was multidimensionally poor, based on the two dimensions of education and access to basic services (World Bank, 2018). Meanwhile, Figure 19 shows an example from Tanzania, where a much higher share of the population is considered poor according to the multidimensional definition.

Analytical lessons. Figure 18 shows that more than half of those identified as monetarily poor are also multidimensionally poor in both dimensions (6.6 out of 11.8 percentage points), while an additional 3.3 percentage points of the monetary poor are deprived of basic infrastructure only, leaving only 1.3 percentage points of the monetary poor as non-multidimensionally poor. This also shows that a sizable part of the population is not defined as monetarily poor according to the national poverty line, but is multidimensionally poor, especially in the education dimension (5.2 percentage points), while few are deprived of basic infrastructure and not also monetary poor. However, in Figure 19, a similar analysis from Tanzania shows a different picture, with 69 per cent defined as multidimensionally poor, including all 19 per cent of those in monetary poverty.

Figure 18 Overlaps in monetary and multidimensional poverty in 119 countries

Figure 19. Venn diagram comparing monetary and dimensional poverty in Tanzania
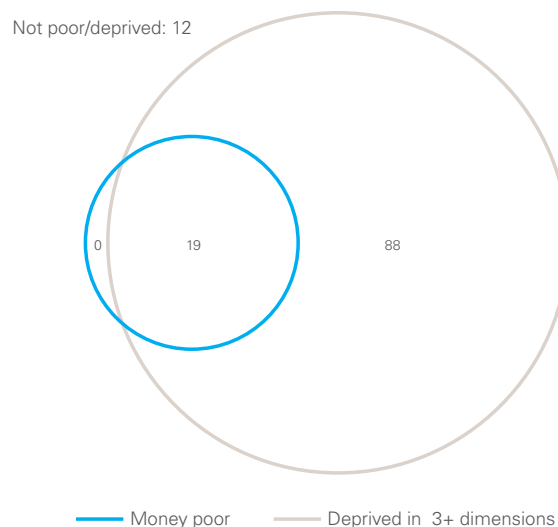
Example 3.9: Poverty triangulation can provide a fuller picture of poverty.

National poverty lines can be relatively arbitrary and/or politically determined (Rossi et al., 2014). It can therefore be a useful exercise to explore these databases and see how the national poverty headcount compares to the international poverty headcount, as well as compare these estimates with multidimensional poverty estimates, both for the general population and children specifically. In addition, there can be greater confidence in the monitoring of poverty if a range of poverty lines show a decline in the headcount ratio, or analyse changes in all part of the welfare distribution (as illustrated in Example 3.6). It is important to 'triangulate' (cross-reference with different sources of information/different measures of poverty) to obtain a complete picture and profile of child well-being using a combination of monetary and non-monetary measures (Evans and Calderon, 2014). The below examples from two countries highlight how monetary and multidimensional poverty estimates can differ quite significantly as they measure different aspects of poverty.

The following poverty lines in Table 8 below may, for example, provide useful information for poverty triangulation. Please note, not all are necessary, this is simply to provide an idea of the various measures which can be explored.

Table 8. Poverty status according to different poverty measures and lines

	Population below national poverty line	Children in households below national poverty line	Population below extreme (PPP $1.90) poverty line	Population below PPP $3.20	Population in multidimensional poverty (Global MPI)	Population in multidimensional poverty according to national MPI	Multidimensional child poverty
Country A	8.6%	-	0%	0.5%	0.8%	-	21.5%
Country B	38.2%	44%	55.5%	79.7%	54.4%	29%	25%

Box 9. Poverty measurement in Georgia

In Georgia, UNICEF engaged both the National Statistics Office of Georgia (GeoStat) and the World Bank in a joint assessment of poverty. The situation was particular challenging as neither organization agreed on the consumption aggregate, nor the poverty line. GeoStat utilized a consumption aggregate in nominal terms, while the World Bank adjusted the aggregate by both time and spatial price differences. Further, the World Bank also excluded some infrequent expenses (for example, weddings). The UNICEF consumption aggregate is closer to GeoStat's measure. Further, GeoStat utilized a relative poverty line, while UNICEF and World Bank preferred an absolute poverty line, with UNICEF utilizing an adult equivalent scale, while World Bank utilized per capita expenditures. Despite so many fundamental differences, a joint report was published, as it was found that the ranking of households was relatively robust for each of these differences. From a poverty trend perspective, there are some notable differences. First, as expected, utilizing a relative poverty line (GeoStat) leads to a much smaller reduction in poverty, as this captures the reduction in poverty as growth among the poor relative to the non-poor. Secondly, as expected, utilizing adult equivalent scales as opposed to per capita (UNICEF and WBG US$2.5) lowers the overall headcount. However, the difference (0.3 percentage points) is very low, indicating the differences in definition of consumption aggregate is influencing the headcounts. More notable is the difference in trend, with UNICEF finding the poverty headcount falling by 20 percentage points (both for children and everyone) compared to the World Bank finding a reduction of 9 percentage points, from a similar level in 2009.

Table 9. Poverty rates by GeoStat, UNICEF and World Bank, 2009-13 (percent)

Definition	2009	2011	2013
GeoStat	21.0	23.0	21.4
UNICEF US$2.50 per day PAE	44.8	37.9	24.6
UNICEF child poverty US$2.50 per day	49.0	40.8	28.4
WBG US$2.50 PPP per day per capita	45.1	44.8	36.0
WBG US$5.00 PPP per day per capita	78.9	80.0	73.3

Source: Estimates retrieved from GeoStat web portal on August 13, 2015, http://geostat.ge7index-php?action=page&p_id=188&lang=eng. *WBG estimates from World bank 2015. UNICEF estimates obtained from WMS 2013.*

Note: UNICEF poverty rate estimates headcount rate PAE. GeoStat = National Statistics Office of Georgia; PAE = per adult equivalent; PPP = purchacing power parity; WBG = World Bank Group; WMS = Welfare Monitoring Survey.

The analysis revealed higher poverty rates among children, and advocacy to disseminate the findings led the government to introduce a remarkable child benefit scheme to its social security system, which aimed to reach approximately 260,000 children from the poorest households.

In 2018, UNICEF Georgia produced new analyses showing that child poverty had once again increased, hitting large households with children particularly hard. It revealed that households with children, and especially those with three or more children, continued to be significantly more likely to live in poverty than households without children. Nearly one third (27.6 per cent) of all children in Georgia live below the absolute poverty threshold compared to just over one fifth (21.7 per cent) of the general population; and every fifth child lives in a household surviving on less than the subsistence minimum. In addition, half of all families living under the general poverty line were chronically poor (below the absolute poverty line). The analysis further showed that if the targeted social assistance and child benefits were removed, extreme poverty among children in Georgia would rise from 6.8 per cent to 12.9 per cent - resulting in around 90,000 more children in poverty in Georgia.

This analysis led to a renewed public debate and intensive government discussions on poverty. The highly publicized debate and the UNICEF-supported findings that child poverty had increased led the government to introduce a fivefold increase in the value of child benefits in 2019 (UNICEF Social Policy Annual Report, 2018).

4. Monetary child poverty analysis informing social protection

Key take-aways:

- Monetary poverty links directly to vulnerability and allows measurement of the impact of social protection programmes on poverty.
- UNICEF´s social protection framework stresses not only addressing poverty, but also economic and social vulnerabilities to poverty.
- Robust monetary child poverty analysis can inform social protection policies and programmes.
- This analysis includes:
    1. Descriptive analysis including coverage and distribution of benefits;
    2. Beyond descriptive analysis: targeting and impact on poverty;
    3. Programme design and overlaps; and
    4. International comparison of social protection expenditures.

Monetary poverty analysis can inform and guide key policies and programmes to address child poverty. The Global Coalition to End Child Poverty outline in their brief *Putting children first: A policy agenda to end child poverty* that, while contexts vary, experience shows that a core agenda for action to address child poverty includes: 1) Improving access to quality public services, particularly for children living in poverty; 2) Expanding child-sensitive social protection systems; and 3) Promoting a decent work and inclusive growth agenda. The following analysis focuses on component 2, i.e. conducting monetary poverty analysis which can guide the expansion of child-sensitive social protection systems/coverage.

UNICEF's social protection framework has child poverty at its centre, as well as economic and social vulnerabilities and vulnerabilities to shocks. As stated in UNICEF (2019), *"the protection of families and children against lack or loss of income as a result of shocks and removing financial barriers to access to services is at the heart of social protection"*. Central to this approach is not only addressing poverty, but also addressing vulnerabilities to poverty. Poverty reflects current assets or capabilities, while vulnerability is a dynamic concept concerned with the factors that determine potential future poverty status.

As illustrated in Figure 20, UNCEF's approach focuses on both economic as well as social vulnerabilities. Social vulnerability includes intertwining vulnerabilities due to personal characteristics such as age, gender, and health status (e.g. disability and chronic illness) as well as vulnerabilities due to social dynamics (e.g. social discrimination and exclusion due to identities such as gender, race, religion, disability, political affiliation, social norms, geographic location and cultural practices). Economic vulnerability is a chronic lack of income or temporary loss of income due to shocks such as illness, unemployment or crop failures. Hence, vulnerability captures the factors that increase the chances of becoming poor or falling deeper into poverty over time, but also considers current capabilities and the external factors faced by children and their families.

Figure 20. Economic and social vulnerabilities to poverty and links to social protection

Economic and social vulneravilities to poverty and the role of social protection
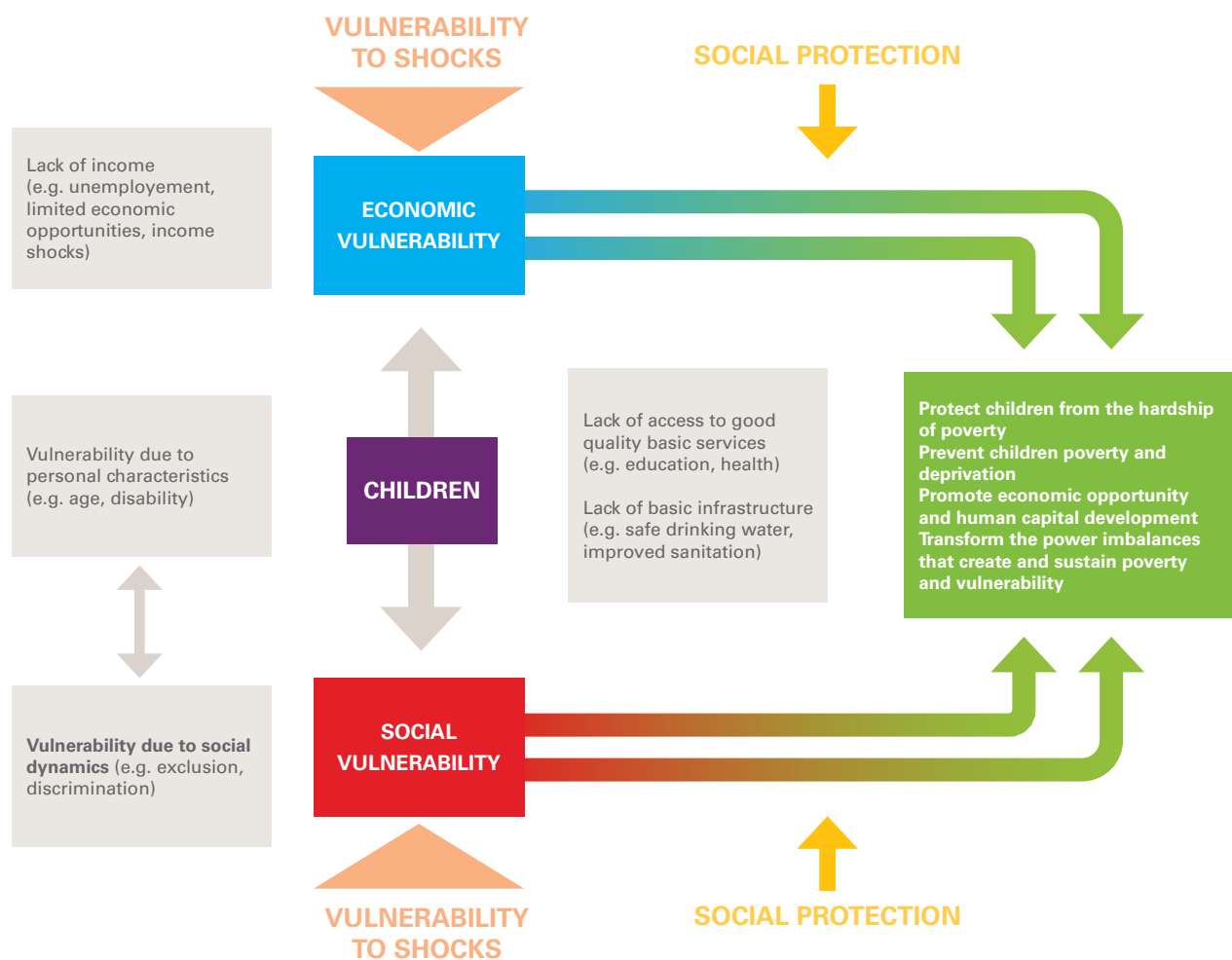
Source: UNICEF (2019) Global Social Protection Programme Framework

Robust monetary child poverty analysis can inform social protection policies and programmes. The following section provides an overview and examples of analysis based on cross-sectional surveys, that highlight challenges and areas for improvement in terms of addressing monetary poverty. A range of critical factors can be highlighted, such as: whether the transfer value is sufficient to lift households with children out of poverty; whether the coverage of children is sufficient in existing social protection programmes; whether social protection programmes reaching poor and vulnerable households with children have led to a reduction in poverty; and which programmes may be most efficient in reducing poverty, among others.

There are numerous and different policies applied in different country contexts to tackle and ultimately end child poverty. The analytical examples below highlight key aspects to explore, for example whether social protection programmes are reaching children in poverty, as well as the efficiency of social protection programmes. There are numerous other key considerations for child poverty-related policy analysis, for example the impact of free or subsidized childcare and schooling, the impact of health care costs, minimum wage policies and so forth. The section is organized as follows: 1) Descriptive analysis including coverage and distribution of benefits; 2) Beyond descriptive analysis: targeting and impact on poverty; 3) Programme design and overlaps; and 4) International comparison of social protection expenditures.

4.1. Descriptive analysis; coverage and distribution of benefits

A first step in understanding the reach and potential shortcomings of existing social protection programmes is usually a descriptive analysis. Frequently used metrics relating to monetary poverty analysis are programme coverage, under-coverage and leakage, as well as the distribution of benefits across the welfare distribution. All aspects can, of course, be broken down by location and children's age, and number of children in the household. Such analysis can be sliced in many ways, and will vary by country based on data, relevant policy questions and results. Below are two examples showing coverage and distribution of benefits.

Example 4.1: Social protection coverage by number of children.
To highlight coverage for children, Figure 21 shows how different programmes cover families with no children, one child, two children, or three or more children in Country Z.

Analytical lessons. The first group of columns in Figure 21 show that, in Country Z, more than 90 per cent of households with three or more children benefit from at least one social protection programme. This is largely driven by social assistance programmes, in particular the child assistance programme. The social insurance programmes, on the other hand, cover more of the households with no children, driven largely by the retirement pension programme.

Figure 21. Social protection programme coverage, by number of children in household
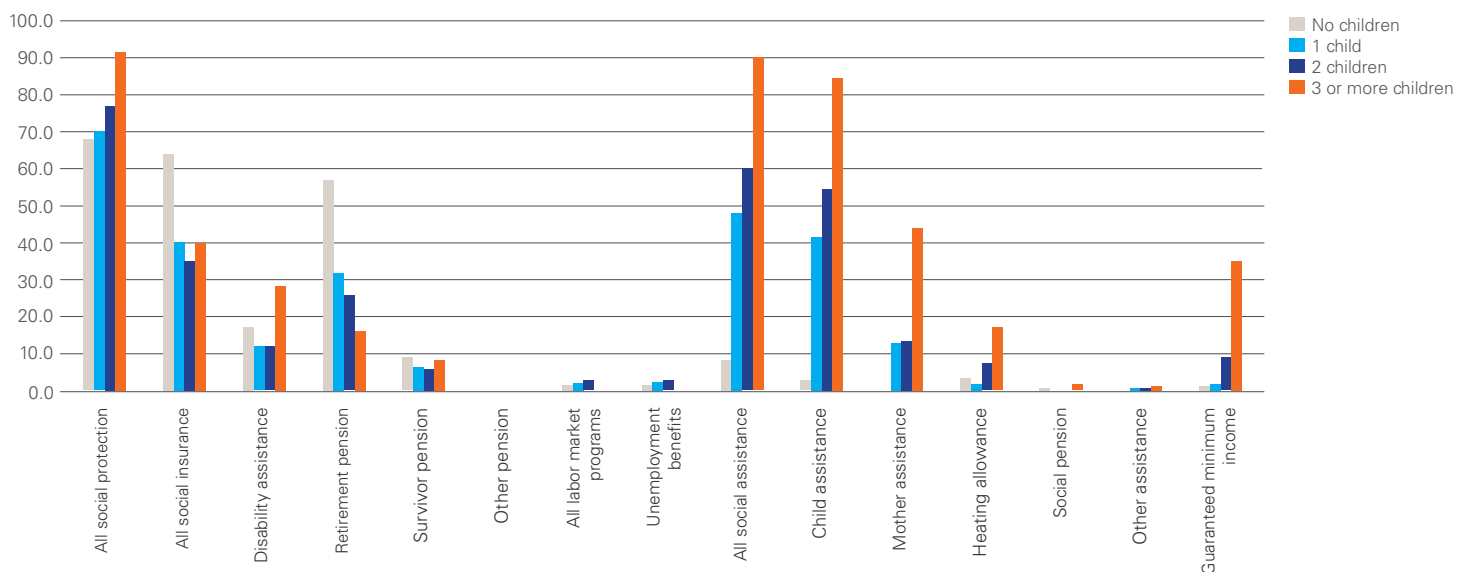
Source: Using ADePT. The figure shows direct and indirect beneficiaries.

Example 4.2: Distribution of benefits by age group.

The distribution of total benefits by age group is a common part of social protection analysis. This analysis is based on household surveys that record how much each household receives from each programme. It shows both the direct and indirect beneficiaries, meaning that, for example, a child living with a grandparent receiving a pension would be considered an indirect beneficiary.

Analytical lessons. The example in Figure 22 highlights that social protection programmes in Country Z do not direct many resources to children, as children under 15 receive less than 12 per cent of all social protection expenditures. For children and the households they live in, mother and child assistance programmes are important, as close to 30 per cent goes to children. Further, the guaranteed minimum income programme and other assistance also provide substantial support for children, while the retirement programme (financially, the largest programme) is less likely to support children.

Figure 22. Distribution of benefits by age
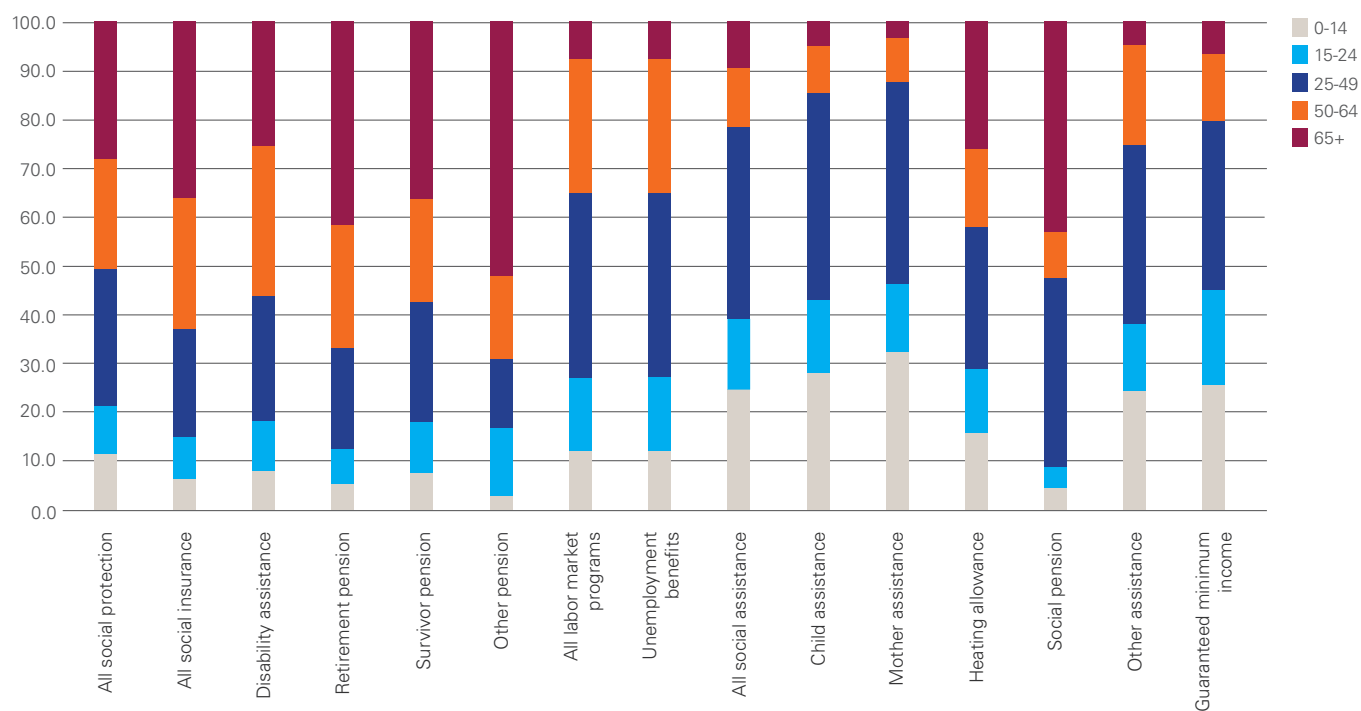
Notes: Using ADePT

Box 10. **What ADePT Social Protection (ADePT SP) can do**

Types of analysis produced with minimal effort by ADePT Social Protecion:
- Coverage, under coverage and leakage by key characteristics
- Distributional analysis programme benefits, by programme and key characteristics
- Profile programme benefits according to programme and household characteristics, e.g. children
- Poverty targeting accuracy, including Benefit Incidence Analysis and the Coady-Grosh-Hoddinott indicator
- Programme impact on poverty reduction
- Programme efficiency in poverty reduction (reduction in poverty relative to programme expenditures)

ADePT SP provides a rich comparative analysis of all social protection programmes, including their benefits for children. For analysis to be undertaken by ADePT SP, a household survey is needed that includes data on household welfare, household demographics, and household or individual participation in social protection programmes. Further, for assessment of the impact on monetary poverty and analysis of distribution of benefits, the transfer value of social protection programmes is also needed. A great advantage of the ADePT SP program is that it easily facilitates a comparative analysis of all social protection programmes, including social assistance, social insurance, and labor market programmes. ADePT SP can be downloaded from http://surveys.worldbank.org/adept, along with a detailed user guide (Yemtsov et al. 2018).

With some simple tricks, ADePT can provide a rich child focused analysis. The program generates a large number of tables (see Appendix 1 for a list of the tables and figures ADePT produces as standard). However, the program is designed to focus on households, as opposed to children. Many household tabulations are also relevant for an analysis of children and the program generates the distribution of benefits by age as a default. Further, a child-focused analysis can easily be obtained using some simple tricks. For example, in the analytical examples, the analysis has been made more child-focused by carrying out the following steps:

1. In the field set aside for regional analysis, a variable with number of children in the household has been identified as "region". Hence, all tables that include a break down by region, now has a breakdown by number of children in the household. Similarly, many other fields can be replaced with child-focused variables to generate the statistics of interest.
2. The entire data set is reduced to households that have children. This way one can easily make a comparative analysis first focusing on children compared to other households, and then an analysis focusing on the differences among households with children.

For a more detailed background and description of the tables, figures and analysis, please see *Measuring the Effectiveness of Social Protection: Concepts and Applications* (Evans et al., 2018).

4.2. Beyond descriptive analysis: Targeting and impact on poverty

One useful aspect of monetary poverty analysis is the ability to simulate the impact of social protection programmes on poverty. Assessment of such impact can be done in numerous ways (Sanfilippo, Martorano and de Neubourg, 2012; Yemtsov et al., 2018b). One option is to assess a programme's current impact by subtracting the monetary value of the social protection programme (either directly or costed) from the welfare aggregate and determine each household's poverty status without the programme. Such a simulation assumes that the household would behave the same way with and without the programme, which is not necessarily an accurate assumption. However, in most practical applications, this is the de-facto assumption, as there is no information on how households would behave without the programme.

Example 4.3: Social assistance targeting of the poor.

Figure 23 shows concentration curves for social assistance programmes. Concentration curves reflect the share of benefits from each programme that accrue to different parts of the welfare distribution. Any concentration curve fully above the line of equality will be progressive and thereby reduce poverty, as more benefits are concentrated among poorer groups than the current distribution of welfare (consumption or income distribution). Programmes in the upper left corner are those most efficiently targeting the poor.

Analytical lessons. The example in Figure 23 shows that the social assistance programme most targeted towards the poor is the heating allowance programme, followed by the guaranteed minimum income, while the child assistance and mother assistance programmes are progressive and contribute to poverty reduction. The redistributive effect from the two latter programmes is smaller. A second important step, and for all the analytical lessons outlined in this note, is to explore in detail the structure and objective of each programme, for example which are universal, which are poverty targeted It is important to note that analysis shows there can be a number of challenges to the conclusions of poverty targeting analysis. Evidence shows significant exclusion errors in poverty targeting in practice. Upwards of 50% of those intended to be in some programmes exluded from targeting, which can be exacerbated over time through the need for frequent re-targeting to account for movements in and out of poverty. Further, universal and quasi universal programmes have other important benefits including strengthened political support for more sustainable programmes, improved social cohesion and addressing issues of stigma and discrimination than targeting can bring which can be so devastating for children. These benefits are underlined by the popularity of universal child benefits in higher income contexts, and underlines UNICEF supports to progressively expand child benefits towards universal coverage (Universal Child Benefits: policy issues and options. UNICEF and ODI. 2020).

Figure 23. Social assistance programmes targeting the poor, illustrated by concentration curves (Bulgaria)
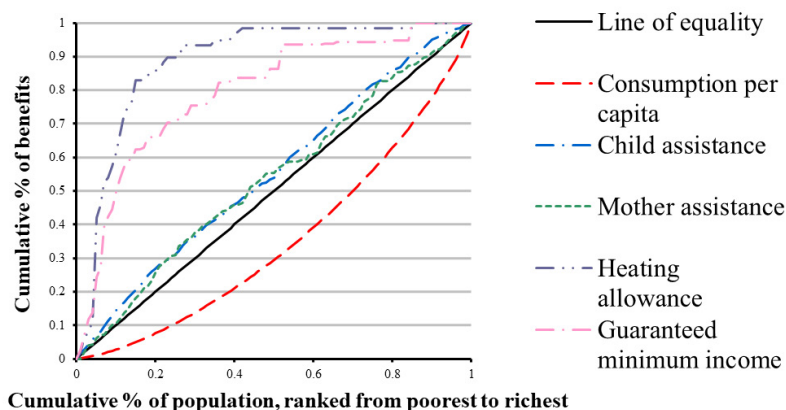
Source: Data is from Bulgaria and based on ADePT. Data shows concentration curves for families with children.

Example 4.4: Absolute poverty reduction by social protection programme.

ADePT automatically calculates the poverty headcount, the poverty gap and squared gap, with and without each of the social protection programmes.

Analytical lessons. The example in Figure 24 shows that the programme that reduces child poverty the most in Bulgaria is the retirement pension programme, which reflects both programme coverage and size of transfers. UNICEF's social protection strategy also stresses that social protection for children must fully consider the environments in which they live, which means that child-sensitive social protection does not always equate only to child-targeted social protection. The child assistance and mother assistance programmes also contribute substantially to reduction in poverty. Maybe surprisingly, the heating allowance and guaranteed minimum income – have a more limited impact on child poverty. This is partly due to the size of the programme (see Figure 24, which takes both targeting and size of programmes into account).

Figure 24. Reduction in poverty headcount by programme for households with children
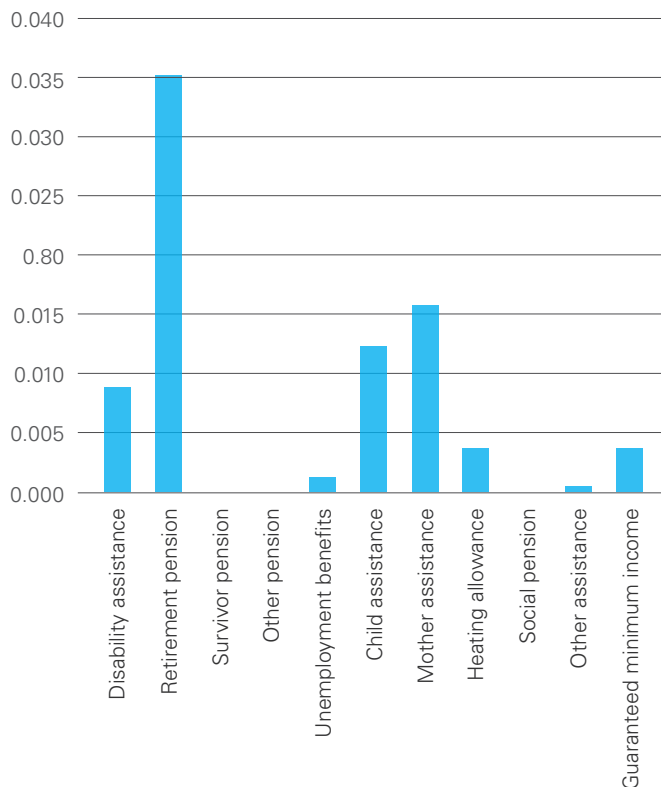
Source: Bulgaria using ADePT

Figure 25. Reduction in poverty gap: Cost-benefit ratios for households with children (Bulgaria)
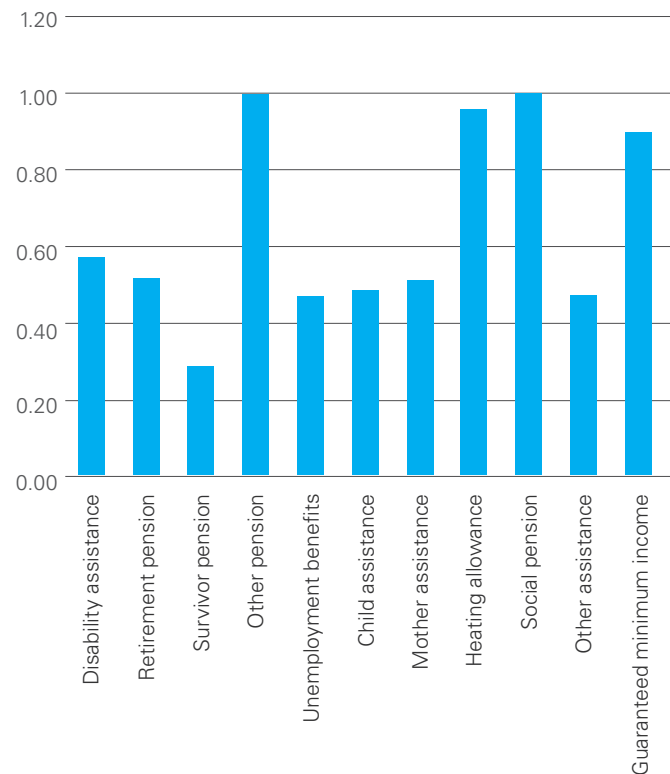
Source: Bulgaria using ADePT

Example 4.5: Poverty reduction efficiency by social protection programme. *Efficiency might be a more important parameter when expansion of programmes is under consideration. To analyse how efficient programmes are at reducing poverty, one can look at the cost-benefit ratio in terms of the programme poverty gap reduction per amount transferred to households (note that the simulation does not take administration cost into account, only the amounts received by the households). By comparing the cost of the programme (proxied by transfers) to the reduction in the poverty gap, the cost-benefit ratio is an indicator of how efficiently a programme reduces poverty.*

Analytical lessons. In the example shown in Figure 25, the retirement pension programme is the most efficient programme at reducing poverty among households with children, followed by the heating allowance and guaranteed minimum income. It might come as a surprise that programmes not focused on children are more efficient at reducing child poverty than, for instance, the child assistance programme. However, it is important to note that this programme is not poverty targeted; in fact, 70 per cent of recipients of child

assistance programmes are non-poor (World Bank, 2009). As noted earlier, such analysis does not take into account the practical realities of exclusion errors in targeted programmes or other benefits or universal or quasi universal programmes (UNICEF and ODI 2020).

Example 4.6: Programme overlap.

A key component of UNICEF´s Global Social Protection Programme Framework (2019) is the development and strengthening of integrated social protection systems. In order to understand how different programmes interact, an analysis of programme overlap can be very useful. Figure 26 shows the number of programmes received based on the number of children in the household, while Figure 27 focuses exclusively on overlaps with the mother and child assistance programmes. The analysis is done in ADePT SP, which generates a full correlation matrix of all programmes, showing overlaps in more detail.

Analytical lessons. This example shows that 30 per cent of households with no children receive no transfers and 5 per cent or so of households receive transfers from multiple programmes. As observed above, only 10 per cent of households with three or more children do not receive any type of social protection coverage. Almost 40 per cent of households with three or more children receive more than one programme (Figure 26). Focusing only on households with children and the programmes aimed at children (mother and child assistance) shows that the two programmes have a large overlap, which may reflect that the different types of programmes are addressing different needs and vulnerabilities and therefore it is not unexpected for some households to receive benefits from multiple programmes. More than 70 per cent of those receiving mother assistance also receive child assistance. Reflecting the larger coverage of the child assistance programme, only 20 per cent of those receiving child assistance also receive benefits from the mother assistance programme (Figure 27). In terms of other social protection programmes, the two child-focused programmes are very similar in terms of overlap, mostly overlapping with the disability assistance, retirement pension and guaranteed minimum income programmes.

Figure 26. Share of households with overlap of programmes (Bulgaria)
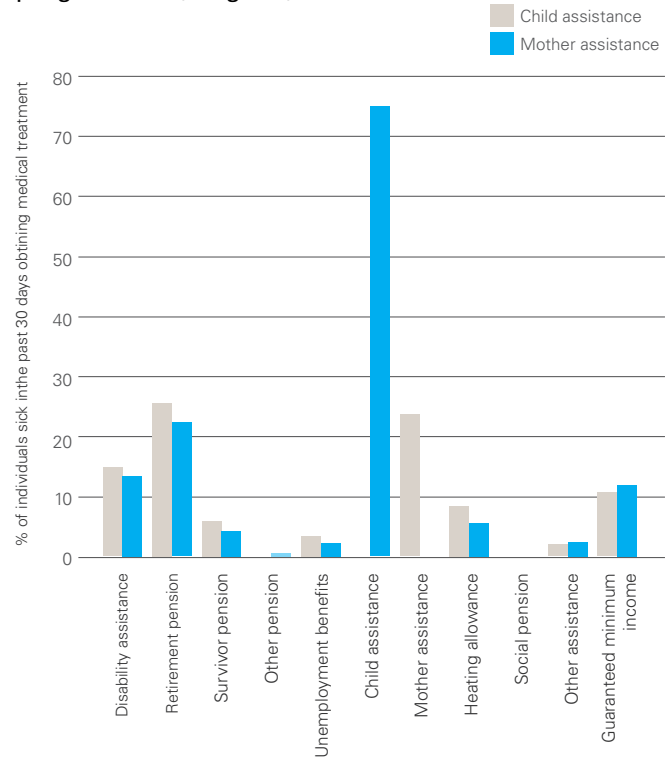
Source: Bulgaria using ADePT

Figure 27. Share of households receiving another programme in addition to child or mother assistance (Bulgaria)
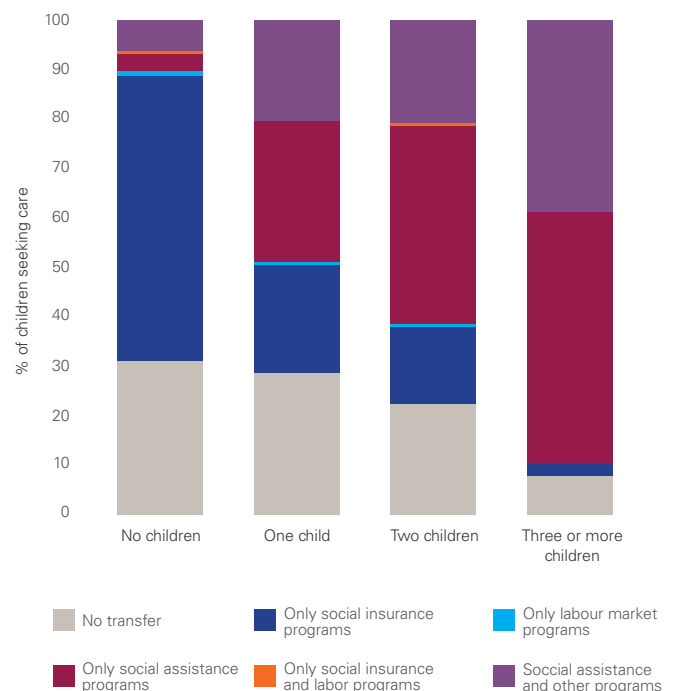
Source: Bulgaria using ADePT

Example 4.7: Benchmarking social assistance's impact on poverty.

Various international databases provide the opportunity to benchmark a number of key social orotection parameters, including the impact on poverty. In particular, the [ASPIRE database](#) (see Appendix 6 for more detail) is focused on the impact on poverty, while others allow benchmarking of expenditures. Figure 28 utilizes the combined impact of social assistance expenditures on the poverty head count, and the benefit-cost ratio of same social assistance expenditures. The latter show how much the poverty gap was reduced per dollar spent.

Analytical lessons. Zooming in on South Africa (abbreviated as ZAF), for example, the graph in Figure 28 shows that among all the countries analysed, South Africa achieves the biggest reduction in the poverty headcount (46 per cent) through social assistance programmes. However, comparing its poverty reduction efficiency (how much poverty is reduced per US$ spent), South Africa is performing around the average.

Figure 28. Benchmarking social assistance's impact on poverty
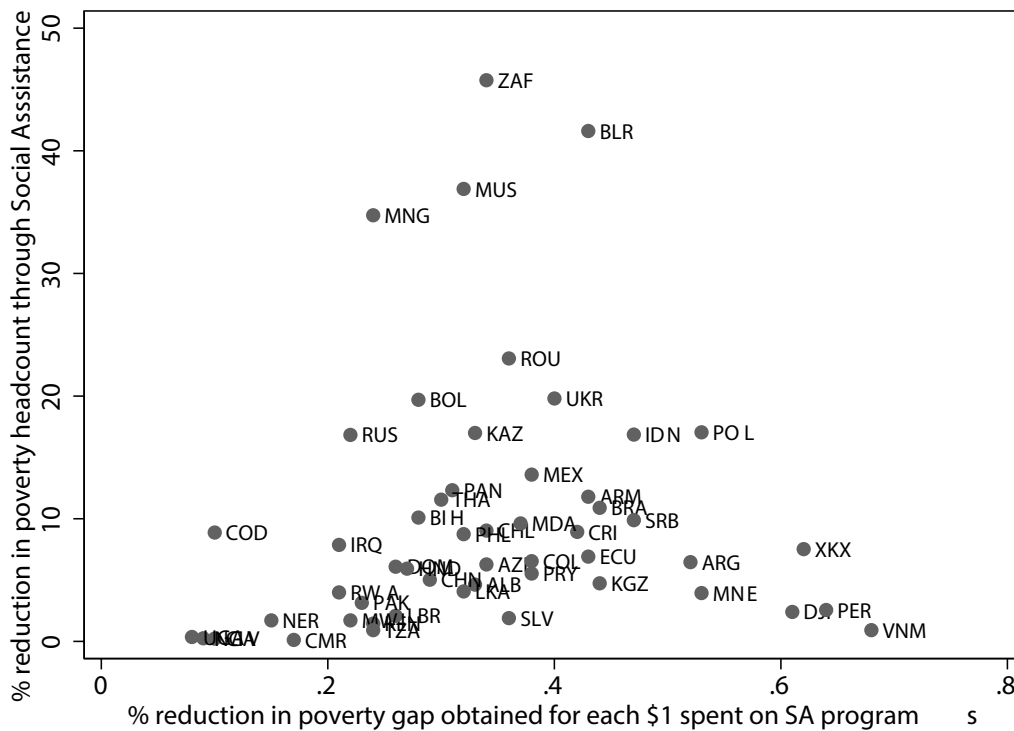
Source: ASPIRE database. Data covers 2012-2016. Countries are represented by their country codes.

Concluding remarks

The SDGs acknowledge that routine national measurement of child poverty, both multidimensional and monetary, is vital. Without knowing how many and which children are living in multidimensional and monetary poverty, countries cannot know how well they are progressing towards the goal of reducing poverty, or the impacts of particular policies and programmes on child poverty.

This guidance note is a contribution to the efforts of countries to measure and monitor the SDG poverty goals and targets, including to reduce at least by half, by 2030, the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions, focusing in particular on analysis to inform SDG indicator 1.2.1: Proportion of the population living below the national poverty line, by sex and age.

The central objective for this guidance note is to expand the analytical toolbox countries have at their disposal, to undertake and/or support impactful monetary child poverty analysis, linking it to policy recommendations and programmes.

Worldwide experience in 2020 and 2021 has brought into focus the importance of robust child poverty analysis, as the COVID-19 pandemic and associated recession highlighted the importance of evidence-based policies and programmes and the importance of advocating for children and their families in poverty, or at risk of falling into poverty.

We hope this guidance note has highlighted the ways in which comprehensive monetary child poverty analysis can lead to real tangible results for children living in poverty.

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Appendices:
Further details and resources on monetary poverty

Appendix 1: Using ADePT for analysis

Analysis of micro data from surveys, the foundation of most poverty analysis, can be done in a number of different software programs. Stata, R and Python are common programs. Some of these have packages especially suited for poverty analysis, but all require reasonably skilled users to operate in order to generate the analysis, tables and figures needed for a profile of poverty. Even with such skills, such work can be time consuming. In the name of efficiency, the World Bank developed a program to facilitate faster poverty analysis, with less requirements in terms of users programming skills. The program is called ADePT and it provides users with numerous advantages as it is applicable to most types of poverty profiling.

This program is designed to produce most of the tables and figures found in reports analysing inequality, labour, gender, health, education, food security, agriculture, poverty and social protection, based on micro-level data from various types of surveys, such as Household Budget Surveys, Demographic and Health Surveys and Labour Force surveys. The program dramatically reduces the time and technical skills required to produce key tables and figures used in analytical reports. The program requires limited

data preparation outside the program and is an extremely powerful tool that can contribute many key components found in most country diagnostic work. Hence, for many, the program is a tool perfectly fitted for UNICEF's needs in terms of analysing monetary poverty in terms of social protection. As a specialized program fitted to a specific need, users are limited to some extent in freedom to define the analysis, compared to general statistical programs. Further support and introduction are available in the elaborate guidance notes on analysing social protection (Yemtsov et al. 2018) and poverty (Foster et al., 2013), in general, and especially with the program. The program can be downloaded from http://surveys.worldbank.org/adept, along with documentation and video instructions on how to use it.

Using ADePT for monetary poverty analysis is recommended for most. ADePT generates about 40 figures and tables (see Tables 10 and 11 for a full list) that are needed for a monetary poverty analysis. These figures and tables are generated with a minimum of data preparation outside the program and require minimum technical skills from the user. In order to use ADePT,

the welfare aggregate (either consumption or income) and the poverty line need to be defined in the raw data. ADePT will take either a stata or SPSS file as raw data. Other than that, the raw data needs to include variables of interest such as urban/rural, age of household members, and education level. Further, by utilizing a few simple tweaks, such as including number of children in the household, or uploading a dataset for children only, the program can easily produce a child-focused analysis. The guidance note *A Unified Approach to Measuring Poverty and Inequality--Theory and Practice: Streamlined Analysis with ADePT* (Foster et al., 2013) covers monetary poverty measurement and analysis in length, and the application of ADePT The guide also includes a section on multi-dimensional poverty measurement and the analysis of inequality.

Box 11. What ADePT Poverty can do

ADePT Poverty automatically generates:

- Descriptive poverty statistics by spatial locations, status of employment, education, head characteristics, and age groups.
- Mean expenditures or income for different groups.
- Decomposition of inequality.
- Growth and redistribution decomposition of poverty changes.
- Consumption regressions.
- Probability of being poor.
- Sensitivity of measured poverty to poverty lines and equivalent scales.
- Growth and poverty incidence curves.

Table 10. List of outputs from ADePT Poverty

				CPU time
Notifications	Errors, Warnings and Notifications generated by data checking process			
Original Data Report	Original Data Report			1.89
Table 2.1	Table 2.1: Overall Poverty	TABLE_SE	TABLE_FREQ	8.38
Table 2.2	Table 2.2: Poverty by Geographic Regions	TABLE_SE	TABLE_FREQ	16.28
Table 3.1	Table 3.1: Mean Expenditure for Different Groups	TABLE_SE	TABLE_FREQ	3.03
Table 3.6	Table 3.6: Regional Poverty Decomposition			0.86
Table 3.6a	Table 3.6a: Urban-rural Poverty Decomposition			0.70
Table 4.1	Table 4.1: Poverty by The Status of Employment	TABLE_SE	TABLE_FREQ	8.67
Table 4.2	Table 4.2: Poverty by Household Head's Status of Employment	TABLE_SE	TABLE_FREQ	9.62
Table 4.3	Table 4.3: Poverty by Education Level	TABLE_SE	TABLE_FREQ	10.26
Table 4.4	Table 4.4: Poverty by Household Head's Education Level	TABLE_SE	TABLE_FREQ	10.52
Table 4.5	Table 4.5: Poverty by Household Head's Gender	TABLE_SE	TABLE_FREQ	8.18
Table 4.15	Table 4.15: Poverty by Age Groups	TABLE_SE	TABLE_FREQ	11.92
Table 4.16	Table 4.16: Poverty by Household Head's Age	TABLE_SE	TABLE_FREQ	9.67
Table 4.7	Table 4.7: Poverty by Demographic Composition	TABLE_SE	TABLE_FREQ	15.09
Table 6.1	Table 6.1: Mean per-capita incomes in real terms	TABLE_SE	TABLE_FREQ	2.78
Table 6.3	Table 6.3: Income-based poverty estimates	TABLE_SE	TABLE_FREQ	15.37
Table 7	Table 7: Other measures of poverty			6.97
Table 3.2	Table 3.2: Decomposition of inequality by regions			1.97
Table 3.2a	Table 3.2a: Decomposition of inequality by urban and rural areas			1.47
Table 3.3	Table 3.3: Inequality in per-capita expenditure distribution by urban and rural areas	TABLE_SE		4.65
Table 3.4	Table 3.4: Ratios of Selected Expenditure Percentiles in Urban and Rural Areas	TABLE_SE		1.62
Table 3.5	Table 3.5: Growth and redistribution decomposition of poverty changes			1.00
Table 4.12	Table 4.12: Consumption Regressions			1.97
Table 4.13	Table 4.13: Changes in the probability of being in poverty (percent)			4.90
Table 4.14	Table 4.14: Probability of being poor			5.32
Table 5.1	Table 5.1: Sensitivity of Headcount Poverty Rate with Respect to the Choice of Poverty Line			2.81
Table 5.2	Table 5.2: Elasticity of Poverty with Respect to the Consumption			5.10
Table 5.3	Table 5.3: Elasticity of Poverty with Respect to the Inequality			9.98
Figure 2.1	Figure 2.1: Growth-incidence curve			15.46
Figure 5.1	Figure 5.1: Poverty Incidence Curve			3.43
Figure 5.2	Figure 5.2: Poverty Deficit Curve			3.37
Figure 5.3	Figure 5.3: Poverty Severity Curve			3.43
Figure 5.4	Figure 5.4: Probability Density Function			6.71
Figure 5.5	Figure 5.5: Lorenz Curve			4.21
Figure 5.6	Figure 5.6: Age-Gender Pyramid and Poverty			4.06
Total time (seconds)				221.63

Table 11. List of outputs from ADePT Social Protection

ADePT sp: Table of Contents
Original Data Report

Table 1	Table 1: Sample and Population Sizes
Table 2	Table 2: Population Demographics
Table 3	Table 3: Average Transfer Value, Per Capita
Table 4	Table 4: Average Transfer Value, Per Capita, Beneficiary Households of Indicated Transfer Only
Table 5	Table 5: Coverage
Table 6	Table 6: Distribution of Beneficiaries
Table 7	Table 7: Distribution of Benefits (Targeting Accuracy)
Table 8	Table 8: Relative Incidence
Table 9	Table 9: Generosity
Table 10	Table 10: Undercoverage and Leakage
Table 11	Table 11: Impact of programs on Poverty and Inequality measures - simulating the absence of the program
Table 12	Table 12: Coady-Grosh-Hoddinott indicator
Table 13	Table 13: Coady-Grosh-Hoddinott indicator, benefits' incidence
Table 14	Table 14: Distributional characteristic index and its decomposition
Table 15	Table 15: Units social welfare impact
Table 16	Table 16: Transfer Duplication in each population group (%)
Table 17	Table 17: Social Program Overlap (%)
Table 18	Table 18: Social Program Overlap [2] (%)
Table 19	Table 19: Cost-Benefit Ratios
Table 4.1	Table 4.1: Average Transfer Value, Per Capita, Beneficiary Households of Indicated Transfer Only
Table 5.1	Table 5.1: Coverage
Table 6.1	Table 6.1: Distribution of Beneficiaries
Table 10.1	Table 10.1: Undercoverage and Leakage
Table 12.1	Table 12.1: Coady-Grosh-Hoddinott indicator
Graph 1	Graph 1: Concentration curves
Graph 1	Graph 1: Concentration curves, social assistance
Graph 1	Graph 1: Concentration curves, labor market programs
Graph 1	Graph 1: Concentration curves, social insurance
Graph 2	Graph 2: Venn diagrams
Graph 3	Graph 3: Cost-Benefit Ratios, upper poverty line
Graph 3	Graph 3: Cost-Benefit Ratios, lower poverty line

Appendix 2: Construction of welfare aggregates based on income or consumption

Generating a consumption aggregate

A rich set of guidelines exists to guide the construction of consumption aggregates. The important elements and considerations for generating a consumption aggregate are laid out in *Guidelines for Constructing Consumption Aggregates for Welfare Analysis* (Deaton and Zaidi, 2002). Updated guidelines and practical advice have also recently been published (Carroll, Crossley and Sabelhaus, 2015; Oseni, Durazo and McGee, 2017; World Bank, 2018). Key guidelines on a consumption aggregate are as follows:

- *Food consumption should be included,* both food consumed at home and food consumed away from the household.
- *Consumption of non-food items should be included.* Examples of non-food items are toilet paper and clothing.
- *The use value of durable goods and housing should be included.* Durable goods, a sofa for instance, present a special challenge as the expenditure is large at one point in time, but the value or "use" of the durable good is spread over years. A household that recently bought a sofa, would look well off as they have high expenditures at the time of the interview, while the same household interviewed the year after would look less well-off as they are utilizing the sofa but have no expenditures on it. To avoid this, the use value of durable goods is included, which captures how much of the sofa is "used" in any single year. In simplistic terms, if the sofa has a lifetime of 10 years and cost US$100, the use value would in this case be US$10 every year for the lifetime of the sofa, as the household "used" the sofa until it had no value anymore. For this reason, the use value is included in the consumption aggregate. However, calculation of use value also comes with some uncertainty, leading some aggregates to exclude it. Some also exclude it due to omission of questions of value at the survey stage. Similar arguments apply for housing expenditures, where rent should be included for those renting, while the rental value (if a household was to rent out the housing that they own) should be

included for households owning their own housing. A challenge in some countries, however, especially in rural areas, is the lack of a rental market or knowledge of it, rendering households (and scholars) struggling to estimate the rental value.

- *Large, rare expenditures should be excluded.* Large, rare expenditures, such as a wedding, are recommended to be excluded from the consumption aggregate, as this would suggest that a household is very rich at the time, but not reflect its overall welfare level. If a use value can be estimated, they can be included in a similar way to durable goods and housing.
- *The value of public goods, time and leisure should ideally be included but most are excluded.* Ideally, the value of publicly provided services, like education, health, renovation, police etc., should be included in the aggregate. Unfortunately, in most cases it is very hard to estimate a value (price) on these services. Therefore, they are usually excluded. Households with more leisure time have a higher level of welfare than households with no leisure. However, valuing leisure with a price for each individual is problematic. Furthermore, it is difficult to distinguish between leisure, non-market work for the household, and involuntary unemployment, which would not have a positive value. See more on health and education below.
- *Public good expenditures such as health and education can be problematic.* Health expenditures can be large and rare (hospitalization for instance) and should in that case be excluded. Health expenditures can also both represent negative welfare, as in the case of illness, but can also be welfare enhancing as they prevent illness or further illness. Education, on the other hand, can be seen as an investment as opposed to a consumption, while it can also directly add to current welfare. The decision to include or exclude health and education expenditures, according to Deaton and Zaidi (2002), should be based on the analysis of the income elasticity of the health expenditures, with higher elasticity being an argument for inclusion in the consumption aggregate.

- *Donations and gifts given by the household to other households should be excluded,* to avoid double counting.
- *Expenditures on investment or production should be excluded.* Expenditures on items that are input into production or investments in general, should not be included as consumption expenditures. For instance, expenditures on fertilizers or tools, utilized to increase farming production or part of a business, are investments and not consumption, and should not be included.

The design of the survey questionnaire is also important for measured consumption. Though some decisions about how to construct the consumption aggregate are made post data collection, as illustrated above, the overall design of the questionnaire designed to capture consumption can be more important (see Appendix 9 for an example of a household survey questionnaire). The design of household consumption surveys varies significantly between countries, in particular with regard to:

1. The method of data capture, usually being either a household diary or a recall questionnaire.
2. The reference period over which consumption is measured, which can vary significantly.
3. The degree of detail on the commodities, which again can vary significantly. The number of consumption items (or categories) for which data are collected from households in Living Standards Measurement Study (LSMS) surveys ranges from 37 to 305, with the mean being 137 and the median 130 (Beegle et al., 2010).

From a data collection point of view, the food consumption data requires large efforts, as households must either keep diaries noting down daily consumption or answer lengthy and time-consuming recall questions. Non-food consumption is usually collected via recall questions, with varying recall length reflecting the frequency of purchase. Data collection for the use value of durable goods and housing is simpler. For further insights into the challenges and choices surrounding

consumption data collection and survey design, see the experimental evidence on a range of survey designs and their relative advantages and disadvantages including time, cost and complexity (Beegle et al., 2010), and overview of the current edge of the research agenda on collection of food consumption data (Zezza et al., 2017). For applied country examples of consumption aggregates, see Malawi (NSO, 2005; NSO and World Bank, 2018), Lao PDR (Pimhidzai et al., 2014) and recent experiences with data collection in fragile states (Hoogeveen and Pape, 2020). Finally, note that updates and changes to questionnaire design can lead to incomparability of consumption and poverty overtime, which is not desirable. For more information, please see below on comparability over time. Various methods aiming at lowering cost and speed of consumption data collection by predicting part of the consumption also exist (Pape and Mistiaen, 2018, Ahmed et al., 2014), though there is some concern of their reliability, especially when applied across non-homogeneous groups and over time. See for instance Christiaensen et al. (2020) on challenges with reduced consumption aggregates and price development over time.

> **Box 12. The impact of survey design on consumption and poverty findings in El Salvador**
>
> In El Salvador, a short questionnaire and a longer, more detailed, questionnaire were distributed at the same time. The longer questionnaire contained more questions asking about consumption of a longer list of food and non-food items. Comparing the results from the two questionnaires showed that the longer, more detailed questionnaire led to a 31 per cent higher consumption at the mean. Evaluated at the absolute poverty line, the short questionnaire had a 46 per cent higher poverty rate, while there was limited difference between the two questionnaires when measured by a relative poverty line (Jolliffe, 2001).

Generating an income aggregate

The income aggregate should capture disposable income. The important elements and considerations for generating an income aggregate are described in the *Canberra Group Handbook on Household Income Statistics* (United Nations, 2011). The income measure for welfare analysis and poverty should be the disposable household income. Disposable household income is then defined as "the maximum amount that a household or other unit can afford to spend on consumption goods or services during the accounting period without having to finance its expenditures by reducing its cash, by disposing of other financial or non-financial assets or by increasing its liabilities" (System of National Accounts 2008, 8.25).

As such, a typical income aggregate will include:

- Income from employment (both paid and self-employment);
- Property income;
- Income from the production of household services for own consumption;
- Current transfers received.

Note here that property income includes all types of assets. Often household income consists of all receipts whether monetary or in-kind goods and services that are received by the household or by individual members of the household at annual or more frequent intervals, but excludes windfall gains and other such irregular and typically one-time receipts.

Income aggregates have several weaknesses, particularly for low-income countries. As is the case for consumption aggregates, the survey design stage is important, as the income aggregate is largely defined at this stage. Aside from this, some key challenges for income aggregates to bear in mind are:

- Income from self-employment (e.g. farming), which can be difficult to estimate.
- Value of housing services and capital gains (for example, the increase in the value of animals on a farm), which are difficult to assess and tend to be understated.
- The right recall period length for surveys requires trade-offs, as details can be forgotten when using a long recall period, while a shorter recall period misses important variation over the year.
- People may be reluctant to disclose the full extent of their income, especially in the case of income earned illegally.

Unlike consumption expenditures, which can also be measured for children (see more in Appendix 3), disposable income is an adult household measure only, as children in most cases do not have any income.

Appendix 3: Challenges and solutions to individual child monetary poverty

It is challenging to apply monetary poverty to individual children, as opposed to calculating the proportion of children living in poor households. Traditional poverty analysis is centred around the household and assumes that in a poor household all members of the household are poor to the same degree. However, if resources within the household are not fairly shared, one or several members of a household could be poor, while other members are not. In order to make an individual assessment of poverty status, two things are needed. First, consumption should be measured for each individual, which has theoretical and practical challenges. Data on the food consumption of individuals require much larger data collection efforts and is difficult to collect when household members consume meals together. Such data collection can be especially challenging for children, who are often unable to report their own consumption. Other consumption items, such as housing or consumer durables, are shared among household members and often cannot be allocated to specific individuals even in principle. Second, individual assessment of poverty also requires individually defined needs. Needs obviously differ between children and adults, but needs also differ between children of different ages. Further, needs of different adults could also vary along various dimensions such as age, occupation and gender. A complete assessment of individual poverty would therefore require both individual measurement of welfare and individual needs, with needs being reflected in an individual poverty line.

 In reality, the consumption pattern of children is likely very different than adults. Hence, as mentioned in the section on local poverty lines, when consumption patterns vary notably across populations, potentially in ways and degrees that cannot be fully captured by price indices, then there can be reasons to have different poverty lines for different populations. Current practice is not to use different poverty lines for different subpopulations by age, but for different locations, like urban and rural areas, and in some cases by regions. The following sections describe the challenges in measuring monetary poverty for children at the individual level. These are challenges that have not yet been overcome, but experimental work developing models that address the challenges is also described, as well as the common practice of using adult equivalent scales, which is currently the only commonly used practice that addresses the different needs of children as opposed to adults. There is no common agreement on which kind of adult equivalent scales to use for different countries.

Multidimensional poverty is partially individual, but also faces data challenges in identifying individual multidimensional child poverty. Multidimensional poverty indices do include indicators which are measured at the individual level, such as enrolment in schools, receiving adequate nutrition etc., but they usually also include indicators measured at the household level (where everyone in the household receives the same value), such as water, sanitation and shelter/housing. Thus, a multidimensional poverty measure is partially individualized. As with monetary poverty, multidimensional poverty measures face the same challenge as monetary poverty measures in properly accounting for differences in intra-household allocations, and there are studies which find that multidimensional poverty is higher at the individual level than the household level, with large differences along gender lines (Vijaya, Lahoti and Swaminathan, 2014).

A monetary child poverty line can be established. An absolute poverty line, based on the cost of basic needs, could be generated based on children and different age groups of children. Caloric needs clearly vary drastically with age. Further, the food basket for correct nutritional intake also varies with age. Both aspects would lead to different food poverty lines for different ages and there is nothing that indicates that they would line up with the average food poverty line based on the full population. The non-food component of the poverty line is also clearly different for children than adults, and also varies notably with age. At a very young age, non-foods might be limited in terms of monetary costs, while rapid growth leads to additional expenditures on clothing, while educational costs can be substantial for older children. Again, these aspects lead to a non-food component of the poverty line that differs for children

and adults, and children at different ages. Hence, in sum, both the food and the non-food component of the poverty line is most likely different for different ages, and different from adults. The use of adult equivalent scales, as explained below, attempts to take these differences, as averages across households, into account.

However, the question remains whether child-specific monetary poverty lines can be estimated empirically. This is conceptually possible, but depends heavily on the household survey questionnaire and data collection. The caloric and nutritional needs by age are generally well known. The individual consumption by children only, on the other hand, is usually unknown as they eat with the rest of the family and individual registration of food consumption is difficult and costly. Hence, actual food consumption for each child is difficult to use for the establishment of the food basket, as illustrated in Box 3. Similarly, non-food consumption is not always registered individually, though some questionnaires do ask for clothing expenditures for individual children, and education costs are often collected at the individual level. In sum, a full distribution of food and non-food consumption for children, as used in the cost of basic needs approach outlined in Section 1 and in Box 3, is not available. However, a defined basket based on nutritional recommendations and food prices from the survey or CPI could be used. Though this approach is not recommended for monetary poverty based on households (see Section 1), it is an approach used in some countries.

A child-specific welfare aggregate is difficult to do. As mentioned above, an income-based welfare aggregate for children is not meaningful, as children don't tend to have income. Further, a consumption-based welfare aggregate for children only is also difficult to do. Food, as a starting point, is difficult to account for at an individual level, which is potentially the most important element for children. When food is shared by several household members, it is difficult to assess how much is consumed by each individual. Although the food costing for infants mostly consuming formula milk (as opposed to breast milk) could be straightforward, estimating the consumption expenditures for children who are breastfed (that would occur through higher consumption by the mother) would be harder to estimate. Recording non-food expenditures such as clothing and other expenditures would also require a questionnaire with

a higher degree of individualized data collection than is normally utilized. Finally, attributing a consumption value to each individual for shared goods such as housing or consumer durables can often not be allocated to specific individuals.

Due to the challenges outlined above, a few alternative methods seek to take children's unique needs at least partially into account. The methods are split into:

- *Estimation of individual consumption from models.* This approach seeks to utilize the information that is available at individual level and estimate the share of resources going to each individual in the household. The methods are still experimental and there is currently insufficient experience to recommend general applications.
- *Adult equivalent scales* that seek to capture that children, on average, have smaller needs than adults.

> Ideally, one would like to analyse child poverty at the individual level, irrespective of the household poverty status, as a child can be poor in a non-poor household, as well as non-poor in a poor household.

Estimation of individual consumption from models

It is challenging to identify the share of household resources devoted to children, because consumption is measured at the household level and goods can be shared. Consumption measures are defined as each member's share of total household consumption. Monetary child poverty measures are therefore not measures of individual consumption, but a calculation based on household data assigning equal resource shares to all household members. However, in most cases, resources are not shared equally within households, which could result in underestimating the incidence of child poverty.

There are modelling alternatives providing more insights into the household poverty status, though this is not standardized analysis yet. There is some experience in assessing poverty based on individual

consumption data, as well as estimating allocation of consumption within the household based on models, as highlighted below.

- **Individual measured consumption.** The *Poverty and Shared Prosperity* report (World Bank, 2018) provides an overview of literature, as well as the practical challenges in collecting and utilizing individual consumption data, and assesses the importance of individual consumption data for the measurement of child poverty. Collecting data on individual-level consumption is costly and not always feasible in the context of large-scale household surveys. However, recently, a few studies have measured consumption at the individual level, though only including the part of consumption that can be measured at an individual level (excluding durable goods for instance), revealing interesting differences in resource allocation among women, men, and children. The evidence shows that intrahousehold differences in consumption and poverty do exist. In most cases, women and children are allocated a smaller share of household resources than men (Dunbar, Lewbel and Pendakur, 2013). This assessment does not take into account potentially different needs, thought it seems that the differences are beyond any such variation. Intrahousehold inequalities in resource allocation appear to be more pronounced for non-food items than for core food items, hinting at a degree of solidarity within families for food consumption (World Bank, 2018). In general, the experience and evidence from studies relying on individual consumption is not developed enough to make general conclusions, and although limited information on intrahousehold allocations exists, more research is now being carried out in this area (see, for example, Munoz Boudet et al., 2021).

- **Estimated consumption allocation.** A small but growing literature uses model-based estimates of intrahousehold resource allocation to explore differences in poverty between women and men, and between adults and children. Estimating individual poverty in this way requires that at least some parts of the household consumption basket can be assigned to individuals. In other words, identifying who within the household consumes what—either because the underlying household survey disaggregates items in such a way (for example, men's clothing, women's clothing, and children's clothing), or because the survey asks respondents to assign an item to specific household members. The data requirements are modest and the approach could open the door to estimating individual-level poverty in many countries. On the other hand, the structural model imposes strong assumptions on the ways in which households and individuals behave, and those assumptions are open to criticism. Because of these assumptions, and additional econometric challenges in estimating the sharing rules empirically, model-based estimations of individual resource shares warrant additional validation and sensitivity analysis before they can be used in routine poverty monitoring (World Bank, 2018).

Appendix 4: Development of PMT models

Though imperfect and debated, PMTs for targeting of social assistance are commonly used. This chapter is not intended to participate in the debate, but to simply provide an overview of what PMTs entail.

For lack of better data, many social protection programmes rely on Proxy Means Test (PMT) indicators for targeting. These are usually proxy consumption expenditures by a number of household and individual characteristics. There is broad agreement that a PMT is an imperfect tool, as PMTs can have high exclusion and inclusions errors, and suffer from survey design and other errors (Kidd, 2011; Brown, Ravallion and Walle, 2016; Schnitzer, 2019; Kilic and Sohnesen, 2019).

PMTs usually proxy the welfare aggregates underpinning monetary poverty. Perfect targeting towards the poor

is then based on a welfare aggregate for everyone. Unfortunately, collecting consumption expenditure on all households and individuals on a regular basis is not feasible. Hence, the PMT usually seek to proxy the consumption expenditure by household characteristics (which are more easily collected/available and are highly correlated with consumption expenditure). A PMT score often includes observable characteristics that don't change too rapidly, such as location and quality of housing, ownership of certain goods, demographic structure of household, education and occupation of members (UNICEF, 2012). For practical implementation, a regression analysis (or other methods, see McBride and Nichols, 2016) between log consumption expenditure aggregate and household characteristics, leads to coefficients that are attributed to each household characteristic, and the sum for each household is the households PMT score. Table 12 illustrates part of what a PMT score could include. Usually, models have more than 20 variables.

Table 12. Simplistic illustration of a PMT model

Coefficient/		Household 1		Household 2		Household 3	
High quality roof	0.5	Yes	0.5	Yes	0.5	No	0
Owns a sofa	0.8	Yes	0.8	No	0	No	0
Owns a bed	0.2	Yes	0.2	Yes	0.2	Yes	0.2
PMT score			1.5		0.7		0.2

The construction of a PMT must consider many aspects. In most cases, PMT coefficients come from a consumption expenditure regression between consumption and household correlates. However, there are also many other aspects to consider, including:

1. **The survey data.** Ideally, survey data underpinning the regression should be representative for the area the PMT seeks to target. If the PMT scores for targeting a social safety net programme has beneficiaries nationwide, the survey should also be nationally representative. Survey data should also be reasonable recent, as correlation between observed variables and consumption can change over time.

2. **Variable selection.** Variables that are easy to verify by enumerators may be preferable to avoid possible cheating and misreporting. Variables should be highly correlated to consumption expenditures, but ideally also reasonable stable over time (both short-term as in a season, and long-term due to growth). However, some variables might be highly correlated with each other, leading to selection problems due to multicollinearity. Missing observations on some variables also need to be dealt with, and finally exclusion could be given higher priority than inclusion errors, which would also impact the variables selection method.

3. **The model.** A PMT model can either be a single model for the entire country or several models (for instance separate models for urban and rural areas), while some models are staged models, using different decisions criteria in different stages. The PMT might also need updating as societies change, which may require a new survey for remodelling. Evaluation of model accuracy can be done based on a full sample or via an excluded sample for test of accuracy, and a threshold for inclusion at one or several levels must be selected. Finally, transparency can also be an important element, as the selection process needs to be communicated to the public and users.

For practical guidance, please see these country examples: Sri Lanka (Sebastian et al., 2018); Vietnam (Nguyen and Tran, 2017); Kazakhstan (Dershem, 2013); Eastern Caribbean (Budlender, 2014); Bangladesh (Sharif, 2009); Honduras and Peru (Karlan and Thuysbaert, 2016).

Appendix 5: Children's access to health and education

Greater equity in public finance could help to create an enabling environment for eradicating child poverty and strengthening human capital. Tackling child poverty requires redistributive public finance to support investments in cash transfers, social protection and – critically – high-quality services in areas such as health and education (check here for key resources on public finance for children and stay tuned for UNICEF's forthcoming *Public Finance for Children Toolkit).*

A profile of the poor therefore often includes an assessment of the share of public resources that benefit the poor. This is known as a Benefit Incidence Analysis (BIA) and is often included as part of monetary poverty analysis, as it can be based on the same cross-sectional surveys utilized for the poverty profile (based on household characteristics). In addition, barriers for access to public services are often analysed. The access and barriers to public services can also provide a link between multidimensional and monetary poverty. The analysis included in the examples below focus on health and education. Other public services including water, sanitation, electricity supply or tax burden, could also be analysed.

Both BIA and barriers to access health and education are also used to inform public reform. As a practical guidem the examples below highlight challenges and ways forward for poverty reduction, while a comprehensive review of analysis for public sector reform is beyond the scope here, though the analysis could be a way to engage/initiate a discussion on such reforms.

Benefit Incidence Analysis (BIA)

BIAs showcase the benefits (the product of both utilization and access) of different services for different population groups. For an extensive overview of BIAs, please refer to the UNICEF Public Finance Toolkit (2021). Other useful introductions to BIA include *Benefit incidence: a practitioner's guide* (Demery, 2000), and

'How to do (or not to do)… a benefit incidence analysis' (McIntyre and Ataguba, 2011) for health-specific BIA. BIA is most often applied to consumption quintiles, or groups like the extreme poor, the poor and the non-poor, but could just as well be applied to households with and without children, or households with few or many children. UNICEF BIA could, for example, focus on services relevant for children, such as education by level, health services like immunizations, childcare, etc. as outlined in UNICEF's Public Finance Toolkit.

Average BIA relies on groups identified in household surveys and detailed unit cost of public services. BIA usually consists of the following three steps:

1. *Estimate the unit subsidy of providing a particular public service.* This could be the cost of primary education, for instance. Unit subsidies are usually based on officially reported public spending on the service in question,[5] and are often the most difficult step. More detailed unit costs lead to more accurate analysis. Sometimes, this is based on recurrent expenditures only, though capital expenditures could also be included.[6]
2. *Allocate the unit subsidy to users of the service.* The unit subsidy is allocated to households or individuals identified as users of the service through household surveys. Students in school, for instance, are individuals who use a subsidized public service and benefit from an in-kind transfer. Benefit incidence analysis measures the distribution of such transfers across the population.
3. *Aggregating individuals (or households) into sub-groups for comparison.* To compare how the subsidy is distributed across different population groups, the subsidy is aggregated. The most common grouping is by income or expenditure quintiles but can also be by (or in combination with) other groups such as location (urban/rural), gender, or number of children in the household. Based on such aggregation, one can conclude that the poorest quintile receives 10

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5   For some countries, the BOOST data portal (http://boost.worldbank.org/) providing online access to public expenditures can be helpful.
6   Recurrent expenditures are expenditures that do not result in the creation or acquisition of a fixed asset. Typical examples of recurrent expenditures are wages/salaries and purchases of goods and services. Capital expenditures are expenditures used to acquire or maintain fixed assets, such as land, buildings and equipment.

per cent of expenditures on education, for instance, compared to 30 per cent for the richest quintile (see Example 5.1 below).

Analysing unit cost and allocation to users separately can be valuable on its own. The data in step one and two is essentially an analysis of utilization across the welfare distribution, and can also be broken down by location, gender and other characteristics. Analysing the components on their own, in addition to combining them into a BIA, can be valuable too. For instance, an analysis of health utilization alone will often show that rural utilization is much lower, which in the BIA sometimes will be muted or even dominated by the higher unit costs of providing services in rural areas. Showcasing the BIA only could show that rural areas

receive a proportionally larger part of expenditures, though they still have poorer services. Utilization, and lack thereof, is also key in understanding the barrier to access treated below.

Marginal BIA is more interesting but also less standardized. The average BIA above shows how many current education expenditures are allocated to each quintile. However, for policy purposes, the relevant question is often what happens if we allocate more (or less) resources to the sector. Marginal BIA seeks to answer this question. There are several ways to estimate the marginal benefit, using both single cross section surveys, repeated cross sections surveys or panel surveys (for an overview, please see Younger, 2003) and the choice of method can make a difference.

Table 13. Average and Marginal Benefit Incidence Analysis (Country A)

Quintiles	Primary			Secondary			Tertiary	All education
	Average BIA							
	Both Sexes	**Boys**	**Girls**	**Both Sexes**	**boys**	**Girls**	**Both Sexes**	**Both Sexes**
Poorest	24.7	12.8	11.9	9.5	4.8	4.7	1.9	17.4
2nd	25.2	12.9	12.3	15.9	9.2	6.8	2	19.3
3rd	21.6	10.8	10.9	21.9	12.7	9.2	7.o	19.4
4th	18.2	9.3	9	25.6	12.4	13.1	19.1	20.2
Richest	10.2	5.1	5.1	27.2	13.6	13.6	70	23.7
	100	51	49	100	53	47	100	100
	Marginal BIA							
	Both Sexes	**Boys**	**Girls**	**Both Sexes**	**boys**	**Girls**		
Poorest	27.1	12.5	14.7	11.6	4.4	7.2		
2nd	20.6	8.7	11.8	14.7	6.2	8.5		
3rd	19.4	10.2	9.3	24.2	14.1	10.1		
4th	19.7	10.7	9	22.2	11.4	10.8		
Richest	13.2	7.4	5.8	27.3	11.9	15.4		
	100	49.5	50.6	100	48	52		

Source: Demery and Gaddis (2009)

Example 5.1: Average and marginal benefit Incidence analysis for education, by gender.

For a generic BIA education analysis, a household survey is used to assess enrolment in public schools at primary, secondary and tertiary level by welfare quintiles. For estimation of the unit cost, this example from Country A relies on the total recurrent expenditures by education level from government budgets and survey-estimated school enrolment rates. Dividing the government recurrent expenditures by the respective enrolment shows that each secondary student costs on average 2.4 times as much as primary student, and tertiary students cost more than 22 times a primary student (see Demery and Gaddis (2009) for further details). The BIA analysis utilizes these unit costs to calculate the share of total expenditures accruing to each consumption quintile, in this case also broken down by gender.

Analytical lessons. In this example, due to the higher absolute enrolment of children among the poorer (note net enrolment rates might still be lower among the poor), the average BIA shows that the poor receive a larger share of the public subsidy for primary education than those in quintile four and five. In contrast, at secondary and tertiary level, the benefits of education expenditures tend to go to those who are better off, especially in tertiary education, where 70 per cent of benefits accrue to the fifth quintile. Taking both the distribution of students and the cost of education into account, the final column shows that 23.7 per cent of public expenditures on education accrue to the richest quintile, while only 17.4 per cent goes to the poorest quintile. The average BIA further shows that in primary education, there is hardly any difference in received benefits across gender, while boys receive 3 percentage points more education subsidies in secondary education. The marginal BIA, on the other hand, highlights that any further expenditures on further enrolment to primary education will benefit the poorer and girls, while in secondary further expansion will still benefit the upper quintiles, but also benefit girls. Note also that the distribution of education spending is very progressive, in that the poor receive a larger proportion of public education expenditure.

BIA is a powerful tool, but also one with limitations. Lots of variation in received benefits will not be accounted for, as estimates of true unit costs are hard to make. One can also question if unit costs are good proxies for the value received by users. For instance, the unit costs of a rural school are likely much higher than an urban school, though quality might be lower. Much of government spending can also not be allocated (or imputed) to individual households or individuals. For instance, preventive health programmes such as insect vector control or environmental protection are health sector examples that cannot be allocated to individuals. Large sections of other public expenditures like military/defense also cannot be imputed to individuals or households. Finally, the design of household surveys often determines the type and extent of analysis that can be performed, so early planning with inputs on survey design can have a high return.

Barriers to utilization

The key to improved conditions for children is addressing binding constraints for access and use of services. Understanding the formal and informal costs of services being barriers to utilization can help to inform the improved design of either services and/or social protection programmes to support better access. Most household surveys contain some direct questions supporting such analysis. In health, for instance, typical questions include if anyone in the household has been sick recently and if they sought treatment for the illness, and where, and if not, why. Similarly, in education there are usually questions on why school-aged children are out of school. All these questions are self-reported and can have caveats due to different social dynamics but still provide an indication of barriers to utilization. Sometimes barriers to access are physical, due to distance, sometimes barriers are cost-related, and in some cases barriers to access are rooted in other social aspects. Improved conditions for children could therefore both be addressed through changes in access to services as well as through social protection programmes. Information gathered from such questionnaires remains the best source of information, but one should still recall that the observed outcome of utilization is a combination of demand and supply which is unobserved.

Analysing the mentioned aspects along the consumption/income distribution will enhance our understanding of monetary poverty's importance for lack of utilization. Many cross tabulations and figures can illustrate this, but common examples of figures

and tables are: utilization of services as a function of the consumption/income distribution; total household out-of-pocket expenditures; as well as a share of total expenditures across the consumption distribution, which shed light on the potential for poverty reduction by eliminating out-of-pocket expenditures.

Example 5.2: Children's utilization of health services.

Based on a household survey from Papua New Guinea, the graphs in Figure 29 illustrate how many obtained medical treatment when ill, by both wealth level and age of children, where they obtained care, and the reasons why others did not obtain care.

Analytical lessons. Example 5.2 shows that the share of children accessing healthcare in times of illness is low in

Papua New Guinea compared to other countries in the region (the report benchmark this), though the differences between quintiles and urban/rural areas are relatively small. Children are given priority, both seen by the higher share receiving treatment when ill and by the larger share of all treated at hospitals. A BIA based on Figure 29 (B) would likely show that children receive a proportional large share of health expenditures. Not surprisingly, cost of treatment as a barrier to utilization of health services is highest among the poorest quintile, with 27 per cent giving this reason. Interestingly, distance and transport are reported as being bigger obstacles than the financial cost of treatment, though transport could also be a cost barrier. As expected, the issues of distance and transport are mostly a rural challenge. Finally, public facilities provide most health services, especially for the poorest, while church-based health facilities also provide a notable share of services, especially in rural areas.

Figure 29. Examples of barriers to healthcare utilization (Papua New Guinea)

A. Share obtaining medical treatment when ill

Q= quintile
Source: Authors' analysis of HIES 2009-2010 data set
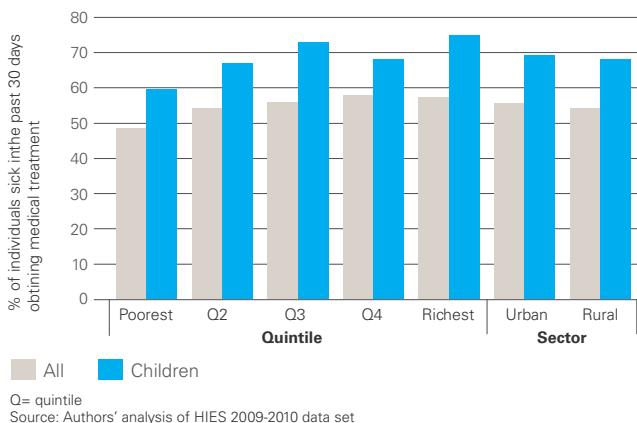
B. Distribution of patients according to age

Source: Authors' analysis of HIES 2009-2010 data set
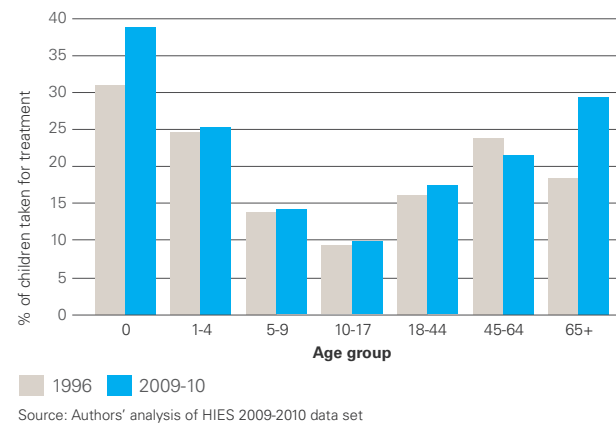
C. Distributions of reasons for not seeking treatment

Q=quintile
Source: Authors' analysis of HIES 2009-2010 data set
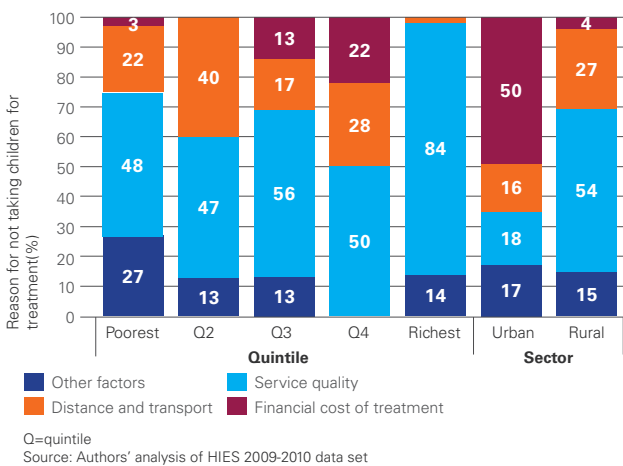
D. Distribution of locations of children seeking care

Q=quintile
Source: Authors' analysis of HIES 2009-2010 data set

Source: Jayanthan et al. (2012)
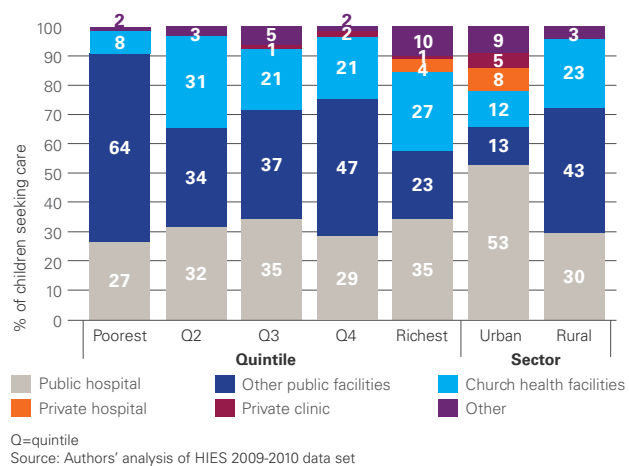
Appendix 6: List of microdata and data resources

Undertaking monetary poverty analysis will always include the use of either an income or consumption aggregate, as one of these is needed to define monetary poverty. Such aggregates come from surveys in most low- and middle-income countries, even in many high-income countries.

Planning and executing a sound and relevant analysis usually involve a circular work process in terms of determining the type of analysis to undertake based on what data. All the analysis presented in this guidance note is based on analysis derived from existing surveys and data. Most national poverty lines and analysis is based on household surveys, the main examples of which are outlined below.

- **Household expenditure and income surveys:** The names of such surveys vary between countries, for example *Integrated Household Living Conditions Survey, Household Income and Expenditure Survey, Socioeconomic Survey, Household Budget Survey, Integrated Household Survey, Income Expenditure and Labour Force Survey,* etc. These surveys are periodic surveys owned and conducted by the government, usually led by national statistics offices, to provide routine monitoring of a country's poverty situation. While the national ownership and periodic nature of the survey are advantages, one of the common challenges is the limited gathering of information on child indicators. Where access is open to the public, such surveys may be available from the national statistical office website or from global survey catalogues, such as the International Household Survey Network at: http://www.ihsn.org/home/survey-catalogs. These surveys, along with many other potential sources, are also available in the World Bank's microdata library: https://microdata.worldbank.org/index.php/home.

- **Living Standards Measurement Survey (LSMS):** This is a global household survey, supported by World Bank, available in 39 countries as of 2015. LSMS has a detailed component on household income and expenditure, which can be the basis upon which to compute the monetary poverty rate. Additionally, the survey also covers areas such as education, health, water and sanitation, which makes it an ideal source to analyse both multidimensional and monetary poverty. Data is available at: http://surveys.worldbank.org/

- **Luxembourg Income Study (LIS) Database:** This database provides microdata for over 40 mostly middle- or high-income countries. LIS acquires datasets with income, wealth, employment, and demographic data from a large number of countries, harmonizes them to enable cross-national comparisons, and makes them available for public use by providing registered users with remote access at: http://www. lisdatacenter.org.

- **EU Statistics on Income and Living Conditions (EU-SILC):** Coordinated by EuroStat, this is a cross-sectional and longitudinal survey sample survey covering member states of the EU. Components of the survey include social exclusion and housing-condition information (collected at household level) and income (at the individual level), as well as labour, education and health observations for persons aged 16 and over. For details, visit: https://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions

- **The OECD Income Distribution database (IDD):** This database has been developed to benchmark and monitor countries' performance in the field of income inequality and poverty. It contains a number of standardised indicators based on the central concept of "equivalised household disposable income" (the total income received by the households less the current taxes and transfers they pay, adjusted for household size with an equivalence scale). Household income is comparable for all 35 OECD countries and data on income distribution and poverty go back to the 1980s in many OECD countries. For more information, see http://www.oecd.org/els/soc/inequality-and-poverty.htm

- **Multiple Indicator Cluster Surveys (MICS):** For multidimensional poverty analysis, a commonly used data source is Multiple Indicator Cluster Surveys (MICS), which are nationally representative household surveys conducted with UNICEF's support in over 100 lower- and middle-income countries. MICS capture many of the dimensions of poverty used in common multidimensional poverty methodologies such as MODA and Bristol. Data on expenditure is not collected and monetary child poverty cannot be constructed using the survey, but asset-based wealth quintiles are constructed for disaggregation purposes. MICS tend to be collected every 3–5 years in most

countries and take a year or so to be finalized, meaning routine child poverty is available at these intervals. Modules exist on child protection, health, education, nutrition, early childhood development, water and sanitation and many other child-specific topics. Information on countries with MICS and the data can be found at: http://mics.unicef.org.

- **Demographic and Health Surveys (DHS):** Similar to MICS, DHS often form the basis of multidimensional poverty analysis. DHS are nationally representative household surveys conducted (with USAID's support) in more than 90 lower- and middle-income countries. They are typically conducted every five years and the surveys include a wide range of indicators covering population, health, nutrition, education, household assets, and domestic violence. The survey does not have a module on income or expenditure (and so monetary child poverty cannot be constructed using the survey), but disaggregation by wealth quintiles constructed by assets is possible. Datasets are accessible upon request at: http://dhsprogram.com.

  - ▸ Handbook on poverty + Inequality
  - ▸ Online lectures on Monetary and multidimensional poverty
  - ▸ The World Banks Open Learning Campus, for instance Fundamentals of Purchasing Power Parities
  - ▸ World Development indicators – national poverty lines and international poverty lines
  - ▸ World Bank PovCalNet - online analysis tool for global poverty monitoring
  - ▸ World Bank Poverty and Equity data portal
  - ▸ UNICEF's child poverty sharepoint – child poverty repository
  - ▸ Estimates of extreme child poverty for children (The World Bank Group & UNICEF)
  - ▸ World Bank poverty blog
  - ▸ ILO Global data on social protection
  - ▸ ASPIRE – atlas of social protection indicators
  - ▸ World Social Protection Database
  - ▸ Adept

The ILO World Social Protection Database (WSPDB) contains child-specific statistics (https://www.social-protection.org/gimi/WSPDB.action). The WSPD collects, stores and disseminates comparable statistical data on social security worldwide. Data compilation on social protection is mainly driven by administrative data received from governments. In addition to these data, the department is establishing agreements with other agencies to receive complimentary information.

For cross-country comparison of social protection expenditures, coverage and impact on poverty, the ASPIRE database is useful, though currently not specific to children. For international comparison, the World Bank's ASPIRE database is a source for reasonable comparable data (ASPIRE, no date). The database covers social protection performance indicators on a range of key indicators based on 328 nationally representative household surveys in 124 countries, mostly in low-income countries, from 1998 to 2016. Similarly, the database covers comparable expenditure indicators for 124 countries, based on administrative data. The following key aspects are covered in the database:

- **Social expenditure:** The social expenditure database covers total programme expenditure including spending on benefits and on administrative costs. Expenditures include both the recurrent and capital programme budget, and are based on administrative programme records. Programme-level expenditure is analysed as a percentage of GDP of the respective year and is aggregated by harmonized programme categories of social assistance (unconditional cash transfers, conditional cash transfers, social pensions, school feeding, in-kind transfers, fee waivers, public works, and other social assistance). Expenditure for social insurance and labour market programmes is not yet available.
- **Performance indicators:** These can estimate the performance of social assistance, social insurance and labour market programmes in 124 countries based on nationally representative household surveys. The indicators are disaggregated by social protection type (social insurance, social assistance, labour market and private transfers) and transfer type (unconditional cash transfers, subsidies and contributary pensions, to mention a few). The indicators can be further split by rural and urban geographical areas, by quintile of the pre- and post-transfer welfare distribution, and by those living below PPP $1.90 a day (extreme poor). They are grouped according to the following topics: *Coverage* (Coverage, programme duplication and overlaps); *Targeting accuracy (*benefit incidence, beneficiary incidence); *Benefit level (*average per capita transfer, adequacy of benefits); and *Impacts and efficiency*

(poverty headcount reduction, poverty gap reduction, inequality reduction, benefit-cost ratio).

Appendix 7: Debates around international poverty lines

From the time of the establishment of the international poverty line of PPP $1.00 in 1990, it has come under considerable criticism as a measurement tool for poverty reduction. For further reading on these debates, please refer to various articles by economists Sanjay G. Reddy, Angus Deaton and Jan Vandemoortele, among others. The latest Report of the Special Rapporteur on extreme poverty and human rights (Human Rights Council, 2020) outlines the key points of criticism, summarized below (bullets taken directly from the report):

- The current international poverty line is derived from an average of national poverty lines adopted by some of the world's poorest countries – it's a yardstick chosen by 15 of the world's poorest countries.
- Unlike many national lines, it is not based on any direct assessment of the cost of essential needs. The IPL is well below the national poverty lines of most countries, and accordingly generates dramatically lower numbers in poverty.
- The IPL is explicitly designed to reflect a staggeringly low standard of living, well below any reasonable conception of a life with dignity. Under the measure, one can 'escape' from poverty without an income anywhere near that required to achieve an adequate standard of living, including access to healthcare and education

- While the World Bank defends the line on the basis that it is intended to cover an intentionally meagre set of basic needs, critics question how the line could cover even that, for example the line's reliance on 15 mostly tropical countries, rather than using any direct assessment of basic needs, thus ignoring higher spending on essentials like fuel and clothing in cold countries, and housing in wealthy countries.
- Others contend that the IPL does not take into account varying societal standards. While PPP rates in principle adjust for different prices of the same goods in various countries, they do not reflect differences in the basic goods required to escape poverty. A cell phone or transport costs may not be essential to work in a low-income country but are imperative in a high-income one.

- The World Bank's response fails to engage adequately with the concern that the line is too low in certain countries to achieve even a frugal standard of living. And it sidesteps tough questions about the validity of PPP rates, the risks of using a reference group comprised of tropical and less urbanized countries, and whether the IPL really captures what it purports to.
- By single-mindedly focusing on the World Bank's flawed international poverty line, the international community mistakenly gauges progress in eliminating poverty by reference to a standard of miserable subsistence rather than an even minimally adequate standard of living. This in turn facilitates greatly exaggerated claims about the impending eradication of extreme poverty and downplays the parlous state of impoverishment in which billions of people still subsist.
- While it may be a fool's errand to pursue a single 'true' poverty line, that does not mean all lines are equally valid. The World Bank's approach is woefully inadequate as the basis for a shared understanding of progress on poverty.
- In evaluating poverty eradication, the international community should stop hiding behind an international poverty line that uses a standard of miserable subsistence. The UN should have the courage of its convictions and acknowledge that the scale of global poverty is far more accurately reflected in its own indicators and reporting.
- Whatever its merits, the IPL should not be treated as the pre-eminent basis on which to determine whether or not the world community is eradicating extreme poverty, let alone as the benchmark for SDG 1 on poverty.

See the full report of the Special Rapporteur here: https://chrgj.org/wp-content/uploads/2020/07/Alston-Poverty-Report-FINAL.pdf

Appendix 8: Simulating the impact of COVID-19 on poverty

There are multiple ways to simulate the impact of crises on poverty, such as the COVID-19 pandemic crisis, based on various assumptions and economic projections. Some of the key methods which emerged in 2020 and 2021 are outlined below in Table 14. These assumptions and simulations are extremely important, as the type of recovery that occurs depends on who is included in the recovery, which in turn depends on how poverty is analysed.

Main results/overview	Quick overview of methodology	Assumptions on economic impact of COVID-19 (different scenarios)	Assumptions of poverty impacts (different scenarios)
COVID-19 and global poverty Are LDCs being left behind? By **UNU WIDER** (Valensisi, 2020) **Change in the number of people living under specific poverty thresholds:** **$1.90:** The global headcount ratio is estimated to increase by 0.9 % (from 8.2% to 9.1%). This translates into 68 million additional people living below US$1.90 per day. This essentially wipes out the poverty-reduction progress made in the last 2–3 years. **$3.20 and $5.50:** An increase of nearly 2%, or more than 140 million additional people – in both cases. Less than 14% of the world's population live in Least Developed Countries (LDCs), yet they account for 53% of the people living below US$1.90 per day at global level.	To calculate the child poverty rate, the authors combined information on the proportion of the population below the national poverty line (from World Bank) with data from MICS and DHS on the distribution of children by decile. To project COVID-19's effect on child poverty, the authors assessed: 1) per capita income effect; and 2) distributional impact. Income effect is calculated using estimates of population growth and decline in total output by the IMF and by the World Bank. For the distribution effect, three scenarios were modelled (full, mild, least), based on empirically observed changes in income distribution during previous shocks (the first model to incorporate these effects).	**UPDATE**: World Bank Global Economic Prospects, June 2020 – The baseline scenario has global growth contracting by about 5% in 2020, while the downside scenario presents a global growth contraction of 8% in 2020. **PREVIOUS**: IMF World Economic Outlook – April 2020: The analysis predicts a contraction of 3% in 2020 in the global economy. In addition to the IMF projections, World Bank regional economic assessments (April 2020) were used to calculate the per capita income effect.	**UPDATE:** Baseline: • Child poverty rate: 31.9% • Total: 585.9 million (with additional countries, hence slight difference from previous baseline) Most Optimistic (least estimated decline in average income per person) with Least Distribution effect • Total: 675 million • Most Pessimistic (largest estimated decline in average income per person) with Full Distribution effect • Total: 703.2 million **PREVIOUS**: Baseline: • Child poverty rate: 31.9% • Total: 586.2 million Most Optimistic (least estimated decline in average income per person) with Least Distribution effect • Child poverty rate: 34.2% • Total: 649 million Most Pessimistic (largest estimated decline in average income per person) with Full Distribution effect • Child poverty rate: 35.4% • Total: 672.2 million

Main results/overview	Quick overview of methodology	Assumptions on economic impact of COVID-19 (different scenarios)	Assumptions of poverty impacts (different scenarios)
COVID-19: Number of children living in household poverty to soar by up to 142 million by end of year by **UNICEF and Save the Children (2020).** The analysis highlights that, without urgent action to protect families from the financial hardships caused by the COVID-19 pandemic, an additional 116 million more children could fall into household poverty by the end of 2020, an increase of 15 per cent.	To calculate child poverty rate, the authors combined information on the proportion of the population below the national poverty line (from World Bank) with data from MICS and DHS on the distribution of children by decile. To project COVID-19's effect on child poverty, the authors assessed: 1) per capita income effect; and 2) distributional impact. Income effect is calculated using estimates of population growth and decline in total output by the IMF and by the World Bank. For the distribution effect, three scenarios were modelled (full, mild, least).	**UPDATE:** World Bank Global Economic Prospects, June 2020 – The baseline scenario has global growth contracting by about 5% in 2020, while the downside scenario presents a global growth contraction of 8% in 2020. **PREVIOUS:** IMF World Economic Outlook – April 2020: The analysis predicts a contraction of 3% in 2020 in the global economy. In addition to the IMF projections, World Bank regional economic assessments (April 2020) were used to calculate the per capita income effect.	**UPDATE:** Baseline: • Child poverty rate: 31.9% • Total: **585.9 million** (with additional countries, hence slight difference from previous baseline) Most Optimistic (least estimated decline in average income per person) with Least Distribution effect • Total: **675 million** Most Pessimistic (largest estimated decline in average income per person) with Full Distribution effect • Total: **703.2 million** **PREVIOUS:** Baseline: • Child poverty rate: 31.9% • Total: **586.2 million** Most Optimistic (least estimated decline in average income per person) with Least Distribution effect • Child poverty rate: 34.2% • Total: **649 million** Most Pessimistic (largest estimated decline in average income per person) with Full Distribution effect • Child poverty rate: 35.4% • Total: 672.2 million

Main results/overview	Quick overview of methodology	Assumptions on economic impact of COVID-19 (different scenarios)	Assumptions of poverty impacts (different scenarios)
[Updated estimates of the impact of COVID-19 on global poverty](#) by **World Bank.** Using household survey data (available on PovCal net) and growth projections for 166 countries from the June 2020 World Bank Global Economic Prospects, the authors estimate that COVID-19 is pushing about **71-100 million people into extreme poverty.**	**UPDATE:** The baseline scenario has global growth contracting by about 5% in 2020 while the downside scenario presents a global growth contraction of 8% in 2020. A variety of growth and inequality scenarios are considered, as follows: • Real GDP growth scenarios: (i) GEP baseline scenario, (ii) GEP downside scenario, (iii) second downside scenario with GDP growth 2 percentage points below scenario. • Inequality scenarios: (i) no change in distribution of income, (ii) increase in Gini coefficient of 1%, 2%, 5%, and 10%.	**UPDATE:** • Distributional effect is considered **PREVIOUS:** Assumptions: Assumptions: • All countries affected by COVID-19 implement social distancing – i.e. COVID-19 does not change inequality within countries measures covering on average 40%-50% of the population for between 2 and 3 months. • International travel is essentially shut down, closing many tourism-related activities. • Social distancing measures allow only essential work, such as food production and distribution, under normal conditions. We assume further that, on average, one third of skilled workers can continue to work effectively via various forms of telecommuting. • The containment measures cause lenecks and ays in international transport, pushing up freight costs by 3%. • While agriculture and food sectors have been identified as essential in most countries, we also assume some supply disruption caused by reduced labor mobility (e.g., for seasonal migrant labor) and further, that perishable farm products suffer greater post-harvest losses of 5% due to logistics problems and demand fallout.	**PREVIOUS:** Assumptions • Global economy contracts by 3% (updated version considers 5% and 8% contraction scenarios) • Emergency packages are not considered • Current projection is distribution neutral • Other scenarios consider distributional changes following Lakner et al.'s approach. Global poverty—the share of the world's population living on less than $1.90 per day—is projected to increase by 0.7 percentage points, which equals 49 million people. (The updated version predicts an increase of 71-100 million). When higher poverty lines are also considered ($3.20 or $5.50 per day) more than 100 million people will be pushed into poverty. Other scenarios for 2020: • Global economy contracts by 2%- extreme poverty 8.4% • Global economy contracts by 4% -extreme poverty 8.7% • GINI increases by 1% - extreme poverty 8.8% • GINI decreases by 1% - extreme poverty 8.4%

Main results/overview	Quick overview of methodology	Assumptions on economic impact of COVID-19 (different scenarios)	Assumptions of poverty impacts (different scenarios)
Poverty and food insecurity could grow dramatically as COVID-19 spreads by **IFPRI.** Over 140 million people could fall into extreme poverty (measured against the $1.90 poverty line) in 2020—an increase of 20% from present levels.	IFPRI's global computable general equilibrium (CGE) model uses a combination of two datasets: the first contains trade, production, and consumption for private households, governments and firms, plus parameters describing trade, production, and consumption behaviour. The second is a sample of 300,000+ households from 31 developing countries with information on household consumption and agricultural production. With the first dataset and the CGE model they have, they identify the long-run effects of a number of productivity shocks on national income and prices. Then, they apply the country-level productivity and price shocks to the 300,000+ household-level models in the second dataset to simulate the poverty implications of the aforementioned productivity shocks.	The authors project a downturn in global economic growth of 5% in 2020. Economies in Africa to be hit hardest (almost a 9% decline). Assumptions:	Without interventions, o**ver 140 million people could fall into extreme** poverty in 2020—an increase of 20% from present levels. Sub-Saharan Africa would suffer most, as 80 million more people would join the ranks of the poor, a 23% increase. The number of poor in South Asia would increase by 15% or 42 million. Assumptions: • Accounts for the economic stimulus packages being implemented by countries in North America and in Europe, including significant income transfers to households. • Does not consider any additional international support or government stimulus in developing countries.

Main results/overview	Quick overview of methodology	Assumptions on economic impact of COVID-19 (different scenarios)	Assumptions of poverty impacts (different scenarios)
Estimates of the impact of COVID-19 on global poverty by **UNU WIDER.** The number of people living in poverty could increase by **420–580 million**, relative to the latest official recorded figures for 2018.	The estimates are based on microdata from the World Bank's PovcalNet dataset and were computed through the Stata's PovcalNet interface at the global and regional levels. The contractions are captured by increasing the value of the poverty line accordingly. That is, for a per capita income or consumption contraction of x per cent, the poverty line z is adjusted upwardly as $z/(1-x)$.	Assumptions: • Based on distribution neutral assumptions. • Does not consider other transmission channels from the pandemic to poverty beyond changes in consumption. • Non-monetary poverty impacts (health indicators, education and other dimensions of poverty) are not captured in the estimates of consumption losses. • No labour market, social and fiscal policy, and household-level responses to economic contractions.	They use three scenarios: low, medium, and high contractions of 5, 10, and 20 per cent, and estimate the impact on the poverty headcount using the international poverty lines of US$1.90, US$3.20 and US$5.50 per day PPP (2011 prices).

Appendix 9: Household survey questionnaire example

Below are examples of some of the components of household survey questionnaires, which ultimately make up the consumption aggregates to measure poverty. As shown below, the food consumption module can be extremely comprehensive, detailed and long, and often complex for households to respond to.

For examples of full questionnaires visit: https://micro-data.worldbank.org/index.php/catalog/2936/related-materials

MODULE G: FOOD CONSUMPTION OVER PAST ONE WEEK

ENUMERATOR: RECORD START DATE & TIME FOR MODULE G:

G00_1. Who in the household is most knowledgeable about food consumed in the household. LIST MEMBER ID.

G00_2. Who in the household is reporting information on food consumption in this module. LIST MEMBER ID.

DE LINE NUMBER	Over the past one week (7 days), did you or others in your household consume any [. . .]? INCLUDE FOOD BOTH EATEN COMMUNALLY IN THE HOUSEHOLD AND THAT EATEN SEPARATELY BY INDIVIDUAL HOUSEHOLD MEMBERS.	G01 YES..1 NO...2>> NEXT ITEM	G02 ITEM CODE	G03 How much in total did your household consume in the past week?		G04 How much came from purchases?		G05 How much did you spend?	G06 How much came from own-production?		G07 How much came from gifts and other sources?		DE LINE NUMBER
				QUANTITY	UNIT	QUANTITY	UNIT	MK	QUANTITY	UNIT	QUANTITY	UNIT	
1	Cereals, Grains and Cereal Products												1
2	Maize *ufa mgaiwa* (normal flour) *		101										2
3	Maize *ufa* refined (fine flour) *		102										3
4	Maize *ufa madeya* (bran flour) *		103										4
5	Maize grain (not as *ufa*) *		104										5
6	Green maize *		105										6
7	Rice		106										7
8	Finger millet (*mawere*)		107										8
9	Sorghum (*mapira*)		108										9
10	Pearl millet (*mchewere*)		109										10
11	Wheat flour		110										11
12	Bread		111										12
13	Buns, scones		112										13
14	Biscuits		113										14
15	Spaghetti, macaroni, pasta		114										15
16	Breakfast cereal		115										16
17	Infant feeding cereals		116										17
18	Other (specify)		117										18

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KILOGRAMME 1
50 KG. BAG 2
PAIL (SMALL) . . .4
PAIL (LARGE) . . .5
No. 10 PLATE . . .6
No. 12 PLATE . . .7
BUNCH. 8
PIECE. 9
HEAP 10
BALE 11
OX-CART
  (UNSHELLED) . . 14
LITRE. 15
GRAM 18
MILLILITRE . . . 19
TEASPOON. 20
SATCHET/TUBE. . .22
OTHER (SPECIFY). 23

* ENUMERATOR: PLEASE SPECIFY SUB-UNIT CODE FOR ITEM. REFER TO PHOTO AID

MODULE G: FOOD CONSUMPTION OVER PAST ONE WEEK

DE LINE NUMBER	Over the past one week (7 days), did you or others in your household consume any [. . .]? INCLUDE FOOD BOTH EATEN COMMUNALLY IN THE HOUSEHOLD AND THAT EATEN SEPARATELY BY INDIVIDUAL HOUSEHOLD MEMBERS.	G01 YES..1 NO...2>> NEXT ITEM	G02 ITEM CODE	G03 How much in total did your household consume in the past week?		G04 How much came from purchases?		G05 How much did you spend?	G06 How much came from own-production?		G07 How much came from gifts and other sources?		DE LINE NUMBER
				QUANTITY	UNIT	QUANTITY	UNIT	MK	QUANTITY	UNIT	QUANTITY	UNIT	
19	**Roots, Tubers, and Plantains**												19
20	Cassava tubers *		201										20
21	Cassava flour		202										21
22	White sweet potato *		203										22
23	Orange sweet potato *		204										23
24	Irish potato		205										24
25	Potato crisps		206										25
26	Plantain, cooking banana		207										26
27	Cocoyam (*masimbi*)		208										27
28	Other (specify)		209										28
29	**Nuts and Pulses**												29
30	Bean, white		301										30
31	Bean, brown *		302										31
32	Pigeonpea (*nandolo*) *		303										32
33	Groundnut *		304										33
34	Groundnut flour *		305										34
35	Soyabean flour		306										35
36	Ground bean (*nzama*)		307										36
37	Cowpea (*khobwe*)		308										37
38	Macademia nuts		309										38
39	Other (specify)		310										39

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KILOGRAMME 1
50 KG. BAG 2
PAIL (SMALL) 4
PAIL (LARGE) 5
No. 10 PLATE . . .6
No. 12 PLATE . . .7
BUNCH. 8
PIECE. 9
HEAP 10
BALE 11
OX-CART (UNSHELLED) . . 14
LITRE. 15
GRAM 18
MILLILITRE . . . 19
TEASPOON. 20
SATCHET/TUBE. . .22
OTHER (SPECIFY). 23

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MODULE G: FOOD CONSUMPTION OVER PAST ONE WEEK (CONTINUED)

DE LINE NUMBER	Over the past one week (7 days), did you or others in your household consume any [. . .]? INCLUDE FOOD BOTH EATEN COMMUNALLY IN THE HOUSEHOLD AND THAT EATEN SEPARATELY BY INDIVIDUAL HOUSEHOLD MEMBERS.	G01 YES..1 NO...2>> NEXT ITEM	G02 ITEM CODE	G03 How much in total did your household consume in the past week?		G04 How much came from purchases?		G05 How much did you spend?	G06 How much came from own-production?		G07 How much came from gifts and other sources?		DE LINE NUMBER
				QUANTITY	UNIT	QUANTITY	UNIT	MK	QUANTITY	UNIT	QUANTITY	UNIT	
40	**Vegetables**												40
41	Onion *		401										41
42	Cabbage *		402										42
43	*Tanaposi*/Rape *		403										43
44	*Nkhwani* *		404										44
45	Chinese cabbage		405										45
46	Other cultivated green leafy vegetables		406										46
47	Gathered wild green leaves		407										47
48	Tomato *		408										48
49	Cucumber		409										49
50	Pumpkin *		410										50
51	Okra / *Therere* *		411										51
52	Tinned vegetables (specify)		412										52
53	Mushroom		413										53
54	Other vegetables (specify)		414										54
55	**Meat, Fish and Animal products**												55
56	Eggs		501										56
57	Dried fish *		502										57
58	Fresh fish *		503										58
59	Beef		504										59
60	Goat		505										60

CODES FOR UNIT:
KILOGRAMME 1
50 KG. BAG 2
PAIL (SMALL) 4
PAIL (LARGE) 5
No. 10 PLATE 6
No. 12 PLATE 7
BUNCH. 8
PIECE. 9
HEAP 10
BALE 11
OX-CART (UNSHELLED) . . 14
LITRE. 15
GRAM 18
MILLILITRE . . . 19
TEASPOON. 20
SATCHET/TUBE. . .22
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MODULE G: FOOD CONSUMPTION OVER PAST ONE WEEK (CONTINUED)

DE LINE NUMBER	Over the past one week (7 days), did you or others in your household consume any [. . .]? INCLUDE FOOD BOTH EATEN COMMUNALLY IN THE HOUSEHOLD AND THAT EATEN SEPARATELY BY INDIVIDUAL HOUSEHOLD MEMBERS.	G01 YES..1 NO...2>> NEXT ITEM	G02 ITEM CODE	G03 How much in total did your household consume in the past week?		G04 How much came from purchases?		G05 How much did you spend?	G06 How much came from own-production?		G07 How much came from gifts and other sources?		DE LINE NUMBER
				QUANTITY	UNIT	QUANTITY	UNIT	MK	QUANTITY	UNIT	QUANTITY	UNIT	
61	**Meat, Fish and Animal products (Continued)**												61
62	Pork		506										62
63	Mutton		507										63
64	Chicken		508										64
65	Other poultry - guinea fowl, doves, etc.		509										65
66	Small animal – rabbit, mice, etc.		510										66
67	Termites, other insects (eg Ngumbi, caterpillar)		511										67
68	Tinned meat or fish		512										68
69	Smoked fish		513										69
70	Fish Soup/Sauce		514										70
71	Other (specify)		515										71
72	**Fruits**												72
73	Mango *		601										73
74	Banana *		602										74
75	Citrus – naartje, orange, etc.		603										75
76	Pineapple		604										76
77	Papaya		605										77
78	Guava *		606										78
79	Avocado		607										79
80	Wild fruit (masau, malambe, etc.)		608										80
81	Apple		609										81
82	Other fruits (specify)		610										82

CODES FOR UNIT:
KILOGRAMME 1
50 KG. BAG 2
PAIL (SMALL) 4
PAIL (LARGE) 5
No. 10 PLATE 6
No. 12 PLATE 7
BUNCH. 8
PIECE. 9
HEAP 10
BALE 11
OX-CART (UNSHELLED) . . 14
LITRE. 15
GRAM 18
MILLILITRE . . . 19
TEASPOON. 20
SATCHET/TUBE. . .22
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MODULE G: FOOD CONSUMPTION OVER PAST ONE WEEK (CONTINUED)

DE LINE NUMBER	Over the past one week (7 days), did you or others in your household consume any [. . .]? INCLUDE FOOD BOTH EATEN COMMUNALLY IN THE HOUSEHOLD AND THAT EATEN SEPARATELY BY INDIVIDUAL HOUSEHOLD MEMBERS.	G01 YES..1 NO...2>> NEXT ITEM	G02 ITEM CODE	G03 How much in total did your household consume in the past week?		G04 How much came from purchases?		G05 How much did you spend?	G06 How much came from own-production?		G07 How much came from gifts and other sources?		DE LINE NUMBER
				QUANTITY	UNIT	QUANTITY	UNIT	MK	QUANTITY	UNIT	QUANTITY	UNIT	
83	**Cooked Foods from Vendors**												83
84	Maize - boiled or roasted (vendor)		820						✕	✕			84
85	Chips (vendor)		821						✕	✕			85
86	Cassava - boiled (vendor)		822						✕	✕			86
87	Eggs - boiled (vendor)		823						✕	✕			87
88	Chicken (vendor)		824						✕	✕			88
89	Meat (vendor)		825						✕	✕			89
90	Fish (vendor)		826						✕	✕			90
91	Mandazi, doughnut (vendor)		827						✕	✕			91
92	Samosa (vendor)		828						✕	✕			92
93	Meal eaten at restaurant		829						✕	✕			93
94	Other (specify)		830						✕	✕			94
95	**Milk and Milk Products**												95
96	Fresh milk		701										96
97	Powdered milk		702										97
98	Margarine - Blue band		703										98
99	Butter		704										99
100	Chambiko - soured milk		705										100
101	Yoghurt		706										101
102	Cheese		707										102
103	Infant feeding formula (for bottle)		708										103
104	Other (specify)		709										104

CODES FOR UNIT:
KILOGRAMME 1
50 KG. BAG 2
PAIL (SMALL) 4
PAIL (LARGE) 5
No. 10 PLATE 6
No. 12 PLATE 7
BUNCH. 8
PIECE. 9
HEAP 10
BALE 11
OX-CART (UNSHELLED) . . 14
LITRE. 15
GRAM 18
MILLILITRE . . . 19
TEASPOON. 20
SATCHET/TUBE. . .22
OTHER (SPECIFY). 23

MODULE G: FOOD CONSUMPTION OVER PAST ONE WEEK (CONTINUED)

DE LINE NUMBER	Over the past one week (7 days), did you or others in your household consume any [. . .]? INCLUDE FOOD BOTH EATEN COMMUNALLY IN THE HOUSEHOLD AND THAT EATEN SEPARATELY BY INDIVIDUAL HOUSEHOLD MEMBERS.	G01 YES..1 NO...2>> NEXT ITEM	G02 ITEM CODE	G03 How much in total did your household consume in the past week?		G04 How much came from purchases?		G05 How much did you spend?	G06 How much came from own-production?		G07 How much came from gifts and other sources?		DE LINE NUMBER
				QUANTITY	UNIT	QUANTITY	UNIT	MK	QUANTITY	UNIT	QUANTITY	UNIT	
105	**Sugar, Fats, and Oil**												105
106	Sugar		801										106
107	Sugar Cane		802										107
108	Cooking oil *		803										108
109	Other (specify)		804										109
110	**Beverages**												110
111	Tea		901										111
112	Coffee		902										112
113	Cocoa, millo		903										113
114	Squash (Sobo drink concentrate)		904										114
115	Fruit juice		905										115
116	Freezes (flavoured ice)		906										116
117	Soft drinks (Coca-cola, Fanta, Sprite, etc.)		907										117
118	Chibuku(commercial traditional-style beer)		908										118
119	Bottled water		909										119
120	Maheu		910										120
121	Bottled / canned beer (Carlsberg, etc.)		911										121
122	Thobwa		912										122
123	Traditional beer (*masese*)		913										123
124	Wine or commercial liquor		914										124
125	Locally brewed liquor (*kachasu*)		915										125
126	Other (specify)		916										126

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KILOGRAMME 1
50 KG. BAG 2
PAIL (SMALL) . . .4
PAIL (LARGE) . . .5
No. 10 PLATE . . .6
No. 12 PLATE . . .7
BUNCH. 8
PIECE. 9
HEAP 10
BALE 11
OX-CART (UNSHELLED) . . 14
LITRE. 15
GRAM 18
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DE LINE NUMBER	Over the past one week (7 days), did you or others in your household consume any [. . .]? INCLUDE FOOD BOTH EATEN COMMUNALLY IN THE HOUSEHOLD AND THAT EATEN SEPARATELY BY INDIVIDUAL HOUSEHOLD MEMBERS.	G01 YES..1 NO...2>> NEXT ITEM	G02 ITEM CODE	G03 How much in total did your household consume in the past week?		G04 How much came from purchases?		G05 How much did you spend?	G06 How much came from own-production?		G07 How much came from gifts and other sources?		DE LINE NUMBER
				QUANTITY	UNIT	QUANTITY	UNIT	MK	QUANTITY	UNIT	QUANTITY	UNIT	
127	**Spices & Miscellaneous**												127
128	Salt *		810										128
129	Spices		811										129
130	Yeast, baking powder, bicarbonate of soda		812										130
131	Tomato sauce (bottle)		813										131
132	Hot sauce (Nali, etc.)		814										132
133	Jam, jelly		815										133
134	Sweets, candy, chocolates		816										134
135	Honey		817										135
136	Other (specify)		818										136

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KILOGRAMME 1
50 KG. BAG 2
PAIL (SMALL) . . .4
PAIL (LARGE) . . .5
No. 10 PLATE . . .6
No. 12 PLATE . . .7
BUNCH. 8
PIECE. 9
HEAP 10
BALE 11
OX-CART (UNSHELLED) . . 14
LITRE. 15
GRAM 18
MILLILITRE . . . 19
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Whoever she is.
Wherever he lives.
Every child deserves a childhood.
A future.
A fair chance.
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Working day in and day out.
In more than 190 countries and territories.
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for every child