ESTIMATES OF MONETARY
POVERTY AMONG CHILDREN
IN MYANMAR IN 2022

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ABBREVIATIONS

CERP	COVID-19 Economic Relief Plan		P/CwD	Persons/Children with Disabilities
CHE	Catastrophic Health Expenditure		PFM	Public Financial Management
CSO	Central Statistical Organization		PPE	Personal Protective Equipment
EAP	East Asia and Pacific		SDGs	Sustainable Development Goals
ECCD	Early Child-Care and Development		SEE	State Economic Enterprises
FY	Fiscal Year		UHC	Universal Health Coverage
GDP	Gross Domestic Product		WASH	Water, Sanitation and Hygiene
HVS	Household Vulnerability Survey		US	United States
ILO	International Labor Organization		UNDP	United Nations Development Programme
IMF	International Monetary Fund			
MCCT	Maternal and Child Cash-Transfer		WFP	World Food Programme
MLCS	Myanmar Living Conditions Survey		WB	World Bank
MMK	Myanmar Kyat			
MTEF	Mid-Term Expenditure Framework			
MTFF	Mid-Term Fiscal Framework			
NPIs	Non-Pharmaceutical Interventions			
OoPE	Out-of-Pocket Expenditure			
PEFA	Public Expenditure and Financial Accountability			
PF4C	Public Finance for Children			

ACKNOWLEDGEMENT

EXECUTIVE SUMMARY

Since February 2021 many analyses and projections have been made on the overall rate of poverty in Myanmar. Those conducted by the United Nations Development Programme (UNDP) were repeated twice and it estimated that the overall poverty rate roughly doubled by the outset of 2022. Shortly thereafter the World Bank arrived at similar estimates, albeit derived by applying a different methodological approach. Almost two years in, there has not been an update of the existing projections and, more importantly, no analysis has been undertaken on the rate and correlates of child poverty in Myanmar in 2022.

Against this background, the main objective of this exercise is to provide a snapshot of the child monetary poverty for 2022 which has been impacted by a number of factors including the COVID-19 pandemic and the military takeover in Myanmar. The exercise builds on the previous ones conducted by UNDP in April 2021 and October 2021 and brings some of the assumptions used in the analysis up to date. In addition, it provides a simulation exercise in order to assess the extent to which the existing social protection mechanisms aimed at children (and scaled up to the population of the entire country) would act as a buffer against the increase in the child poverty rate.

By 2022, fifty three percent of children in Myanmar were estimated to be living below the national poverty line, an additional 4 million children compared to 2017.

Some important findings emerge from this analysis. First, while the overall poverty rate was expected to increase from 24.8 percent to 49 percent, child poverty was expected to follow a similar trend, rising from 31.2 percent to 53.3 percent. In other words, by 2022 over half of the children in Myanmar were expected to be living below the national poverty line. In addition, this finding also meant that compared to 2017 an additional 4 million children were living below the national poverty line in 2022.

Secondly, the poverty rate was expected to increase not only among the general population and children, but also in different age groups. Thirdly, and consistent with the existing research, this study's new projections suggested a feminization of poverty had occurred in that a higher share of females compared to males would be living below the national poverty line in 2022.

Fourthly, while child poverty was expected to remain high among states and regions that had been traditionally poor (e.g. Rakhine), it is in the urbanized states/regions (e.g. Mandalay, Yangon) that the study expected to see the highest number of children falling below the national poverty threshold.

Fifth, the pre-post analysis on correlates of child poverty (2017 vs 2022) indicates that the same set of correlates (characteristics of the child, household head and of the household) explain child poverty. Children living in households headed by women, large households, households having a member with disabilities and rural households are more likely to be living in poverty. More importantly, the results of the analysis also suggest that a significant correlation exists between monetary and non-monetary poverty indicators both in 2017 and in 2022.

This correlation is not self-evident by any means. For example, in a "welfare state" some sections of the population can be unemployed and without a source of regular income. But they and their families are often covered by state sponsored (free) health and education systems, which means the non-monetary measure of well-being is very different from a monetary measure. For Myanmar, our finding underscores the importance of income of the household as the leading determinant of child well-being through channels such as better health, nutrition and education. With the rapid erosion of jobs and livelihoods due to the twin crises and the absence of any significant social protection mechanism, the situation points to a bleak future with respect to productivity of the future generation.

Finally, our findings suggest that the current level of existing cash transfers have a positive impact on reducing the poverty rate among children who are eligible for the grants. The results of our simulation exercise suggests that among children below the age of 2 and those below the age of 5, the poverty rate is expected to decrease by up to ten percentage points due to cash transfers. The two social protection instruments also have an impact on reducing the poverty of the entire subgroup of children and the younger parents. While the impact of the instruments on the overall poverty rate is somewhat limited, they are expected to raise the average per capita consumptions, particularly among the poorest segment of the population.

Children living in women-headed households and households with a member with disabilities are more likely to be living in poverty in 2022.

INTRODUCTION

The events that ensued in the wake of the military takeover in February 2021 exacerbated the already challenging economic situation, driven by two waves of COVID-19. The civil disobedience movement meant that many workers could not attend their workplaces, effectively bringing the production in many sectors to a halt, in particular manufacturing, which, until the military takeover, had contributed significantly to Myanmar's overall gross domestic product (GDP).

This was coupled with a gradual withdrawal of foreign investors, depleting foreign direct investment, which had supported Myanmar's growth over the last few years. Moreover, initial anecdotal evidence pointed to cash shortages, rising fuel prices and inputs shortages, thus further exacerbating the overall macroeconomic situation in the country. As a result, international financial institutions projected a double-digit contraction of the Myanmar economy for 2021 and only a mild recovery for 2022. More specifically, and as indicated by the International Monetary Fund (IMF, 2022), there was a contraction of 17.9 percent in the real GDP in 2021, followed by anaemic growth of only 2 percent.

In addition, the IMF forecasts that the growth rates between 2022 and 2025 would hardly surpass the threshold of 2 percent. (IMF, 2022). Garment industry output, once a thriving sector and an important engine of national economic growth, has stalled. As a result of the military takeover, many international brands opted to leave the country, citing the military takeover as one of the main reasons for this trend (UNDP, 2022). This also meant the loss of countless jobs (particularly for young women) who had been drafted into the workforce during the 2010s.

Finally, for those who were still fortunate enough to work, the ever rising prices were eating into their precarious incomes. As the IMF suggested, the average inflation rate in the country was expected to reach 16.2 percent (a steep rise from the stable 4 percent inflation achieved during the economic stabilization of the 2010s).

The interplay of the above-mentioned factors is likely to have a negative impact on the socio-economic standing of households. Both the World Bank and the UNDP in their respective analyses estimated that the deterioration in Myanmar's macro-economic situation would result in a doubling of the overall poverty rate (World Bank, 2022b; UNDP, 2021b). More importantly, while the two reports followed a slightly different methodological approach, they arrived at comparable estimates of the poverty rate, thus attesting to the methodological rigour applied in those analyses. However, while there has been sufficient study on the impact of overall poverty, thus far little evidence exists on the overall impact of the military takeover on child poverty.

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OBJECTIVES

Against this background, the main objective of this exercise is to provide a snapshot of the child monetary poverty for 2022 which has been impacted by a number of factors, including the COVID-19 pandemic and the military takeover in Myanmar. The exercise builds on the previous reports conducted by UNDP in April 2021 and October 2021 and brings some of the assumptions used in the analysis up to date. In addition, it provides a simulation exercise in order to assess the extent to which the existing social protection mechanisms aimed at children (and scaled up to the population of the entire country) would act as a buffer against the increase in the child poverty rate.

The report is organized as follows: in the next section, the methodology used in the analysis is elaborated upon. The results are presented in the subsequent section. They are followed by a simulation exercise on the role of the social protection mechanisms in safeguarding child welfare. The final section is the conclusion.

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METHODOLOGY

OVERVIEW OF THE APPROACH

In estimating the most recent child monetary poverty, this study relied on a methodological approach used by UNDP (2021b). Essentially it consists of a two-step analysis that takes into account the effect of two shocks sustained in 2020 and 2021. In doing so, it first assumes that the first shock is a temporary shock and that households can cope with it by employing a variety of coping mechanisms (e.g. relying on savings, selling assets, borrowing from family and friends). The adjusted consumption and income were then used as a baseline to estimate the effect of the shock sustained in 2021. As discussed elsewhere (UNDP, 2021b), the effect of the second shock was expected to last longer and the coping mechanisms that households could use were limited (thus the study applied the permanent income hypothesis, where a unit loss of income was associated with a unit loss of consumption).

DATA SOURCES

The exercise was conducted using the Myanmar Living Conditions Survey (MLCS) 2017 dataset, without making any additional adjustments to the data. The MLCS 2017 is a comprehensive household survey conducted by Myanmar's Central Statistical Organization of the Ministry of Planning, Finance and Industry supported by UNDP and the World Bank. The survey covers the national level, the state/ regional level and the Union Territory of Nay Pyi Taw, including both urban and rural areas. A total of 13,730 households were interviewed, yielding a wide range of information on how people work, how much income they earn, and how they use this income to meet the food, housing, health, education and other needs of their families (CSO, UNDP & World Bank, 2017).

MEASURE OF WELFARE

Household welfare is measured using a consumption aggregate for both theoretical and practical reasons (see Deaton and Zaidi, 2002). Compared to other welfare measures, consumption is a better proxy for long-term average welfare, assuming that households gradually adjust their consumptions over time. In developing countries, consumption is typically easier to measure than income due to the predominance of informal activities (e.g. in agriculture or self-employment). The consumption aggregate is constructed using both market and non-market consumption, such as home production or gifts. The aggregation method included four components of the consumption aggregate: food, non-food, housing and durables.

MODELLING APPROACH

As mentioned above, the modelling approach encompassed two-stage estimations. The assumptions used in the first stage estimation (compared to the original UNDP report) were slightly adjusted and based on the Household Vulnerability Survey (HVS), 2020 survey which was conducted in the second half of 2020. More specifically, the study assumed a loss of income of 49 percent among urban households and 41.5 percent among rural households. The income losses were then mapped to losses in welfare (i.e. consumption) by using the parameter of 0.35.

The set of assumptions that were applied for the second stage are further outlined below and are based on available evidence and the additional review of the following materials that meanwhile have been published:

1. World Bank Economic Monitor, July 2022. Some of the findings from this publication include:

   (a) confirmation that the poverty would be doubling, with close to half of the population living below the national poverty line;

   (b) receding of economic contraction, however minimal, to no growth expected in the short term, which translated into a reduction in household incomes and declining coping mechanisms against food insecurity and poverty (which further justifies the use of the permanent income hypothesis);

   (d) movement of labour away from services and into the agricultural activities (this would mean that while this study could still use the same assumption for loss of income due to wages, the assumption on losses to the agricultural activities could be weaker).

2. The World Food Programme (WFP)/Food and Agriculture Organization of the United Nations (FAO) situation report from August 2022. The

most striking finding from this report is that 20 percent of the population is at an acute risk of malnutrition, which, as in point 1 above, further underlines the usefulness of the permanent income hypothesis (i.e. lack of sufficient coping mechanisms that leads households to economize on food, further leading to negative nutrition outcomes).

3. International Labour Organization (ILO) brief, 2022. The report outlines the losses of jobs as a result of the military takeover, and underlines that while in 2021 there was a projection of 1.8 million job losses, the 2022 projection estimates a total of 1.1 million of jobs lost as a result of the military takeover.

In addition to these documents, the study has also reviewed the background literature published by the UN agencies and beyond that accounts for the rate of unemployment in the overall estimates of the socio-economic impact of shock. An example from Colombia (UNDP, 2020b), the losses in jobs in terms of unemployment are always translated into losses of income due to a reduction in wages. This is the approach adopted in this report.

Against this background, the following assumptions were made and the methodological approach outlined above adopted :

   (i) Fifty percent reduction in income of non-farm businesses. Indeed, as evidenced by the data from the People's Pulse, this is the economic activity that was significantly impacted following the events that unfolded since 1 February 2021. This finding was also supported by the World Bank publications from 2021 and the most recent publication from July 2022.[1]

   (ii) Reduction in wages. In making this assumption, this study was guided by the World Bank economic monitor from 2021

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1. World Bank, Economic Monitor July 2021: Progress Threatened; Resilience Tested, 21 July 2022, https://www.worldbank.org/en/country/myanmar/publication/myanmar-economic-monitor-july-2021-progress-threatened-resilience-tested; World Bank, Myanmar Economic Monitor July 2022: Reforms Reversed (World Bank. IBRD. IDA. East Asia and Pacific, July 2022)

and 2022.[2] The loss of wages as a result of the military takeover were assumed to be equivalent to the contraction of the three main sectors – agriculture, industry and services. More specifically, the following assumptions were made on the losses of wage income:

(i) agriculture – 10.5 percent;
(ii) industry – 20.3 percent; and
(iii) services – 19.9 percent.

It is important to note here that these reductions in wages were applied uniformly, and thus, at the aggregate level, they took into account the overall effect of the economic shock.

In addition, the study took this path to modelling the loss of wages as there is insufficient reliable data on the unemployment patterns per sector. While the ILO brief, "Employment in Myanmar in the first half of 2022: A rapid assessment",[3] indicates the total number of jobs lost as a result of the military takeover, the report does not provide a sector disaggregated account of the job losses.

(iii) The report assumed a reduction in agricultural income of 15 percent. This study revised this assumption compared to the UNDP report from 2021 as, given the World Bank report, Reforms Reversed[4] some of the workers had moved from cities to their village;, thus it was reasonable to expect that they had relied on agriculture to support themselves albeit through subsistence farming.

(iv) Finally, and given the evidence from the World Bank Economic Monitor from July 2022, the study assumed a 30 percent reduction in remittances occurred. Remittances took a significant hit and were likely to fall further, including due to industrial slowdowns, the impact on businesses and disruptions in the banking system.

(v) Unlike the UNDP report, Impact of the twin crises on human welfare in Myanmar,[5] the study has not made any assumptions regarding social transfers as: (a) coverage

of social protection was and remains very low; (b) disbursements by the de facto authorities have been very patchy at best since the military takeover; and (c) the main public schemes, the Maternal and Child Cash Transfer (MCCT) and Social Pension are not poverty-targeted but lifecycle schemes.

These income losses were then aggregated and mapped onto the welfare losses. In doing so, the study assumed a one-for-one relationship (i.e. one kyat loss of income was associated with one kyat loss in consumption). Based on this assumption, the new welfare measure was created and used to derive the poverty rates, which are further discussed below.

In addition to modelling/updating the child poverty figures for 2022, the study also conducted a simple simulation exercise taking into account the protection of the two social protection instruments aimed at children: the MCCT conditional cash transfer (given to pregnant and young mothers and also covering children up to the age of 2) and the child grant, given to children aged below 5 years. The simulation exercise entailed augmenting the newly arrived consumption/welfare aggregate by the maximum amount of a transfer that eligible recipients could receive. The study then repeated the exercise on deriving the poverty rate, while taking this newly calculated welfare/consumption aggregate into account.

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2. Ibid.

3. ILO Brief, "Employment in Myanmar in the first half of 2022: A rapid assessment" (ILO, Geneva, 2022).

4. See Reforms Reversed.

5. UNDP, Impact of the twin crises on human welfare in Myanmar (UNDP, Myanmar, November 2021).

caveats

Some caveats should be noted. First, it is a simulation-based research and as such relies on a set of assumptions. However, the study followed as comprehensive an approach as possible in distilling the final set of premises. Secondly, these were applied to the MLCS 2017. While this could be considered a limitation of the research, a few advantages ensued from using this approach and relying on the MLCS data:

(i) first, the MLCS uses actual data, i.e. data that has been collected from a household survey and not subject to any additional adjustments;

(ii) the study does not have to make assumptions based on the level of growth between 2017-2020 and how that has translated into changes in income and consumption; and

(iii) importantly, as of 2020 no re-calibration of the survey weights is needed in order for the survey sample to be representative of the population. National estimates of child poverty and vulnerability.

RESULTS - ESTIMATES OF MONETARY CHILD POVERTY

NATIONAL ESTIMATES OF CHILD POVERTY AND VULNERABILITY

Figure 1 depicts the overall poverty rate and the child poverty rate, when considering the national poverty statistic. While the overall poverty rate is expected to increase from 24.8 percent to 49 percent, the child poverty figure is also expected to follow a similar trend, rising from 31.2 percent to 53.3 percent. In other words, by 2022 over half of the children in Myanmar were projected to be living below the national poverty line.[6]

Estimated share of the total population and children living below the national poverty line, 2017 and 2022

Child Poverty

53.3%

Child Poverty rate is estimated to increase

from **31.2%** in 2017
to **53.3%** in 2022
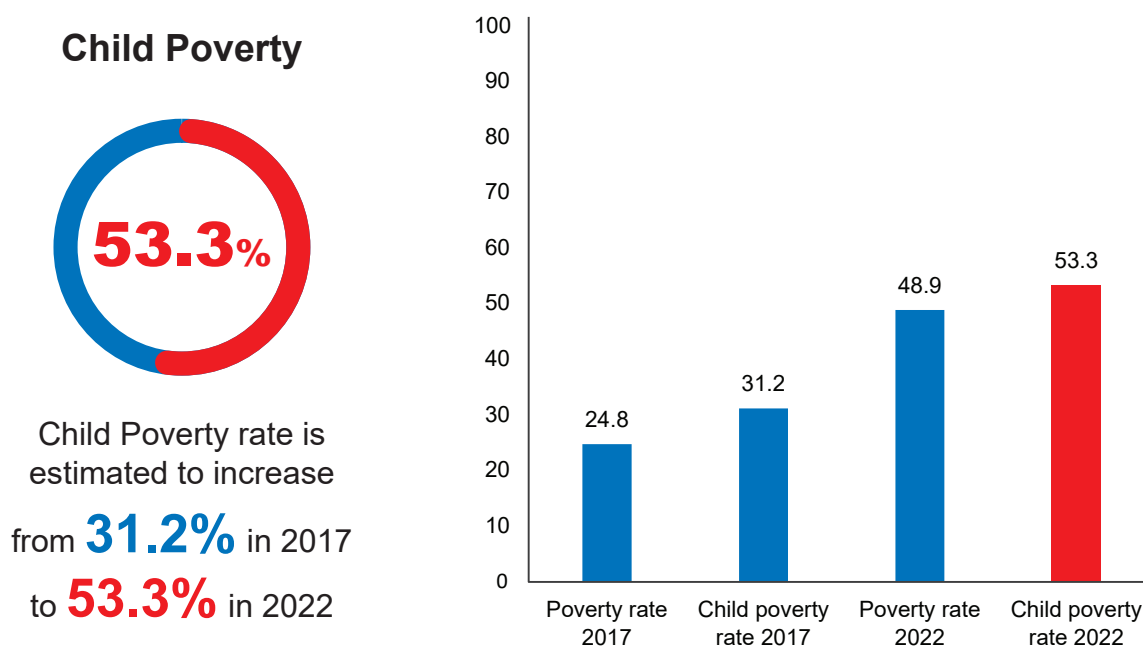
These stark predictions of ever increasing poverty rates, particularly among children, are also evidenced when considering the international poverty line (living on less than US$1.9 and US$3.2, PPP, respectively) in assessing the changes to child poverty. As Figure 2 indicates and consistent with the main findings, by 2022 the share of children living below US$1.9 and US$3.2, PPP was expected to increase manifold. The increase is particularly striking when using the lower international poverty statistic and it suggests that, as a result of the double shock, roughly 15 percent of the children in Myanmar would be living in absolute poverty.

6. It is important to note that, even with this new set of assumptions, the study's findings on poverty rate increases are consistent with those of UNDP (2021a) and UNDP (2021b), while also being higher by several percentage points.

Figure 2. Share of children living below the international poverty lines, US$1.9 and US$3.2 per day, PPP, 2017 and 2022
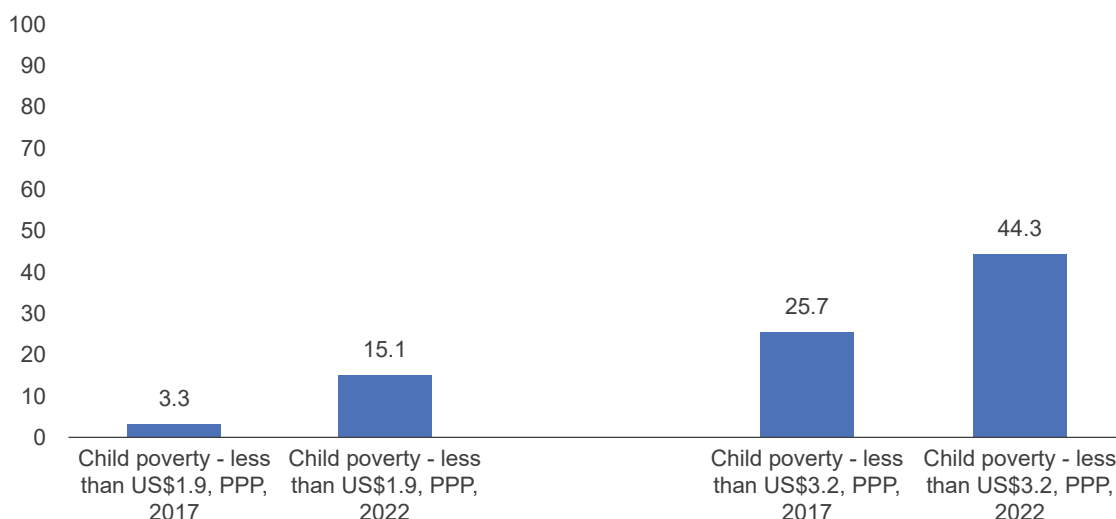
By 2022, both the poverty rate and also the insecurity, or so-called 'vulnerability to poverty', rate were expected to increase. In this particular case, insecurity was defined as living between the national poverty line and 1.5 times the national poverty line. As shown in Figure 3, the share of children who were insecure was expected to decrease, mostly as those who were insecure prior to the shock were expected to move below the national poverty line. More importantly, the share of children not vulnerable to poverty (i.e. secure children) was expected to decrease. As Figure 3 indicates, less than 1 in 5 children are expected to be living in conditions not vulnerable to poverty.

Figure 3. Share of insecure children (living between 1 and 1.5 times below the national poverty line) and secure children (living over 1.5 times the national poverty line), 2017 and 2022

34.7%
Secure Children

34.1%
Insecure Children

31.2%
Children living in poverty

2017

Estimate of Child Poverty

» More than 800,000 children from insecure household will move below the national poverty line

» More than 2 million children are less secured in 2022

17.9%
Secure Children

28.8%
Insecure Children

53.3%
Children living in poverty
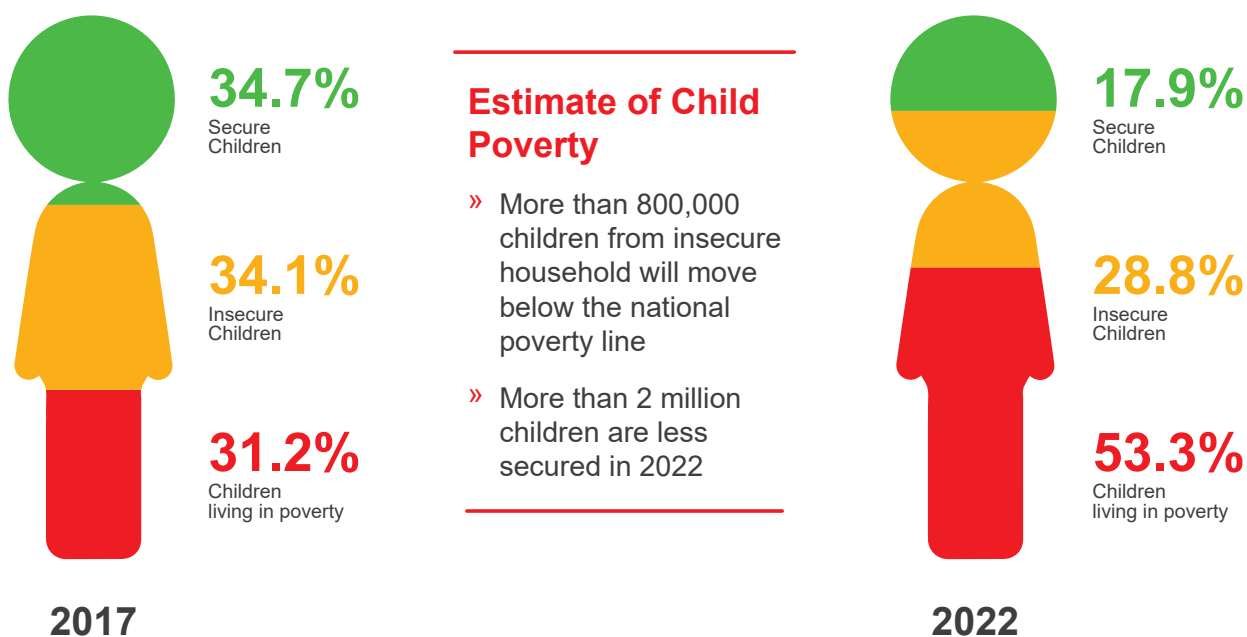
2022

DISAGGREGATED ESTIMATES OF POVERTY

In this section the study further explores some of the disaggregated facets of poverty in Myanmar in both in 2017 and in 2022. The analysis starts by disaggregating poverty, in percentage terms and in the absolute number of people living below the poverty line, by age groups. In this way, the study focuses on three age groups: (i) children; (ii) the working-age population; and (iii) the elderly, i.e. individuals aged 65 and over.

The results of the analysis are presented in Table 1. First, in addition to child poverty, the poverty rate for the rest of the age groups is expected to rise significantly. In fact, as Table 1 shows, the poverty rate is expected to double both among the working-age population and among the elderly. The second part of Table 1 shows the increase in the absolute number of people in respective age groups living below the national poverty line .

As evidenced from the bottom part of the table, the absolute number of people living below the national poverty line roughly doubled between 2017 and 2022. By 2022, 27.4 million people Myanmar were expected to be living below it.

Table 1. Disaggregated poverty rates by age groups, in percentage and in absolute numbers

Share of population living below the national poverty line			
2017		2022	
Below 18	31.2	Below 18	53.3
Working age 15-64	22.4	Working age 15-64	47.4
Elderly (over 65)	21.2	Elderly (over 65)	44.4

Absolute number of people living below the poverty line, in millions			
2017		2022	
Below 18	4.7	Below 18	9.9
Working age 15-64	7.0	Working age 15-64	16.1
Elderly (over 65)	0.7	Elderly (over 65)	1.4

A feminization of poverty means a higher share of females compared to males are living below the national poverty line in 2022.

While in 2017 the share of males and females living below the national poverty line was roughly equal (a difference of less than a percentage point), the results of the 2022 analysis revealed a certain degree of 'feminization' of poverty.

In other words, by 2022, more females than males were expected to be living below the national poverty line (see Figure 4 below). Some recent World Bank and UNDP (World Bank, 2022b; UNDP, 2021b) research alluded to this trend.

Figure 4. Share of males and females living below the national poverty line, 2017 and 2022

Increased to **51%** in 2022

24% of Female living below the national poverty line in 2017
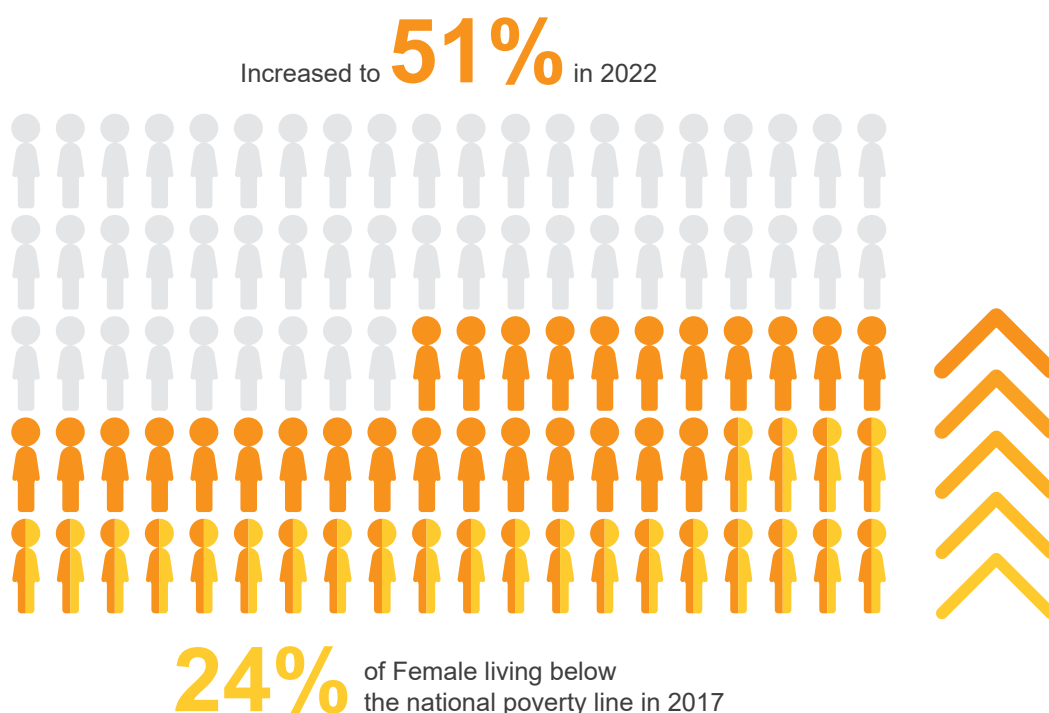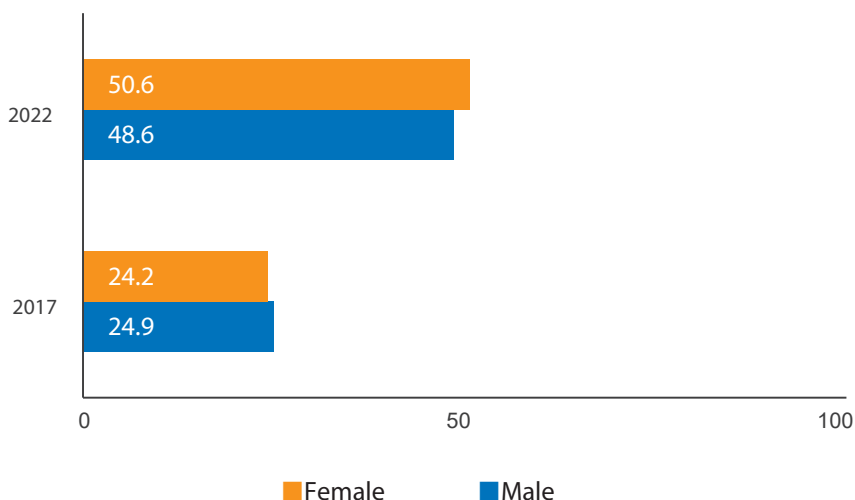
As in any other large, heterogenous country, the poverty rate in Myanmar fluctuates by state and region. It is thus important to note the geographical variation in child poverty in the country. As shown in Figure 5, child poverty is expected to increase across all of the states and regions in Myanmar. However, as Figure 5 further depicts, the impact across states and regions differs. For example, while child poverty is expected to still be highest in Chin and Rakhine due to higher baseline poverty, the child poverty rates are expected to more than double in places like Yangon and Mandalay. Inter alia, this is a testimony of the higher impact of the shock on urban areas, particularly during the initial months.

Figure 5. Child poverty by state/region, in percentages, 2017 and 2022
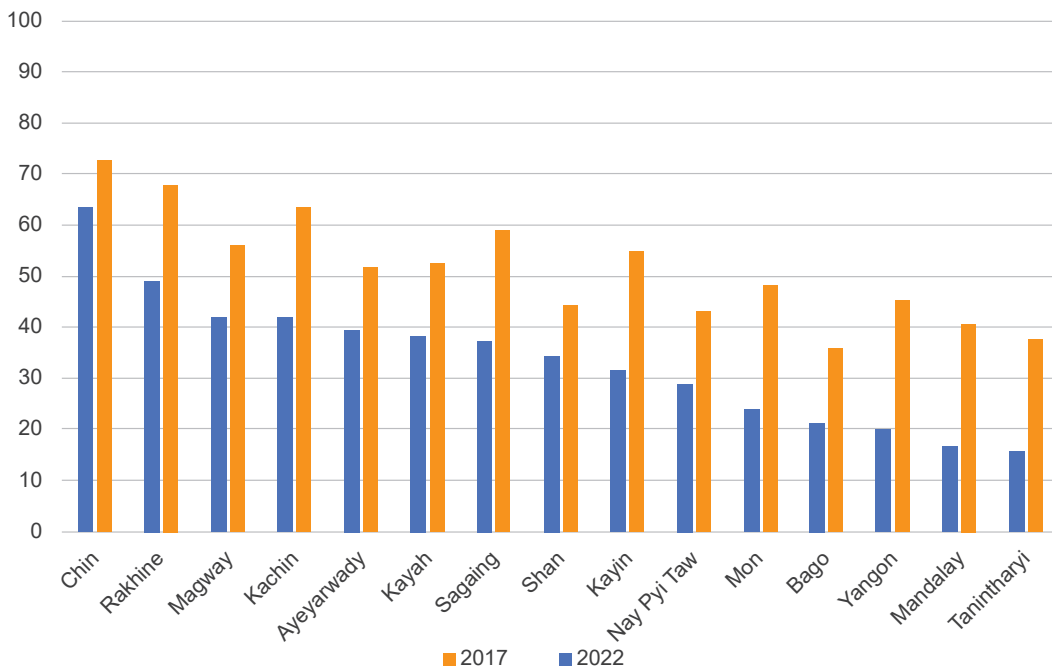
The results of the exercise were confirmed when assessing the absolute number of children living below the national poverty line in 2017 and 2022. The results are captured in Table 2 below. As Table 2 suggests, the absolute number of children living below the national poverty line was expected to increase significantly. In regions such as Sagaing, for example, by 2022, one million children were projected to be living in poverty.

A similar high number of children living in poverty was also projected in Ayeyarwady and Yangon. However, as the table suggests, the highest increases in the absolute number of children in poverty are estimated to be concentrated in the more urban regions, such as Yangon and Mandalay. In Yangon, for example, the number of poor children was expected to increase by 670,000, which roughly involved a tripling of the number of poor children since 2017. Similar high increases were also projected in Mandalay.

Table 2. Number of children living below the national poverty line, in millions, 2017 and 2022

State/Region	Child poverty 2017	Child poverty 2022	Changes between 2017 and 2022
Kachin	0.20	0.36	0.16
Kayah	0.04	0.07	0.03
Kayin	0.20	0.38	0.18
Chin	0.13	0.18	0.05
Sagaing	0.56	1.08	0.52
Tanintharyi	0.08	0.22	0.14
Bago	0.33	0.59	0.26
Magway	0.44	0.73	0.29
Mandalay	0.25	0.78	0.53
Mon	0.14	0.33	0.19
Rakhine	0.47	0.84	0.37
Yangon	0.38	1.05	0.67
Shan	0.63	0.93	0.30
Ayeyarwady	0.74	1.21	0.47
Nay Pyi Taw	0.10	0.18	0.08

FACTORS ASSOCIATED WITH CHILD POVERTY

In order to ascertain the most common correlates of child poverty in the country, the study adopted the standard logit model approach. A binary variable (0-1, poor-non poor) was used as a dependent variable and regressed on a set of independent variables capturing the following elements:

(i) the characteristics of the child (age, gender);

(ii) characteristics of the household head (age, gender, employment status, education attainment);

(iii) characteristics of the household (access to water, access to sanitation, location). State/region dummies were also included in the modelling approach. In this section the main results from the exercise are discussed.

Baseline child poverty, based on MLCS

It is important to note that even in the baseline scenario (MLCS data), child poverty was higher than the overall poverty rate (see Appendix Table A1 for example). This was the case irrespective of whether the entire sample of children or whether the three separate age groups of children (0-5, 6-12, 13-17) were taken into consideration.

In addition, existing evidence also points to a few characteristics that explain the overall child poverty in the country. Our analysis of the correlates of child poverty based on MLCS data indicates that the characteristics of the household head (e.g. education

level, age) and household characteristics (e.g. urban vs rural, household size) are significant predictors of child poverty in the country (Appendix Table A2). More importantly, the results conducted on MLCS suggest that there is a significant correlation between monetary and non-monetary child poverty.

More specifically, children living in households who have an improved water source are less likely to be living in poverty. Similarly, children living in households who practice open defecation are two times more likely to be living in poverty, relative to those who have access to improved sanitation.

Correlates of child poverty, 2022

The results of the logit model, based on the most recent estimates of child poverty, are included in Table 3 and they highlight the following. First, as regards

the characteristics of the child, the study found there was a higher probability of children with disabilities being poor, although only for those aged 5 to 12

years. Secondly, the link between child poverty and the characteristics of the household head followed the same pattern as that established in the baseline estimates.

In addition, and consistent with the baseline estimates, children living in larger households would be more likely to be living below the national poverty line. In addition, children living in households having a member with disabilities were more likely to be living in poverty by 2022. The only exception to this was the group of 0-5 year-old children (possibly as these are younger households).

The exercise also points to the significant link between monetary and non-monetary poverty. For example, children living in households with an improved water source were 0.8 times less likely to be living in poverty. Similarly, children living in households who practice open defecation were roughly two times more likely to be living in poverty by 2022 (relative to those that did not). Finally, as expected, urban children are still less likely to be living in poverty, relative to rural children.

> In addition, children living in households having a member with disabilities were more likely to be living in poverty by 2022.

Table 3. Correlates of child poverty, national poverty line, logit model, odds ratios

	Entire sample	Age group		
		Age 5 and below	6 to 12	13 to 17
Characteristics of the child				
Girl	1.034	1.055	1.065	0.991
	(0.0395)	(0.0749)	(0.0642)	(0.0691)
With disabilities	1.010	0.576	1.270	0.920
	(0.198)	(0.362)	(0.366)	(0.288)
Characteristics of the household head (relative to over 80)				
Less than 30	2.726***	2.008*	1.800*	3.731***
	(0.518)	(0.787)	(0.552)	(1.567)
Aged 30 to 39	2.367***	1.614	2.158***	3.014***
	(0.412)	(0.614)	(0.575)	(0.893)
Aged 40 to 49	1.809***	1.374	1.658*	2.372***
	(0.312)	(0.521)	(0.438)	(0.682)
Aged 50 to 59	1.956***	1.295	1.933**	2.577***
	(0.334)	(0.486)	(0.511)	(0.734)
Aged 60 to 69	1.846***	1.253	1.584*	2.694***
	(0.314)	(0.469)	(0.415)	(0.771)
Aged 70 to 79	1.794***	1.434	1.665*	2.038**
	(0.331)	(0.571)	(0.473)	(0.637)
Female	1.314***	1.283**	1.367***	1.300***
	(0.0759)	(0.141)	(0.126)	(0.131)
(Relative to no education)				
Below primary	0.936	0.888	0.961	1.007
	(0.0627)	(0.109)	(0.101)	(0.126)
Primary	0.666***	0.594***	0.638***	0.803
	(0.0471)	(0.0765)	(0.0707)	(0.108)
Below secondary	0.590***	0.500***	0.640***	0.633***
	(0.0526)	(0.0812)	(0.0899)	(0.106)

	Entire sample	Age group		
		Age 5 and below	6 to 12	13 to 17
(Relative to no education)				
Secondary	0.321***	0.236***	0.358***	0.402***
	(0.0467)	(0.0632)	(0.0793)	(0.114)
Tertiary	0.331***	0.357***	0.403***	0.214***
	(0.0402)	(0.0742)	(0.0769)	(0.0540)
Employed	1.230***	1.288**	1.259**	1.134
	(0.0703)	(0.134)	(0.115)	(0.118)
Characteristics of the household				
Household having a member with disabilities	1.330***	1.198	1.247*	1.609***
	(0.0953)	(0.167)	(0.141)	(0.203)
Household size	1.204***	1.202***	1.209***	1.198***
	(0.0140)	(0.0269)	(0.0225)	(0.0246)
Urban	0.839***	0.875	0.858**	0.790***
	(0.0374)	(0.0730)	(0.0607)	(0.0638)
Household with improved water source	0.800***	0.816**	0.788***	0.793**
	(0.0409)	(0.0759)	(0.0640)	(0.0747)
Households practicing open defecation	1.998***	1.994***	2.449***	1.549***
	(0.164)	(0.290)	(0.336)	(0.225)
Number of observations	20556	6248	8292	6016
Pseudo R-sq	0.079	0.085	0.086	0.074
Exponentiated coefficients; Standard errors in parentheses				
="* p<0.1	** p<0.05	*** p<0.01"		
The models also included state/region dummies (not shown)				

In addition to presenting the main descriptive statistics, we have also repeated the logit modelling exercise on the correlates of poverty, while using the poverty assessed against the two international poverty lines as a benchmark. The results are presented in the Appendix in Tables A2 and A3 and are consistent with the main findings from the analysis.

THE IMPACT OF THE SOCIAL PROTECTION MECHANISMS
IN REDUCING CHILD POVERTY IN MYANMAR

The social protection system in Myanmar is still in its infancy. The country spends much less on social protection measures compared to its peers from the wider Southeast Asia region. Nevertheless, there have recently been some positive signals in terms of laying the foundation of a proper social protection system in the country. In that respect, two flagship programmes have recently been established which are implemented by the Ministry of Social Welfare, Relief and Resettlement: the MCCT and Social Pension.

Until the military takeover, the MCCT was implemented in five geographic areas: Chin, Kayah, Kayin, Naga and Rakhine. In addition, and as per the national costed social protection plan, the programme was expected to be rolled out in the rest of the states and regions (Costed Social Protection Sector Plan, 2019).

In terms of provisions of the current cash transfers, each MCCT pregnant woman/mother receives MMK45,000 quarterly (MMK15,000 per month). Social Pension is providing MMK10,000 to individuals 85 years and above in all states and regions. The Social Pension has around 200,000 beneficiaries. For both the MCCT and the Social Pension, the government provided an additional top-up of MMK30,000 (one-off), in addition to a regular quarterly amount by end of May/early June in 2020.

In addition to these, the authorities were also considering implementing a child allowance of MMK15,000 per month to be given to households with children aged less than 5 years of age. It is important to note that some changes to the programme have been observed since the initial inception phase. The overall amount of money given to eligible children has increased to MMK25,000 per month. This is the amount used in this analysis, adjusted to 2017 real terms in order to conduct the simulation exercise.

> Among children under 2 years and those under 5 years, the poverty rate is expected to decrease by up to ten percentage points due to cash transfers (results of UNICEF simulation exercise).

Against this background, the study conducted a simulation exercise, which involved the following analyses: (i) first, on the role of the social protection instruments in reducing child poverty for children eligible for the programmes; (ii) secondly, on the spill-over effects of the social protection instruments onto other people living in the households with eligible children; and (iii) thirdly, on the effect of the above-mentioned social protection instruments on the overall poverty rate.

Table 4 captures the results of the exercise when only considering the children eligible for the two separate social protection mechanisms: (i) MCCT (which is given to pregnant women and mothers of children up to the age of 2); and (ii) the child grant, given to all children below the age of 5. The overall message in the table is that the selected social protection measures had a sizeable effect in reducing the poverty rate among eligible children.

More specifically, and as per our simulation exercise, the poverty rate among eligible children for MCCT is expected to drop by 6 percentage points, while a similar reduction is also registered for children eligible for the child grant. The effect is even larger if all eligible children in the household receive both types of social assistance (in that case, the reduction of poverty rate is

expected to be over 10 percentage points). An important point – this exercise only takes the poverty rate of eligible children into account, i.e. those below 2 years and those below 5 years.

Furthermore, the same exercise was repeated taking into account the poverty gap and a similar reduction in the child poverty gap in selected child-age categories was noted (Table 5).

Figure 6. Increase in the average per person household consumption, by quintile (percent)
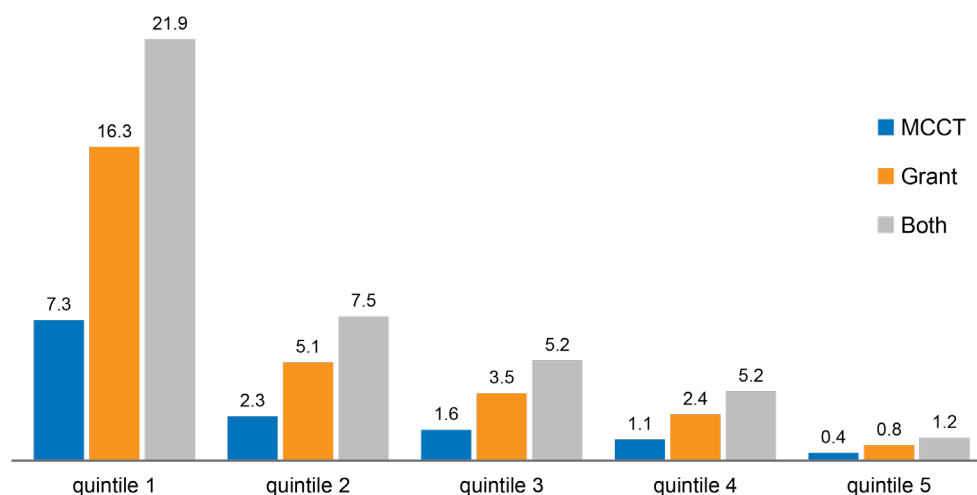
Table 4. The effect of selected social protection measures in reducing child poverty headcount (percent)

	Child poverty headcount (baseline, 2022)	Child poverty headcount (effect of only MCCT)	Child poverty headcount (effect of MCCT and child grant)
Children below the age of 2	56.4	50.0	41.1
Children below the age of 5	55.6	48.1	43.7

Table 5. The effect of selected social protection measures in reducing child poverty gap (percent)

	Child poverty gap (baseline, 2022)	Child poverty gap (effect of only MCCT)	Child poverty gap (effect of MCCT and child grant)
Children below the age of 2	26.3	21.6	16.2
Children below the age of 5	25.1	19.2	16.9

Table 6. Poverty rate (poverty headcount) among age groups living with children eligible for the Social Protection instruments (percent)

Age group	Poverty headcount after considering the impact of the military takeover	Poverty headcount (effect of only MCCT)	Poverty headcount (effect of only child grant)	Poverty headcount (effect of both MCCT and child grant)
0 to 4	56.5	52.1	48.2	43.3
5 to 9	54.4	52.8	50.0	48.2
10 to 14	53.5	52.2	51.4	50.5
15 to 19	50.9	50.2	49.6	48.6
20 to 24	50.7	49.4	48.3	46.7
25 to 29	49.5	47.6	45.5	43.0
30 to 34	49.5	47.6	45.6	43.6
35 to 39	48.9	47.3	45.3	43.4
40 to 44	46.5	45.7	44.6	43.7
45 to 49	44.1	43.6	42.8	42.3
50 to 54	45.3	44.8	44.4	43.9
55 to 59	45.3	45.0	44.5	43.6
60 to 64	44.1	43.7	43.1	42.2
65 to 69	44.1	43.4	42.9	42.3
70 to 74	43.5	42.8	41.6	40.4
75 to 79	44.5	44.5	44.1	43.2
80 to 84	46.1	45.4	44.5	44.0
Over 85	48.4	47.8	47.8	47.3

Table 7. Poverty gap among age groups living with children eligible for the Social Protection instruments (percent)

Age group	Poverty headcount after considering the impact of the military takeover	Poverty headcount (effect of only MCCT)	Poverty headcount (effect of only child grant)	Poverty headcount (effect of both MCCT and child grant)
0 to 4	24.5	22.3	19.6	17.0
5 to 9	23.2	22.1	20.2	19.2
10 to 14	22.7	22.0	21.0	20.5
15 to 19	22.8	22.2	21.7	21.2
20 to 24	24.2	23.1	22.4	21.6
25 to 29	22.6	21.2	19.8	18.7
30 to 34	23.5	22.3	20.9	19.8
35 to 39	23.5	22.5	21.4	20.5
40 to 44	22.2	21.6	20.8	20.3
45 to 49	23.3	23.0	22.4	22.1
50 to 54	21.7	21.3	20.9	20.5
55 to 59	21.7	21.2	20.7	20.2
60 to 64	18.3	17.7	17.3	16.8
65 to 69	23.3	22.8	22.2	21.7
70 to 74	16.7	16.2	15.7	15.3
75 to 79	22.9	22.4	21.9	21.4
80 to 84	18.4	18.0	17.5	17.2
Over 85	22.5	22.1	21.7	21.3

While the overall reduction in the poverty rate is somewhat smaller – a couple of percentage points - as illustrated in Figure 6, the receipt of this type of social protection leads to a significant increase in the average per person consumption levels, particularly among the poorest quintile of the population.

In Tables 6 and 7, the effect of the two above-mentioned social protection measures on the poverty rate of the various age groups that are grouped in five year brackets are analysed. First, the study expected the impact to be the most significant on child poverty, including all children up to age of 18. Secondly, the study found some impact was made on reducing the poverty rate among individuals of other age groups, although it was slightly less. Importantly, however, the study noted a somewhat sizeable reduction in poverty rates of those in their late 20s and early 30s, which includes younger parents.

CONCLUSION

As the introduction of this study noted, the objective of this exercise was threefold:

(i) to determine the child poverty rate in Myanmar;

(ii) to estimate the overall level of child poverty in 2022 and to assess the changes in child poverty between 2017 and 2022; and

(iii) to model/simulate how the social protection measures can mitigate the rising poverty rates in the country, particularly among children.

Overall, the study found that child poverty in the country was higher compared to the overall poverty rate. In other words, as previously stipulated in the MLCS Socio-economic report, the study notes a degree of intergenerational transmission of poverty in the country, in that it is higher in households with children. The poverty rate was similar across different age groups, although it varied between urban and rural children and also across states.

Furthermore, the study estimated that by 2022, the child poverty rate was expected to rise significantly, in line with previous World Bank and UNDP predictions. It considered various transmission mechanisms, different magnitudes of the impact and adopted a new set of assumptions, building on similar exercises conducted by UNDP (2021a) and UNDP (2021b). As per the findings, both the above-mentioned findings and the current ones, one can ascertain that the effects of the crisis would be more profound on households with children. More specifically, the study estimated that over half the children in Myanmar would be living in poverty by 2022.

Against this background, what could be the role of existing and other planned cash transfers as buffers? In this particular case, the study focused on two specific cash transfers – the MCCT and the child allowance grant. The study's findings suggest that the current level of existing cash transfers does have a direct impact on reducing the poverty rate among children who are directly eligible for the grants. More specifically, the results of the simulation exercise suggested that among children below the age of 2 and those below the age of 5, the poverty rate was expected to decrease by up to 10 percentage points.

The two social protection instruments also have an impact on reducing the poverty of the entire subgroup of children. Moreover, they have an additional, albeit limited, spill-over effect on the poverty rate of other age groups. Nevertheless, the two instruments also have a significant impact on increasing the overall per capita household expenditure, particularly among the poorest quintile of the population.

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APPENDIX

TABLE A1

Child poverty rate (headcount) based on the national poverty line, by State/Region and Age group

	Below age of 18	Below age of 5	Aged 5 to 10	Aged 11 to 17
Union	31.2	33.4	32.6	28.9
Kachin	41.7	43.3	43.1	39.4
Kayah	38.2	35.8	37.4	40.7
Kayin	31.4	32.6	34.1	28.5
Chin	63.4	64.4	61.1	64.9
Sagaing	37.4	37.7	38.4	36.4
Tanintharyi	15.6	16.4	15.8	15.1
Bago	21.2	23.2	22.4	18.9
Magway	41.8	46.4	44.9	37.3
Mandalay	16.5	20.9	16.0	14.7
Mon	23.8	26.6	22.3	23.1
Rakhine	49.1	54.1	51.6	44.5
Yangon	20.1	19.9	21.8	19.0
Shan	34.5	35.8	36.0	32.1
Ayeyarwady	39.6	43.2	42.0	35.5
Nay Pyi Taw	28.8	31.8	25.4	30.1
Rural	36.4	38.7	37.8	34.0
Urban	15.4	17.3	15.6	14.1

TABLE A2

Logit model – correlates of child poverty, baseline, based on MLCS 2017

	Entire sample	Age group		
		Age 5 and below	6 to 12	13 to 17
Characteristics of the child				
Girl	0.995	0.944	0.999	1.056
	(0.0431)	(0.0743)	(0.0679)	(0.0855)
With disabilities	0.970	1.190	1.042	0.817
	(0.209)	(0.790)	(0.330)	(0.279)
Characteristics of the household head (relative to over 80 years of age)				
Less than 30 years	2.187***	2.490**	1.607	2.536*
	(0.470)	(0.983)	(0.559)	(1.236)
Aged 30 to 39	2.007***	2.161**	1.838**	2.124**
	(0.397)	(0.819)	(0.567)	(0.739)
Aged 40 to 49	1.600**	2.094*	1.498	1.580
	(0.313)	(0.795)	(0.457)	(0.532)
Aged 50 to 59	1.532**	1.481	1.393	1.870*
	(0.297)	(0.556)	(0.424)	(0.623)
Aged 60 to 69	1.567**	1.736	1.312	1.841*
	(0.303)	(0.651)	(0.396)	(0.615)
Aged 70 to 79	1.333	1.979*	0.985	1.366
	(0.280)	(0.789)	(0.325)	(0.501)
Female	1.098	1.162	1.154	1.018
	(0.0709)	(0.139)	(0.123)	(0.116)
(Relative to no education)				
Below primary	0.719***	0.744**	0.737***	0.702***
	(0.0497)	(0.0898)	(0.0794)	(0.0952)

	Entire sample	Age group		
		Age 5 and below	6 to 12	13 to 17
Primary	0.478***	0.423***	0.498***	0.536***
	(0.0358)	(0.0552)	(0.0581)	(0.0791)
Below secondary	0.317***	0.253***	0.356***	0.353***
	(0.0337)	(0.0475)	(0.0602)	(0.0715)
Secondary	0.0950***	0.0660***	0.120***	0.105***
	(0.0188)	(0.0218)	(0.0340)	(0.0491)
Tertiary	0.0709***	0.0780***	0.0840***	0.0426***
	(0.0171)	(0.0311)	(0.0328)	(0.0186)
Employed	0.997	1.126	0.972	0.910
	(0.0633)	(0.126)	(0.0994)	(0.109)
Characteristics of the household				
Household having a member with disabilities	1.299***	1.142	1.222	1.620***
	(0.106)	(0.179)	(0.156)	(0.238)
Household size	1.291***	1.298***	1.315***	1.260***
	(0.0160)	(0.0303)	(0.0262)	(0.0277)
Urban	0.472***	0.506***	0.458***	0.456***
	(0.0268)	(0.0520)	(0.0420)	(0.0471)
Household with improved water source	0.601***	0.556***	0.635***	0.609***
	(0.0326)	(0.0540)	(0.0549)	(0.0619)
Household practicing open defecation	2.644***	2.197***	3.076***	2.672***
	(0.202)	(0.302)	(0.369)	(0.385)
Number of observations	20556	6248	8292	6016
Pseudo R-sq	0.154	0.169	0.159	0.143
Exponentiated coefficients; Standard errors in parentheses				
="* p<0.1	** p<0.05	*** p<0.01"		
The models also control for state/region dummies (not shown)				

TABLE A3

Correlates of child poverty using the international poverty line of US$1.9 per day, PPP

	Entire sample	Age group		
		Age 5 and below	6 to 12	13 to 17
Characteristics of the child				
Girl	1.021	0.968	1.082	1.004
	(0.0510)	(0.0874)	(0.0859)	(0.0935)
With disabilities	0.641	0.647	0.480	0.732
	(0.179)	(0.532)	(0.248)	(0.279)
Characteristics of the household head (relative to over 80)				
Less than 30	1.222	0.802	1.173	1.191
	(0.297)	(0.358)	(0.457)	(0.753)
Aged 30 to 39	1.482*	1.042	1.321	2.223**
	(0.322)	(0.441)	(0.436)	(0.884)
Aged 40 to 49	1.291	0.875	1.275	1.801
	(0.277)	(0.369)	(0.416)	(0.699)
Aged 50 to 59	1.387	0.854	1.515	1.874
	(0.293)	(0.351)	(0.490)	(0.720)
Aged 60 to 69	0.976	0.617	0.971	1.297
	(0.207)	(0.255)	(0.315)	(0.504)
Aged 70 to 79	1.553*	0.993	1.572	2.159*
	(0.351)	(0.438)	(0.550)	(0.878)
Female	1.222***	1.269*	1.281**	1.116
	(0.0900)	(0.170)	(0.154)	(0.150)
(Relative to no education)				
Below primary	0.918	0.987	1.011	0.813
	(0.0780)	(0.145)	(0.140)	(0.131)
Primary	0.749***	0.735**	0.829	0.702**
	(0.0674)	(0.113)	(0.122)	(0.120)

	Entire sample	Age group		
		Age 5 and below	6 to 12	13 to 17
Below secondary	0.777**	0.752	0.968	0.630**
	(0.0890)	(0.148)	(0.178)	(0.142)
Secondary	0.586***	0.489*	0.767	0.524
	(0.117)	(0.186)	(0.226)	(0.208)
Tertiary	0.547***	0.658	0.768	0.270***
	(0.0887)	(0.178)	(0.189)	(0.0973)
Employed	1.153**	1.195	1.104	1.135
	(0.0818)	(0.142)	(0.125)	(0.160)
Characteristics of the household				
Household having a member with disabilities	0.887	0.798	0.794	1.114
	(0.0817)	(0.140)	(0.118)	(0.179)
Household size	1.118***	1.125***	1.137***	1.088***
	(0.0138)	(0.0276)	(0.0226)	(0.0230)
Urban	1.215***	1.315**	1.145	1.226*
	(0.0734)	(0.141)	(0.112)	(0.137)
Household with improved water source	0.963	1.133	0.976	0.780*
	(0.0677)	(0.141)	(0.111)	(0.101)
Household practicing open defecation	1.606***	1.955***	1.581***	1.278
	(0.147)	(0.294)	(0.235)	(0.250)
Number of observations	20556	6248	8292	6016
Pseudo R-sq	0.028	0.041	0.029	0.035
Exponentiated coefficients; Standard errors in parentheses				
=″* p<0.1				
The models also control for state/region dummies (not shown)				

TABLE A4

Correlates of child poverty using the international poverty line of US$3.2, PPP

	Entire sample	Age group		
		Age 5 and below	6 to 12	13 to 17
Characteristics of the child				
Girl	1.013	0.986	1.057	0.999
	(0.0383)	(0.0688)	(0.0628)	(0.0696)
With disabilities	0.998	0.447	1.445	0.835
	(0.189)	(0.271)	(0.408)	(0.254)
Characteristics of the household head (relative to over 80)				
Less than 30	2.138***	1.897*	1.315	3.750***
	(0.403)	(0.702)	(0.402)	(1.632)
Aged 30 to 39	2.173***	1.762	2.007***	2.650***
	(0.374)	(0.630)	(0.533)	(0.811)
Aged 40 to 49	1.715***	1.561	1.598*	2.074**
	(0.292)	(0.556)	(0.421)	(0.617)
Aged 50 to 59	1.886***	1.497	1.849**	2.352***
	(0.318)	(0.527)	(0.486)	(0.692)
Aged 60 to 69	1.995***	1.597	1.774**	2.666***
	(0.336)	(0.561)	(0.463)	(0.787)
Aged 70 to 79	1.574**	1.310	1.574	1.760*
	(0.287)	(0.494)	(0.445)	(0.563)
Female	1.307***	1.403***	1.340***	1.219**
	(0.0744)	(0.151)	(0.122)	(0.123)
(Relative to no education)				
Below primary	1.009	1.019	1.083	0.960
	(0.0651)	(0.117)	(0.110)	(0.119)
Primary	0.743***	0.676***	0.769**	0.798*
	(0.0511)	(0.0819)	(0.0832)	(0.106)

	Entire sample	Age group		
		Age 5 and below	6 to 12	13 to 17
Below secondary	0.675***	0.583***	0.723**	0.725*
	(0.0592)	(0.0917)	(0.100)	(0.121)
Secondary	0.358***	0.287***	0.384***	0.441***
	(0.0546)	(0.0820)	(0.0881)	(0.128)
Tertiary	0.409***	0.448***	0.516***	0.247***
	(0.0511)	(0.0947)	(0.100)	(0.0646)
Employed	1.173***	1.252**	1.216**	1.044
	(0.0655)	(0.126)	(0.109)	(0.107)
Characteristics of the household				
Household having a member with disabilities	1.264***	1.257*	1.114	1.521***
	(0.0884)	(0.173)	(0.121)	(0.190)
Household size	1.199***	1.195***	1.212***	1.185***
	(0.0130)	(0.0249)	(0.0212)	(0.0227)
Urban	0.895**	0.880	0.979	0.812**
	(0.0404)	(0.0741)	(0.0701)	(0.0668)
Household with improved water source	0.825***	0.801**	0.832**	0.836*
	(0.0414)	(0.0728)	(0.0663)	(0.0781)
Household practicing open defecation	1.889***	1.853***	2.091***	1.703***
	(0.139)	(0.243)	(0.244)	(0.233)
Number of observations	20556	6248	8292	6016
Pseudo R-sq	0.065	0.074	0.070	0.060
Exponentiated coefficients; Standard errors in parentheses				
="* p<0.1				
The models also control for state/region dummies (not shown)				

TABLE A5

Correlates of child insecurity

	Entire sample	Age group		
		Age 5 and below	6 to 12	13 to 17
Characteristics of the child				
Girl	1.015	1.074	0.977	1.001
	(0.0413)	(0.0821)	(0.0625)	(0.0742)
With disabilities	0.825	1.199	0.569	1.029
	(0.184)	(0.723)	(0.205)	(0.344)
Characteristics of the household (relative over the age of 80)				
Less than 30	0.505***	0.375***	0.757	0.762
	(0.0953)	(0.138)	(0.238)	(0.322)
Aged 30 to 39	0.492***	0.425**	0.541**	0.471***
	(0.0846)	(0.152)	(0.146)	(0.137)
Aged 40 to 49	0.615***	0.511*	0.716	0.542**
	(0.104)	(0.182)	(0.191)	(0.152)
Aged 50 to 59	0.496***	0.513*	0.506**	0.441***
	(0.0837)	(0.181)	(0.135)	(0.123)
Aged 60 to 69	0.512***	0.481**	0.648	0.372***
	(0.0867)	(0.170)	(0.171)	(0.106)
Aged 70 to 79	0.606***	0.509*	0.586*	0.691
	(0.110)	(0.191)	(0.167)	(0.209)
Characteristics of the household head				
Female	0.721***	0.684***	0.762***	0.689***
	(0.0455)	(0.0857)	(0.0749)	(0.0757)
(Relative to no education)				
Below primary	1.056	1.100	0.966	1.136
	(0.0757)	(0.151)	(0.105)	(0.154)

	Entire sample	Age group		
		Age 5 and below	6 to 12	13 to 17
Primary	1.274***	1.338**	1.272**	1.242
	(0.0957)	(0.190)	(0.145)	(0.178)
Below secondary	1.107	1.407*	0.931	1.112
	(0.107)	(0.247)	(0.140)	(0.205)
Secondary	1.176	1.746**	0.927	0.871
	(0.179)	(0.448)	(0.225)	(0.266)
Tertiary	0.731**	0.593**	0.594**	1.142
	(0.100)	(0.154)	(0.129)	(0.282)
Employed	0.854**	0.851	0.846*	0.890
	(0.0526)	(0.100)	(0.0820)	(0.0979)
Characteristics of the household				
Household having a member with disabilities	0.888	0.889	0.873	0.893
	(0.0680)	(0.138)	(0.103)	(0.120)
Household size	0.936***	0.909***	0.939***	0.946***
	(0.0110)	(0.0213)	(0.0175)	(0.0197)
Urban	0.755***	0.856*	0.733***	0.694***
	(0.0366)	(0.0781)	(0.0559)	(0.0620)
Household with improved water source	1.068	1.067	1.074	1.063
	(0.0586)	(0.109)	(0.0922)	(0.108)
Household practicing open defecation	0.586***	0.596***	0.477***	0.763*
	(0.0528)	(0.0935)	(0.0731)	(0.123)
Number of observations	20,556	6,248	8,292	6,016
Pseudo R-sq	0.021	0.023	0.031	0.021
Exponentiated coefficients; Standard errors in parentheses				
="* p<0.1	** p<0.05	*** p<0.01"		

The models also control for state/region dummies (not shown)

TABLE A6

Literature review on income shocks and consumption smoothing

	Author	Dataset(s)	Research questions/ methodology	Findings
1	Gruber (1997)	1968-1987 PSID	Impact of unemployment as unanticipated and anticipated income shock on consumption	For unanticipated layoffs UI had a large smoothing effect. A 10% rise in the replacement rate reduced the fall in consumption on unemployment by about 3%.
2	Browning & Crossley (2001)	1993 Canadian Out of Employment Panel (COEP)	Impact of unemployment as income shock on consumption exploiting legislative changes to Canadian UI system	Elasticity of expenditure with respect to UI benefit was 5%. Elasticities were as high as 20% for low-asset individuals (consistent with the presence of liquidity constraints)
3	Stephens (2001)	1968-92 PSID	Impact of job displacement and disability as permanent income shocks on consumption	The percentage change in consumption was less than that of income, especially at the time of the shock. Displaced households responded to an increase in the probability of job losses by reducing consumption prior to a job loss.
4	Gertler & Gruber (2003)	1991, 1993 panel data collected as part of Indonesian resource mobilization study	Impact of illness as income shocks on consumption in developing countries	An income shock results with 0.35 units decrease in consumption for each unit decrease in income. People weathered the effect of minor illnesses (could be interpreted as a transitory shock) but less the effect of major illnesses (which could be interpreted as permanent shock)
5	Agarwal and Qian (2004)	Panel data on consumer financial transactions	Consumption and debt response to unanticipated income shocks	Consumers that have low liquid assets or with low credit card limit reduce consumption significantly in a wake of an unanticipated income shock.
6	Skoufias and Quisuming (2005)	Household panel data from Bangladesh, Ethiopia, Mali, Mexico and Russia	Impact of shocks on consumption and poverty	All the case studies show that food consumption is better insured than non-food consumption from idiosyncratic shocks. Adjustments in non-food consumption appear to act as a mechanism for partially insuring ex-post food consumption from the effects of income changes.

	Author	Dataset(s)	Research questions/ methodology	Findings
7	Dercon et al. (2005)	Data for 15 Ethiopian villages for the period between 1999-2004	Authors examine the impact of various types of shocks on consumption	The authors find that drought- and illness-related income changes decrease per capita consumption of households by about 20% and 9% respectively. The impact of these shocks has persisted having an impact on the consumption level despite having occurred 2-5 years previously.
8	Yang and Choi (2007)	Data on linked household surveys from the Philippines	Use of remittances as a buffer to income shocks	Roughly 60 percent of declines in household income are replaced by remittance inflows from overseas. Consumption in households with migrant members is unchanged in response to income shocks, whereas consumption responds strongly to income shocks in households without migrants.
9	Chen et al. (2013)	Urban Households Income and Expenditure Survey (1992-2003)	Impact of income changes on consumption patterns	In the first half of the 1990s, a 1% change in income was associated with a 0.6% change in consumption. In the second part of the 1990s, households' ability to insure consumption increased. When faced with a shock, households first cut down on durable goods consumption to insure the consumption of non-durables.
10	Bruckner and Gradstein (2013)	Panel of 39 SSA countries for the period 1980-2009	Effects of transitory shocks to aggregate output on consumption in poor countries	The authors' estimates yield a marginal propensity to consume out of transitory output of around 0.2.
11	Cui and Huang (2017)	Household survey in rural China	Food expenditure responses to income/ expenditure shocks in rural China	Large negative income shocks result with 25-30% of reduction in food expenditure. Moreover, food expenditures among low-income households are much more sensitive to large negative income shocks.

TABLE A7

Literature review on Permanent Income hypothesis

	Author	Dataset(s)	Research questions/ methodology	Findings
1	Cashin and Unayama (2016)	Japanese Family Income and Expenditure Survey (JFIES)	Increase in the VAT in Japan as an unanticipated shock. Natural experiment set up.	Consumption fell in proportion to the income shock upon announcement, giving salience to permanent income hypothesis.
2	Kruger and Perri (2012)	Italian Survey of Household Income and Wealth from 1987 to 2008	Impact of income shocks (wages) vs shocks on assets (e.g. house prices and businesses).	Wealth shocks have a much more profound and more lasting effect on household consumption than income wage shocks.
3	Japelli and Pistaferri (2020)	Italian Surveys of Household Income and Wealth	Impact of permanent shocks on household consumption. The authors rely on an instrumental variable methodological approach.	The authors find that households indeed revise approximately one-for-one their target wealth in response to permanent income shocks.
4	Cho et al (2019)	Public Safety Identification (PSID) and the Household Income and Labour Dynamics in Australia panel household budget surveys for US and Australia	The authors examine the response of households to permanent income shock, depending on their socio-economic standing and level of debt.	Households with debt have higher sensitivity to shocks (be it transitory or permanent). In both countries, better off households better safeguard their consumption during period of income shocks.
5	Ludwig (2015)	PSID	Impact of permanent and transitory income shocks on consumption of households across the income spectrum.	The poorer the households are, the more similarly they react to the two types of shocks examined (permanent and transitory).
6	Mckenzie (2006)	ENIGH surveys for Mexico before and after the peso crisis from 1994	The author examines the reasons behind the drop in semi-durables consumption during and after the crisis.	The explanation offered is such that households perceived the shock as permanent, hence further adjusting down their consumption patterns.

POVERTY MEASURES USED IN THIS PAPER

Poverty headcount:

This is the share of the population that is poor, i.e. the proportion of the population for whom consumption per equivalent adult y is less than the poverty line z. Taking a population of size n in which q people are poor. The poverty headcount is:

$$H = \frac{q}{n}$$

Poverty gap:

The poverty gap, which is often considered to represent the depth of poverty, is the mean distance separating the population from the poverty line, with the non-poor being given a distance of zero. The poverty gap is a measure of the poverty deficit of the entire population, where the notion of "poverty deficit" captures the resources that would be needed to lift all the poor out of poverty through perfectly targeted cash transfers. It is defined as follows:

$$PG = \frac{1}{n} \sum_{i=1}^{q} \left[\frac{z - y_i}{z} \right]$$

where y_i is the consumption of household i, and the sum is taken only on those households that are poor (with appropriate weights). The poverty gap can be written as being equal to the product of the consumption (or income when that metric is used) gap ratio and the headcount index of poverty, where the consumption (or income) gap ratio is itself defined as:

$$PG = I * H$$, with

$$I = \frac{z - y_q}{z}$$ where $$y_q = \frac{1}{q} \sum_{i=1}^{q} y_i$$ is the average consumption of the poor.