February 2020

# MYANMAR LIVING CONDITIONS SURVEY 2017

REPORT 04

## SOCIO-ECONOMIC REPORT

MYANMAR CSO
CENTRAL STATISTICAL ORGANIZATION

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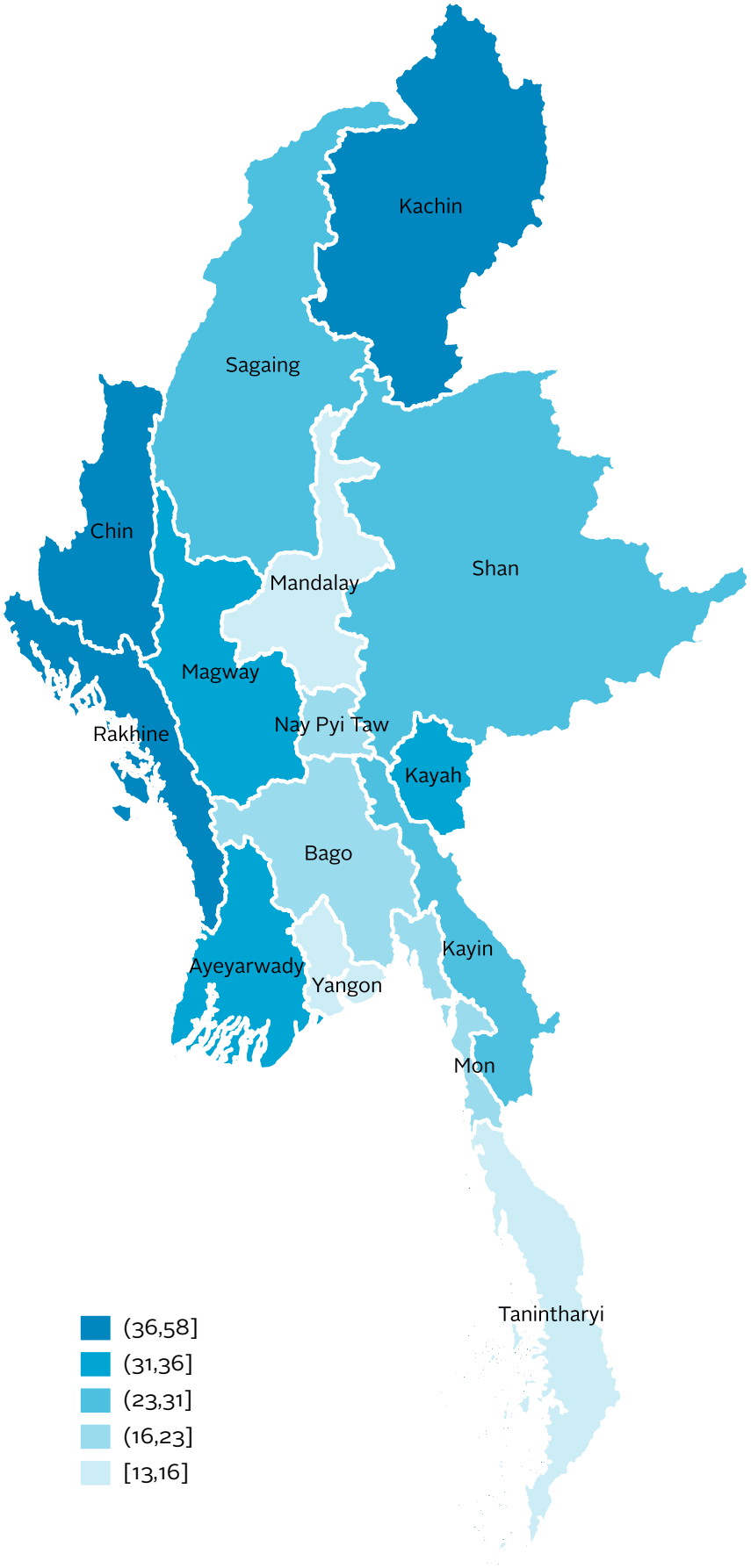
## SOCIO-ECONOMIC REPORT

This report has been possible because of the generous financial support of the governments of Australia, Denmark, Finland, Ireland, Republic of Korea, Sweden and the United Kingdom.

State/Region poverty rate in 2017 (CSO, UNDP and WB, 2019)




Note: Outreach activities for the 2017 MLCS took place over the 12 months of data collection, but it was not possible to conduct interviews in two townships of Northern Rakhine State (Buthidaung and Maungdaw) and the Wa Self-Administered Division. The survey only includes conventional households.

# Foreword

The 2017 Myanmar Living Conditions Survey (MLCS) is a large-scale multi-topic living conditions survey implemented by the Central Statistical Organization of the Ministry of Planning, Finance and Industry, and supported by the World Bank and the United Nations Development Programme. The MLCS builds on three existing household surveys: The *Integrated Household Living Conditions Assessment* (2005 and 2010), the *Household Income and Expenditure Survey* (between 1989 and 2012), and the *Myanmar Poverty and Living Conditions Survey* (2015). The MLCS brings the objectives of these earlier household surveys together to create a comprehensive source of information on living conditions in Myanmar. This Socio-economic Report presents an in-depth examination of the data.

As the Myanmar Sustainable Development Plan calls for poverty mitigation throughout the country, it is important to have insights on who is poor, where they live, and what they do for their livelihoods. The reports analysing the 2017 MLCS data address these very questions. They explain employment conditions and how they allocate and spend their income on education, health, and other necessities. Benefitting from an original sample design, the 2017 MLCS examines differences between states/regions with sufficient statistical confidence to help policymakers design policies, programmes, and plans to reduce geographical disparities and to ensure that prosperity is shared by everyone throughout the county.

Results from the first and second analytical reports based on the 2017 MLCS (Key Indicators and Poverty report, respectively) are already widely cited. It is my wish that governmental and non-governmental institutions alike will use the findings in this third analytical report to jointly improve the lives of Myanmar people. The Socio-economic Report provides evidence that economic development in Myanmar is moving in the right direction: The extent and depth of poverty in our country has decreased significantly since 2005. However, a significant proportion of the population still lives close to the poverty line, putting them in danger of falling into poverty, especially in the event of a shock.

I wish to express my deep appreciation to the Central Statistical Organization (CSO) for their strong leadership in the MLCS, especially the Survey Section of the CSO for successfully managing the technical, administrative, and logistical aspects of the survey. I am very grateful for the support provided by our development partners, particularly the UNDP and the World Bank for their technical and financial assistance. The support and collaboration of the national, state, and regional administrations, as well as local leaders, was also an important factor in the successful implementation of data collection.

I hope that these socio-economic findings will feed into policies that continue Myanmar's transition to a buoyant economy with benefits shared across the country.

His Excellency U Soe Win
Union Minister
Ministry of Planning, Finance and Industry

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Resilient nations.

# Foreword

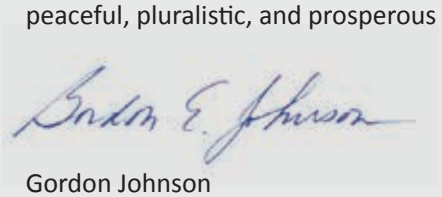
The Socio-economic Report is the third analytical report in a series of reports drawing from the 2017 Myanmar Living Conditions Survey (MLCS) and produced by the Central Statistical Organization (CSO), World Bank, and UNDP to establish a wide-ranging assessment of the well-being of people in Myanmar. The first, the Key Indicators Report, was launched in 2018, and provides a snapshot of key non-monetary indicators of living standards in Myanmar in 2017. The Poverty Report was then published in 2019, updating the poverty rate and providing a basic diagnostic of poverty in Myanmar. This last report further analyses the characteristics and living conditions of the Myanmar population.

For Myanmar to achieve a peaceful, thriving and democratic future, progress must benefit everyone. This report confirms substantial achievements in several dimensions of living conditions. But it also demonstrates continued disparities, as these gains have not been equally shared across states/regions and among all Myanmar people. The incidence of poverty is the highest in Chin State while Mandalay Region, Yangon Region, and Tanintharyi Region have the lowest poverty rates. Moreover, educational costs and household finances present significant barriers for children, particularly poor children, to complete basic education and go on to higher education. Therefore, although significant steps have been made in Myanmar to reduce poverty in all its dimensions, there is still much work to be done.

The 2017 MLCS is a large-scale multi-topic survey providing the latest reliable and accurate data that can be used to assess the well-being of people in Myanmar, to inform policies for the future development of the country, to establish the baseline of Myanmar's Sustainable Development Plan, and to monitor the Sustainable Development Goals. This survey follows international technical standards from questionnaire design to report writing. The questionnaire was designed through broad consultation and piloting and benefitted from the knowledge of a variety of people from government, research institutes, academia, and international organisations. The survey used an updated sample frame, benefitting from the 2014 Population and Housing Census. MLCS improves our understanding of seasonality as, for the first time in Myanmar, fieldwork was conducted for a full twelve-month period. Finally, the data collection teams did data entry in the field to produce more reliable information.

We are very grateful to U San Myint, Director General of the CSO, for his support of the MLCS. We would also like to thank the wider CSO team for successfully managing the technical, administrative, and financial aspects of the survey. We would furthermore like to thank the government representatives, researchers, and representatives from non-governmental and international development organisations who have supported survey development through contributions at data-user workshops.

We are pleased to launch this report at a time when the Myanmar Sustainable Development Plan is being put into operation. We are confident that MLCS indicators will form an important part in further developing the National Indicator Framework (NIF). Finally, we hope that the information in this report will assist policymakers in devising policies, programmes, and plans to deliver a positive future in a peaceful, pluralistic, and prosperous nation for all people of all ethnic groups and religions.



Gordon Johnson
Resident Representative a.i.
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Myanmar

Gevorg Sargsyan
Acting Country Director for Myanmar, Cambodia
and Lao People's Democratic Republic
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# Acknowledgements

I would like to express my deepest gratitude to His Excellency Union Minister U Soe Win, Ministry of Planning, Finance and Industry, for his valuable support, guidance and encouragement though the process of undertaking the Myanmar Living Conditions Survey.

Myanmar's official statistics must be credible in order to fulfil their important task of describing the socio-economic conditions in our country. They must be based on clear, publicly stated operating principles and methodologies. These conditions guarantee the quality of statistics and create confidence in the results.

This is a busy and stimulating time for the development of statistics and the statistical system in Myanmar. A new statistics law has been formulated which strengthens the relationship of statistics producers and stakeholders. In addition, a National Strategy for the Development of Statistics (NSDS) has been formulated, setting a clear path and concrete milestones for developing quality and accurate official statistics in Myanmar. The National Indicator Framework is being discussed with many partners as we define the indicators to measure future development in Myanmar.

I would like to thank all those who have worked with a steady commitment to undertake the MLCS 2017. The financial and technical support of the UNDP and the World Bank is greatly valued. I also express my gratitude to all the 13,730 households, spread throughout Myanmar, who answered our many MLCS questions. They have provided much-needed information that is already being used by a wide variety of data users.

U San Myint
Director General
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Ministry of Planning, Finance and Industry

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# Acronyms and abbreviations

| | |
|---|---|
| **ASEAN** | Association of Southeast Asian Nations |
| **CBM** | Central Bank of Myanmar |
| **CSO** | Central Statistical Organization |
| **CPI** | Consumer Price Index |
| **DOL** | Department of Labour |
| **DOP** | Department of Population |
| **EA** | Enumeration Area |
| **EAP** | East Asia and Pacific |
| **FAO** | Food and Agricultural Organization |
| **FRD** | Financial Regulatory Department |
| **GDP** | Gross Domestic Product |
| **IHLCA** | Integrated Household Living Conditions Assessment |
| **IPL** | International poverty line |
| **LFS** | Labour Force Survey |
| **MADB** | Myanmar Agriculture Development Bank |
| **MDG** | Millennium Development Goal |
| **MLCS** | Myanmar Living Conditions Survey (2017) |
| **MOPFI** | Ministry of Planning, Finance and Industry |
| **MOLIP** | Ministry of Labour, Immigration and Population |
| **MPLCS** | Myanmar Poverty and Living Conditions Survey (2015) |
| **MSDP** | Myanmar Sustainable Development Plan |
| **NGO** | Non-Governmental Organisation |
| **NIF** | National Indicator Framework |
| **PPP** | Purchasing Power Parity |
| **SDG** | Sustainable Development Goal |
| **UNDP** | United Nations Development Programme |
| **UNESCO** | United Nations Educational, Scientific and Cultural Organization |
| **USD** | United States Dollars |
| **WB** | World Bank |
| **WHO** | World Health Organization |

# Executive Summary

**The Myanmar Living Conditions Survey 2017 (MLCS 2017) is a comprehensive household survey conducted by Myanmar's Central Statistical Organization of the Ministry of Planning, Finance and Industry.** The survey is representative of the Union, its states/regions and the Union Territory of Nay Pyi Taw, and urban and rural areas. A total of 13,730 households were interviewed, which yielded a wide range of information on how people work, how much income they earn, and how they use this to meet the food, housing, health, education and other needs of their families. The objectives of the survey are three-fold: (1) to produce an assessment of poverty and living conditions; (2) to provide core data inputs – weights and private consumption expenditures – for the consumer price index (CPI) baskets and the system of national accounts; and (3) to monitor data needs and selected Sustainable Development Goal (SDG) targets.

**This Socio-economic Report is the third and final analytical report in a series of reports that started with the Key Indicators Report (CSO, UNDP and World Bank, 2018a) and was followed by the Poverty Report (CSO, UNDP and World Bank, 2019).**[1] The focus of the present report is to provide an in-depth analysis of the living conditions of households in 2017 and how these conditions contribute to and characterise welfare in Myanmar. The executive summary presents evidence on the three thematic questions addressed in this report, which aim to describe poverty in Myanmar, assess the asset base of households, and explain what households do for a living.

## Monetary poverty and characteristics of the poor

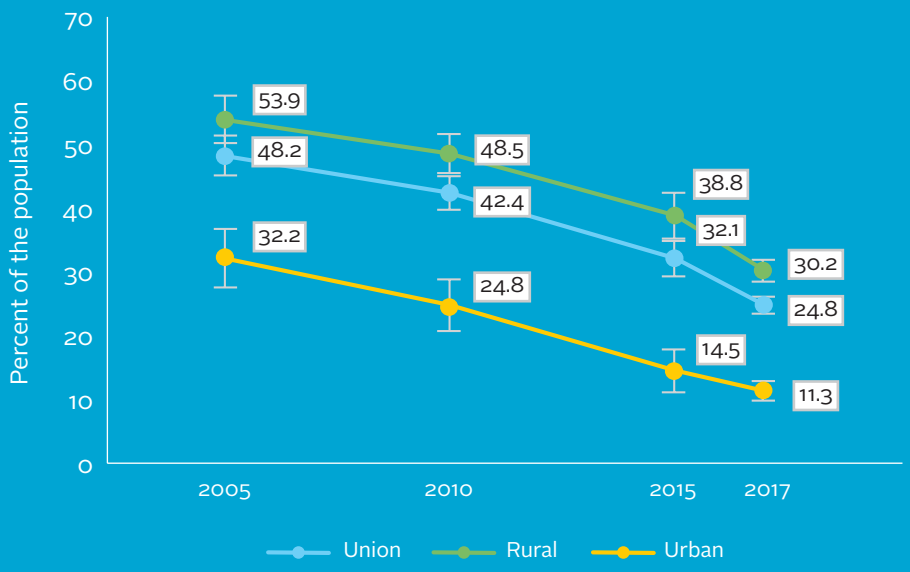
**Between 2005 and 2017, monetary poverty in Myanmar decreased substantially, yet in 2017, poverty and vulnerability are still an issue.** The Poverty Report (CSO, UNDP and WB, 2019) highlights the decline in the poverty rate, which went from 48.2 percent in 2005 to 24.8 percent in

1 Report 02 is a technical report on survey content and quality (CSO, UNDP and WB, 2018b).

2017 (Figure ES-1).[2] However, one in four people are still considered poor and another 32.9 percent of the population have consumption levels that put them at risk of falling into poverty. In terms of international poverty, Myanmar has a low extreme poverty rate (two percent), which is measured using the international poverty line (IPL) of USD 1.90 in 2011 Purchasing Power Parity (PPP). Yet when considering higher lines, specifically USD 3.20 and 5.50 in 2011 PPP, Myanmar fares poorly. More than 60 percent of the population have welfare levels below the highest line, which reflects the high level of vulnerability in the country (CSO, UNDP and WB, 2019). Households with more children are more likely to be poor, increasing the intergenerational transmission of poverty.

Figure ES-1

**Poverty headcount, by residential area (in percent)**




Note: Outreach activities for the 2017 MLCS took place over the 12 months of data collection, but it was not possible to conduct interviews in two townships of Northern Rakhine State (Buthidaung and Maungdaw) and the Wa Self-Administered Division. The survey only includes conventional households. Imputation methods are employed for the 2005 and 2010 poverty estimates in order to present comparable estimates for 2015 and 2017. See MOPF and World Bank (2017) for a discussion of the robustness of the methods.

Sources: IHLCA1 2005, IHLCA2 2010, MPLCS 2015, 2017 MLCS.

2 Outreach activities for the 2017 MLCS took place over the 12 months of data collection, but it was not possible to conduct interviews in two townships of Northern Rakhine State (Buthidaung and Maungdaw) and the Wa Self-Administered Division. These figures are based on IHLCA (Integrated household Living Conditions Assessment) from 2005 and the MLCS estimations. These surveys only covered conventional population; more precisely, it does not include people living in hotels/motels/guesthouses, military camps, police camps, orphanages/homes for the aged, religious centres, boarding schools/colleges/universities, correctional facilities/prisons, hospitals, camps/hostels for workers, and homeless/other collective quarters.

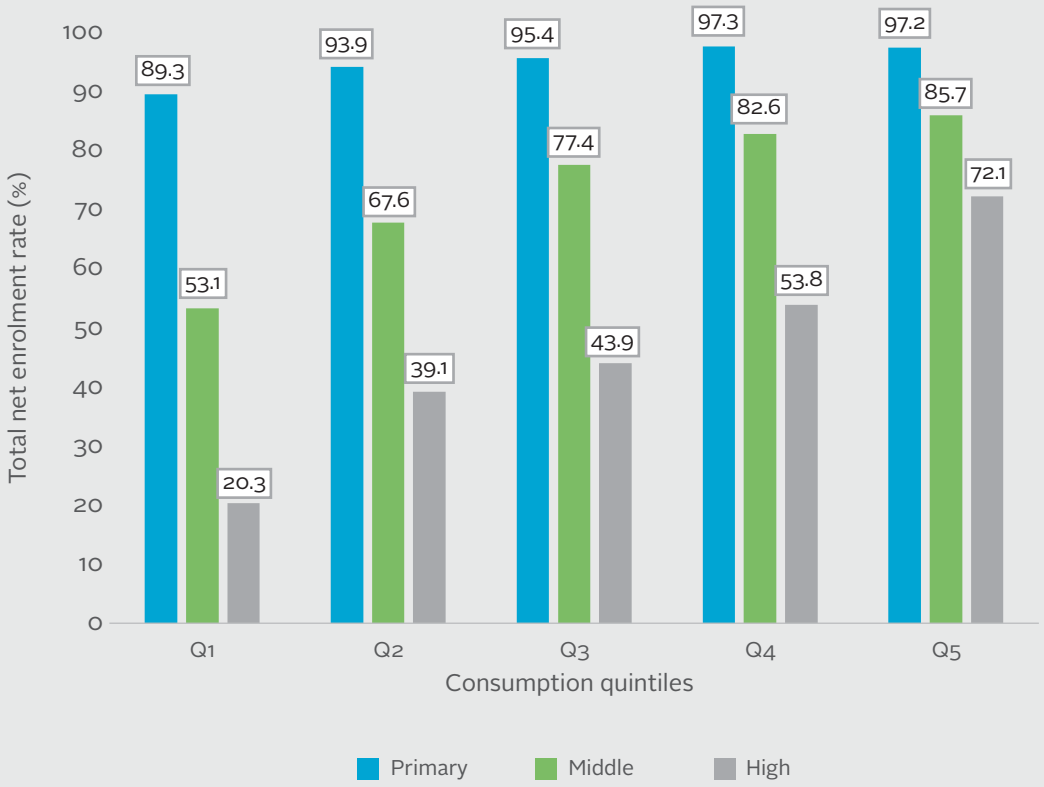
## Households' productive capital and links to poverty

**Human capital[3] accumulation through education is low and unbalanced with poor households lagging behind.** Adults in poor households have lower educational attainment than those from non-poor households. Furthermore, educational enrolment in non-compulsory grades (i.e., after primary school) is low across the population, but is even more so among poorer children. As of 2017, 53 percent of children from the bottom quintile are enrolled in middle school or higher, compared to 86 percent of children from the top quintile. Differences across welfare quintiles are even larger for the high school level, in which 20.3 percent of children in the poorest quintile are enrolled, and 72 percent of children from the wealthiest quintile are (Figure ES-2). In addition, the rates of school dropout and child labour are higher for children in the bottom quintile and in rural areas. Poorer children face considerably larger barriers to education: They have lower access to schools, face greater financial constraints to continuing education, and possess greater household responsibilities that deter them from going to school.

3 Human capital defined by the Oxford English Dictionary as "the skills the labour force possesses and is regarded as a resource or asset" includes the notion that there are investments in people through education, training, and health that can increase one's productivity (Goldin, 2014).

Figure ES-2

Total net enrolment rates in primary, middle, and high school, by consumption quintile (in percent)




Note: Net enrolment rates in primary, middle, and high school are based on the total number of children of official age to attend primary (5 to 10 years old), middle (10 to 14 years old) or high school (14 to 16 years old). Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.

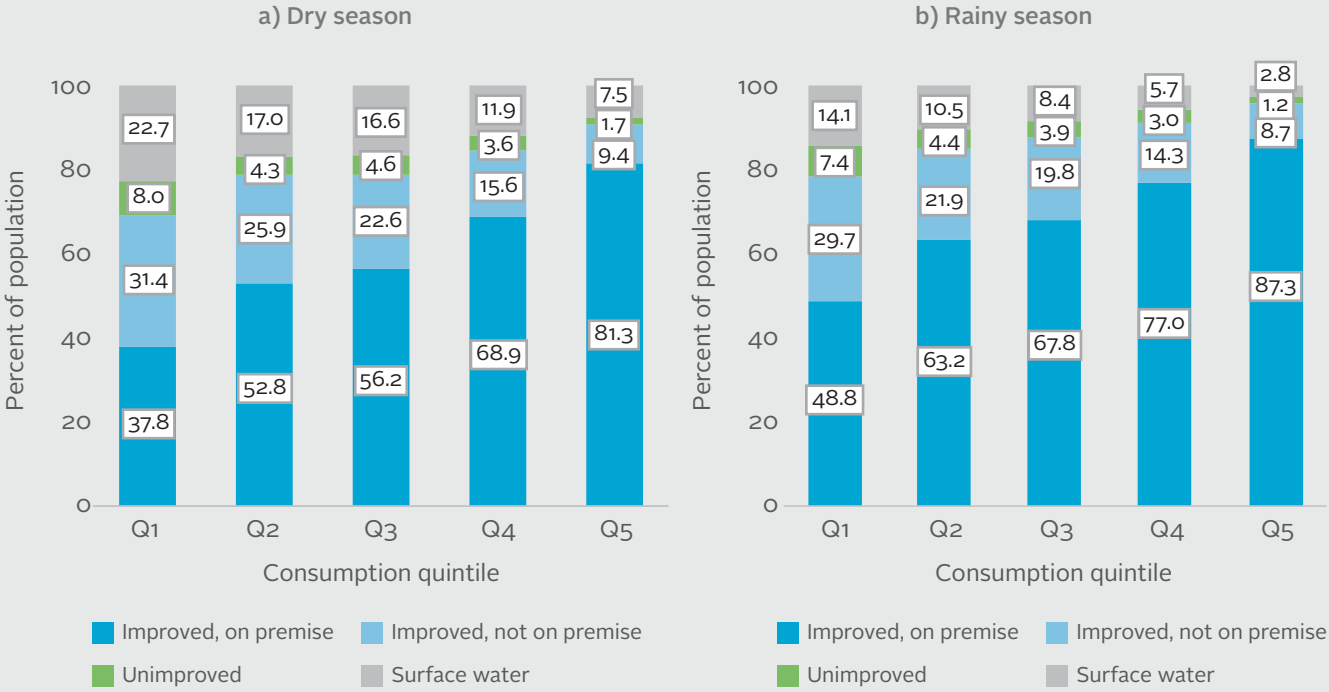
Source: 2017 MLCS.

**Access to comprehensive healthcare services and healthcare utilisation are relatively low in rural areas, where most of the poor live.** Urban residents are significantly more likely than rural residents to have access to a public or private hospital. Public health centres and posts are more accessible in rural areas, but provide a limited range of healthcare services. Given that the majority of the poor live in rural areas, access to hospitals is limited among the poor. The poor are also significantly less likely than the non-poor to use healthcare services, particularly private services, when faced with an illness or injury, instead resorting to self-medication or other less-reliable methods. Poorer households are also more likely to incur a financial burden from healthcare costs and resort to riskier methods such as borrowing to cover these costs, which puts them at risk of a debt trap.

**Poor households in Myanmar have significantly lower access to basic services that could improve their day-to-day living conditions.** In the dry season, 20 percent of the population lacks improved access to water (CSO, UNDP and WB, 2018a), but among the bottom quintile that number exceeds 30 percent (Figure ES-3). In addition, while the rate of open defecation in 2017 is low (6 percent), 14 percent of those in the bottom quintile practice open defecation. Poverty is associated with a higher likelihood of lacking improved water and sanitation access, which can increase the risk of enteric diseases for small children. In addition, although the poor use clean energy sources for lighting (37.7 percent are using solar panel for lighting), 83 percent of households in the bottom consumption quintile rely heavily on firewood and 5 percent on charcoal for cooking, increasing their risk of contracting respiratory diseases.

Figure ES-3

Percentage of the population with access to improved water on premise, by consumption quintile




Note: Unimproved access to water includes non-protected tube and well, ponds, river, and other sources. See the Key Indicators Report for more information (CSO, UNDP and WB, 2018a). Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.
Source: 2017 MLCS.

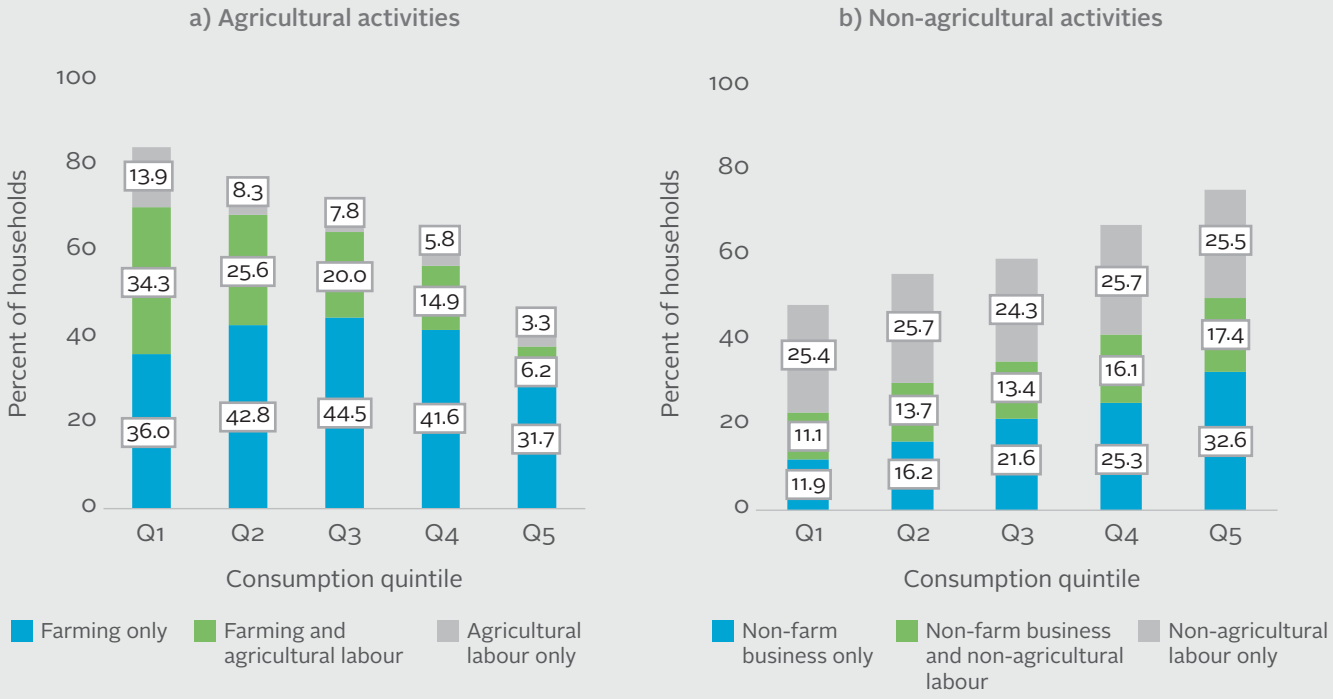
**In 2017, usage of formal financial services is low, particularly in rural areas and among the poor.** Access to formal financial institutions such as banks and microfinance organisations is significantly higher in urban areas than in rural areas. Although village funds, cooperatives, and other local credit unions have filled in some of the gaps in rural areas, usage of other informal sources of credit such as moneylenders is still high in both urban and rural areas. Moreover, only 17% of households in Myanmar have a bank account, with poorer households significantly less likely to own an account. A lack of savings puts the poor and the vulnerable at greater risk of a debt trap, as they are more likely to borrow rather than use savings in order to cope with a negative shock.

## Households' livelihoods and activities

**The poor work mainly in agricultural activities such as farming or agricultural labour, which yield relatively low income (Figure ES-4).** Agriculture is characterised by high seasonality and vulnerability to climatic shocks, which contribute to relatively high rates of labour underutilisation among individuals engaged in this sector. Among farmers, ownership of, and access to, productive assets such as agricultural machinery and fertiliser remain low, which has contributed to low agricultural productivity. Participation in the agricultural sector is associated with lower welfare and income, while participation in non-agricultural activities is associated with higher welfare and income. Ownership of a non-farm business and higher education are the two most significant correlates of higher income.

Figure ES-4

Household engagement in agricultural and non-agricultural activities, by consumption quintile (in percent)




Notes: Agricultural activities includes farming and agricultural labour. Non-agricultural activities include non-farm business and non-agricultural labour.
Source: 2017 MLCS

**While unemployment is low, labour underutilisation is significant in 2017, particularly among the poor.** About 14 percent of the working-age population could be contributing more to productive activities in Myanmar. Labour underutilisation is higher among the poor, who are more likely to have unmet demands for employment due to high participation in agriculture, which is characterised by seasonal labour. Moreover, about five percent of the population temporarily migrate away from home for employment. Many of these individuals come from agricultural households to work in unskilled, low-wage jobs in the non-agricultural sector. Temporary migration may thus be a method for agricultural households to secure income during off-seasons and diversify into non-agricultural activities.

**As of 2017, disparities in labour force participation and wages persist between men and women.** Women face significant barriers to labour force participation largely due to housework and the need to tend to children and elderly dependents. Women also generally have lower-paying and lower-quality jobs and are more likely to have unmet employment demands. However, education, particularly at the university level or above, has the power to improve labour force participation and the quantity and quality of employment. For instance, university education closes the gender gap in both labour force participation and wages.

These findings have five main implications:

1. **Reducing barriers to education is important for poverty reduction and improving welfare.** Education gives individuals, especially women, significantly greater opportunities to secure higher-paying, permanent, and formal employment. In addition, education offers the poor the ability to diversify their activities away from low-skill labour, especially in agriculture, to higher-skill, higher-wage jobs in the non-agricultural sector. Therefore, targeted interventions in education, particularly related to the accessibility and affordability of schools are necessary for increasing enrolment, especially in rural and remote areas of Myanmar.

2. **Improving the accessibility and affordability of comprehensive healthcare services is vital for sustainable development.** Much of the rural population and the poor have limited access to hospitals, which offer a wider range of medical services compared to health centres or posts. The poor are also more likely to incur a financial burden from usage of healthcare facilities. It is therefore critical to improve the accessibility, affordability, and quality of comprehensive healthcare services in rural and remote areas, where many of the poor reside.

3. **Diversification away from agriculture to more productive activities in the non-agricultural sector can help improve household welfare.** Labour market activities in non-agriculture, particularly services, are associated with significantly higher returns than agricultural activities. Encouraging the development of more diversified income sources with

a greater reliance on non-agricultural activities could help households secure greater income throughout the year.

4. **Given high engagement in agriculture, investments in agriculture are necessary to increase productivity, especially for poor farmers.** Agricultural productivity in Myanmar is low compared to other countries in the EAP region. Low productivity can be largely attributed to a lack of technology such as machinery, fertiliser, and irrigation, as well as limited access to markets and vulnerability to climatic shocks. Thus, interventions that improve these channels can help bolster agricultural productivity and improve the welfare of agricultural households.

5. **Targeted interventions for states/regions that are lagging behind in terms of access to key services and facilities can foster more balanced economic development.** Beyond urban-rural differences in access to schools, hospitals, formal financial institutions, and other basic services and facilities, significant disparities exist across states/regions, even after controlling for the share of the population residing in urban or rural areas. Some areas are deprived in multiple dimensions, which is manifested through severe poverty. Targeted interventions in such areas can help promote equitable growth in Myanmar.

# Team members contributing to the report

| Name | Title | Organization |
|---|---|---|
| U San Myint | Director General | CSO |
| Dr. Wah Wah Maung | Former Director General | CSO |
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| Dr. Harold Coulombe | Consultant | World Bank |
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| Mr. Samuel Ashworth | Consultant | World Bank |
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# 01.

# INTRODUCTION

# Objective of the report

**This report is the third analytical product[1] stemming from the 2017 Myanmar Living Conditions Survey (MLCS).** The objective of this report is to present a profile of living conditions and income generation in Myanmar that can act as a solid information base to feed into policymaking. The report contains a substantial amount of fresh data to inform the numerous strategies, such as the Myanmar Sustainable Development Plan (MSDP), that are being formulated as the country continues its transition to achieve medium and long-term development goals.

This report intends to answer three questions:

1. What is monetary poverty in Myanmar and what are the distinct characteristics of the poor?
2. What types of productive capital do households in Myanmar have, and how does this vary by poverty status?
3. What do households in Myanmar do for a living and where do they do this?

The report provides an in-depth socio-economic analysis of welfare in Myanmar, taking into consideration the most pressing concerns of those engaged in policymaking.

The report puts forward social and economic indicators with a view to:

(i) ***Describe the living conditions of the population as of 2017:*** The analysis puts forward a Union- and state/region-level assessment of living conditions in Myanmar. The analysis uses both monetary and non-monetary indicators of welfare. Where needed, the indicators are linked to the Sustainable Development Goal indicators that they align with.

(ii) ***Assess potential drivers of welfare:*** The analysis examines the correlates of poverty and welfare in Myanmar including, but not limited to, location, education, gender, main income generating activities, and access to markets, infrastructure, and public services.

Throughout the report, the analysis is separated by gender to ensure that we can highlight any gender gaps in social and economic conditions. In addition, where possible, individual analysis will present a life-cycle dimension to well-being, separating out children, youth and the elderly from those of working age.

# Data used in the report

**The MLCS is a comprehensive survey of how people in Myanmar live.** It was carried out by the Central Statistical Organization (CSO) in the Ministry of Planning, Finance and Industry (MOPFI), with technical and financial support from the United Nation Development Programme (UNDP) and the World Bank.[2] The MLCS collects data on the occupations of people, how much income they earn and how they use this to meet the food, housing, health, education, and other needs of their families. Consolidating earlier household surveys, particularly the Integrated Household Living Conditions Assessment (IHCLA-I, 2005 and IHLCA-II, 2010), the Household Income and Expenditure Survey (between 1989 and 2012) and the Myanmar Poverty and Living Conditions Survey (MPLCS, 2015), the MLCS is intended to serve as a comprehensive source of information on the living conditions of the Myanmar people (CSO, UNDP and WB, 2018b).

1 Report 01 is Key Indicators Report (CSO, UNDP and World Bank, 2018a); Report 02 is a Technical Report (CSO, UNDP and WB, 2018b); and Report 03 is the Poverty Report (CSO, UNDP and World Bank, 2019).

2 A detailed description of the methodology can be found in the Annex of the MLCS 2017 Key Indicators Report (CSO, UNDP and World Bank, 2018a) and Technical Report (CSO, UNDP and World Bank, 2018b).

**The objectives of the 2017 MLCS are three-fold:** (1) to produce an assessment of poverty and living conditions; (2) to provide core data inputs – weights and private consumption expenditures – for the CPI baskets and the system of national accounts; and (3) to monitor data needs and selected Sustainable Development Goal (SDG) targets.

**The 2017 MLCS provides data representative at the level of the Union, its states/regions, as well as urban and rural areas.** A two-stage sampling strategy was designed, with enumeration areas (EAs) as primary sampling units and households the ultimate sampling units. While EAs within each stratum were selected systematically with a probability of being selected proportional to their size, inside each EA, 12 households were selected systematically with an equal probability of selection. The sample was designed to cover all districts and 296 of the 330 townships of Myanmar and was based on the 2014 Myanmar Population and Housing Census frame. In total, 1,145 EAs were selected across the country[3] and 13,730 households participated in the survey. Sampling weights were applied to make estimates representative of the population for the 14 states/regions, the Union Territory of Nay Pyi Taw, and urban and rural areas.

**As Myanmar has very distinct seasons, offering differing crop growing and income earning potential, the survey was conducted continuously over a 12-month period allowing for quarterly representation.** Interviewing began in the winter season (December to February), continued throughout the dry season (March to May) and the rainy season (June to October) and concluded in the winter season of 2017. The data from each quarter can be treated as an independent national-level cross-sectional survey. The quarters approximately map into Myanmar's seasons, with the first quarter firmly capturing the winter season, the second capturing the dry season, the third capturing the first half of the rainy season and the fourth capturing the rainy season and a month of the early winter season.

## Overview of the report

The Socio-economic Report is structured as follows.

To answer question 1, Chapter 2 presents the consumption aggregate and poverty estimates discussed in the Poverty Report (CSO, UNDP and WB, 2019) before presenting progress in fighting poverty in the context of broader developments in the economy. This chapter provides a profile of poverty and well-being in Myanmar, looking at differences between the poor and non-poor, and across quintiles of the population.

Question 2 is addressed in the next four chapters. Chapter 3 to Chapter 6 look at human capital, notably education (Chapter 3) and health (Chapter 4), the availability of key sanitation and energy sources (Chapter 5), and the use of financial products (Chapter 6).

The last question is answered in the final three chapters. Chapter 7 looks at labour market indicators and Chapter 8 gives a profile of permanent and temporary migrants before analysing factors that can encourage migration. Chapter 9 examines the sources of income, focusing on participation in agricultural and non-agricultural activities.

Chapter 10 ends with a brief summary of main takeaways and implications.

3 Outreach activities for the 2017 MLCS took place over the 12 months of data collection, but it was not possible to conduct interviews in two townships of Northern Rakhine State (Buthidaung and Maungdaw) and the Wa Self-Administered Division. Limitations in coverage are fully documented in the MLCS 2017 Technical Report (CSO, UNDP and World Bank, 2018b). The 2017 MLCS only includes the conventional population; more precisely, it does not include people living in hotels/motels/guesthouses, military camps, police camps, orphanages/homes for the aged, religious centres, boarding schools/colleges/universities, correctional facilities/prisons, hospitals, camps/hostels for workers, and homeless/other collective quarters.

# 02.

# ASSESSING WELFARE AND POVERTY

*The first goal of the SDGs aims to "end poverty in all its forms everywhere". Targets 1.1 and 1.2 aim to eliminate extreme poverty worldwide, based on the international poverty line, and to reduce national poverty based on each country's respective national definition. In line with these two targets, this chapter provides an overview on how Myanmar is faring in comparison with other ASEAN countries using international poverty lines, and on the progress that Myanmar has achieved in reducing poverty. The chapter also identifies factors that may potentially explain poverty by looking at various socio-demographic correlates of welfare.*

### Box 2-1 SDG 1 "End poverty in all its forms everywhere"

In September 2015, 193 member countries of the United Nations adopted the 2030 Agenda for Sustainable Development. There are 17 Sustainable Development Goals (SDGs) which includes 169 targets to be achieved by 2030. The SDG 1 is to "end poverty in all its forms everywhere" and consists of five main targets:

- **Target 1.1:** By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than US$1.90 in 2011 PPP a day[1]
- **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

Source: United Nations, SDG Indicators Metadata
Note 1: $1.25 a day was used as international extreme poverty line based on 2005 international prices when SDGs was first adopted in 2015, and later it was updated to US$1.90 a day at 2011 international prices.

## Welfare aggregate

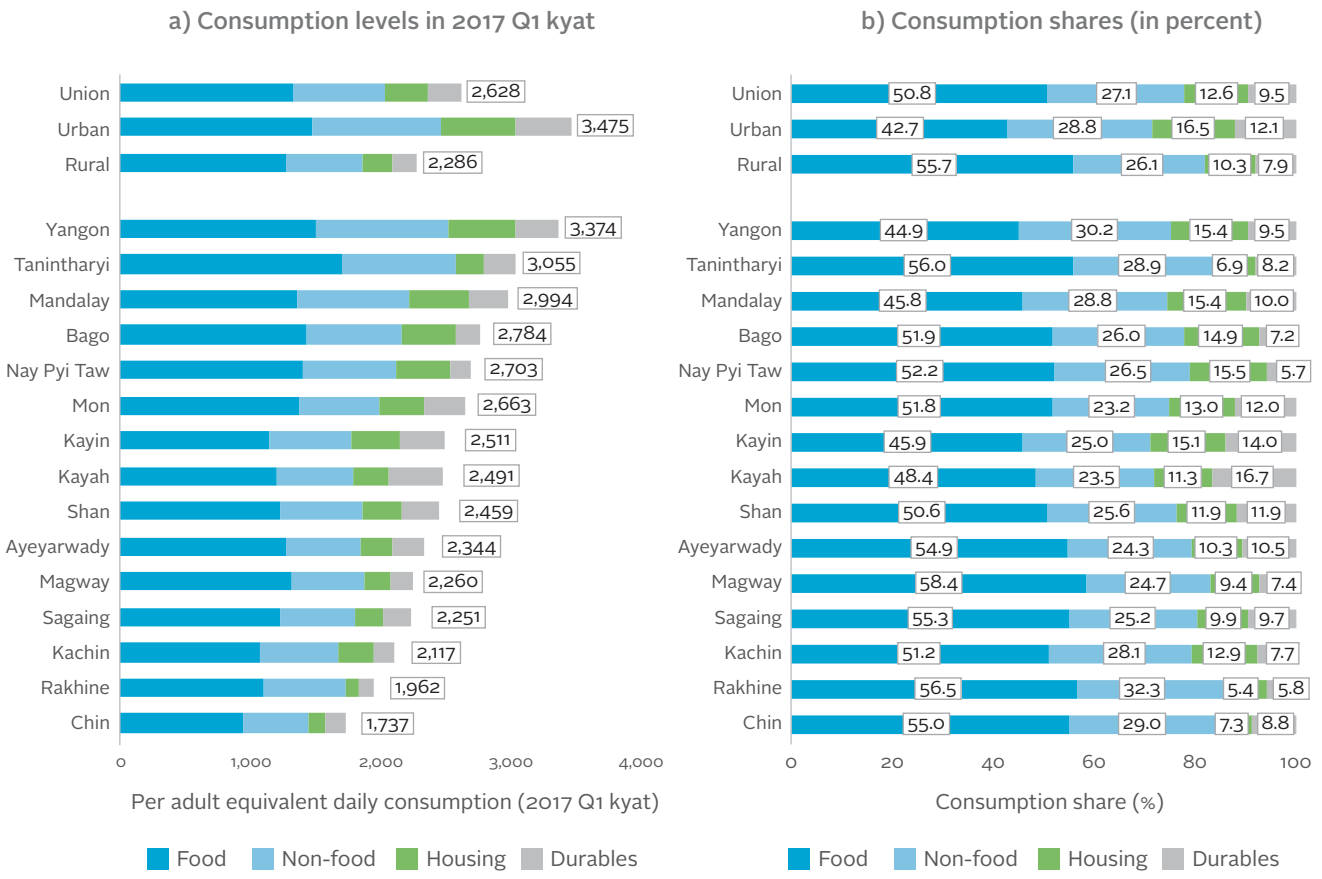
**The consumption aggregate is used in Myanmar to measure poverty and is mostly composed by food expenditures.** As explained in the Poverty Report, poverty in Myanmar is measured using a per adult equivalent consumption aggregate in kyats and a national poverty line equal to 1,590 kyats per adult equivalent per day (CSO, UNDP and WB, 2019).[4] The consumption aggregate captures welfare in monetary terms and consists of four principal items: food expenditures including home-consumption; expenditures on non-food items such as energy, transport, and education; the use value of durables, or the estimated value of using home assets in a household's possession; and the imputed use value of a household's home. In 2017, food accounts for half of total consumption (Figure 2-1b). The other half of the consumption aggregate is predominantly composed of non-food expenditures.

**Rural inhabitants and those living in the poorest states/regions devote, on average, a higher share of their total consumption to food than urban inhabitants and those living in wealthier states/regions.** In absolute terms, individuals living in urban areas spend 1.5 times more than their rural counterparts (Figure 2-1a). Inhabitants of Yangon Region and Tanintharyi Region spend more on food than those living in poorer states/regions such as Chin State and Rakhine State. However, in relative terms, food generally accounts for a larger share of total consumption in poorer states/regions, while non-food expenditures, housing, and durables comprise a relatively larger share among wealthier states/regions.

4 Figure B-2 in Annex B pictures poverty headcounts for Myanmar, rural and urban areas, and by state/region.

Figure 2-1

Average per adult equivalent daily consumption




Note: Outreach activities for the 2017 MLCS took place over the 12 months of data collection, but it was not possible to conduct interviews in two townships of Northern Rakhine State (Buthidaung and Maungdaw) and the Wa Self-Administered Division. The survey only includes conventional households.

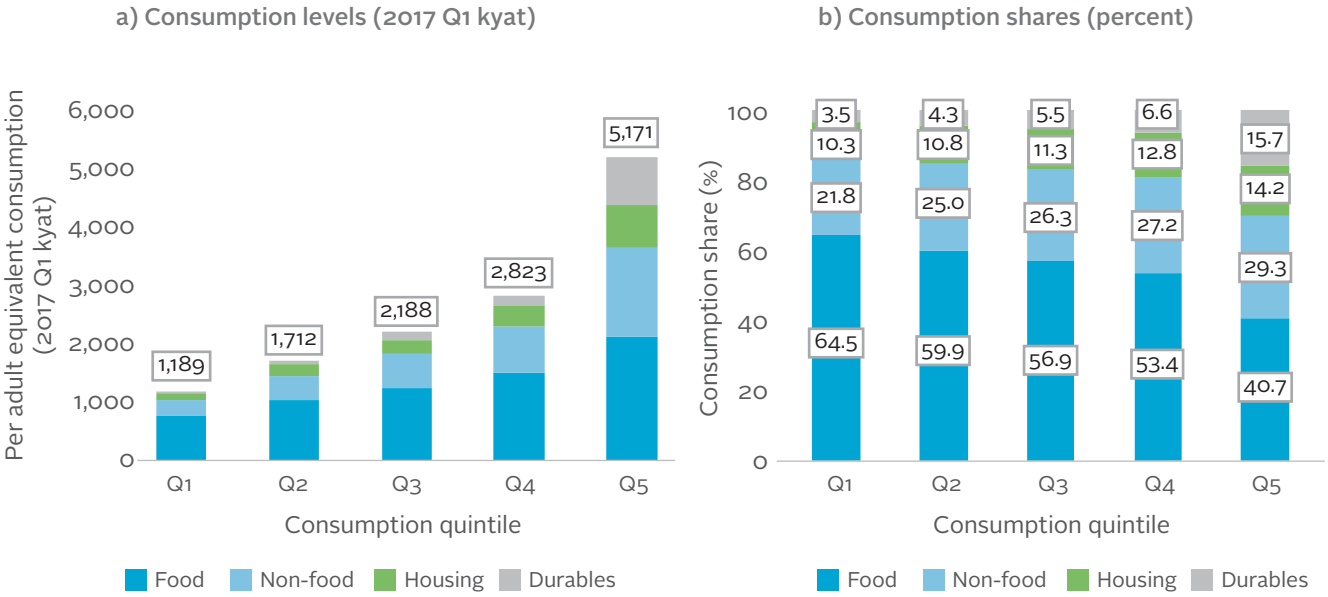
Source: 2017 MLCS

**Lower welfare is associated with higher shares of consumption spent on food.** Average consumption in the top quintile (Q5) of the population is more than four times what it is in the bottom quintile (Q1). Individuals in the bottom quintile spend nearly two-thirds of their total budget on food, leaving little resources for other types of expenditures (Figure 2-2). On the other hand, those in the top quintile have higher expenditures – both in absolute terms and as a share of total consumption - on non-food items, durables, and housing. Limited resources to spend on non-food expenditures among poor households can restrict their access to important services such as education (Chapter 3), health (Chapter 4), and water and sanitation (Chapter 5).[5]

5 This decomposition of the consumption aggregate has not changed since 2015 as reported in figures in Annex B.

Figure 2-2

Average per adult equivalent daily consumption, by quintile




Source: 2017 MLCS.

## International comparisons of poverty estimates

**The international poverty line of USD 3.20 in 2011 PPP is the most relevant one for assessing poverty in Myanmar.** Using the same consumption aggregate but per capita rather than per adult equivalent, one can compare Myanmar with other countries (see Annex B on international poverty and using 2011 PPP). There are three international poverty lines (IPL) used for international comparisons, as well as for tracking global extreme poverty and measuring progress on global goals such as target 1.1 of SDG 1 (Box 2-1). To estimate the share of the population living under the IPL, the consumption aggregate is deflated to 2011 kyats and then converted into dollars using a purchasing power parity (PPP) conversion factor.[6] Myanmar is a lower middle-income country for which the IPL at USD 3.20 in 2011 PPP is more suitable than the lower IPL at USD 1.90 in 2011 PPP used in low income countries (Jolliffe and Prydz, 2016). In 2017, one in five individuals lived on less than the IPL of USD 3.20 in 2011 PPP, which is comparable to the poverty rate using the national poverty line.[7]

**Myanmar performs well in terms of the lower line of USD 1.90 but poorly when higher international poverty lines are applied.** With the IPL of USD 1.90 in 2011 PPP, Myanmar's poverty rate in 2017 is low[8] but similar to the East Asia and Pacific (EAP) average (Figure 2-3). However, with the IPL of USD 3.20 in 2011 PPP, the international poverty rate in Myanmar is about seven percentage points higher than the EAP average. Myanmar is among the poorest countries in Asia if one considers the higher IPL of USD 5.50 in 2011 PPP. This may be expected given that a third of the population, although non-poor, live just above the poverty line (CSO, UNDP and WB, 2019).

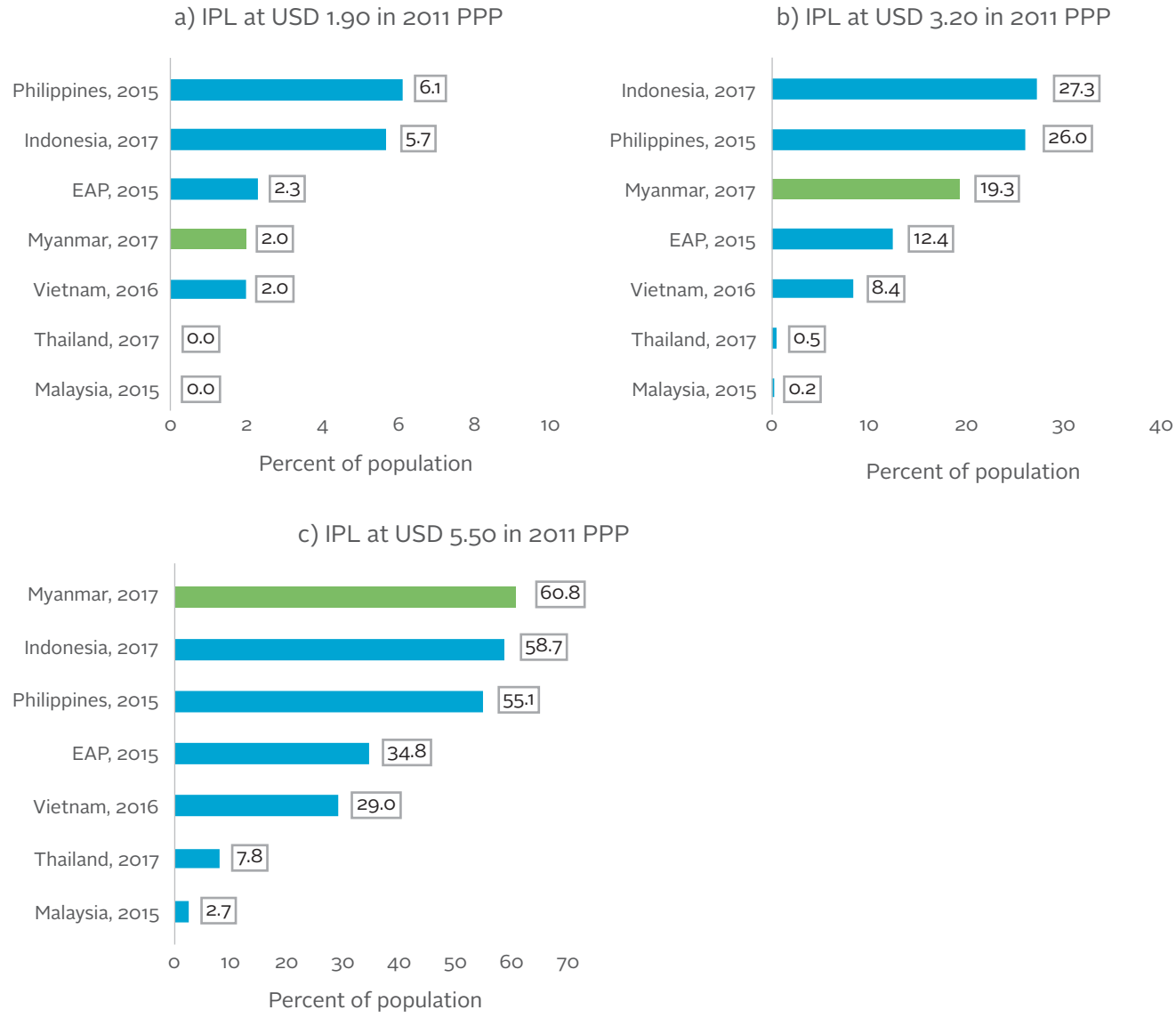
6 https://databank.worldbank.org/source/international-comparison-program-(icp)-2011

7 The national poverty line is equal to 1,590 in 2017 quarter 1 kyats, which corresponds to 3.60 USD in 2011 PPP.

8 Outreach activities for the 2017 MLCS took place over the 12 months of data collection, but it was not possible to conduct interviews in two townships of Northern Rakhine State (Buthidaung and Maungdaw) and the Wa Self-Administered Division.

Figure 2-3

Percentage of population living below the international poverty line




Note: Survey years vary by country and are indicated next to the country name.
Source: 2017 MLCS for Myanmar. Poverty and Equity Data portal for other countries (http://povertydata.worldbank.org/poverty/home).

## Poverty trends in Myanmar

**In line with target 1.2, over the last decade, monetary welfare improved, and Myanmar recorded a substantial reduction of poverty.**[9] Using the consumption aggregate per adult equivalent[10] and the national poverty line, between 2005 and 2017, the proportion of the population living in poverty[11] has halved from 48.2 percent to 24.8 percent (Figure 2-4a). Despite population growth, the number of poor people declined from 18.7 million in 2005 to 11.8 million in 2017[12] (CSO, UNDP and WB 2019). This reduction was observable in both urban and rural areas.

9 Due to differences in survey design from IHLCA to MPLCS and MLCS, the assessment of poverty uses imputation approaches to restore comparability of consumption aggregates over time at the Union and urban/rural levels (MOPF and World Bank, 2017).

10 Per adult equivalent controls for the composition and economies of scale in the household.

11 Outreach activities for the 2017 MLCS took place over the 12 months of data collection, but it was not possible to conduct interviews in two townships of Northern Rakhine State (Buthidaung and Maungdaw) and the Wa Self-Administered Division.

12 The 2005 IHLCA and 2017 MLCS only covered the population living in conventional households.

## Box 2-2 Poverty measures and consumption class definitions

### Poverty measures

**Poverty headcount:** share of the population that is poor with per adult equivalent consumption less than the poverty line (1,590 kyats per day in 2017 quarter 1 kyats).

**Poverty gap (depth):** the average amount that per adult equivalent consumption falls below the poverty line, expressed as a percentage of the poverty line. The poverty gap captures the depth of poverty by estimating the average distance that the poor live below the poverty line, expressed as a percent of the poverty line.

**Squared poverty gap (severity):** the squared value of the poverty gap, which gives greater weight to individuals who fall further below the poverty line.

### Consumption classes

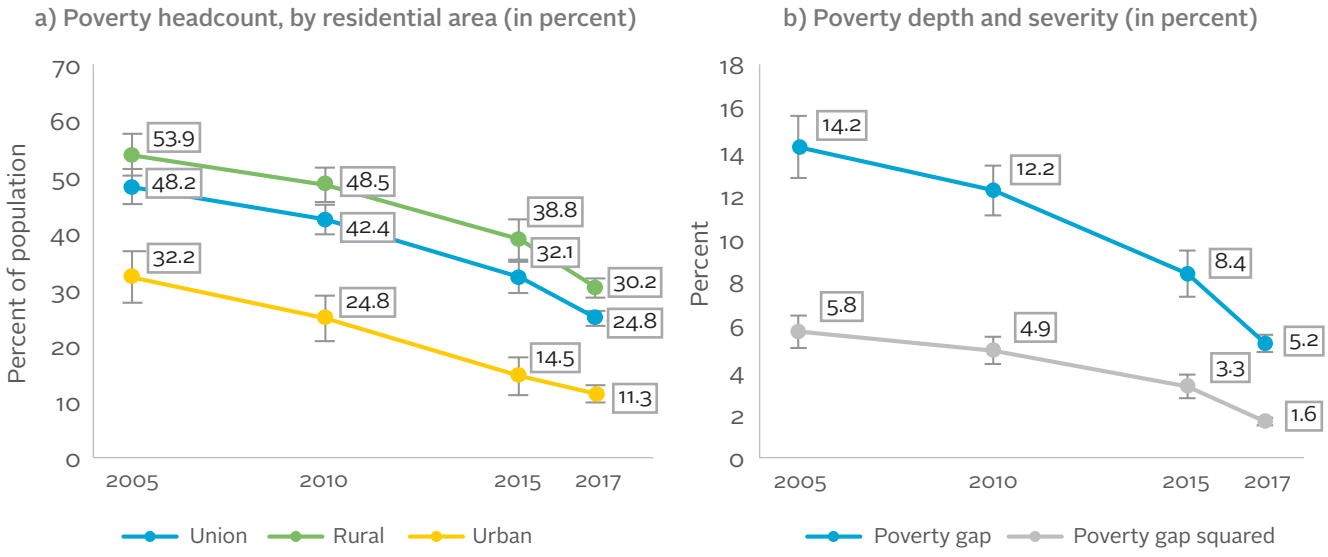
**Non-poor insecure:** individuals who are classified as non-poor but are at relatively high risk of falling into poverty. Specifically, those with per adult equivalent consumption between the poverty line (1,590 kyat per day) and 1.5 times the poverty line (2,385 kyat per day).

**Non-poor secure:** individuals who are classified as non-poor and have per adult equivalent consumption levels that is more than 1.5 times the poverty line (2,385 kyat per day).

**Relative to the poor in 2005, the poor in 2017 are better off.** Measures of poverty depth and severity allow a more nuanced assessment of welfare among the poor (Box 2-2). The poverty gap, which captures the depth of poverty, fell from 14.2 percent in 2005 to 5.2 percent in 2017 (Figure 2-4b). The squared poverty gap, which measures poverty severity, also fell from 5.8 percent to 1.6 percent. These two trends indicate that, on average, the poor have seen an increase in welfare.

Figure 2-4

Trends in poverty indicators, 2005 to 2017



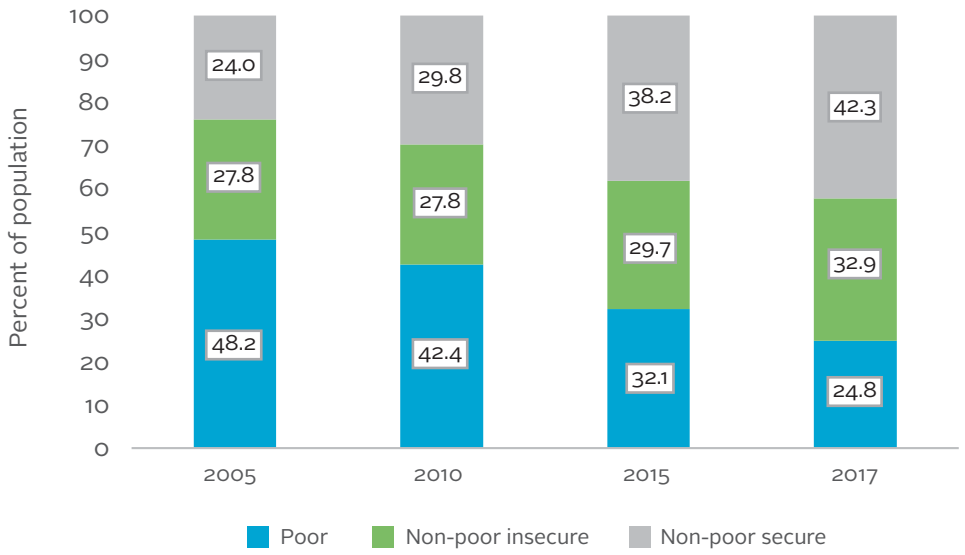

Note: Outreach activities for the 2017 MLCS took place over the 12 months of data collection, but it was not possible to conduct interviews in two townships of Northern Rakhine State (Buthidaung and Maungdaw) and the Wa Self-Administered Division. The survey only includes conventional households. Imputation methods are employed for the 2005 and 2010 poverty estimates in order to present comparable estimates for 2015 and 2017. See MOPFI and World Bank (2017) for a discussion of the robustness of the methods.

Sources: IHLCA 2005, IHLCA 2010, MPLCS 2015, 2017 MLCS.

**Many households, however, are living just above the poverty line and remain vulnerable to falling below it.** As poverty declined, the share of individuals classified as non-poor insecure and non-poor secure expanded (Box 2-2), with the non-poor secure growing faster than the non-poor insecure (Figure 2-5). While only 24.0 percent of the population had consumption more than 1.5 times the poverty line in 2005, this share increased to 42.3 percent in 2017. At the same time, 32.9 percent of the population, while technically non-poor, has consumption levels below 1.5 times the poverty line or less than 2,385 kyat per day (in 2017 quarter 1 kyat) per adult equivalent. Negative shocks and ensuing coping strategies can push vulnerable households into poverty (see Chapters 7 and 9).

Figure 2-5

Percentage of poor, non-poor insecure, and non-poor secure in total population, 2005 to 2017




Note: Outreach activities for the 2017 MLCS took place over the 12 months of data collection, but it was not possible to conduct interviews in two townships of Northern Rakhine State (Buthidaung and Maungdaw) and the Wa Self-Administered Division. The survey only includes conventional households. Imputation methods are employed for the 2005 and 2010 poverty estimates in order to present comparable estimates for 2015 and 2017. See MOPF and World Bank (2017) for a discussion of the robustness of the methods.
Sources: IHLCA1 2005, IHLCA2 2010, MPLCS 2015, MLCS 2017.

**Trends in non-monetary wellbeing tell the same story of improvements in the welfare of Myanmar's population, but still much is left to be achieved.** As highlighted in the Key Indicators Report (CSO, UNDP and WB, 2018a), the number of households that use electricity for lighting effectively doubled, from 1.8 million in 2005 to 4.7 million in 2017. The country has seen similar improvements in water, sanitation, housing, and technology over this period. However, as shown in Chapter 5, the poor remain disadvantaged: Poor households are less likely to have improved living conditions and have lower health and educational outcomes.

**Intergenerational transmission of poverty may be a policy concern given the large number of children living in poor households.** Close to a third of children less than 18 years old live below the national poverty line (Annex B, Table B-1), which is about seven percentage points higher than it is among the total population. Higher poverty among children is expected given that poor households have almost two times more children than non-poor households (CSO, UNDP and WB, 2019). Roughly 60 percent of poor children in Myanmar live in five states/region: Ayeyarwady Region, Shan State, Sagaing Region, Rakhine State, and Magway Region. The two poorest states/regions – Chin State and Rakhine State – also have the highest share of poor children (63.4 percent and 49.1

percent, respectively). In contrast, child poverty is the lowest in Tanintharyi Region and Mandalay Region (15.6 percent and 16.5 percent, respectively). Poor children are less likely to attend middle and high school because of the schooling costs and physical access to schools (see a more detailed analysis in Chapter 3).

## Correlates of poverty[13]

**Geographic location is a strong correlate of welfare.** Controlling for socio-demographic indicators and state/region differences, individuals living in urban areas are 6.7 percentage points less likely to be poor than their rural counterparts. Even after controlling for various household characteristics and other indicators, there are significant differences in both welfare and the likelihood of being poor across states/regions. This suggests that there are state/region-specific characteristics (e.g., geographical terrain, climate, etc.) that influence consumption levels and poverty.

**Larger household size, particularly the number of children below age 15, is associated with lower welfare.** Controlling for various state/region and socio-demographic characteristics, more household members at any age is associated with a greater likelihood to be poor and lower consumption. The number of children below age 15 is related to lower welfare: for every additional child five years old or younger, per adult equivalent consumption decreases by about 11.3 percent and the likelihood of being poor increases by 8.9 percentage points. Similarly, for every additional child between the ages of 6 and 14, consumption decreases by 9.4 percent and the likelihood of being poor increases by 6.0 percentage points.

**Controlling for state/region differences and other characteristics, the marital status, gender, or religion of the household head are not significant correlates of welfare, while disability status and having an identification card are.** Female- and male-headed households are equally likely to be poor and have comparable levels of consumption. After controlling for state/region characteristics, the religion of the household head also does not appear to be a predictor of welfare. On the other hand, having a disabled head is associated with 11.7 percent lower consumption and a higher likelihood of being poor. Having a disability may affect important determinants of welfare such as education and access to quality jobs. In 2017, households where the head has an identification card are 11.9 percentage points less likely to be poor, controlling for other household and state/region characteristics. Proper identification can also allow households to access public services, claim their rights, and secure formal loans, hence enabling access to various channels that may improve household welfare.

**Consumption levels increase with the education level of the household head.** Compared to those living in households with an uneducated head, individuals whose household head has reached primary school have 6.9 percent higher consumption. Each additional level of educational attainment increases the differential in consumption relative to those with an uneducated head. Individuals with a head who has completed university or more have, on average, 56.3 percent higher consumption and are 81.3 percent less likely to be poor.

13 For results of the linear and probit regressions to identify poverty correlates, see Annex B. The regressions take into account demographic and socio-economic characteristics such as educational attainment among heads of household, household composition, and other indicators including information on accessibility to social services, and incidence of shocks to predict per capita consumption and the likelihood of being poor.

**The sector of labour force participation across members in a household is an important correlate of welfare.** Across its members, households may be engaged exclusively in agriculture, exclusively in non-agriculture, both agriculture and non-agriculture, or have no working members. On average, individuals living in households engaged exclusively in non-agricultural activities have 13.1 percent higher per adult equivalent consumption than those living in purely agricultural households and are significantly less likely to be poor. Individuals whose household is engaged in both agricultural and non-agricultural activities are similarly better off. This suggests that household participation in non-agriculture may be an important avenue to improve welfare, a finding reinforced in Chapter 9 on income sources.

**Remoteness and limited access to basic services and infrastructure may negatively affect welfare.** Individuals living in communities with a market are 3.5 percentage points less likely to be poor and have 4.2 percent higher consumption than those who live in communities with no markets. However, access to markets as well as access to other services and infrastructure may largely be determined by the characteristics of where one lives, such as geographical terrain, political climate, or other factors. These characteristics can be specific to a state/region, which would then be picked up by each of the state/region controls.

## Main takeaways and implications

This chapter shows that extreme poverty is less of a concern in Myanmar than is moderate poverty. In addition, children aged 0 to 14 are more likely to be poor than any other age group, which may bring about an intergenerational transmission of poverty. Education and participation in non-agricultural activities are positively correlated with consumption.

These findings regarding poverty have two main implications:

i. Improving access to services and connecting rural and remote areas would reduce households' probability of being poor in monetary and non-monetary terms. Households in remote areas have a limited access to markets for labour, services, and goods, which further prevents them from improving their welfare.

ii. Improving educational attainment can ensure that households participate in more productive activities, move out of subsistence agriculture, withstand shocks, and in general, improve their welfare.

# 03.

# BUILDING HUMAN CAPITAL THROUGH EDUCATION

*Recognised as an important determinant of economic growth by improving one's economic opportunities and earning potential (Barro, 1995; Barro and Lee, 2010), educational attainment has a prominent place in the SDG agenda, with SDG 4 exclusively focusing on quality education. Target 4.1 of the SDG 4 calls for quality and equitable primary and secondary education for both girls and boys, leading to effective learning outcomes. The objective of this chapter is to assess educational attainment among adults in Myanmar and to explore the main correlates of primary, middle, and high school enrolment for boys and girls. This chapter also looks at reasons for dropout and educational expenditures and its components by different school levels.*

## Adult educational attainment

**Educational attainment among the adult population aged 15 and over is low, especially in rural areas.** As of 2017, one out of ten adults in Myanmar has never attended school (Table 3-1). For another 53.3 percent, primary education – either completed or uncompleted – is the highest level of educational attainment. Only 5.6 percent of adults in Myanmar have completed secondary education (middle and high school). Rural residents are more than twice as likely to have no education or have completed some primary education but not have graduated. On the other hand, completion of middle, high, and tertiary education is significantly higher among urban adults.

Table 3-1

Educational attainment among adults aged 15 and over (in percent)

| | Union | Urban | Rural | Female | Male |
|---|---|---|---|---|---|
| No education | 9.7 | 4.8 | 11.8 | 12.7 | 6.1 |
| Monastic | 7.0 | 2.9 | 8.7 | 4.9 | 9.4 |
| Below primary | 19.7 | 11.8 | 23.1 | 21.9 | 17.1 |
| Primary | 33.6 | 27.7 | 36.1 | 31.8 | 35.7 |
| Middle | 17.6 | 26.4 | 13.9 | 15.6 | 20.0 |
| High | 5.6 | 10.2 | 3.6 | 5.2 | 6.1 |
| Tertiary | 6.9 | 16.2 | 2.8 | 7.9 | 5.6 |

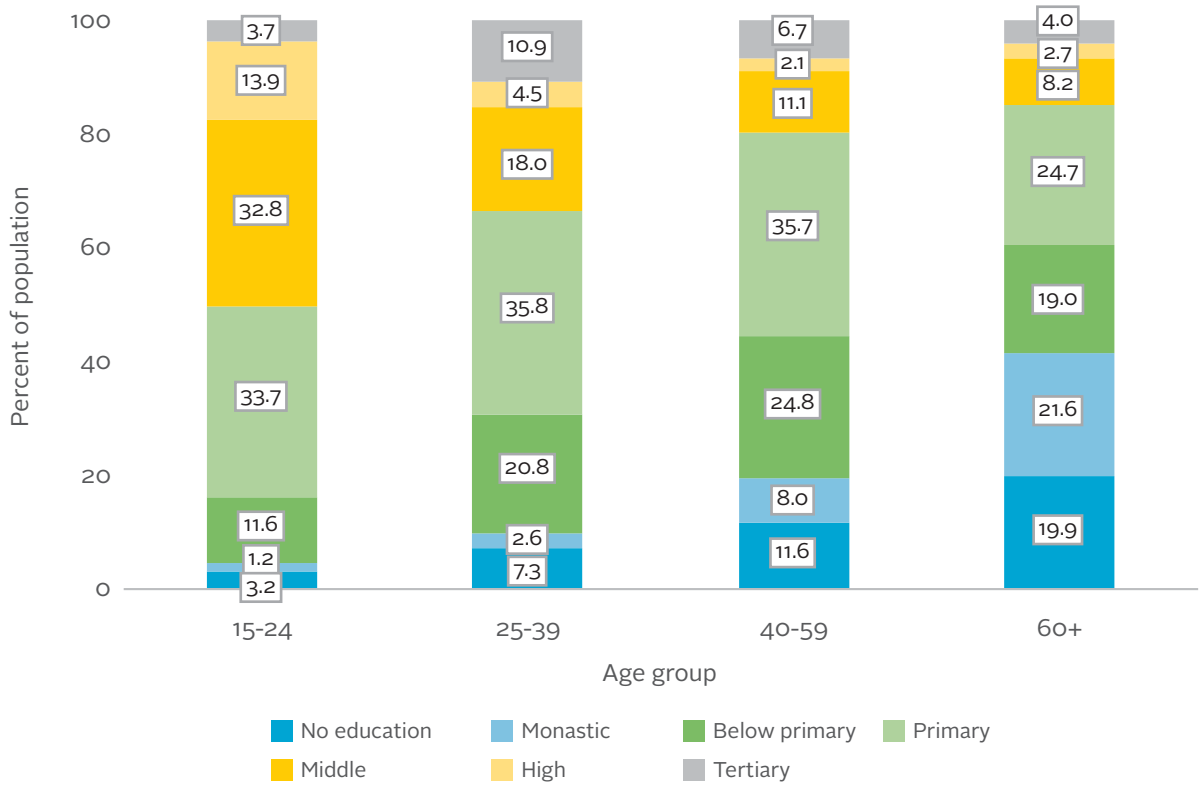
Note: Below primary indicates that the individual has some primary education but has not completed primary education.
Source: 2017 MLCS.

**Educational attainment varies with generation and younger generations of adults are generally better educated than older ones.** In recent years, the Government of Myanmar has implemented multiple reforms aimed towards improving enrolment, grade-to-grade transition, and school quality, among other educational outcomes (DOP, 2017a). Perhaps consequently, educational attainment among younger cohorts, especially the youth (individuals aged 15 to 24), is significantly higher than it is in older cohorts. Half of the youth have completed middle school or higher, which is notably greater than the share that has done so in any other age group, especially among those aged over 40 (Figure 3-1). Compared to adults aged 25 to 39 years old, the youth are more likely to have graduated from high school, but less likely to have completed tertiary education. This is in large part due to current enrolment in tertiary institutions among the youth, many of whom are still of the standard

age to attend university. Monastic education is significantly higher among adults aged 60 and over than it is among younger cohorts. Only 1.2 percent of the youth have received monastic education, indicating that attendance of monastic schools has gone down significantly in the past few decades.

Figure 3-1

Educational attainment among adults aged 15 and over, by age group (in percent)



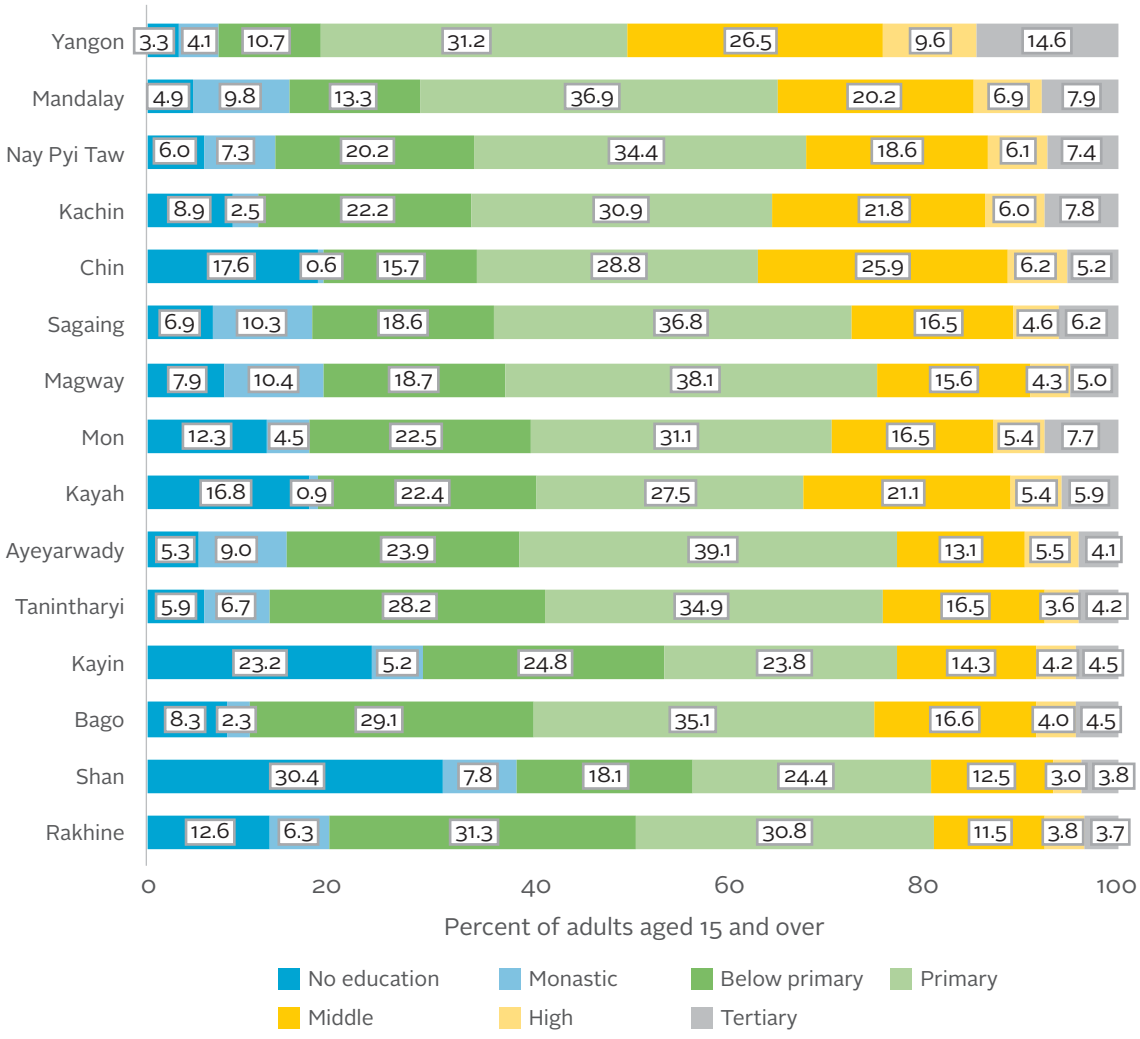

Note: Below primary indicates that the individual has some primary education but has not completed primary education.
Source: 2017 MLCS.

**Female educational attainment has historically lagged behind male educational attainment, but gender gaps have closed in recent years.** In 2017, women age 15 and older are twice as likely to have never gone to school compared to their male counterparts (Table 3-1). Moreover, the share of women that have completed either middle or high school (20.8 percent) is lower than the share of men who have done so (26.1 percent). However, among the youth, there are no significant gender gaps in educational attainment up until high school. In fact, female youth are 33 percent more likely than male youth to have completed high school or tertiary education. In both younger and older cohorts, women are more likely than men to have completed tertiary education. Although the factors accounting for women's predominance at higher levels of education attainment are unclear, this finding may reflect gender norms in Myanmar. Studies show that among men and women with similarly low levels of education, men have greater access to opportunities for career development (Gender Equality Network, 2015). As shown in Chapter 7, women are considerably more likely to work in a household farm or business without remuneration and get paid lower wages than men. Thus, women may need to pursue higher education to increase their competitiveness in the labour market (Gender Equality Network, 2015).

**Significant differences in educational attainment exist across states/regions, with Yangon Region and Mandalay Region having by far the most educated adults.** In Rakhine State and Shan State, nearly three out of four adults have only attended primary school or have no education (Figure 3-2). Shan State has the highest share of adults who have never attended school (30.4 percent), which is more than 10 times the share of adults with no education in Yangon Region. Yangon Region and Mandalay Region, which have relatively high accessibility to high schools and universities, also have the highest shares of high school and university completion among the adult population. Various factors such as the availability and accessibility of schools, school quality, and local labour market conditions may contribute to such differences in educational attainment across states/regions. For example, in areas where employment in the agricultural sector is high, education may not be as important as it is in areas where employment in more skilled jobs such as professional services or academics dominates. As shown in Chapter 7, most of the labour force in both Yangon Region and Mandalay Region work in the non-agricultural sector, especially in the service sector. Such characteristics of the local labour market may thus be a factor in attracting educated individuals or necessitating individuals living in the area to obtain higher education in order to be competitive in the labour market.

Figure 3-2

Educational attainment among adults over 15 years of age, by state/region (in percent)

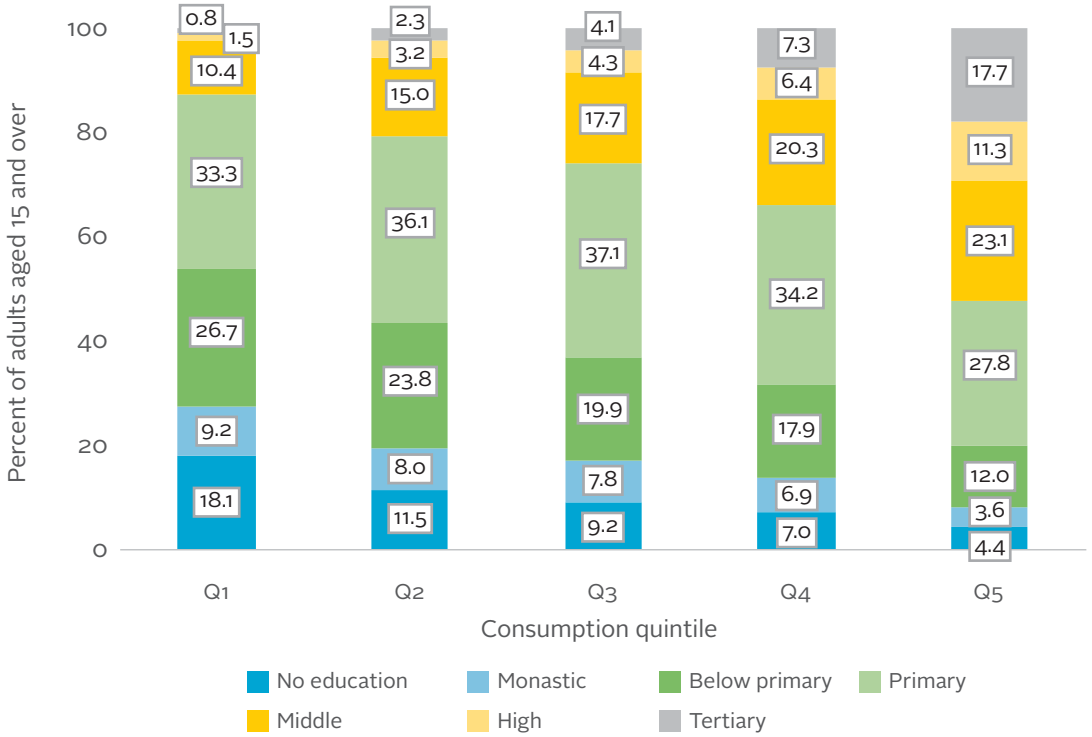



Note: Below primary indicates that the individual has some primary education but has not completed primary education. States/Regions are sorted in descending order of the share of adults that have completed of primary school or lower (not including monastic education).
Source: 2017 MLCS.

**Poor adults are 31 percent more likely than non-poor adults to have completed only primary education or less, and educational attainment increases with welfare.** Almost eight out of ten adults in the poorest consumption quintile have no education or have only obtained primary education (Figure 3-3). The share of adults in this group decreases with welfare, whereas the total share of adults who have obtained middle, high, or tertiary education increases. Adults in the top quintile are 4.1 times more likely than those in the bottom quintile to have completed middle school or more and 12.6 times more likely to have finished high school or more. The causal direction of this relationship between education and welfare may go either way. Only wealthier individuals may be able to afford the costs – both incurred costs and opportunity costs – associated with attending high school or university. At the same time, completion of high school and higher education may improve one's competitiveness in the labour market, allowing one to secure higher-paying jobs that increase wealth.

Figure 3-3

Educational attainment among adults over 15 years of age, by consumption quintile (in percent)

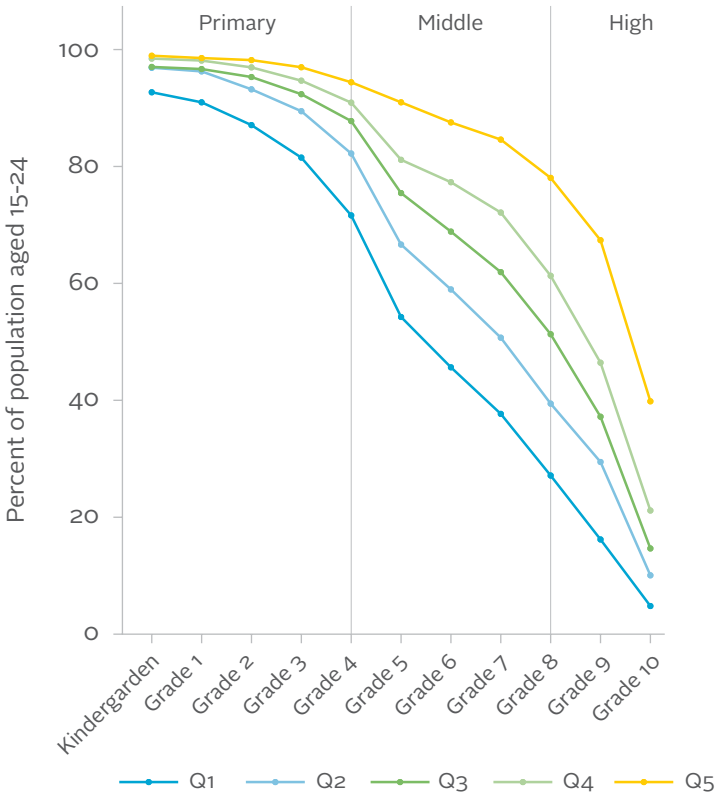



Note: Below primary indicates that the individual has some primary education but has not completed primary education. Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.
Source: 2017 MLCS.

**Among the youth, grade-to-grade transition has decreased rapidly after primary school, particularly among poorer individuals.** Attainment curves illustrate the share of the population that has completed a given grade or higher. When examined among the adult population who are more likely to have completed their educational career, attainment curves can provide a picture of grade-to-grade transition and drop out. Figure 3-4 displays attainment curves for the youth by consumption quintile. These curves show that grade-to-grade transition is high in primary school, especially for the youth in wealthier quintiles. However, transition to middle school from primary school is noticeably low, with poorer quintiles showing higher rates of drop out. Compared to transition from primary to middle school, grade-to-grade transition in middle school is relatively high for all quintiles except the wealthiest, suggesting that children are less likely to drop out once they enter middle school. After grade 5, which marks the start of middle school, attainment decreases steadily for youth across all welfare classes. These findings demonstrate that dropout between primary and middle school is still a significant issue in Myanmar.

Figure 3-4

Percentage of youth that has completed each grade or higher, by consumption quintile




Note: Although most of the adult population in 2017 attended school before the 2016 educational reform that changed grading nomenclature, this figure uses the new nomenclature and accounts for differences in the new and old systems. For example, adults who completed grade 1 under the old system are considered as having completed kindergarten under the new system. Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.

Source: 2017 MLCS

## Child enrolment in primary, middle, and high school[14]

**The Key Indicators Report shows that total net enrolment in all educational levels has increased since 2010, but significant differences still exist across age groups, gender, and state/region in 2017 (CSO, UNDP and WB, 2018a).** In 2017, about 94 percent of primary-school-age children in Myanmar are enrolled in school, and marginal differences in total net primary enrolment rates (Box 3-1) exist by residential area or gender (Figure 3-5). In comparison, total net middle and high school enrolment rates are substantially lower and exhibit larger gaps by residential area and gender. Middle-school-age and high-school-age children in urban areas are respectively 18 percent and 56 percent more likely than their rural counterparts to be enrolled in the appropriate level or higher. Total net middle and high school enrolment rates are also higher among girls than boys, reaffirming findings above on higher female educational attainment among adults. Across states/regions, primary enrolment is generally high, with only five states/regions having total net primary enrolment rates below the national average and only Shan State having a rate below 90 percent (CSO, UNDP and WB, 2018a). However, there is substantially greater variation in middle and high school enrolment rates across states/regions. For example, the share of children aged 14 to 15 attending high school or higher is twice as high in Mandalay Region (59.1 percent) as it is in Kayin State (27.3 percent).

14 This section examines various individual, household, and geographical predictors of primary, middle, and high school enrolment using probit regressions, which can be found in Annex C Table C 1.

## Box 3-1 Definitions of school age and total net enrollment

**School age:** Age at the start of the school year (June 1st). Under the current system, basic education in Myanmar is comprised of five years of primary school (kindergarten to grade 4), followed by four years of middle school (grades 5 to 8), and two years of high school (grades 9 and 10). The official school age for each educational level is:

- Primary school: ages 5 to 9
- Middle school: ages 10 to 13
- High school: ages 14 and 15

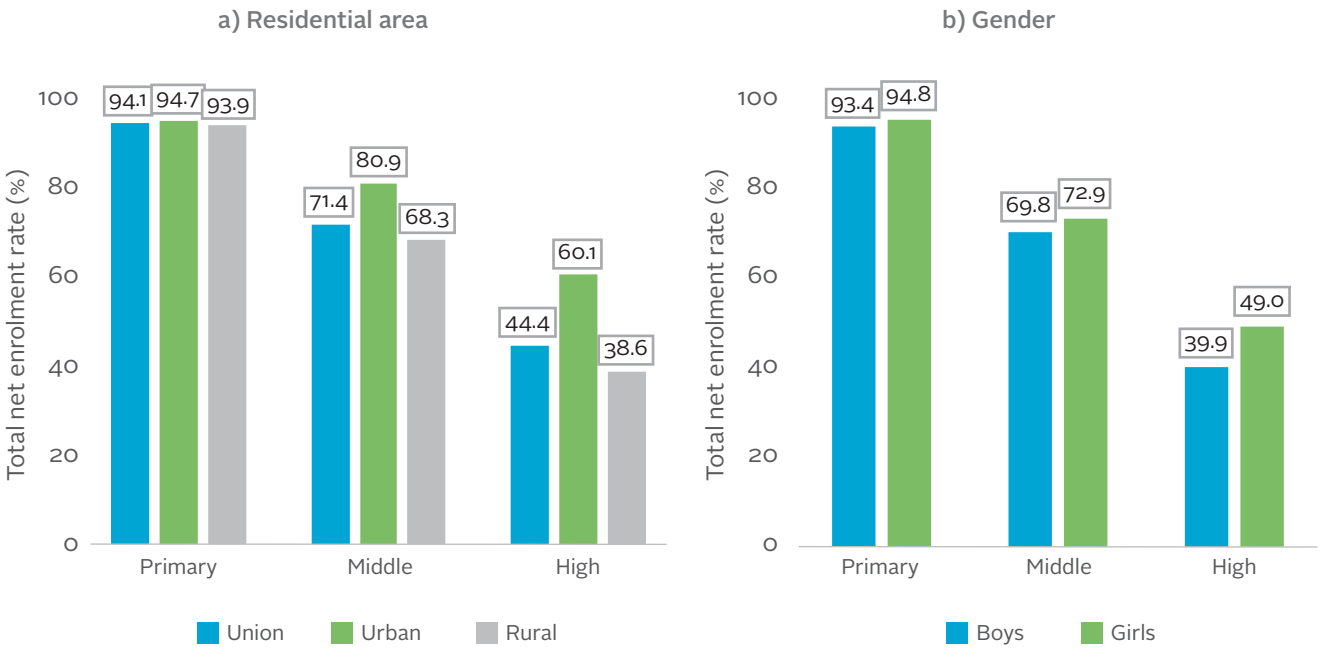
The estimates presented in this section are based on school age rather than the age at the time of the survey.

**Total net enrolment ratio:** The number of children in the official school age range for a given level of education who are enrolled in that educational level or higher, expressed as a share of the total population in the same age group. The total net primary enrolment rate measures the share of children aged 5 to 9 at the start of the school year who are enrolled in primary school or higher. The total net middle enrolment rate represents the share aged 10 to 13 who are enrolled in middle school or higher, while the total net high enrolment rate represents the share aged 14 or 15 who are enrolled in high school or higher.

Note: See CSO, UNDP and WB (2018a) for further discussion on the use of school age and total net enrolment ratios.

Figure 3-5

Total net primary, middle, and high school enrolment rates, by residential area and gender (in percent)

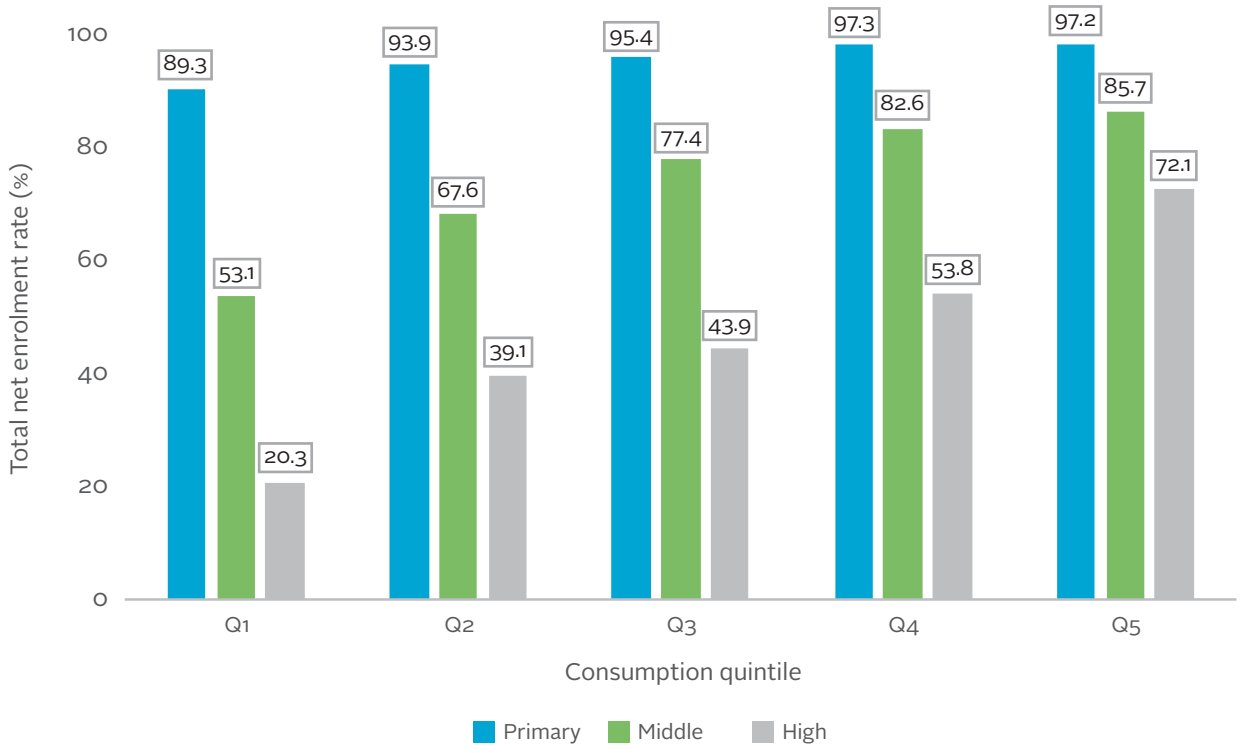



Source: 2017 MLCS.

**Higher welfare is associated with a significantly higher likelihood of being enrolled, especially for middle and high-school-age children.** Across consumption quintiles, most children of primary-school age are enrolled in school, which in part demonstrates the compulsory nature of the primary education in Myanmar.[15] Despite this fact, primary-age children in the poorest quintile are still less likely than children of the same age in the top quintile to attend primary school or higher (Figure 3-6). Moreover, differences in enrolment across welfare quintiles are substantially larger for middle and high school-age children. Although some of this variation is explained by factors such as residential area and the accessibility of schools, differences persist even after considering such factors as well as other individual and household characteristics. This suggests that other factors correlated with welfare such as the ability to afford education at higher levels or the perceived importance of education for the type of jobs preferred by wealthier cohorts remain important determinants of middle and high school enrolment. Controlling for various characteristics, children aged 10 to 13 in the wealthiest quintile are 15.3 percentage points more likely to be enrolled in middle school or higher than their counterparts in the poorest quintile (see Table C-1 in Annex C). The absolute and relative differences in total net enrolment rates across consumption quintiles are even more pronounced for children of high-school age. For example, other factors considered, children aged 14 or 15 in the top quintile are 32.1 percentage points more likely than those in the bottom quintile to be enrolled in high school or higher.

Figure 3-6

Total primary, middle, and high school net enrolment rates, by consumption quintile (in percent)



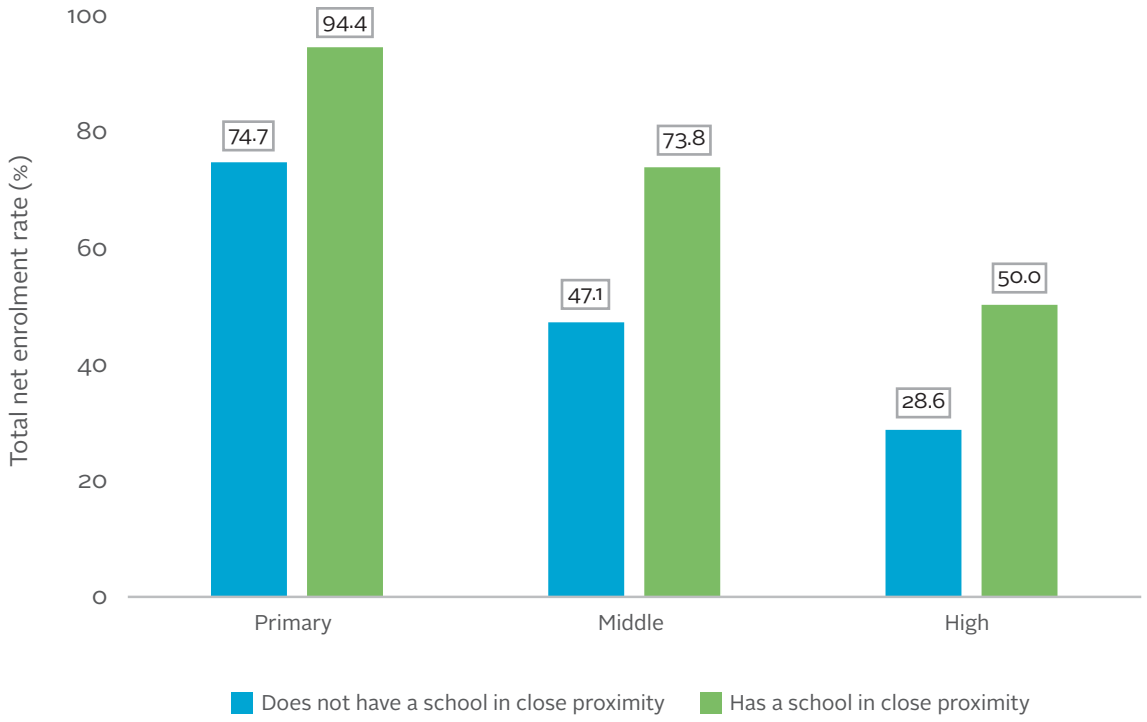

Note: Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.
Source: 2017 MLCS.

15 There are many policies and laws that ensure compulsory primary education in Myanmar. Universal primary education is inscribed in the 2008 Constitution of the Union of Myanmar (specifically Art. 28 and Art. 366) and the National Education Law of 2014 (Parliamentary Law No.41). Section 20 of the Child Law of 1993 also articulated the early aspirations for free and universal primary education (UNESCO, 2017).

**Accessibility of schools is a significant determinant of enrolment in middle and high school for both boys and girls.** Access to government primary schools is nearly universal in Myanmar: About 95.1 percent of primary-school-age children have a school that offers primary-level grades in their village or ward, and 98.4 percent live in close proximity[16] to one. In comparison, government secondary schools, especially those that offer high-school grades are in shorter supply: Only three out of ten high-school-age children have a high school in their village or ward, while three out of four live in close proximity to one. In general, schools are considerably less accessible in rural areas than they are in urban areas, and significant variation in accessibility exists across states/regions. Figure 3-7 shows that enrolment rates are significantly higher for children who live in close proximity to a school that offers the standard grades for their age. Controlling for residential area, state/region characteristics, and other factors, middle and high-school-age children who live near schools that offer middle and/or high school grades are about 9-10 percentage points more likely to be enrolled than their counterparts who live further away (see Table C-1 in Annex C). Proximity to schools is similarly important for girls and boys of school age to enrol in school.

Figure 3-7

Total net primary, middle, and high school enrolment rates, by proximity to schools (in percent)




Note: A child is considered to live in close proximity to a school if the school is less than 5 miles away and it takes 30 minutes or less to get to the school by the most common means of transport in the village/ward. Each bar represents total net enrolment by proximity to a school that offers the indicated level of education. For example, the total net enrolment rate for primary-school age children who do not live in close proximity to a primary school is 74.7 percent.
Source: 2017 MLCS.

16 Close proximity is defined as being less than 5 miles away and taking 30 minutes or less to reach by the most common means of transport in the village/ward.

**Urban-rural differences in enrolment can largely be explained by lower welfare and lower accessibility of schools in rural areas.** Much of the geographical differences in total net middle and high school enrolment can be attributed to two factors: the accessibility of schools and spatial differences in welfare. In general, rural children are poorer than urban ones and face greater difficulties in reaching schools that offer the relevant level of education for their age, particularly secondary-level grades. States/Regions also exhibit substantial differences in welfare (see Chapter 2) and in the accessibility of government schools. Yangon Region, Mandalay Region, the Union Territory of Nay Pyi Taw, and Mon State have the highest shares of school-age children living in close proximity to a school offering secondary-level grades, while Kayin, Rakhine, Shan, and Chin States have the lowest.[17] Welfare and proximity to schools explain nearly all of the differences in primary, middle, and high school enrolment across urban/rural areas and much of the differences across states/regions (see Table C-1 in Annex C).

**School-age children who live with a greater number of siblings or other children aged 0 to 15 are less likely to be enrolled in the standard educational level or higher.** Some of these differences in enrolment can be attributed to the fact that poor households, which are less likely to send their children to school, tend to have more children. However, even after controlling for welfare quintile, age, and other individual and household characteristics, children of all school ages who live with more siblings or other children aged 15 and under are less likely to be enrolled in the appropriate educational level or higher (see Table C-1 in Annex C). This finding holds for both younger and older siblings/children. For example, among middle-school-age children, each additional younger sibling is associated with a 4.0 percentage point decrease in the likelihood of the child being enrolled in middle school or higher. Similarly, each additional older sibling is associated with a 4.6 percentage point decrease in the likelihood of a middle-school-age child being enrolled. A larger number of children in the household may mean greater responsibilities for a child to stay at home to look after siblings or help with housework or in a household farm or business. This may have implications for enrolment, especially in the appropriate grade for a child's age. In general, school-age children living with more siblings or other children are more likely to be enrolled in a grade or educational level that is below the standard one for their age.

**Parental educational attainment, particularly the education of mothers, is an important factor in the education of both boys and girls.** Primary-school-age children with more educated parents are more likely to be enrolled in primary school or higher, especially when compared to children with a mother or father who has never attended school. However, differences in total net primary enrolment rates by parental education are small relative to differences in total net middle or high school enrolment rates. Controlling for differences in welfare and other factors, children aged 14 and 15 with a mother who has completed tertiary education are 48.7 percentage points (6.6 times) more likely than those with an uneducated mother to be enrolled in high school. In comparison, the differential in total net high school enrolment by father's attainment of tertiary education is 26.9 percentage points (5.5 times), which is almost two times lower than it is by mother's educational attainment. Significant increases in child enrolment can be seen for every level of parental educational attainment. However, the absolute and relative differences in total net middle and high school enrolment rates are more pronounced by mother's education than they are by father's education (see Table C-1 in Annex C). Although the exact reasons for this finding are not clear, it is possible that mothers have greater decision-making power than fathers in the education of their children, as women in Myanmar tend to have relatively greater responsibilities in child-rearing (Gender Equality Network, 2015).

17 Ethnic, NGO-run, monastic, and private schools have filled in some of the gaps in the provision of government education in many states/regions, but section four of the 2017 MLCS community questionnaire does not differentiate these academic institutions by educational level.

**Boys are more likely than girls to be enrolled in a school level below the appropriate level for their age, which explains the gender gap in total net middle school enrolment but not high school enrolment.** The gender gap in middle and high school enrolment persists even after considering age, proximity to schools, welfare, and various other household and individual characteristics. Middle and high-school-age girls are respectively 4.7 and 8.8 percentage points more likely than boys of the same age to be enrolled in the appropriate school level or higher. However, middle-school-age boys are 28.3 percent more likely than their female counterparts to be enrolled in a school level below middle school (i.e., primary school), and this characteristic accounts for almost all the difference between boys and girls in total net middle enrolment rates. Boys of high-school age are also more likely than girls to be enrolled in a lower educational level than the standard, but gender gaps in total net high enrolment persist even considering this fact and other individual and household characteristics.

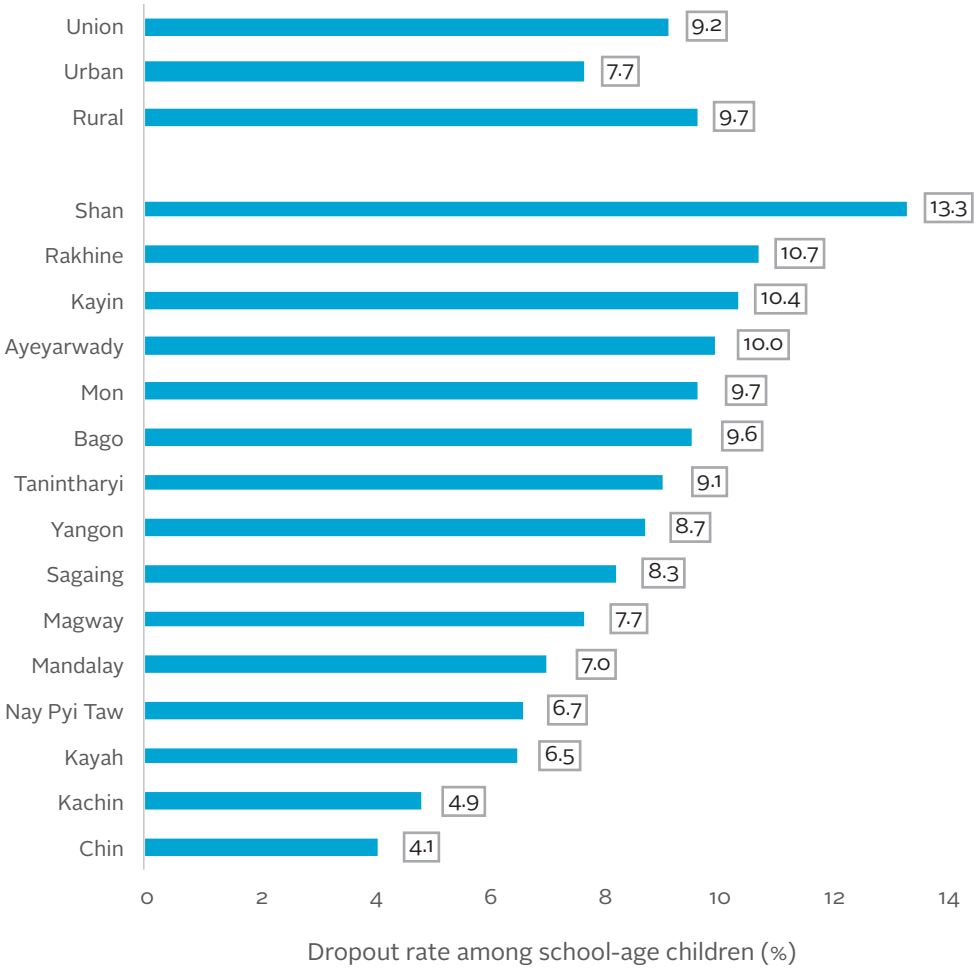
## Dropout among school-age children

**Dropout and delayed progression through the educational system are the primary reasons for low middle and high school enrolment.** Among children aged 10 to 13 who are not enrolled in middle school or higher, six out of ten are enrolled in a lower educational level (i.e. primary school), which may be due to a delay in starting their education, repetition of a grade, or a gap year in education. Another three out of ten have dropped out from school, and less than 3 percent of school-age children have never attended school. A relative delay in education thus is the main reason for low total net middle enrolment rates, especially among boys. However, for children aged 14 or 15, the primary reason for not being enrolled in high school or higher is due to dropout rather than delayed enrolment. Almost 55 percent of children in this age group who are not in high school or higher have dropped out, while just 37 percent are enrolled in a lower level (i.e., middle or primary school).

**Dropout rates capture how likely a child is to drop out of school, and in 2017, about 9 percent of both boys and girls aged 5 to 15 have left schooling.** Dropout rates are 26 percent higher in rural areas than in urban areas, and significant variation exists by state/region (Figure 3-8). As expected, there is a strong negative relationship between dropout and total net enrolment across states/regions. Shan, Rakhine, and Kayin States, which have some of the lowest total net enrolment rates, also have the highest likelihoods of dropout among school-age children. While Chin State has the lowest dropout rate, it also has one of the highest shares of children in educational levels below the appropriate level for their age, which accounts for the state's low total net middle and high school enrolment rates.

Figure 3-8

School dropout rate among school-age children, by residential area and state/region (in percent)

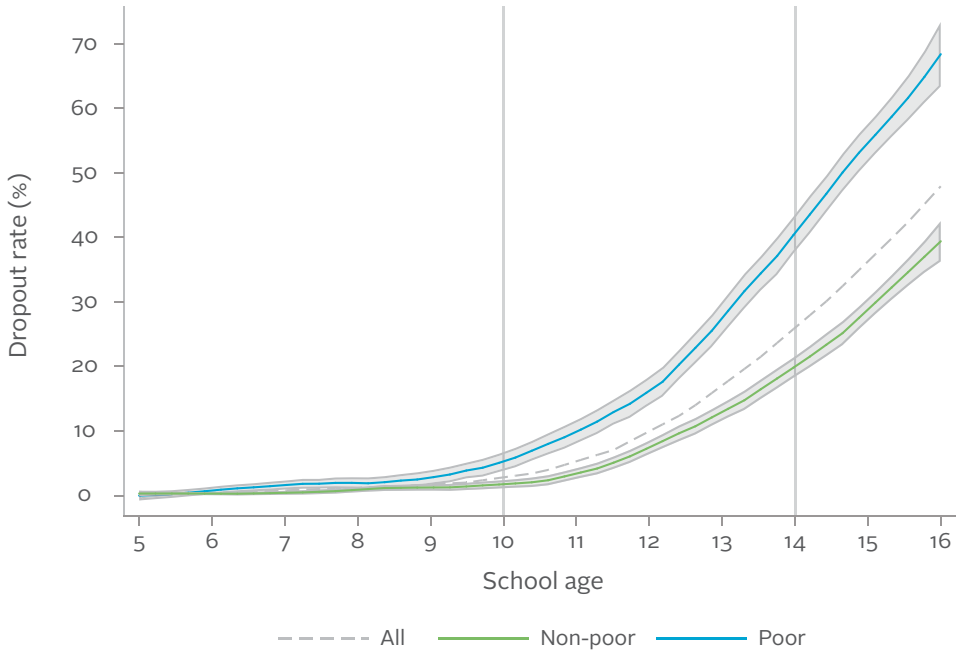



Note: Dropout rates are defined as the share of school-age children who have attended school at one point in their lives but have since dropped out and are not in a gap year.
Source: 2017 MLCS.

**Dropout rates increase rapidly with school age after primary school, emphasizing that grade-to-grade transition in middle and high school is an issue in Myanmar, especially among poor children.** Figure 3-9 shows that dropout in primary school years (age 5 to 9) is low, and marginal differences in dropout exist between poor and non-poor children. Starting from age 10 when children typically enter middle school, dropout rates increase rapidly, and poor children become significantly more likely to dropout from school. By high-school age, the dropout rate is over 30 percent, with poor children being twice as likely as non-poor children to drop out from school. Overall, 14 percent of poor school-age children have dropped out from school, while 7 percent of non-poor children have done so. Similar trends in dropout can be seen by welfare quintile: Middle and high-school dropout rates decrease with welfare, and children aged 14 and 15 in the poorest quintile are 3.7 times more likely than those in the wealthiest quintile to drop out.

Figure 3-9

School dropout rate, by school age and poverty status (in percent)




Note: The dotted line represents both poor and non-poor children. The grey area indicates 95% confidence intervals, and the vertical lines at age 10 and 14 indicate the start of middle and high school, respectively.
Source: 2017 MLCS.

**Household finances and educational costs present significant barriers for children, particularly poor children, to continue and complete secondary education.** A lack of affordability and the need to work account for almost two-thirds of dropouts from basic education, particularly from middle and high school (Table 3-2). Together, these financial barriers make up a larger share of dropouts among middle and high-school-age children than among primary-school-age children, signalling the relatively high financial burden secondary education presents for households. Among children who have dropped out of school, those living in rural areas are more likely than those living in urban ones to drop out for financial reasons, especially to work. Poor children in every age group are also more likely than non-poor children to drop out because they cannot afford schooling costs. Although among dropouts, non-poor children are more likely than poor ones to have left schooling in order to work, among all school-age children, poor children are significantly more likely to drop out to work. Thus, as shown in Chapter 7, child labour is more of an issue among poor children 10 to 15 years old than it is among non-poor children.

**Girls are more likely than boys to drop out due to financial reasons, while boys are more likely to drop out because of poor performance in school or the perception that further education is not imperative.** Relative to boys, girls are 24.6 percent more likely to drop out of school due to difficulty paying for the costs associated with schooling or due to the need to work (Table 3-2). On the other hand, a greater share of boys drops out because of poor performance in school or because they find school content not useful or they have completed their desired level of schooling. Both of these finding hold even after considering age group, which controls for potentially different timings of dropout. Given that dropout rates between girls and boys are similar across age groups, these results suggest that financial investment in girls' education may be less of a priority for some households.

Table 3-2

Reasons for dropout among school-age children who have dropped out (in percent)

| | Union | Urban | Rural | Male | Female | Non-poor | Poor |
|---|---|---|---|---|---|---|---|
| Could not afford school | 38.2 | 40.0 | 37.8 | 34.4 | 42.1 | 34.2 | 42.9 |
| To work | 25.1 | 18.0 | 27.0 | 22.1 | 28.3 | 26.4 | 23.7 |
| Failed/Fell behind | 7.5 | 8.9 | 7.2 | 8.6 | 6.5 | 8.0 | 7.1 |
| School content not useful | 5.6 | 5.7 | 5.6 | 6.3 | 4.9 | 5.9 | 5.2 |
| Completed desired level | 5.2 | 6.5 | 4.9 | 7.3 | 3.0 | 6.0 | 4.3 |
| Illness/Disability | 5.0 | 6.3 | 4.6 | 4.1 | 5.8 | 6.1 | 3.7 |
| School was too far | 3.5 | 3.1 | 3.6 | 3.2 | 3.7 | 2.2 | 5.0 |
| Other | 9.8 | 11.5 | 9.4 | 13.8 | 5.7 | 11.2 | 8.2 |

Source: 2017 MLCS.

## The costs of education

**In 2017, households in Myanmar spend on average 5.1 percent of their total consumption on any educational expenditures and 4.1 percent on expenditures related only to basic education.** Urban households are more likely than rural households to spend more in absolute terms on basic education, as are non-poor households when compared to poor households. However, in relative terms, spending on basic education as a share of total consumption is similar across urban and rural areas, and poor and non-poor households.

**Educational expenditures per student increase with school level, demonstrating that higher levels of basic education demand larger requisite costs.** For every child enrolled in any academic institution, the average school-related costs[18] are about 205,300 kyat per year or 22,800 kyat per school month. Educational expenditures increase with school level, with average annual costs amounting to 103,000 kyat per primary-school student, 173,500 kyat per middle-school student, and 602,400 per high-school student (Table 3-3). Some schools such as private schools require additional fees. Moreover, some educational expenses such as tutoring or donations are discretional and are not necessarily required for all children enrolled in school. Excluding expenditures on tutoring and donations and restricting the sample of students to those attending government schools thus provides a better estimate of the basic costs associated with schooling. Table 3-3 shows that the basic costs in government schools are significantly lower than total costs in any type of academic institution: The average annual basic cost associated with sending a child to a government school is 78,000 kyat for primary school, 123,200 kyat for middle school, and 346,400 kyat for high school.

18 Total costs include educational expenditures on school fees, donations, uniforms, books, tutoring, accommodations, transportation, school meals or snacks, and miscellaneous items.

Table 3-3

Average annual educational expenditures per student by school level (in 2017 nominal kyat)

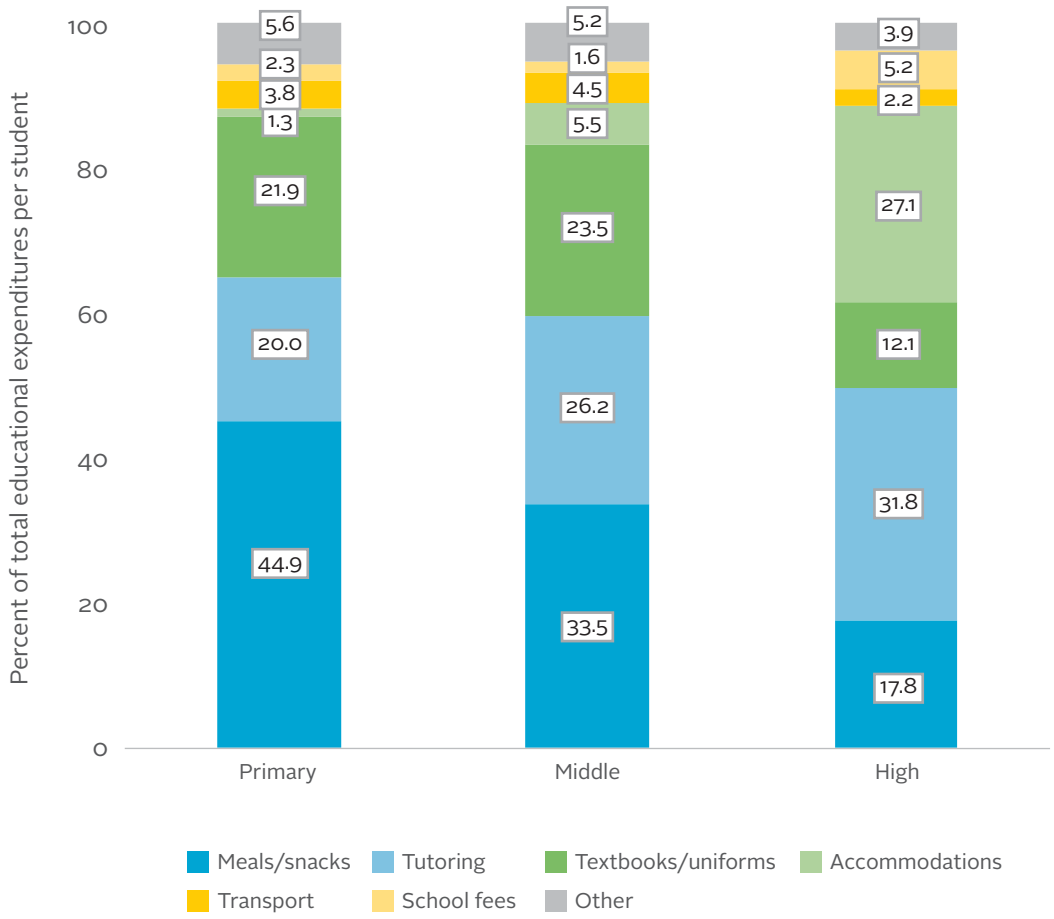
| | Total costs | | Basic costs |
|---|---|---|---|
| | All schools | Government-run schools | Government-run schools |
| Primary | 103,000 | 95,500 | 78,000 |
| Middle | 173,500 | 169,900 | 123,200 |
| High | 602,400 | 537,700 | 346,400 |

Note: Total costs include educational expenditures on school fees, donations, uniforms, books, tutoring, accommodations, transportation, school meals or snacks, and miscellaneous items. Basic costs include only essential educational expenditures and excludes tutoring fees and donations. Values are reported in 2017 nominal kyat.

Source: 2017 MLCS.

Figure 3-10

Student educational expenditure shares, by educational expense and school level (in percent)




Note: Expenditure shares are taken over students of the specified school level who report having educational expenditures.
Source: 2017 MLCS.

**Compared to primary and middle school, high school is associated with substantially higher shares of total educational expenditures spent on accommodations and tutoring.** For primary and middle school students, expenditures on school meals or snacks make up the majority of total educational expenditures (Figure 3-10). Expenses associated with tutoring, textbooks, uniforms, and other school supplies also compose a significant portion of total costs. Large expenditures on additional tutoring for children may reflect challenges in the education system. In Myanmar, tutoring often entails paid, after-class instruction that is sometimes led by classroom teachers. This type of tutoring has become pervasive in Myanmar and is largely regarded as a "necessary evil", as it is perceived to help with school performance but is costly and hampers out-of-classroom development.[19] On average, expenditures on tutoring make up 31.8 percent of educational expenditures on high-school students. This translates to about 200,000 kyat per high-school student, although variation across students is large, with about a third of high school students spending nothing on tutoring and some spending more than a billion kyat per year on tutoring. High-school students also have relatively high accommodation expenses, which reflects the short supply of high schools in Myanmar. As shown in Chapter 8, many children are forced to temporarily migrate to attend high school and thus incur additional expenses for accommodation at dormitories, homes of relatives, or other places.

**Wealthier households spend significantly more on education per school-age child, even after considering higher enrolment in secondary grades and private schools among the top quintiles.** On average, the non-poor spend almost twice as much in educational expenditures per student as the poor, while the top quintile spends about 2.6 times more per student than the poorest quintile.[20] Some of these differences can be attributed to relatively high enrolment in secondary school and private school in wealthier quintiles, which are associated with higher costs compared to primary and public schools, respectively. However, gaps in spending per student persist even controlling for differences in school level and type, in addition to residential area and other individual characteristics. In fact, much of these gaps can be attributed to significantly higher spending on tutoring both in absolute terms and as share of total educational expenditures among wealthier students at every educational level. As tutoring is not mandatory for students, poor households may choose not to enrol their children in these optional afterschool classes. However, if tutoring proves to play an important role in school performance and prospects for further education, poor students may be at a serious disadvantage since many will not be able to afford these additional costs. This, in turn, could have serious implications for widening gaps in enrolment and educational attainment across welfare quintiles.

19 https://frontiermyanmar.net/en/extra-curricular-tuition-is-big-business-in-myanmar

20 See Annex C Table C-2 for regressions of log educational expenditures per student on consumption quintile, school level, school type, residential area, and other individual characteristics.

## Main takeaways and implications

This chapter sheds light on Myanmar's build-up of human capital through education. As of 2017, adults' education remains low, although more adults from the younger generations have completed higher school levels. However, dropout rates in middle and high school suggest that more remains to be done to ensure accumulation of human capital and productivity gains for all children. Poorer children face considerably larger barriers to education. In general, they have poorer access to schools, face greater financial constraints to continuing education, and possess greater household responsibilities that deter them from going to school.

This analysis brings to light two main implications:

i. Helping poorer students with grants and scholarships to pursue their education after primary school level could have a trickle-down effect on reducing school dropout. This could reduce child labour force participation as most children dropping out of school start working at an early age. It could also improve human capital and once these children become parents, one can hope they would invest in the education of their future children.

ii. Developing school infrastructure network at the community level would increase enrolment. Having physical access to school could lead Myanmar to reach universal primary education enrolment. Building, and investing in, middle and high school at the local level could also help reduce the budgetary constraint that parents face when sending their children to middle and high school outside of their communities to receive higher education.

# 04.

# ACCESSING HEALTHCARE SERVICES AND MANAGING THE FINANCIAL BURDEN OF HEALTHCARE

*Universal health coverage generally entails two main components: access to services and protection from financial headship when using healthcare. The importance of such coverage is spelled out in target 3.8 of the third SDG: "To ensure healthy lives and promote well-being for all at all ages". In this context, this chapter describes access to different types of healthcare facilities in Myanmar and analyses the utilisation of healthcare when faced with an illness or injury. It also examines the level of financial burden that households face due to healthcare utilisation and the strategies used in order to pay for health costs.*

## Access to healthcare services

**Nearly nine out of ten individuals in Myanmar live in close proximity[21] to a public medical facility, although the type of facility differs by residential area.** In 2017, half of the population lives near a government hospital (Table 4-1). Urban residents are 2.4 times as likely as rural residents to have a government hospital nearby, and government hospitals are by the far most accessible public medical facility in urban areas, with 85.6 percent of the urban population living close to them. On the other hand, in rural areas, a greater share of individuals lives in close proximity to a government health centre or health post[22], which is expected given that these clinics have been set up mainly in rural areas in an attempt to satisfy gaps in the provision of primary care through government hospitals. While health centres offer a wider range of primary care services, health posts tend to provide only basic medical services and have limited staff, most often without a doctor. In rural areas, more than half of residents live near a government health post, making it the most accessible public facility in rural areas.

Table 4-1

Percentage of population living in close proximity to medical facilities, by type of facility

| | Union | Urban | Rural | Non-poor | Poor |
|---|---|---|---|---|---|
| **Any public facility** | 88.7 | 91.1 | 87.8 | 89.4 | 86.5 |
| Public hospital | 50.4 | 85.6 | 36.3 | 53.8 | 40.1 |
| Public health centre | 28.9 | 13.5 | 35.0 | 28.5 | 30.0 |
| Public health post | 41.7 | 15.1 | 52.3 | 40.0 | 46.9 |
| **Any private facility** | 55.6 | 96.1 | 39.5 | 59.9 | 42.6 |
| Private hospital | 20.0 | 55.1 | 6.0 | 23.5 | 9.4 |
| Private doctor/clinic | 55.0 | 95.8 | 38.6 | 59.4 | 41.6 |

Note: An individual is considered to live in close proximity to a facility if the facility is less than 5 miles away from the village/ward of residence and it takes less than one hour to reach the facility by the most common means of transport in the village/ward. Public facilities include government hospitals, health centres, and health posts. Private facilities include private hospitals and doctors/clinics.
Source: 2017 MLCS

21 An individual is considered to live in close proximity to a facility if the facility is less than 5 miles away from the village/ward of residence and it takes less than one hour to reach the facility by the most common means of transport in the village/ward.

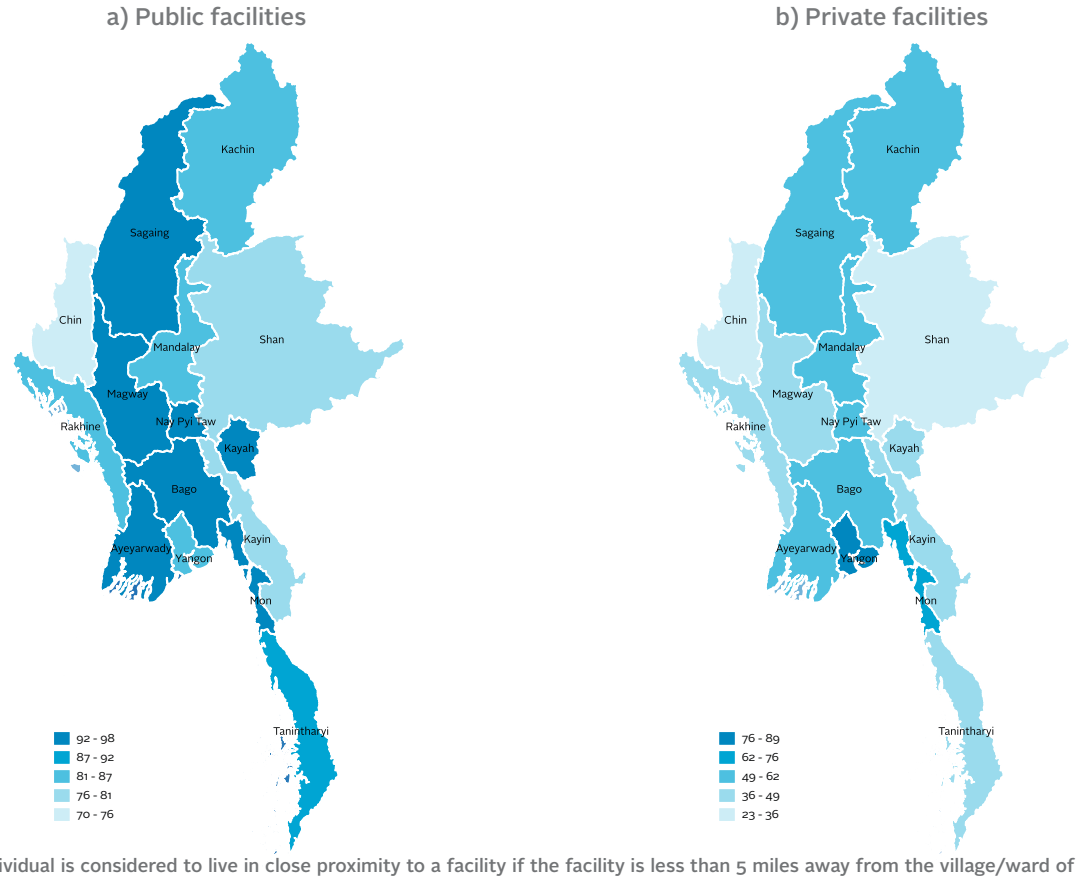
22 Health centres and posts in rural areas of Myanmar typically have no beds or doctors and offer only primary care with a focus on maternal and child health and public health services.

**Private providers have failed to fill in the gaps of public healthcare provision.** In 2017, nearly 56 percent of the population lives in close proximity to a private hospital or doctor/clinic, and private medical facilities, especially private hospitals, are significantly more accessible in urban areas than in rural areas (Table 4-1). In general, individuals who live close to government hospitals are also more likely to have better access to private hospitals and clinics. Map 4-1 shows that the states/regions that have greater access to public providers also have greater access to private ones and tend to be in central Myanmar. This relationship between public and private facilities is also evident within every state/region and is largely driven by areas with government hospitals. Those who only have access to government health centres or posts tend to have relatively poor access to private facilities, which may offer a more extensive range of primary care services. Taken together, these results suggest that private providers have not entirely filled the gaps of public healthcare provision within and across states/regions in Myanmar. Access to both public and private health facilities is notably low in Chin, Shan, Kayin, and Rakhine States.

**The poor have inferior access to public and private hospitals compared to the non-poor primarily due to higher residence in rural areas.** While the share of the poor and the non-poor who have access to any public medical facility is similar, the non-poor are 34.2 percent more likely than the poor to live in close proximity to a government hospital (Table 4-1). Moreover, the non-poor are 2.5 times as likely as the poor to have a private hospital nearby their residence. Public health centres and health posts are relatively more accessible to the poor, largely due to the fact that many of the poor reside in rural areas.

Map 4-1

Percentage of population living in close proximity to medical facilities




Note: An individual is considered to live in close proximity to a facility if the facility is less than 5 miles away from the village/ward of residence and it takes less than one hour to reach the facility by the most common means of transport in the village/ward. Public facilities include government hospitals, health centres, and health posts. Private facilities include private hospitals and doctors/clinics. Outreach activities for the 2017 MLCS took place over the 12 months of data collection, but it was not possible to conduct interviews in two townships of Northern Rakhine State and the Wa Self-Administered Division.

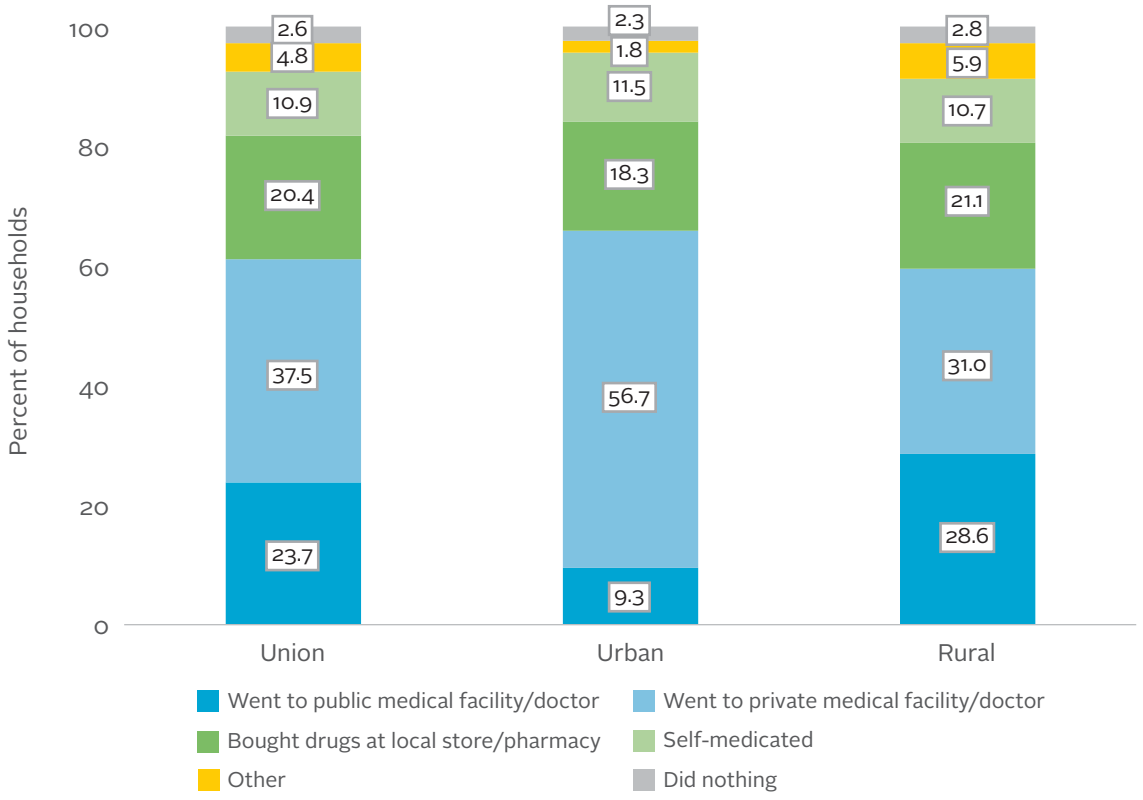
Source: 2017 MLCS

## Correlates of healthcare utilisation[23]

**In 2017, healthcare utilisation in Myanmar, particularly of private facilities, is high.** Six out of ten people seek treatment at a medical facility or consult a doctor when faced with an illness or injury (Figure 4-1). Going to a medical facility or a doctor is associated with more days recuperating than self-medicating, buying drugs at a local store or pharmacy, or pursuing other/no methods of treatment. This suggests that those who face relatively severe illnesses or injuries tend to seek treatment at healthcare facilities rather than relying on personal methods of treatment, which may be sufficient for small ailments. Among those who go to a formal healthcare provider, the majority (61 percent) go to a private facility rather than a public facility, with private hospitals and clinics being the most visited. Government health posts are the most utilised public facility, which reflects their relative accessibility in rural areas.

Figure 4-1

Percentage of ill or injured individuals seeking different types of treatment, by residential area




Note: Self-medication is defined as using medicine that is already in one's possession. Treatment at NGO-run facilities represents less than 0.1 percent of treatment sought at medical facilities and is combined with treatment sought at public facilities.
Source: 2017 MLCS.

**Urban residents are more likely than their rural counterparts to use private rather than public healthcare services when ill/injured.** Ill/injured individuals residing in urban areas are 10.8 percent more likely than ill/injured individuals residing in rural areas to visit a medical facility or doctor. A relatively large share of urban residents seek treatment at private facilities rather than public ones,

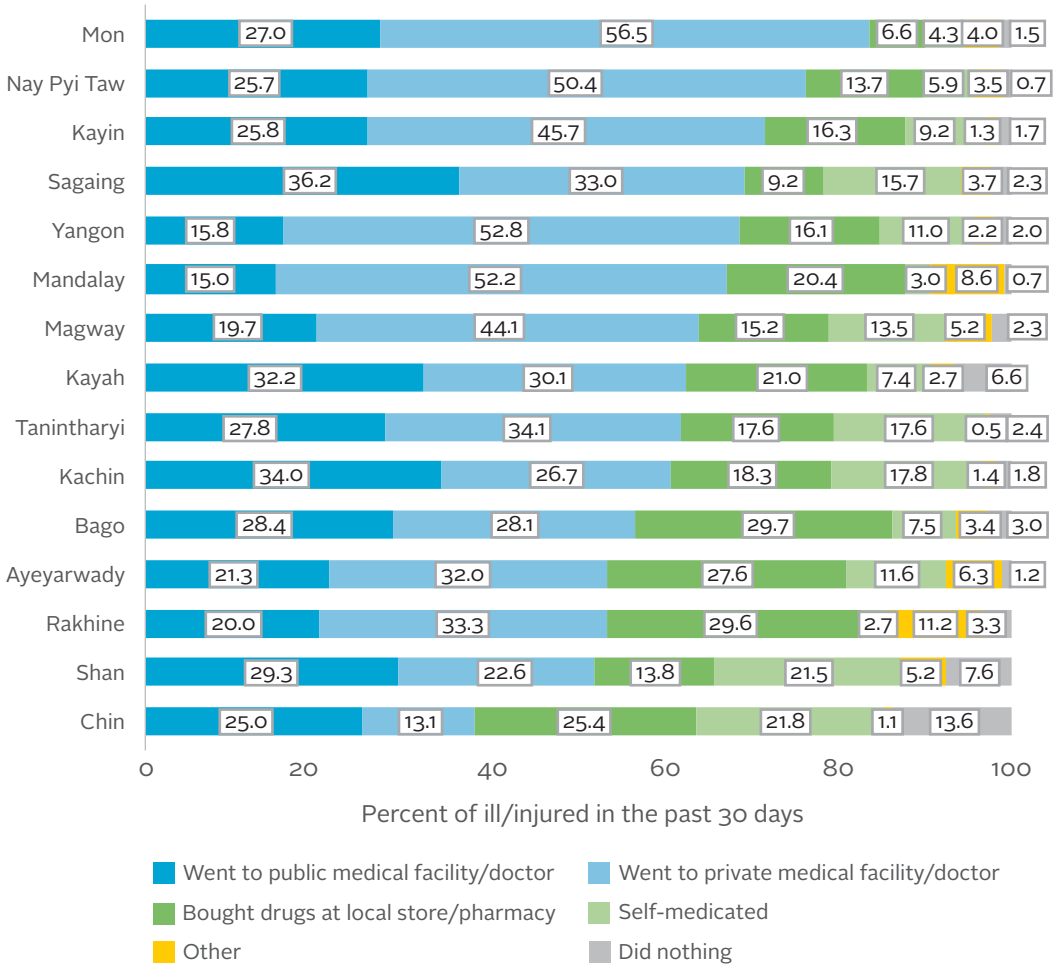
23 This section examines correlates of healthcare utilisation among individuals who report being ill or injured in the 30 days preceding the survey (about 31 percent of individuals in the 2017 MLCS). Healthcare includes public hospitals, centres, and posts, as well as private hospitals/clinics and doctors. Probit regressions of healthcare utilisation on various demographic, household, and state/region characteristics can be found in Annex D Table D-1.

which reflects both greater accessibility of private facilities and preference for private providers in urban areas. Controlling for proximity to various public and private medical facilities and other individual and household characteristics reduces urban-rural differences in the likelihood of using healthcare services, but still urban residents are 6.8 percentage points more likely than rural residents to use private facilities and are 8.9 percentage points less likely than rural residents to use public ones.

**States/Regions exhibit substantial differences in healthcare usage, even after considering severity of illness, access to healthcare facilities, and other individual and household characteristics.** Figure 4-2 shows the types of treatment sought among ill/injured individuals by state/region. Mon State has by far the highest share of individuals using medical facilities, particularly private ones, in response to an illness or injury (Figure 4-2). At the other end of the spectrum, Chin State and Shan State have the lowest utilisation of healthcare services in general and private services in particular. Instead, these states have the highest share of individuals who self-medicated or did not seek treatment through any means after being afflicted with an illness or injury. Although some of these differences in healthcare usage across states/regions are explained by varying access to public and private healthcare facilities and welfare disparities, differences persist even after controlling for these factors and other individual and household characteristics. This suggests that other variables specific to states/regions – for example, affordability and quality of available services – influence healthcare utilisation.

Figure 4-2

Percentage of ill or injured individuals seeking different types of treatment, by state/region

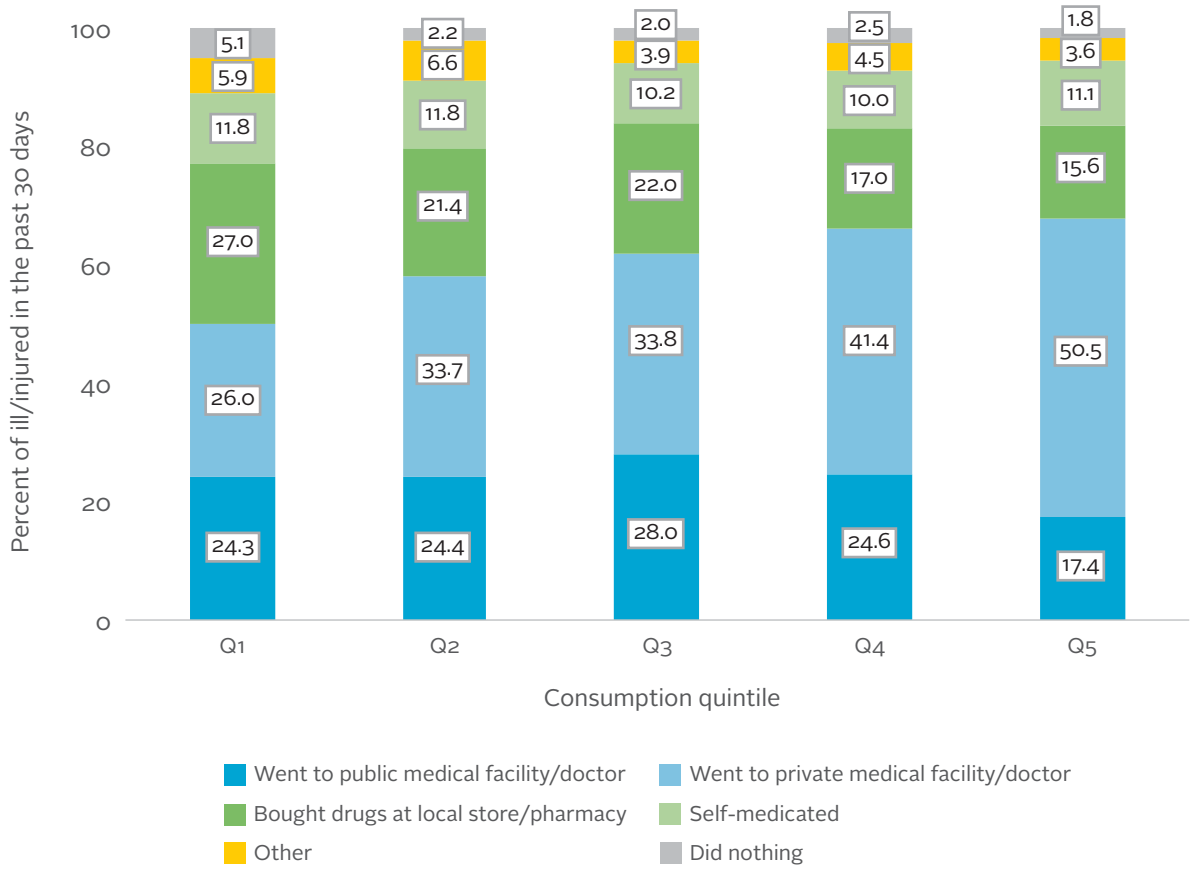



Note: Self-medication is defined as using medicine that is already in one's possession. Treatment at NGO-run facilities represents less than 0.1 percent of treatment sought at medical facilities and is combined with treatment sought at public facilities.
Source: 2017 MLCS.

**Higher welfare is associated with greater healthcare utilisation, which is driven by higher usage of private medical facilities.** The non-poor are 24 percent more likely than the poor to seek treatment at a healthcare facility when faced with an illness or injury. In general, healthcare utilisation also increases with consumption, which is entirely driven by greater usage of private healthcare services in higher quintiles (Figure 4-3). Controlling for age, illness severity, proximity to facilities, and other individual and household characteristics reduces the magnitude but does not close the gap in private healthcare utilisation across welfare quintiles. This result indicates that wealthier individuals tend to prefer private providers – perhaps due to the quality of service – compared to poorer individuals, who are more likely to utilise public medical facilities or buy medication at a local store or pharmacy. It is probable that poor individuals opt for these methods due for their relative affordability, as treatment from public providers and over-the-counter medication are generally cheaper compared to the services provided at private hospitals or clinics. Further research is required to assess whether treatments sought by the poor are sufficient to deal with their health needs, which is beyond the scope of the MLCS.

Figure 4-3

Percentage of ill or injured individuals seeking different types of treatment, by consumption quintile

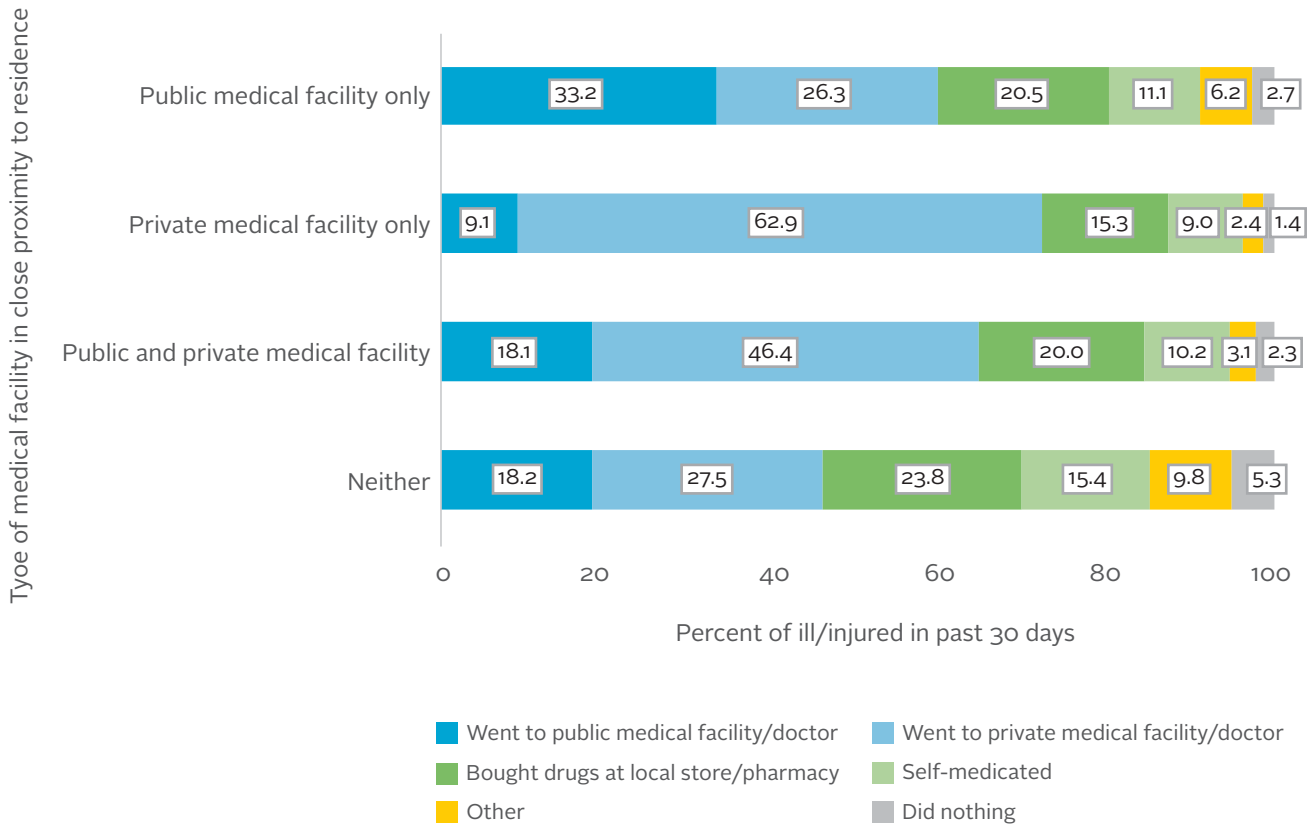



Note: Self-medication is defined as using medicine that is already in one's possession. Treatment at NGO-run facilities represents less than 0.1 percent of treatment sought at medical facilities and is combined with treatment sought at public facilities. Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.
Source: 2017 MLCS.

**Usage of a public or private healthcare provider depends largely on the accessibility of services, but there is a general preference for private services.** Controlling for proximity to other medical facilities and additional factors, living close to public facilities, mainly government hospitals and posts, is associated with higher healthcare utilisation. On the other hand, residing near a private hospital or clinic is associated with lower usage of public medical services and higher usage of private ones. In areas where only public facilities are easily accessible, the majority of individuals (33.2 percent) seek treatment from public providers (Figure 4-4). In areas where private medical facilities are accessible either exclusively or together with public facilities, the preference is primarily towards private providers: Almost half (46.4 percent) of ill/injured individuals seek treatment from private providers in areas close to both public and private medical facilities, which is 2.6 times the share that go to public facilities in these areas. Even in locations where neither public or private facilities are easily accessible, the majority of individuals opt to receive treatment at private facilities (27.5 percent), although the share of individuals resorting to methods outside of formal healthcare is also relatively high.

Figure 4-4

Percentage of ill or injured individuals seeking different types of treatment, by proximity to medical facilities




Note: Self-medication is defined as using medicine that is already in one's possession. Treatment at NGO-run facilities represents less than 0.1 percent of treatment sought at medical facilities and is combined with treatment sought at public facilities. Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.
Source: 2017 MLCS.

## Financial burden associated with healthcare expenditures[24]

**Outpatient care and expenditures on medicine and other drugs comprise a substantial share of household spending on health.** On average, households spend almost 300,000 kyat per year (in 2017 nominal kyat) in health expenditures, which includes costs incurred from healthcare utilisation (i.e., inpatient and outpatient care and associated transportation and accommodation costs) as well as other expenditures on medication and drugs. Nearly all households have some health expenditures, with eight out of ten households having expenditures from healthcare utilisation and eight out of ten having expenditures on medicine and other drugs. Only 6.9 percent of households report zero spending on health. On average, costs incurred from outpatient care account for 46.8 of household health expenditures, while spending on medicine and drugs account for another 35.6 percent. Inpatient care constitutes only 8.0 percent of total health expenditures. In general, urban households spend 66.3 percent more than rural households on health, and the non-poor spend 88.1 percent more than the poor on health expenditures. The share of total health expenditures spent on different types of health expenses are similar across residential areas and welfare quintiles.

**For almost one out of ten households, health expenditures make up 20 percent or more of total household consumption, presenting a considerable financial burden.** On average, health expenditures constitute 7.6 percent of total household consumption in 2017, and marginal differences exist between urban and rural areas.[25] For most households (64.3 percent), health expenditures represent less than 5 percent of total household consumption (Figure 4-5). Two out of ten households spend 10 percent or more of total consumption on health expenses, and 8.3 percent spend 20 percent or more on health. Health expenditures that make up 20 percent or more of total household consumption are likely to present significant financial burdens for households, which on average spend half of their budget on food expenditures. In comparison to other countries in the region such as Vietnam, Myanmar has more burdensome levels of spending on healthcare (Hoang, et al., 2015), which may have implications for the affordability of healthcare in Myanmar.

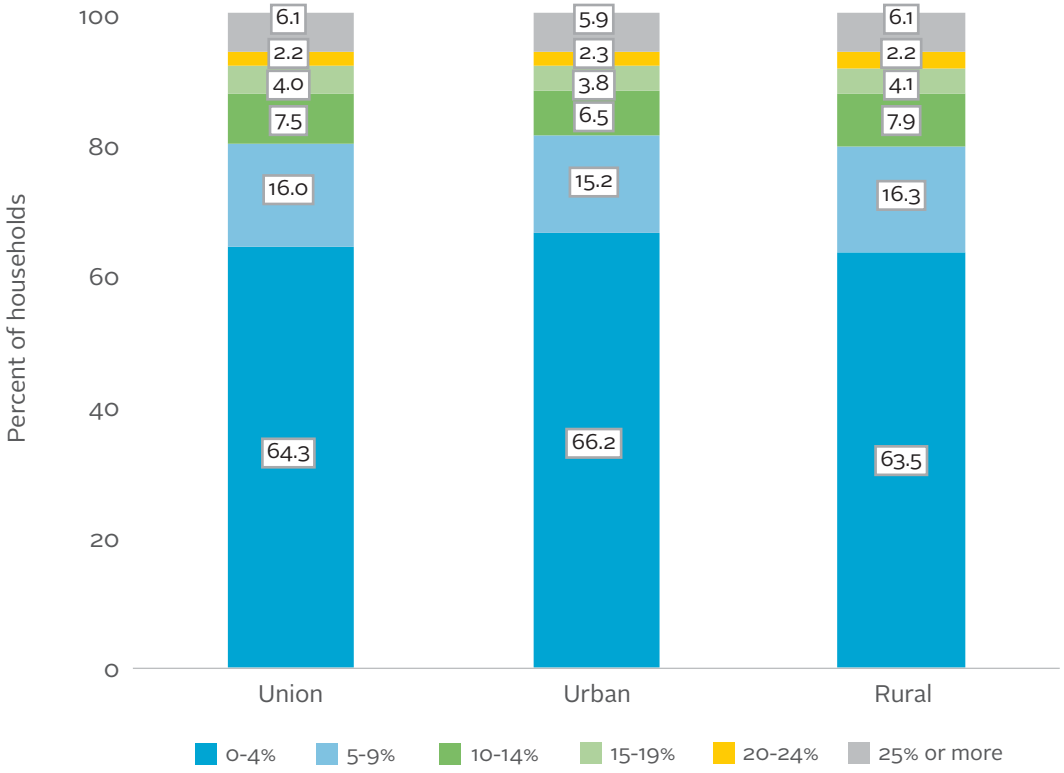
**Few states/regions such as Rakhine State, Mon State, Bago Region, and Chin State exhibit relatively high financial burden from health expenditures.** In these four states/regions, more than 10 percent of households spend 20 percent or more of total consumption on health. In Rakhine State and Mon State, more than 25 percent of households spend a tenth or more of total consumption on health expenses. Even after controlling for welfare differences, proximity to public and private medical facilities, and other household characteristics, differences across states/regions persist, indicating that other local factors play a role in determining the financial burden of health expenditures among households. For example, if the range and quality of medical services are relatively poor in these areas, households may be forced to seek treatment in other areas, which may incur higher costs and financial burden.

24 This section draws on probit regressions of health expenditures as a share of total household consumption on various household characteristics and state/region indicators, which can be found in Annex D Table D-2.

25 Health expenditures are not included in the consumption aggregate, as they are often infrequent, large, and not welfare-enhancing. See CSO, UNDP, and WB (2018b) for further details on the exclusion of health expenditures from the consumption aggregate.

Figure 4-5

Percentage of households with health expenditures constituting different shares of total consumption, by residential area




Note: Each category represents the percentage of households that have health expenditures that make up the specified percentage range of total household consumption. For example, for 64.3 percent of households, health expenditures constitute 0 to 4 percent of total household consumption.
Source: 2017 MLCS.

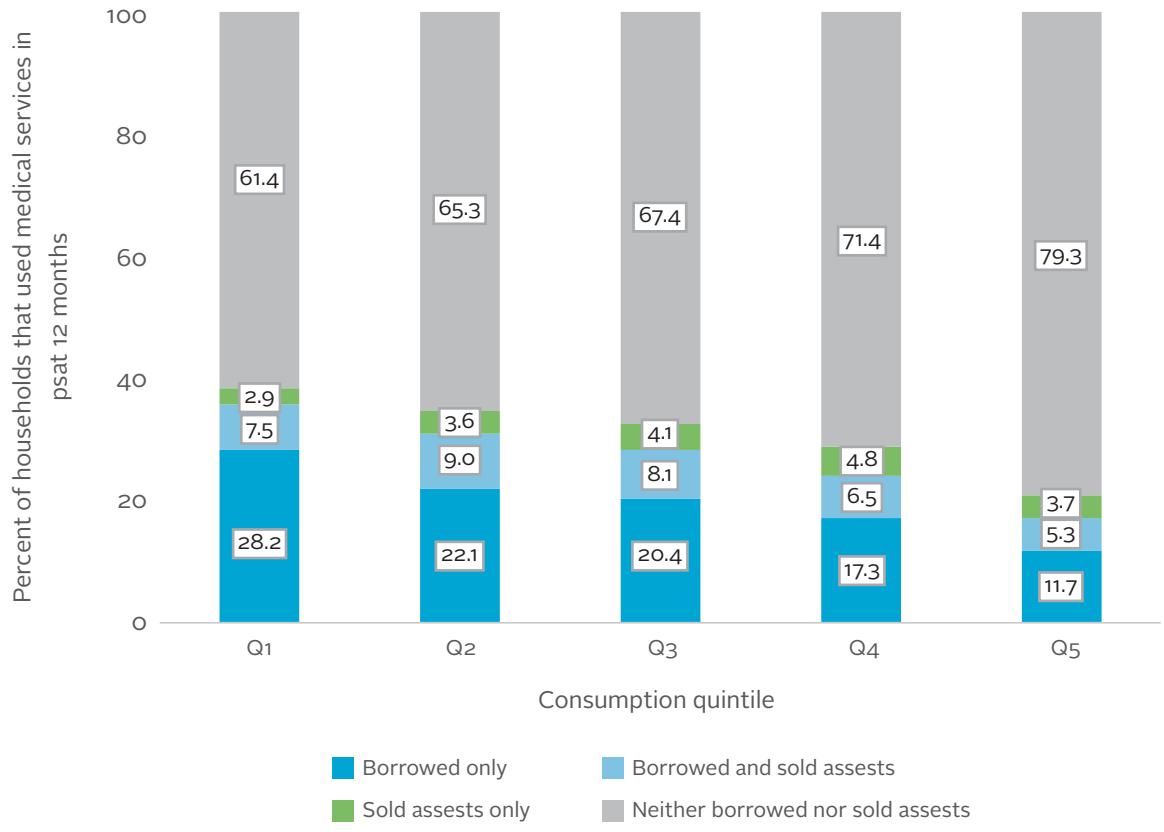
**Having more young children or elderly members in the household is associated with higher financial burden from health spending.** Controlling for household welfare and other characteristics, each additional child below the age of five is associated with a 1.6 percentage point increase in the likelihood of having health expenditures that make up 20 percent or more of total consumption. Similarly, each additional household member aged 60 or more is associated with a 2.5 percentage point greater likelihood of having a financial burden from health spending. Young children and the elderly are more likely to require specialized treatment (paediatric and geriatric care), which is more readily available at hospitals and clinics that offer a range of primary and secondary care. Thus, the type of care needed and access to facilities that provide this care may present relatively large health expenditures for young children and elderly members of the household.

**Poorer households are more likely to have higher financial burden from health spending than wealthier households.** Household size and composition differ significantly between poor and non-poor households. For example, poor households are 1.75 times more likely than non-poor households to have children below the age of five, while non-poor households are more likely to have elderly members, especially over the age of 70. Thus, household size and composition must be taken into consideration when looking at differences in burdensome health spending across welfare quintiles. Controlling for these and other household and geographic characteristics, wealthier households are significantly less likely than households in the poorest quintile to have health expenditures that make up 20 percent or more household consumption.

**In addition to having higher financial burden from health spending, poorer households resort to riskier methods to cover their medical expenses.** Lack of financial risk protection and high medical costs may cause households to resort to coping mechanisms such as borrowing or selling personal assets in the face high healthcare expenses. In general, households that neither borrow nor sell assets to cover their medical costs have lower financial burden from health spending: On average, health expenditures compose 5.7 percent of total consumption for households that neither borrow nor sell assets, which is 3.3 times lower than it is among households that are forced to both borrow and sell their assets to cover medical expenses. Households that sell their assets have the highest financial burden from health spending, suggesting that selling personal assets may be an option of last resort. Almost 36 percent of households in the bottom consumption quintile borrow to cover the cost of medical treatment, while 17 percent of households in the top quintile do so (Figure 4-6). Riskier coping mechanisms among poorer quintiles may be expected given the higher financial burden faced by these households due to healthcare utilisation. However, controlling for the share of total consumption spent on healthcare does not explain differences in strategies employed to cover medical costs across welfare quintiles. This result indicates that poorer households have more difficulty in paying for their medical treatment regardless of the level of financial burden it presents and are forced to resort to borrowing or selling their assets. Such coping mechanisms can undermine the livelihood strategies (particularly of poorer households) and increase their vulnerability to future shocks (Flores et al, 2008).

Figure 4-6

Strategies used to cover healthcare expenses, by consumption quintile (in percent)




Note: Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.
Source: 2017 MLCS.

## Main takeaways and implications

This chapter demonstrates that access to comprehensive healthcare services is limited in rural areas, in which many of the poor reside. Access to public and private healthcare services is also low in select states/regions such as Chin, Shan, Kayin, and Rakhine States. Access is an important factor in healthcare utilization, and urban residents are significantly more likely than rural residents to utilize private hospitals or clinics when ill or injured. Usage of private healthcare facilities is also higher among wealthier individuals, and generally, there is a preference for private healthcare services in Myanmar. The poor are more likely to face larger financial burdens due to healthcare costs and are also more likely to resort to more extreme methods to pay for their healthcare expenses.

Two main implications stem from this chapter:

i. The poor, many of whom reside in rural areas, could benefit from improvements in the accessibility and affordability of comprehensive healthcare services. Improving the accessibility of public and private hospitals or clinics could help reduce the share of people who either do nothing when ill or injured or go to unskilled caregivers.

ii. Health expenditures, especially those incurred from healthcare facilities, present significant financial burdens, especially for the poor. Targeted health coverage or flexible payment methods can prevent poor households from resorting to extreme measures in order to pay for healthcare.

# 05.

# IMPROVING ACCESS TO KEY SANITARY AND ENERGY SERVICES

*Access to water and sanitation (Box 5-1 on SDG 6) as well as access to clean energy (Box 5-2 on SDG 7) are basic human rights that have spillover effects on achieving the rest of the SDGs. There are strong links between access to clean water and sanitation and reducing under-5 child mortality or between access to clean energy and health, or electricity and productivity. With this background, the objective of this chapter is to explore the main determinants explaining access to water and sanitation, and access to energy. This chapter starts by analysing access to clean water and sanitation, while paying attention to its link with welfare. Then the chapter moves on to assess the access to electricity and to clean energy, shedding light on the link between welfare and access to clean energy.*

## Access to improved water sources and improved sanitation

**The Key Indicators Report shows that the percentage of the population using an improved water source has increased; at the same time the use of improved water source is better in rainy season than in the dry season, and significant differences still exist across urban and rural areas, and state/region in 2017 (CSO, UNDP and WB, 2018a).** In 2017, one out of five people in Myanmar does not have access to improved sources of drinking water in the dry season. Rural residents are significantly more likely than urban residents to have unimproved sources of water (Figure 5-1). Access is poorest in Rakhine State, where only 42 percent of the population have access to improved water in the dry season and 45 percent have access in rainy season. The need to transport water, especially over long distances can expose water to contamination and degrade quality. About 40 percent of the population live in households that do not have drinking water on premise and thus need to transport water from the source back to their homes. Urban residents are more likely than rural residents to have improved water on premise in both the dry and rainy seasons.

### Box 5-1 SDG Goal 6 - Indicators and definitions

**Goal 6: Ensure availability and sustainable management of water and sanitation for all**
**Target 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all.**

*Indicator 6.1.1: Proportion of population using safely managed drinking water sources*

This indicator includes four criteria: 1) use of an improved drinking water source; 2) use of a water source which is located on premise; 3) having a water source that is available when needed; and 4) having a water source that is free of faecal (and priority chemical) contamination. As outlined in Box 5.1 of the Key Indicators Report, the 2017 MLCS only captures improved drinking water sources and whether or not the source is located on premise. It does not capture water availability and quality. Thus, the following categories are used to characterise water usage:

1. Improved, on premise – Drinking water from an improved water source which is located on premises. Improved water sources include: piped water, tube well/borehole, protected well, rainwater collection/ tank, bottled water , and water delivered from a tanker/truck.
2. Improved, not on premise – Drinking water from an improved water source which is not located on premise
3. Unimproved – Drinking water from an unprotected well or spring
4. Surface water – Drinking water directly from a river, stream, canal, pool, pond, lake, dam, or other stagnant water

**Target 6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.**

*Indicator 6.2.1: Proportion of population using safely managed sanitation services*

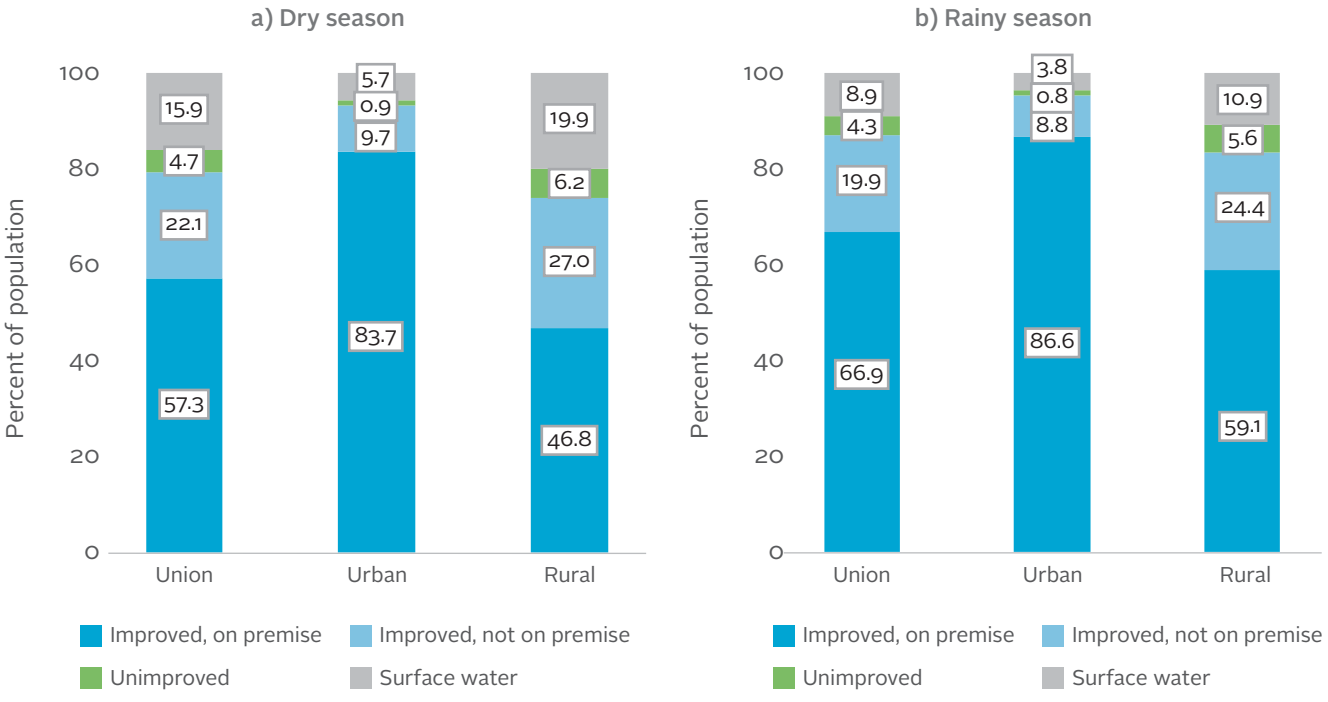
This indicator includes four criteria: 1) use of improved types of toilets; 2) exclusive use of toilet by a household; 3) having a hand-washing facility; and 4) faecal waste system which is safely disposed in situ or treated off-site. The 2017 MLCS does not capture the faecal waste system of a household's toilet, although it does provide information on the type of toilet, exclusive use of toilet, and whether the household has a hand-washing facility. Thus, following the Key Indicators Report, the following categories are used:

1. Basic – Use of improved toilets that are not shared with other households and having a hand-washing facility. Improved toilets include flush or pour flush toilets to sewer systems, septic tanks, or pit latrines, ventilated improved pit latrines, pit latrines with a slab, and composting toilets.
2. Limited – Use of improved toilets that are shared with other households and having a hand-washing facility
3. Unimproved – Use of pit latrines without a slab or platform or hanging/bucket latrines, regardless of whether a household has hand-washing facilities or shares their toilet with other households
4. Open defecation – Disposal of human faeces in field, forests, bushes, open bodies of water, and other open spaces or otherwise having no disposal facilities, regardless of whether a household has hand-washing facilities or shares their toilet with other households.

Sources: https://www.un.org/sustainabledevelopment/water-and-sanitation/
https://www.un.org/sustainabledevelopment/energy/;
CSO, UNDP, and WB (2018a)

Figure 5-1

Percentage of the population with access to improved sources of drinking water, by residential area

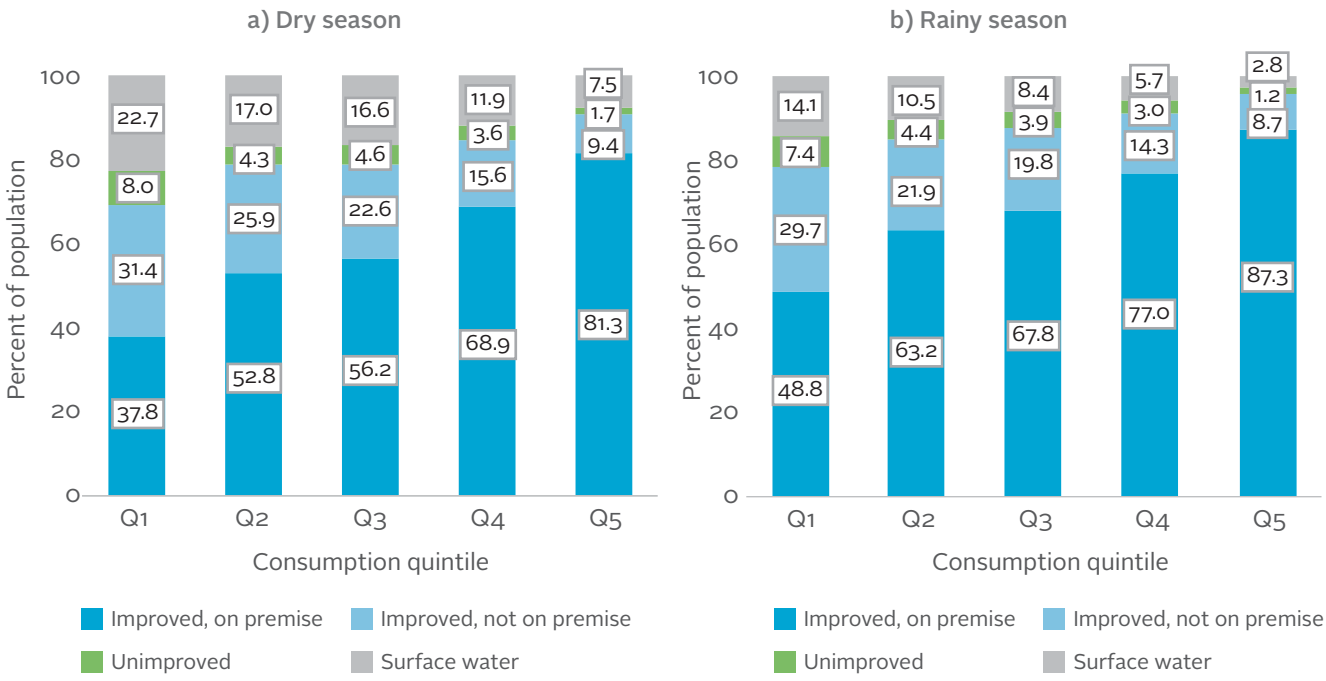



Source: 2017 MLCS.

**Improved water access is unequal with poorer people relying on unimproved water sources.** Three out of ten people in the bottom consumption quintile have unimproved water sources in the dry season, while the same is true for 21.5 percent of the population during the rainy season (Figure 5-2). In general, many households that rely on unimproved water sources in the dry season, particularly surface water, switch to collected rainwater in the rainy season. About half of those in the poorest quintile have access to improved water on premises during the rainy season, which is about 29 percent higher than it is in the dry season. Much of this difference across seasons is explained by use of rainwater in the wet season. Rainwater collection is thus an important source of drinking water, especially for the poor. The poor are also more likely than the non-poor to have to transport water to their homes in both seasons, which is often part of women's and children's chores. Distance to water sources are also significantly higher for the poor: In the dry season, almost half of those in the poorest quintile who do not have water on premise spend more than 10 minutes transporting water. In comparison, only one out of ten people in the wealthiest quintile who do not have water on premise do so. Transporting water and harvesting rainwater both increase the likelihood of deterioration of water quality, hence aggravating the risk of enteric diseases among the poor, especially poor children.[26]

Figure 5-2

Percentage of the population with access to improved sources of drinking water, by consumption quintile




Note: Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.
Source: 2017 MLCS.

**One out of three people in Myanmar and half of the poor do not have access to basic improved sanitation facilities in 2017.** As described in Box 5-1, basic improved sanitation requires three criteria. While the share of the population that meets each one of the three criteria is high, the share of the population that meet all three criteria is relatively low at 64.2 percent (Table 5-1). Rural residents are 17.9 percent less likely than urban residents to have access to basic improved sanitation, and the poor are 28.1 percent less likely than the non-poor to have access to these facilities. Moreover, the share of the poor that have access to hand-washing facility is only 69.8 percent. As shown in

26 https://www.who.int/water_sanitation_health/gdwqrevision/rainwater.pdf

the Key Indicators Report, access to hand-washing facilities also varies significantly across states/regions, with people in Kayin State, Chin State, Tanintharyi Region and Ayeyarwady Region faring poorly (CSO, UNDP and WB, 2018a). Studies show that unsafe hygienic practices are still common in Myanmar, with many not washing their hands with soap after using the toilet, before preparing food, and before eating, even if they have access to hand-washing facilities.[27]

Table 5-1

Percentage of population living in households with different types of sanitation facilities, by residential area and poverty status

| | Union | Urban | Rural | Non-poor | Poor |
|---|---|---|---|---|---|
| **Basic improved sanitation** | **64.2** | **73.6** | **60.4** | **69.0** | **49.6** |
| Improved toilet | 89.0 | 96.4 | 86.1 | 92.4 | 78.8 |
| Toilet not shared | 80.7 | 79.2 | 81.2 | 81.2 | 79.1 |
| Hand-washing facilities | 83.3 | 93.5 | 79.1 | 87.7 | 69.8 |

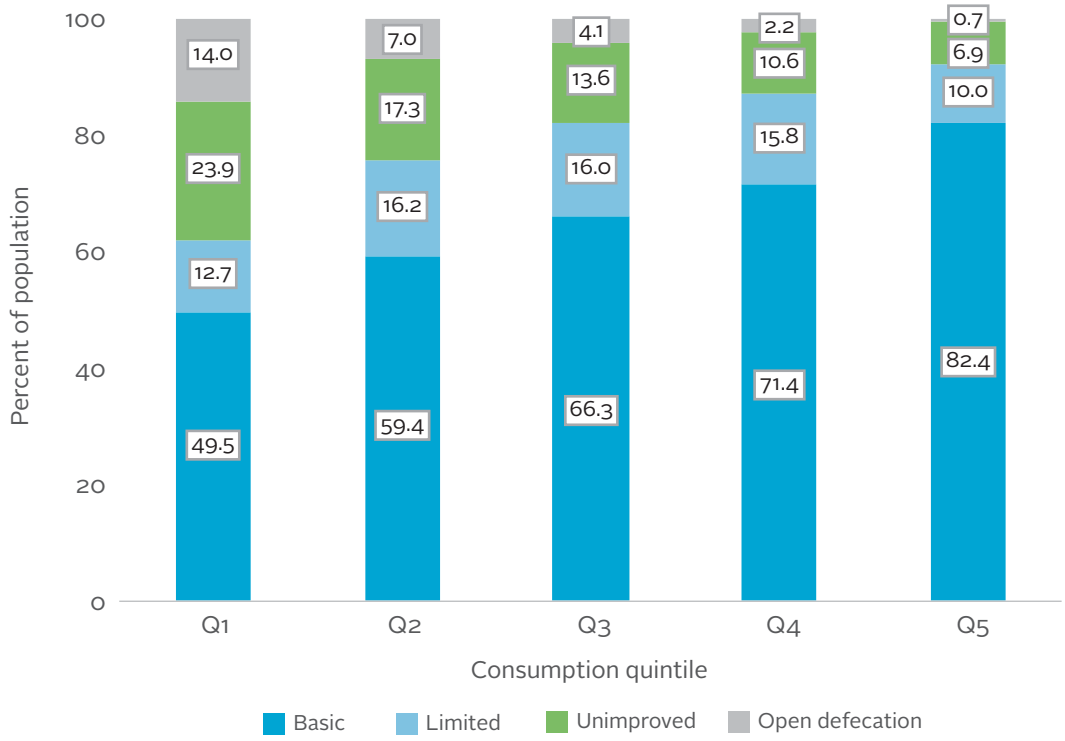
Note: "Improved toilet" includes flushed to piped sewer system, septic tank, or pit latrine, ventilated improved pit latrine, pit latrine with slab, and composting toilet, but does not consider whether household has hand-washing facilities or if the facility is shared with other households (CSO, UNDP and WB, 2018a).
Source: 2017 MLCS

**Unequal access to improved sanitation means that the poor are more likely to resort to open-air defecation and other unsafe facilities than the non-poor.** The share of people with no toilet facilities has declined but disproportionately across states/regions; In Rakhine State, nearly half of the population has no toilet facilities, which is about seven times more than the Union average (Figure E-1). In addition, on average, about 14 percent of people in the bottom quintile practice open defecation while nearly one out of four people uses unimproved toilet facilities (Figure 5-3). Disparities in access to basic improved sanitation across welfare quintiles are significant, with those in the top quintile 66.5 percent more likely than those in the bottom quintile to have access to such facilities. As in the case of access to improved water sources, poverty is the primary challenge preventing universal latrine usage in Myanmar. This may be due to a few reasons, one being that the poor may struggle to afford the materials or manpower required to build a latrine. In addition, some elderly people or children may be reluctant to use latrines, sometimes perceiving them as uncomfortable, unstable or dangerous. Other individuals may prefer to defecate in the open, falsely believing that open defecation is harmless, practical, and more natural than using latrines.[28]

27 https://www.wcmt.org.uk/sites/default/files/report-documents/Meehan%20P%20Report%202011%20FINAL.pdf
28 https://www.wcmt.org.uk/sites/default/files/report-documents/Meehan%20P%20Report%202011%20FINAL.pdf

Figure 5-3

Percentage of the population with access to type of toilet, by consumption quintile




Note: Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.
Source: 2017 MLCS.

## Access to clean energy

**Access to electricity has increased rapidly between 2005 and 2015, while there has been a sharp decrease in the use of candle and kerosene for lighting.** As reported in the Key Indicators Report, only seven percent of households still use candles and kerosene as their main source of lighting in 2017, compared to half of households in 2005. The shift to electricity is evident: In 2017, 42 percent of households rely on electricity from the public grid, while about 40 percent obtain electricity from a solar system or battery (CSO, UNDP and WB, 2018a). The shift to electricity has been greatest in rural areas, where the use of candle or kerosene has dropped from 62 percent in 2005 to 9 percent in 2017. The adoption of solar technology has largely driven the change in lighting sources in rural areas: In 2017, more than a third of households use solar systems to generate electricity (CSO, UNDP and WB, 2018a).

**Solar energy has become a common source of lighting for poor households, with more than a third of poor households relying on solar technology.** The use of solar energy for lighting is highest for households in the poorest quintile and decreases with welfare (Figure 5-4). Lighting from a rechargeable battery is also higher in poorer quintiles. The adoption of solar technology by poor households confirms the importance of such technology in the poorest states/regions: Chin State and Rakhine State, which have the highest rates of poverty, also have the highest rates of use of solar system to generate electricity in 2017 (CSO, UNDP and WB, 2018a).

## Box 5-2 SDG Goal 7 - Indicators and definitions

**Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all**
**Target 7.1: By 2030, ensure universal access to affordable, reliable and modern energy services.**

*Indicator 7.1.1: Proportion of population with access to electricity*

This indicator is measured as the share of people with electricity access at the household level. It comprises electricity sold commercially, both on-grid and off-grid.

The MLCS captures energy questions at the household level: (i) whether households are connected to a public grid; (ii) whether they are connected to a community grid; (iii) what energy source is used as the main source for lighting. A community questionnaire permits triangulation of households' responses.

*Indicator 7.1.2: Proportion of population with primary reliance on clean fuels and technology*

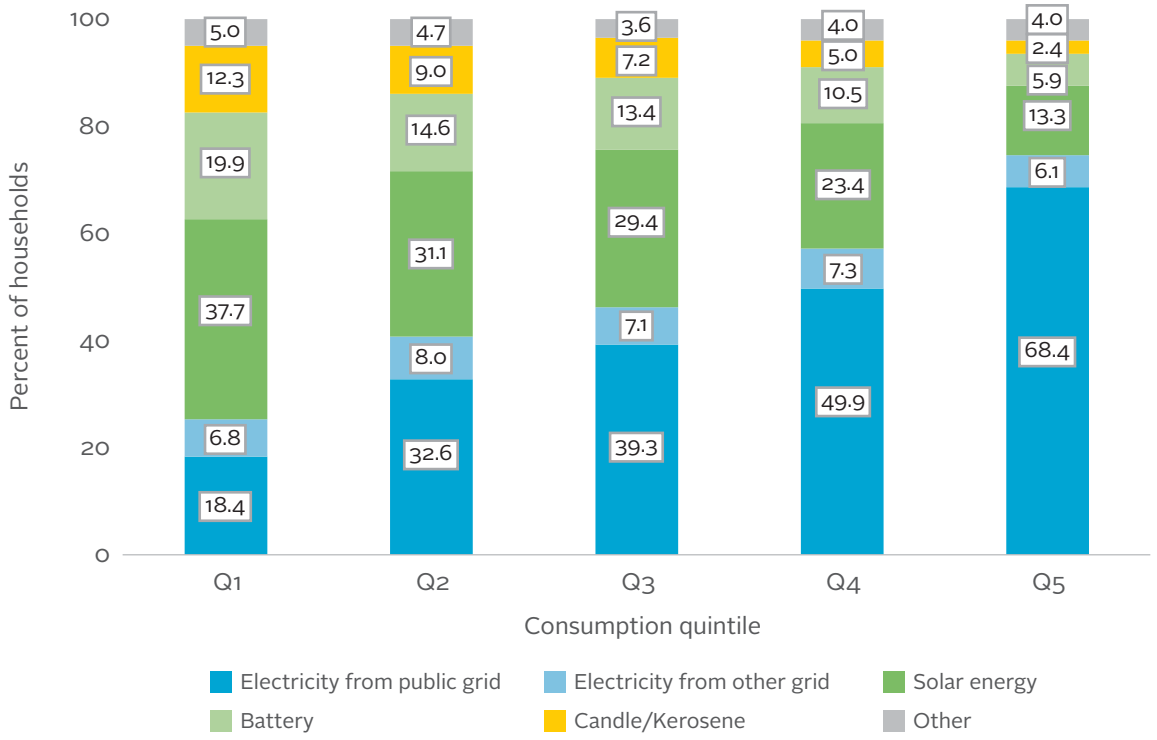
This indicator is measured as the share of the total population with access to clean fuels and technologies for cooking. Access to clean fuels or technologies such as clean cookstoves reduce exposure to indoor air pollutants, a leading cause of death in low-income households.

The MLCS has a single question on energy for cooking which is "what energy source is used as fuel for cooking?".

Source: https://sustainabledevelopment.un.org/sdg7
https://sdg-tracker.org/energy
CSO, UNDP, and WB (2018a)

Figure 5-4

Main sources of lighting among households, by consumption quintile (in percent)

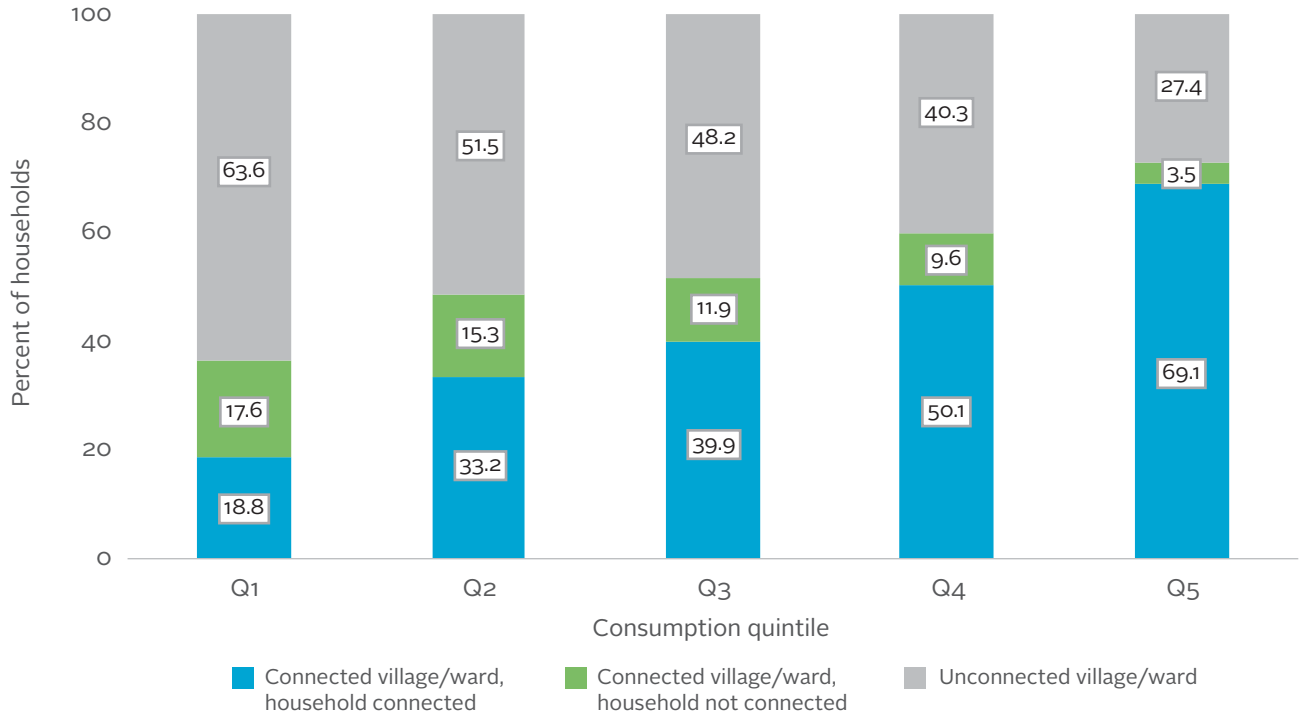



Note: Solar includes solar lantern, lighting system, and home system. See the Key Indicators Report for more information (CSO, UNDP and WB, 2018a). Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.
Source: 2017 MLCS.

**The poor face greater physical and financial barriers to accessing electricity from the public grid.** About 64 percent of poor households live in a village tract or ward that is not connected to the national grid, compared to 42 percent of non-poor households. This share decreases significantly with welfare (Figure 5-4), suggesting that wealthier households are more likely to live in communities that are connected to the grid. However, the availability of grid electricity in one's community is not the only barrier to adoption of electricity among poor households. About 18 percent of the poor live in a village or ward that is connected to the public grid, but their households is not connected. This share is 75 percent higher than it is for the non-poor, indicating that the affordability of electricity fees and the relevant equipment needed to install electricity in the household may be a barrier for some poor households to adopt electricity.

Figure 5.5

Percentage of households living in villages or wards connected to the public grid whose household is either connected or not connected, by consumption quintile




Note: Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.
Source: 2017 MLCS.

**In 2017, seven out of ten people still rely on firewood or other biomass as their main source of cooking fuel, although there is significant variation across urban and rural areas and states/regions.** The use of clean energy is small with only three out of ten people using electricity or LPG/bio gas (Table 5-2). There is a clear dichotomy between urban and rural areas with respect to fuel sources: Rural residents are 2.4 times more likely than urban ones to rely on biomass for cooking fuel — a difference that is primarily driven by higher usage of firewood in rural areas. On the other hand, urban residents are 4.1 times more likely to use clean energy sources, especially electricity. Using the 'energy ladder model', which envisages a three-stage fuel switching process from biomass to fossil fuels and finally clean energy (DOP, 2017b), as of 2017, most people in Myanmar are in the first rung of the energy ladder model. At the same time, Figure 5-6 shows that most of the population in Yangon Region has moved up the energy ladder, while those living in Ayeyarwady Region, Chin State, and Rakhine State remain in the first level of the energy ladder.

Table 5-2

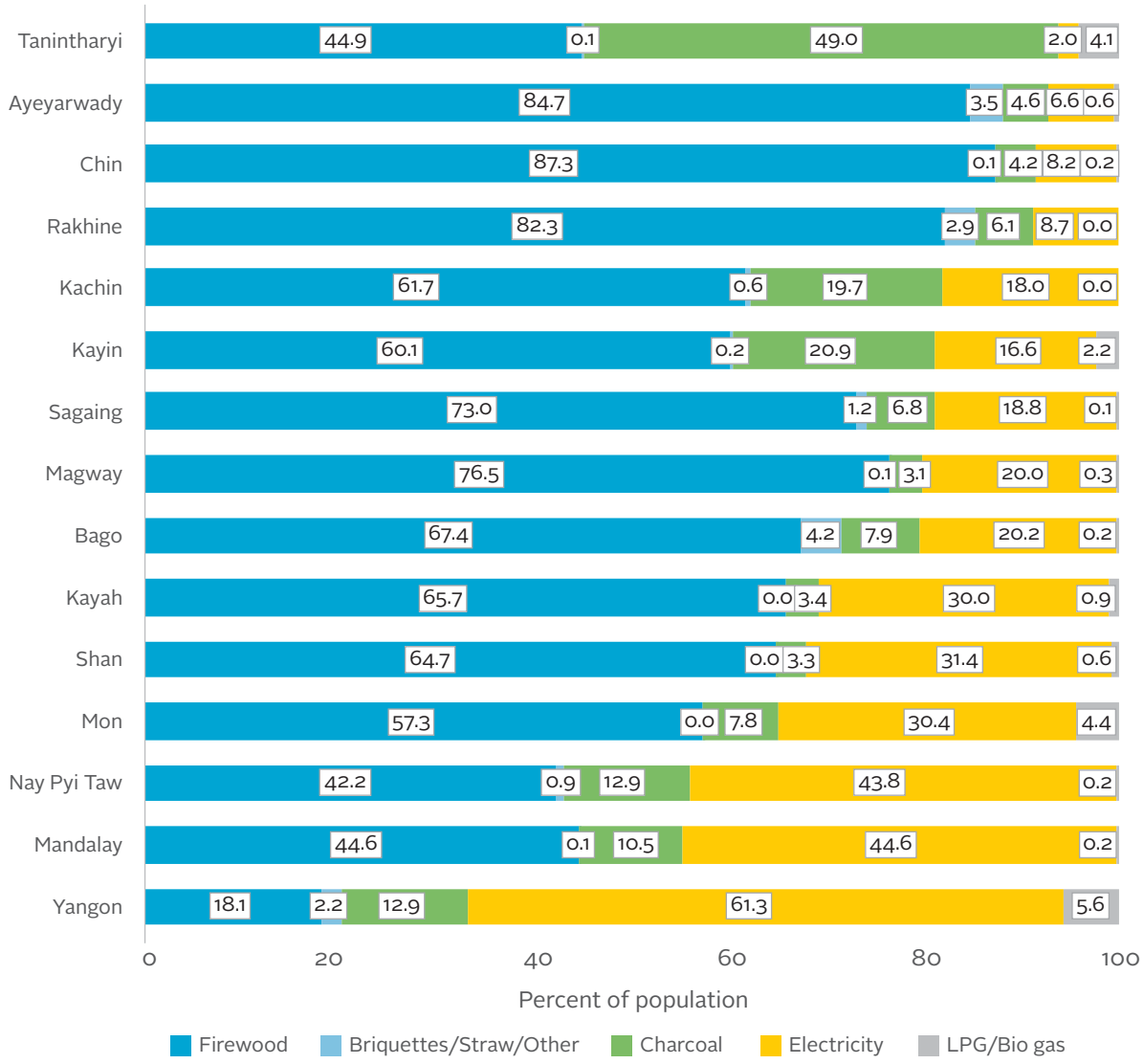
Main source of cooking fuel among the population, by residential area and poverty status (in percent)

| | Union | Urban | Rural | Non-poor | Poor |
|---|---|---|---|---|---|
| **Biomass** | **70.4** | **35.7** | **84.3** | **63.8** | **90.6** |
| Firewood | 59.5 | 17.2 | 76.4 | 51.7 | 82.9 |
| Briquettes/Straw/Other | 1.5 | 1.1 | 1.7 | 1.2 | 2.7 |
| Charcoal/Kerosene | 9.4 | 17.3 | 6.3 | 10.9 | 5.0 |
| **Clean energy** | **29.6** | **64.4** | **15.7** | **36.2** | **9.4** |
| Electricity | 28.1 | 60.5 | 15.3 | 34.4 | 9.3 |
| LPG/Bio gas | 1.4 | 3.9 | 0.4 | 1.8 | 0.1 |

Source: 2017 MLCS

Figure 5.6

Main source of cooking fuel among the population, by state/region (in percent)

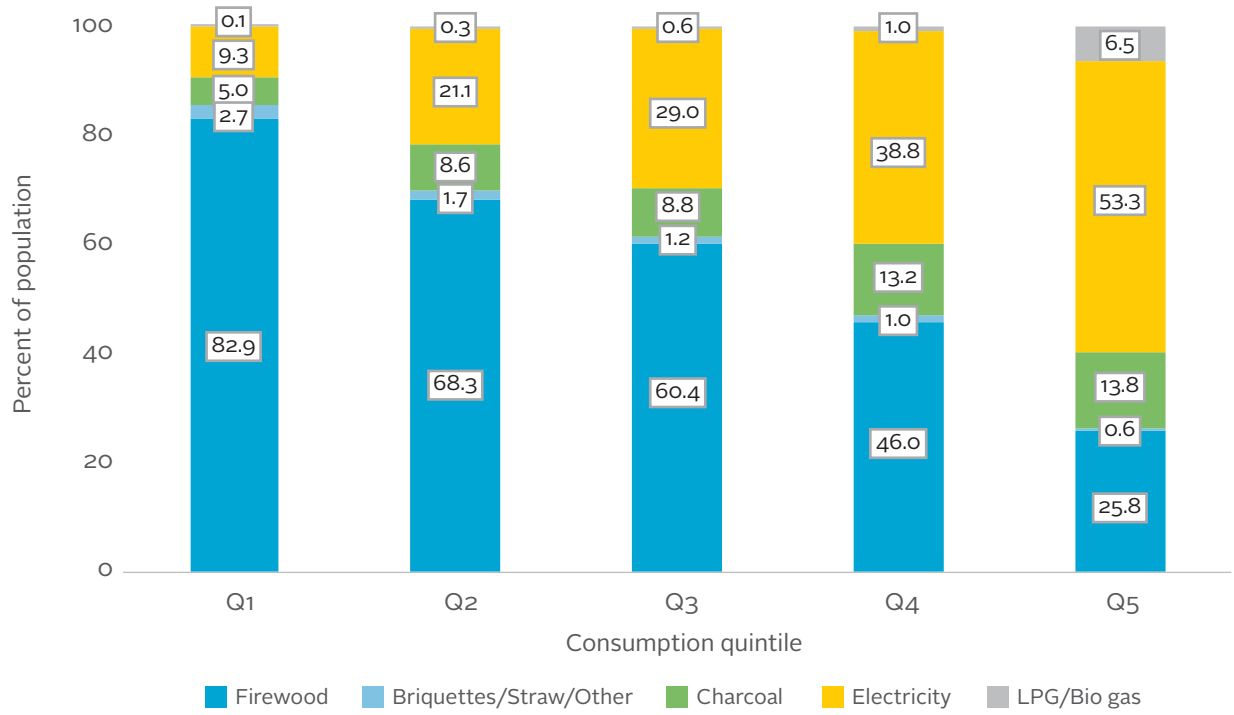



Source: 2017 MLCS.

**Usage of biomass for cooking is nearly universal among the poor, while the non-poor are significantly more likely to rely on clean energy sources.** As of 2017, nine out of ten poor people rely on biomass to cook, which 42 percent higher than it is among the non-poor (Table 5-2). In general, usage of biomass decreases significantly with higher welfare: Only four of ten people in the top quintile rely on these sources of fuel for cooking (Figure 5-7). Wealthier households tend to opt for clean energy sources, particularly electricity. However, one out of four households in the top quintile still use firewood for cooking and an additional 14 percent use other biomass. This indicates that to some extent, even wealthy households remain reliant on biomass fuels for cooking. In addition to having serious health effects due to increased indoor pollution, the sourcing of biomass is often one of women's chores which limits the time women could occupy with activities outside the house that could have more remunerative prospects (Chapter 7).

Figure 5.7

Main source of cooking fuel among the population, by consumption quintile (in percent)

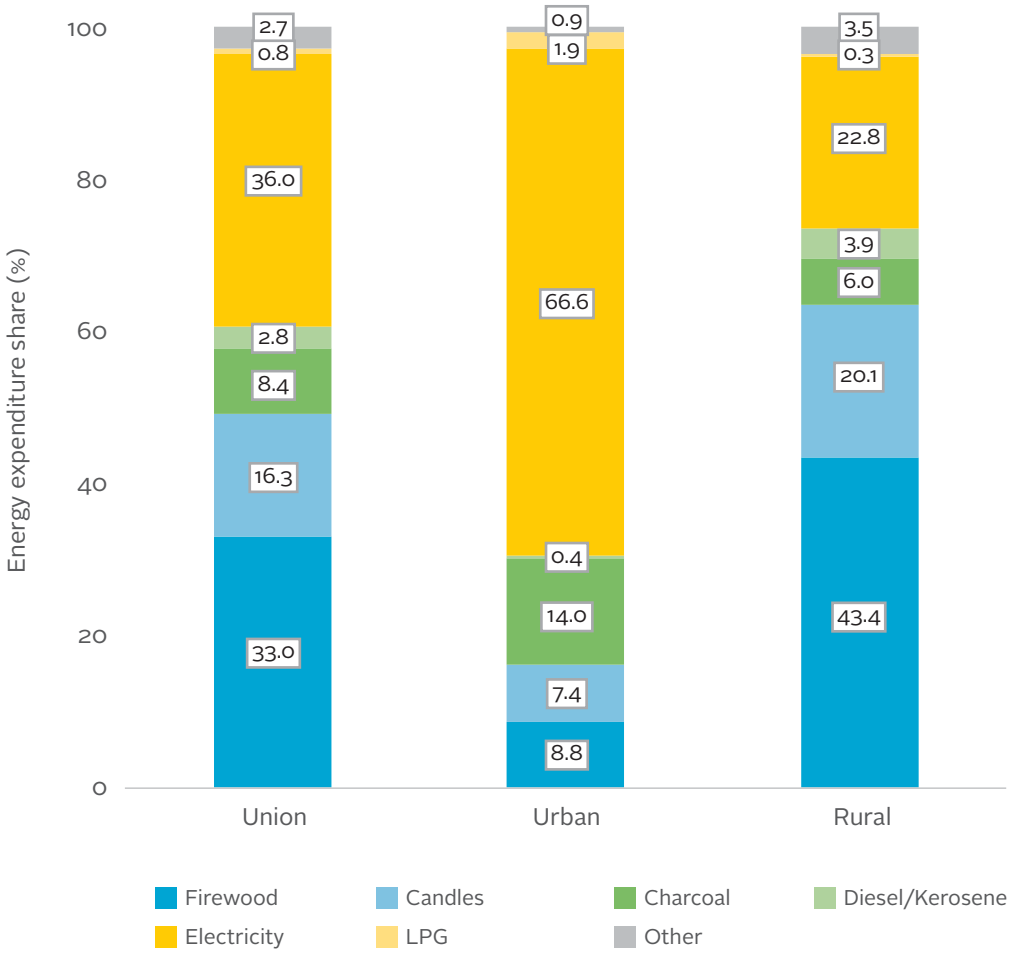



Note: Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.
Source: 2017 MLCS.

**Mirroring preferences in lighting and fuel sources, households spend on average relatively more on biomass than on other fuels with the same urban-rural cleavage.** In 2017, an average household in Myanmar spends about 132,000 kyats per year on energy, which accounts for about four percent of their total consumption. Figure 5-8 shows the average shares of total household energy expenditures spent on different sources. In 2017, 60.5 percent of household energy expenditures is spent on biomass, with firewood accounting for 33.0 percent of households' expenditures on energy. On average, urban people spend 68.6 percent of their energy expenditures on clean energy, while just 23.1 percent of rural households do so. Spending on different energy sources also varies significantly by state/region, with more than 80 percent of total energy expenditures in Rakhine State being spent on biomass. On the other end of the spectrum, just 32 percent of household energy expenditures in Yangon Region can be attributed to spending on biomass. As previously documented, urbanisation is one of the main driving forces for switching from biomass to clean sources of energy (DOP, 2017b).

Figure 5.8

Average household energy expenditure shares, by residential area (in percent)

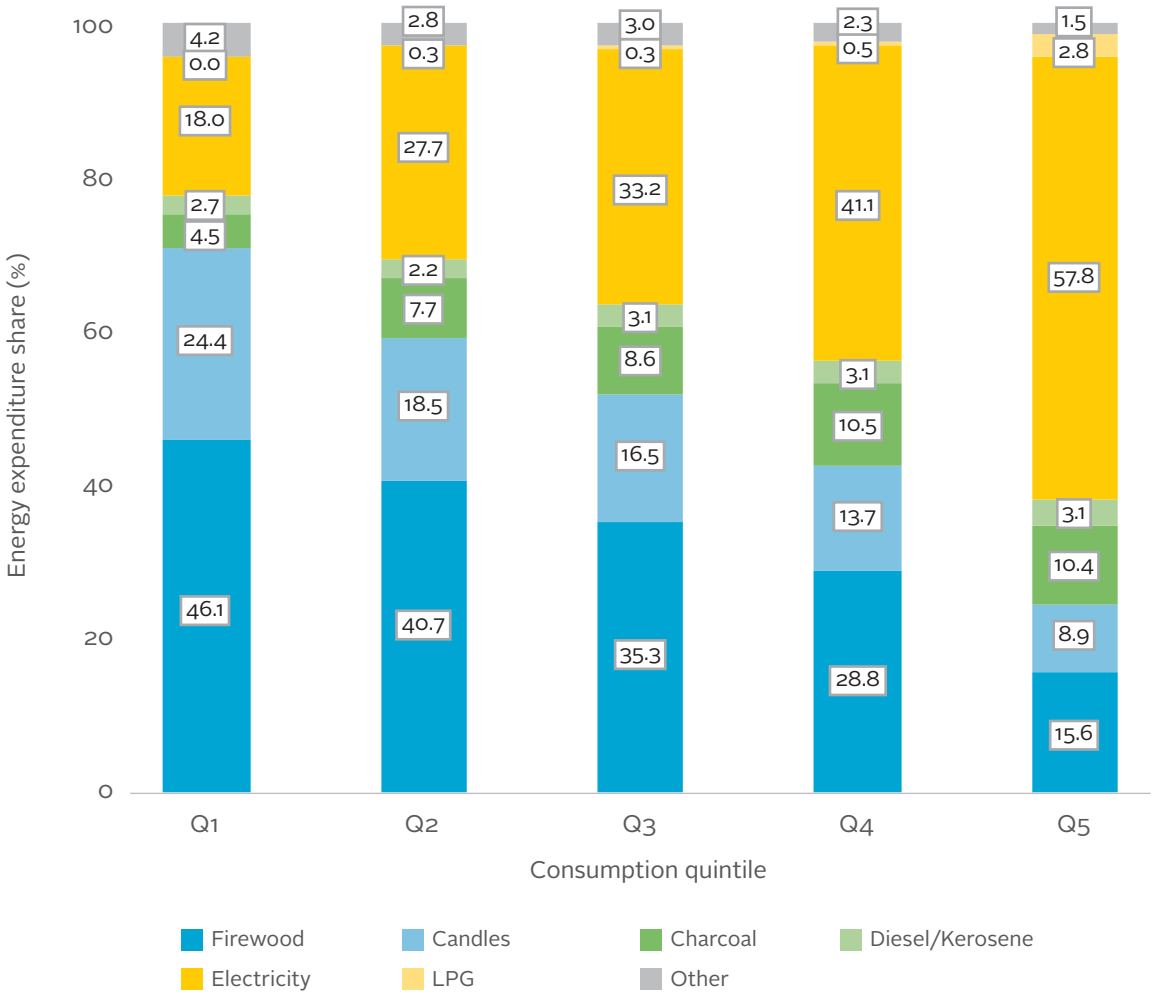



Note: Firewood includes collection values. Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.
Source: 2017 MLCS.

**In line with their energy preferences for cooking and for lighting, poor households spend the majority of their energy expenditures on biomass.** On average, households in the top quintile spend more than twice the amount households in the bottom quintile spend on energy. Despite this, as a share of total household consumption, energy expenditures represent a smaller amount for households in the top quintile than they do for households in the bottom quintile (3.6 percent versus 4.5 percent). In addition, the majority of energy spending for poor households are devoted to biomass (75 percent), while the majority of energy expenditures for non-poor households, especially those in the top two quintiles are spent on clean energy sources, particularly electricity (Figure 5-9). This trend in energy expenditures across quintiles highlights the fact that welfare, and to some extent relative fuel prices, is the main factor preventing movement up the energy ladder (Leach, 1992; Barnes, Krutilla, and Hyde, 2004; Barnes and Floor, 1999, cited in Heltberg, 2003).

Figure 5.9

Average household energy expenditure shares, by consumption quintile (in percent)




Note: Diesel excludes diesel for car. Firewood and charcoal include collection values. Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.

Source: 2017 MLCS.

## Main takeaways and implications

Combined with the findings from the Key Indicators report (CSO, UNDP and WB, 2018a), this chapter shows that even though Myanmar has seen improvements in access to key basic services, the poor are lagging behind. Poor households are less likely to have improved access to water and more likely to practice open defecation. Given that poor households are also more likely to have children under the age of five, lack of basic sanitation can result in enteric diseases, thus impairing the fight against under-five mortality. In addition, although the poor are increasingly relying on solar energy for lighting, they still depend heavily on firewood and other biomass for their cooking needs. The poor face greater barriers to accessing electricity — both in terms of physical access and affordability.

Three implications stem from the analysis of this chapter:

i. The geographical variation in access to these services sheds light on the scant provision of these services in poorer areas. Overlaying the results from maps of households' access to water and electricity services could help identify where to increase investments in providing these services.

ii. More research could be done to measure the impacts of unimproved access to water and sanitation to the risk of dying of enteric diseases, and to measure the impacts of using biomass energy for cooking. These works could help inform awareness campaigns to encourage use of improved key sanitary and energy sources.

iii. Solar technology has filled in the gap where electricity from the public grid is not provided. However, it would be interesting to research what power is needed to encourage households to use solar-produced electricity for cooking rather than biomass fuels.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# 06.

# FACILITATING ACCESS TO FINANCE

*Financial products such as loans can help individuals invest in their human capital to improve their future economic prospects and allow businesses, especially microenterprises, to improve returns by investing in productive capital. Bank accounts can also encourage saving through secure and effective mechanisms, and other financial services can help households cope with shocks or events that may negatively impact the productive activities of household members and thus household income. Access to finance therefore may play an important role in both securing and improving household welfare. This chapter explores access to financial services, particularly credit, in Myanmar. It also provides a picture of the coping strategies that households adopt when faced with a shock, emphasizing the use of financial products as a way of coping.*

## Access to financial services

**Access to formal financial services is unequal across urban and rural areas and states/regions in Myanmar, although local credit unions have filled in some of the gaps.** In 2017, two out three people live in close proximity[29] to a formal financial institution, namely a private bank or microfinance organisation.[30] Urban residents are significantly more likely to have access to a formal financial institution: 90.7 percent of urban residents live near a private bank or microfinance institution, while just 58.3 percent of rural residents do so. Private banks, in particular, are largely limited to mostly urban areas of Yangon Region, while microfinance organisations are more widespread across Myanmar (Map 6-1). In some states/regions, village funds such as the Evergreen Village Project and Green Emerald Fund or other local cooperatives have filled in some of the gaps in formal financial service provision, particularly in rural areas (Map 6-1). However, in other states/regions such as Kayin State, Chin State, Tanintharyi Region, Shan State, and Rakhine State, access to private banks, microfinance organisations, and credit unions is limited.

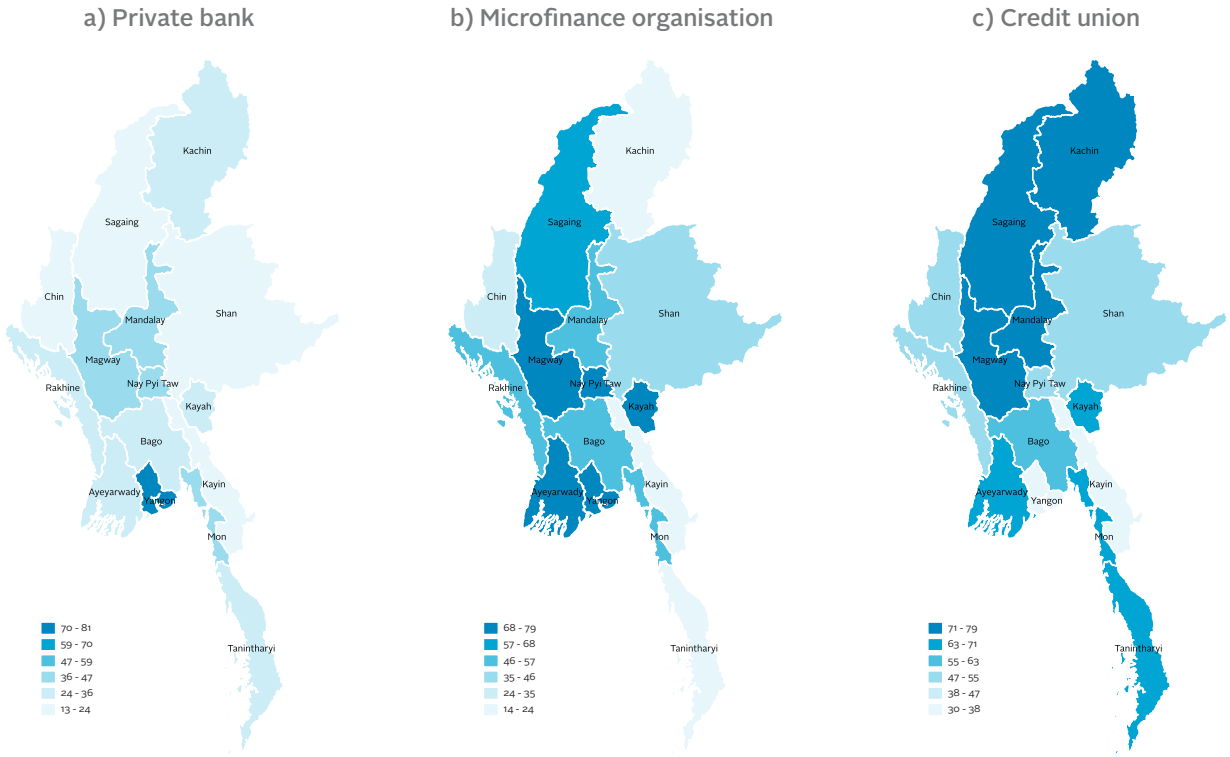
**Access to formal financial institutions is relatively limited and less varied among the poor.** About 70 percent of the non-poor live in close proximity to either a private bank or microfinance organisation, while just 58 percent of the poor do so. Access to formal providers increases significantly with welfare quintile, and nearly eight of ten people in the wealthiest quintile have access to one or more formal financial institution (Figure 6-1). Moreover, the non-poor have better access to more than one formal financial institution: 30.6 percent of the non-poor live near both a private bank and a microfinance organisation, which is twice as high than it is among the poor. Credit unions such as village and cooperative funds are generally more accessible among poorer populations and are more likely to be the only financial institution in areas where the poor live. However, about one in five of the poor have neither a formal financial institution nor any type of credit union in close proximity, which may present barriers for usage of formal financial services.

29 Close proximity is defined as being less than 5 miles away and taking an hour or less to reach by the most common means of transport in the village/ward.

30 A formal financial institution is defined here as institutions that are regulated by the Financial Regulatory Department of the MOPFI or the Central Bank of Myanmar. The 2017 MLCS Community Questionnaire does not ask respondents about access to public banks, only private banks. Thus, the share of the population living in close proximity to a formal financial institution is likely higher than 66.9 percent when also considering public banks. Microfinance organisations include both MFIs and other microfinance organisations.

## Map 6-1

Percentage of population living in close proximity to formal financial institutions

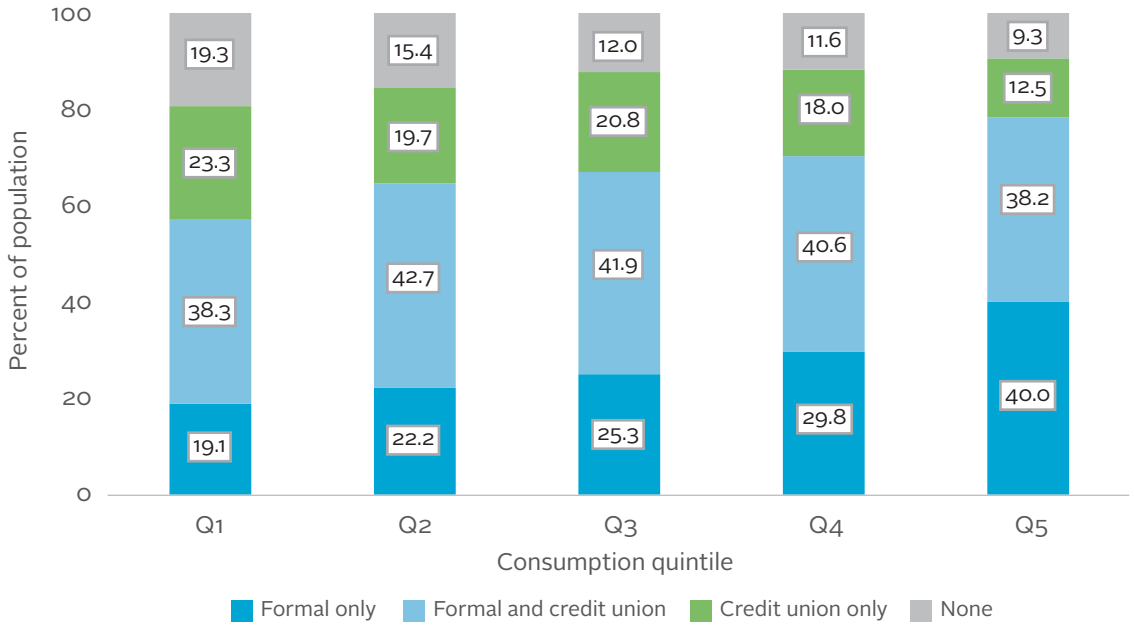



Notes: Outreach activities for the 2017 MLCS took place over the 12 months of data collection, but it was not possible to conduct interviews in two townships of Northern Rakhine State and the Wa Self-Administered Division. Close proximity is defined as being less than 5 miles away and taking an hour or less to reach by the most common means of transport in the village/ward. Credit union includes village and cooperative funds, and Map 6-1c shows the share of the population who have a such an institution in their village/ward.

Source: 2017 MLCS

## Figure 6-1

Percentage of population living in close proximity to formal financial institutions, by consumption quintile




Notes: Formal financial institutions include private banks and microfinance organisations. Close proximity is defined as being less than 5 miles away and taking an hour or less to reach by the most common means of transport in the village/ward. Credit union includes village and cooperative funds and is measured as the share of the population who has such an institution in its village/ward. Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.

Source: 2017 MLCS

**Usage of financial services such as bank accounts and insurance is still nascent in Myanmar, particularly among the poor.** In 2017, only 17 percent of households have one or more members with a bank account and possession of non-medical insurance is less than 2 percent (Table 6-1). Urban households are 1.8 times more likely than rural households to have a bank account, which can partially be attributed to greater accessibility of banks in urban areas.[31] In general, states/regions with limited access to private banks also have relatively low shares of households with bank accounts, suggesting that accessibility may be a significant factor in determining usage. The non-poor, particularly those in the top welfare quintile, are significantly more likely than the poor to own a bank account (Table 6-1).

**Data from other sources suggest that in addition to limited accessibility, information or knowledge gaps and behavioural biases could be significant deterrents to account ownership for the poor.** In addition to the transaction costs presented by limited access to formal financial institutions, other reasons for non-usage of formal accounts, especially among the poor, may be due to lack of trust in financial institutions, information or knowledge gaps, social constraints, or behavioural biases such as higher value of present consumption than future consumption (Karlan, et al., 2014). Such barriers may make it difficult for people to borrow or save in a secure manner, instead using "under-the-mattress" methods of saving or not saving at all. The World Bank Global Financial Inclusion Database (Global Findex) shows that in 2017, almost 75 percent of individuals aged 15 and over in Myanmar without a formal account state insufficient funds as a reason for not having an account. About 32 percent and 22 percent mention lack of necessary documentation and distance to formal financial institutions as reasons for not having an account, respectively. These results suggest that while accessibility is a significant barrier to having an account at a formal financial institution, information or knowledge gaps about financial products for micro-savings or behavioural biases that prevent saving, even in small amounts, may play a significant role in non-usage of formal accounts.

Table 6-1

Percentage of households using financial products, by residential area

| | Bank account | Loan | Insurance |
|---|---|---|---|
| Union | 17.0 | 61.0 | 1.8 |
| Urban | 24.9 | 40.0 | 3.1 |
| Rural | 13.8 | 69.4 | 1.2 |
| **Consumption quintile** | | | |
| Q1 | 8.5 | 69.5 | 1.3 |
| Q2 | 9.9 | 68.2 | 0.8 |
| Q3 | 15.4 | 66.5 | 1.2 |
| Q4 | 16.0 | 60.7 | 1.1 |
| Q5 | 29.8 | 45.8 | 3.8 |

Note: Insurance excludes health insurance. Loans include those taken out from formal and informal sources. Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.
Source: 2017 MLCS

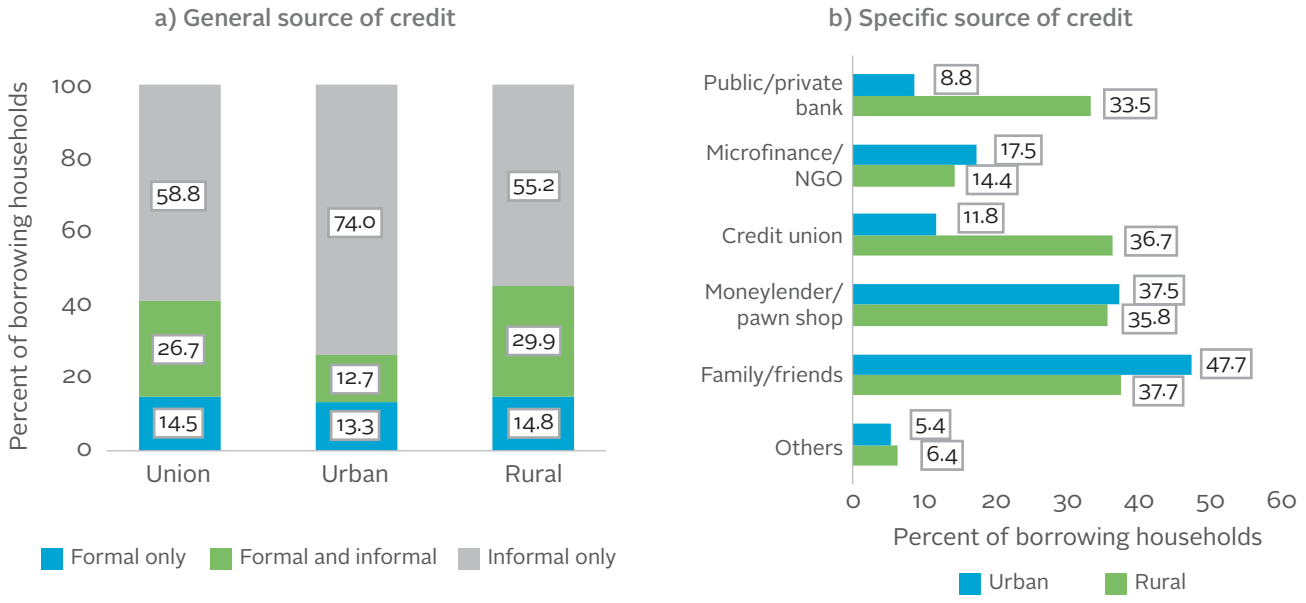
31 The 2017 MLCS does not distinguish bank accounts held at a financial institution from ones held through a mobile provider. If most bank accounts are digital, then physical access to banks may not be significantly correlated with ownership of a bank account. However, studies show that usage of mobile financial services is still low as of 2017 (Oxford Business Group, 2019).

**In comparison to banking and insurance, borrowing activity is high, especially among rural and agricultural households.** Six in ten households have taken out at least one loan in 2017, and rural households are 73.5 percent more likely than urban households to have borrowed from any source (Table 6-1). In addition, households engaged in agriculture are significantly more likely than those who are not to take out a loan, particularly from a public or private bank: Agricultural households are 7.4 times as likely as non-agricultural households to take out a loan from a bank. Although the reasons for borrowing and exact sources of credit are unclear in the 2017 MLCS, this finding is likely a result of widespread crop loans provided to farmers by state-owned Myanmar Agriculture Development Bank (MADB). In 2016 and 2017, the MADB extended the size of loans provided to farmers producing crops such as rice, corn, beans varieties, and cotton in effort to help cover some of their input costs.[32] Investment in agricultural capital therefore may be a common motivating factor for borrowing among many households, especially in rural areas.

**The poor are 18 percent more likely to borrow than the non-poor, which is largely explained by higher participation in agricultural activities among the poor.** Poorer households are typically more credit-constrained than wealthier households and thus may require loans to invest in their business or to cope with negative income shocks. Compared to the top welfare quintile, households in the bottom quintile are 51.7 percent more likely to take out a loan (Table 6-1). As shown in Chapters 7 and 9, the majority (80 percent) of poor households engage in agricultural activities. Considering that agricultural households are more likely to borrow than non-agricultural ones, presumably to invest in their harvest, it is expected that household sectoral participation explains a large portion of the relationship between poverty and household borrowing. Controlling for household sector, the poor are still on average 6.8 percent more likely to borrow than the non-poor.

Figure 6-2

Percentage of borrowing households by source of credit, by residential area




Note: The sample is restricted to households that reported taking out at least one loan from any source in the 12 months preceding the survey. Formal sources of credit include banks and microfinance institutions/NGOs. Informal sources of credit include credit unions, moneylenders/pawn shops, family/friends, and other miscellaneous.
Source: 2017 MLCS.

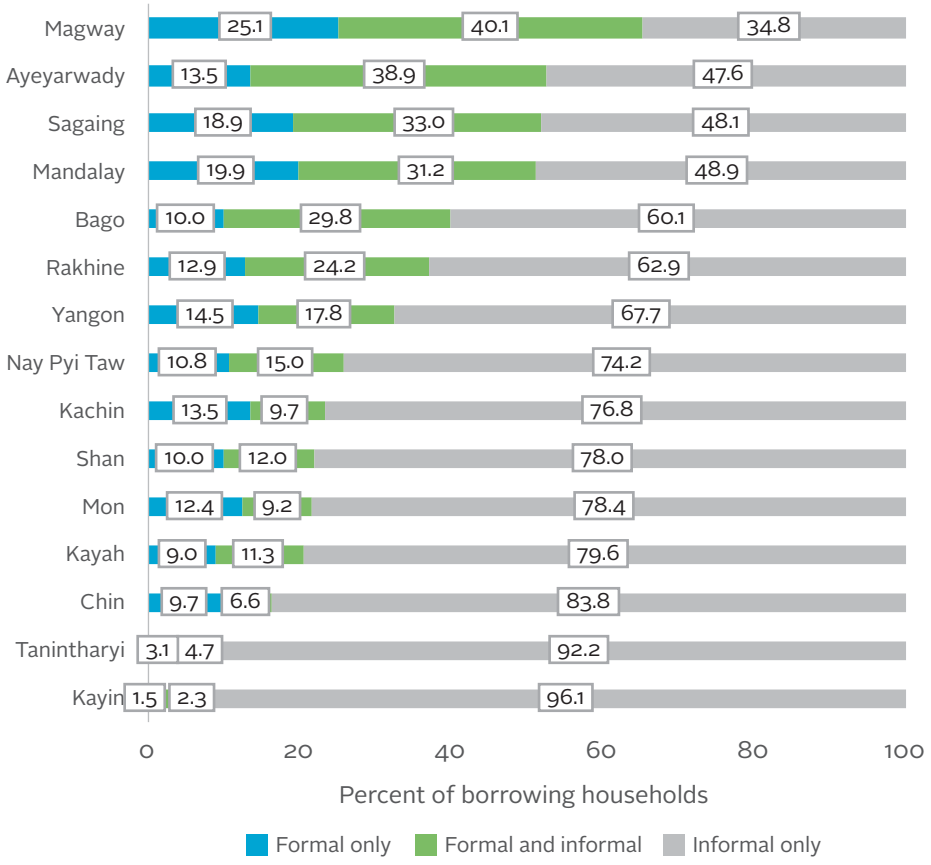
32 See https://www.mmtimes.com/news/loans-help-farmers-crops-be-increased.html

**Loans from informal credit providers such as moneylenders, pawn shops, family, and friends may present risks to borrowers.** Households that take out loans from informal sources such as private moneylenders can be subject to exorbitant interest rates, hard-to-manage repayment schedules, and extortion. While family and friends may demand zero or more lenient interest rates or repayment terms, such informal loans can encourage imprudent financial behaviour in borrowers and may jeopardize interpersonal relationships. Village funds which provide low-interest loans, many with the aim of reducing poverty in rural areas, may be better informal alternatives. However, these funds and other cooperatives are currently unregulated by the FRD or MCB and their effectiveness is largely unknown.

**Despite high borrowing activity, informal providers continue to be the preferred source of credit in both urban and rural areas.** In 2017, 85.5 percent of borrowing households take out loans from informal sources of credit, and 58.8 percent borrow exclusively from informal sources (Figure 6-2a). While urban and rural borrowing households are equally likely to utilise informal sources of credit, urban residents are significantly more likely to borrow from family and friends (Figure 6-2b). Borrowing from credit unions is more than three times as common among rural households than urban ones, which is expected considering that most village funds are located in rural areas. Urban households are also 34.1 percent more likely than rural households to utilise informal credit exclusively due to relatively high usage of banks a source of credit among rural households, particularly those involved in agriculture.

Figure 6-3

Percentage of borrowing households by general source of credit, by state/region

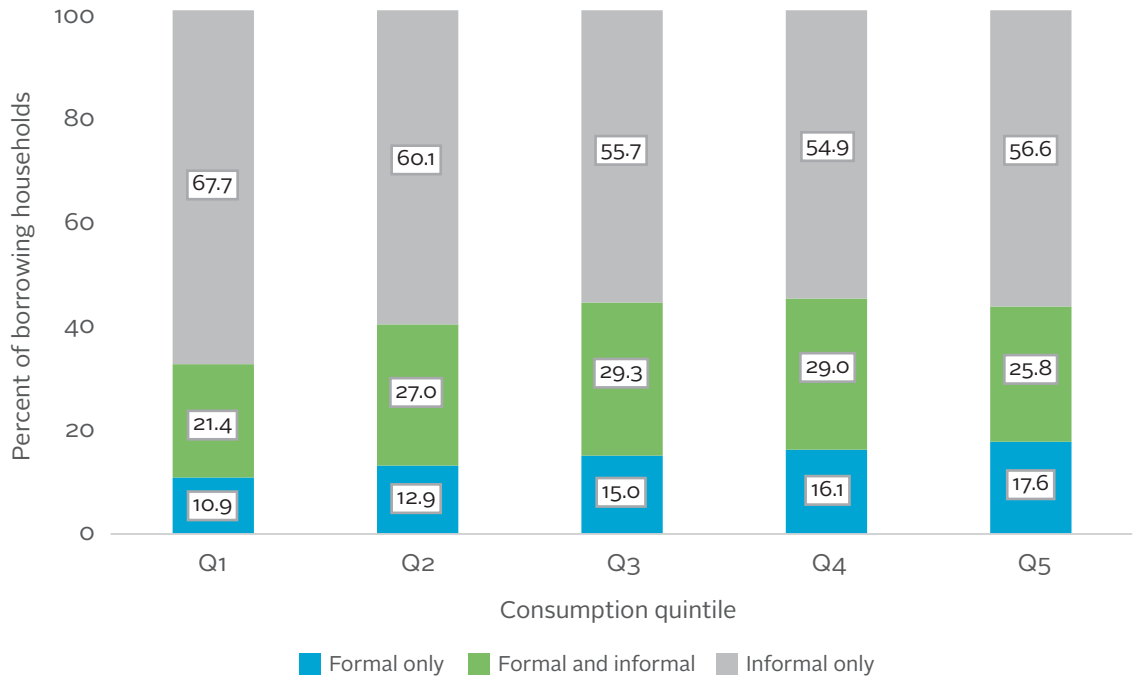



Note: The sample is restricted to households that reported taking out at least one loan from any source in the 12 months preceding the survey. Formal sources of credit include banks and microfinance institutions/NGOs. Informal sources of credit include credit unions, moneylenders/pawn shops, family/friends, and other miscellaneous.
Source: 2017 MLCS.

**Sources of credit vary significantly across states/regions, even after controlling for household sector, access to formal financial institutions, and welfare.** Magway, Ayeyarwady, Sagaing, and Mandalay Regions have the highest shares of borrowing households taking out loans from formal sources (Figure 6-3). On the other end of the spectrum, Kayin State and Tanintharyi Region have less than 10 percent of borrowing households utilising formal credit providers. While household participation in agricultural activities, access to microfinance organisations and credit unions, and welfare disparities explain some of these differences, use of informal sources of credit remains resolutely high in some states/regions such as Kayin State and Tanintharyi Region even after considering these factors. This result suggests that other factors such as characteristics of the local financial market continue to play an important role in determining sources of credit in some states/regions.

Figure 6-4

Percentage of borrowing households by general source of credit, by consumption quintile




Note: The sample is restricted to households that reported taking out at least one loan from any source in the 12 months preceding the survey. Formal sources of credit include banks and microfinance institutions/NGOs. Informal sources of credit include credit unions, moneylenders/pawn shops, family/friends, and other miscellaneous. Q1 to Q5 represents per adult equivalent consumption quintiles with Q1=poorest quintile and Q5=wealthiest quintile.
Source: 2017 MLCS.

**Informal borrowing is widespread among both the poor and non-poor, but the poor are more likely to resort to informal sources of credit, particularly after considering household participation in agriculture.** More than 80 percent of both poor and non-poor borrowing households take out loans from informal sources, making them the preferred provider of credit for poor and non-poor households alike. The poor are 5.7 percent more likely than the non-poor to utilise informal sources of credit, and the share of borrowing households taking out an informal sector loan – either exclusively or together with a formal sector loan increases with welfare (Figure 6-4). Differences across quintiles become starker when controlling for sectoral participation of household members, with poorer households more likely to borrow from informal sources. As shown in Chapters 7 and 9, households in poorer quintiles are more likely to be agricultural households, which are also more likely to take out loans from banks. Thus, controlling for household sector increases the relative

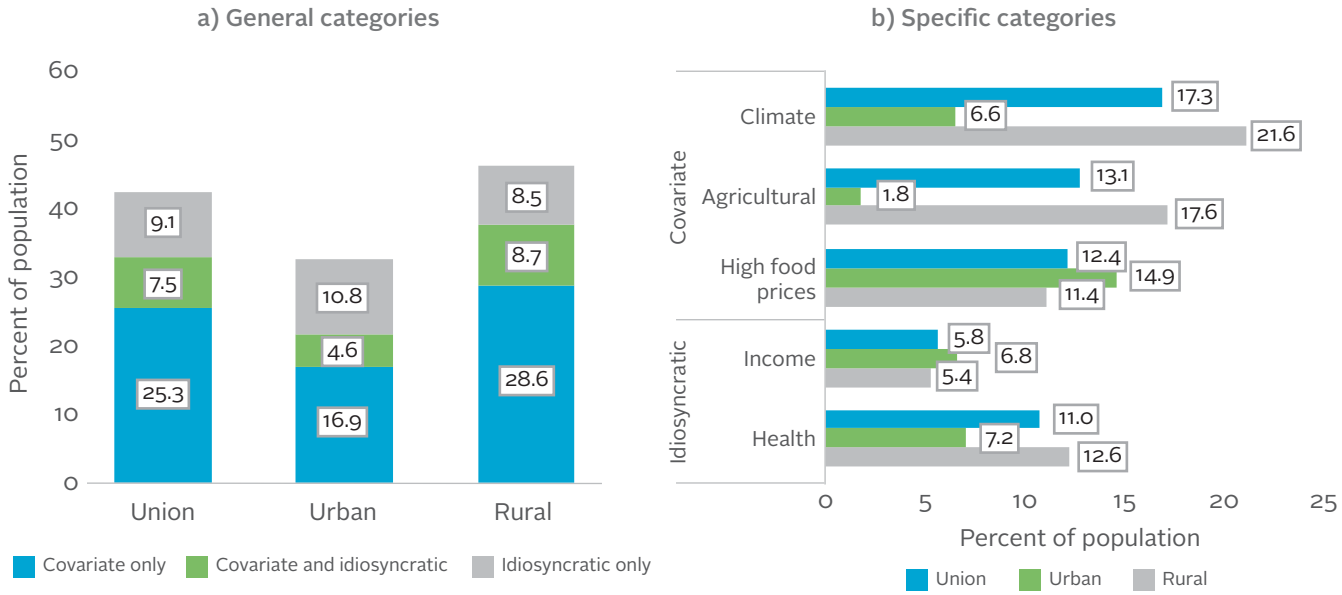
likelihood of utilising formal sector loans among wealthier households. This gap in formal credit utilisation is almost entirely due to higher borrowing from banks among wealthier households after considering household sector.

## Credit as coping mechanism to shocks

**Shocks can negatively impact household income and thus push households, particularly vulnerable ones into poverty.** About three out of ten people in Myanmar are classified as non-poor insecure (CSO, UNDP, and WB, 2019c). For this group, even slight fluctuations in household income can have negative consequences for consumption and push the household into poverty. Thus, shocks may be seriously detrimental to household welfare if household members do not have the means to cope with these shocks.

Figure 6-5

Percentage of population living in households negatively affected by different categories of shocks, by residential area




Notes: Covariate shocks include various climatic events, agricultural shocks, high food prices, and conflict. Idiosyncratic shocks include income loss due to unemployment or business failure, health injuries or illnesses, and theft of assets.
Source: 2017 MLCS.

**In 2017, four out of ten people live in households that report being negatively affected by one or more shocks.**[33] Shocks may be categorised into two groups: covariate shocks and idiosyncratic shocks. Covariate shocks affect all households in a given area or group, while idiosyncratic ones affect single individuals or households. Common covariate shocks include adverse climatic events such as floods and droughts, epidemics, and macro events such as price volatility. Household-specific events such as deaths, injuries, business failure, or unemployment are examples of idiosyncratic shocks. In both urban and rural areas, households are significantly more likely to be negatively affected by covariate shocks rather than idiosyncratic ones (Figure 6-5a).

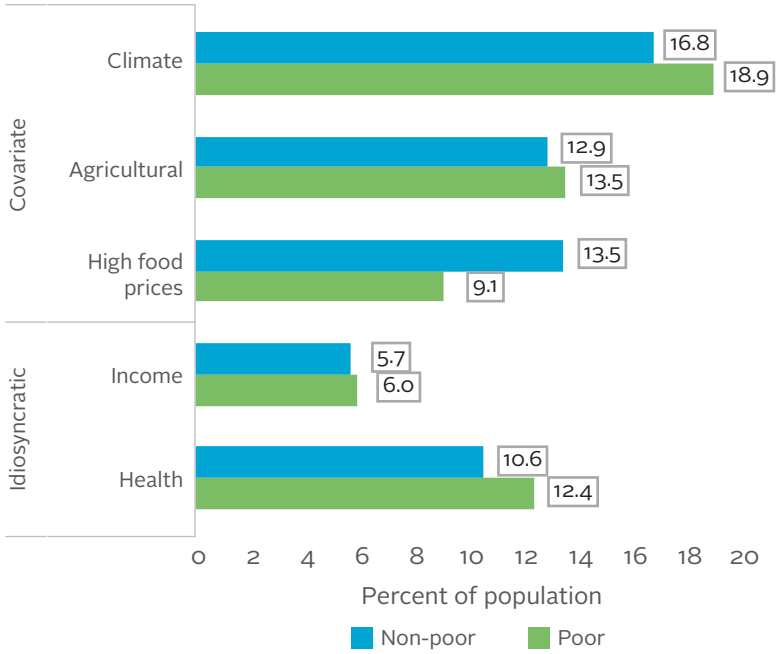
**Shocks, especially covariate shocks, are closely linked to the geographical area of residence.** Rural inhabitants are 42.1 percent more likely than urban inhabitants to be negatively affected by one or more shock, which is primarily driven by higher covariate shocks in rural areas, namely climatic events

33 The 2017 MLCS asks respondents whether their household was negatively affected by various shocks in the 12 months preceding the survey.

and agricultural shocks such as low crop prices (Figure 6-5b). Moreover, significant variation in the share of the population that report experiencing a shock exists across states/regions. For example, more than 70 percent of residents of the Union Territory of Nay Pyi Taw and Bago Region report being negatively affected by a shock in 2017, while less than 11 percent of residents in Kachin State and Tanintharyi Region do so. Much of these differences across states/regions can be attributed to covariate shocks. For example, in 2017, more than 50 percent of people living in the Union Territory of Nay Pyi Taw report being affected by high food prices, while less than one percent of people in Kachin State and Tanintharyi Region do so. Health shocks are also more prevalent among rural residents, which highlights the importance of accessible and affordable healthcare in rural areas. Rural inhabitants are also more likely to experience more than one shock in a year: In 2017, an average of 18.2 percent of the rural population has been affected by more than one of the five shock types shown in Figure 6-5b, which is 2.6 times higher than it is for the urban population.

Figure 6-6

Percentage of population living in households negatively affected by different types of shocks, by poverty status




Notes: Covariate shocks include various climatic events, agricultural shocks, high food prices, and conflict. Idiosyncratic shocks include income loss due to unemployment or business failure, health injuries or illnesses, and theft of assets.
Source: 2017 MLCS.

**The poor and non-poor are similarly likely to be negatively affected by a shock, although there are marginal differences in the types of shocks experienced.** The share that reports being harmed by a covariate or idiosyncratic shock in 2017 is similar between the poor and the non-poor. However, the poor are more susceptible to climate and health shocks, while the non-poor are significantly more likely to encounter high food prices (Figure 6-6).

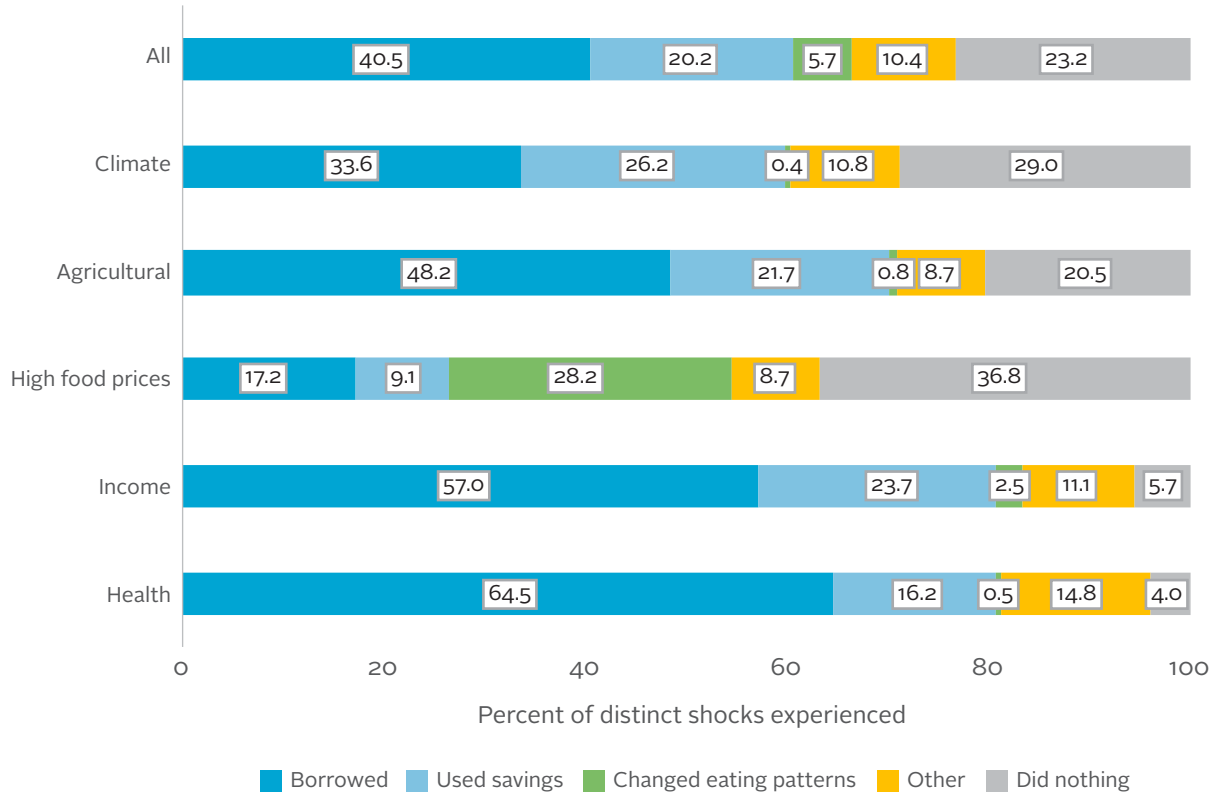
**For most shocks, the most common coping mechanism among affected households is to borrow, suggesting that many households lack the savings needed to cope with these shocks.** In 2017, for 40.5 percent of distinct shocks[34], affected households responded by obtaining credit (Figure 6-7). For all shock types besides high food prices, borrowing is the most common response among affected households. Borrowing is particularly common in response to idiosyncratic shocks such

34 Distinct shocks are composed of the 16 shocks listed in the 2017 MLCS.

as illnesses or injuries among household members. Using personal or household savings is also a common response yet is significantly less widespread than borrowing. Many households also do nothing in response to a shock, especially covariate shocks, which may signal their ability to absorb the negative consequences of the shock without much impact on household income or an inability to do anything to remedy the immediate effects of the shock.

Figure 6-7

Percentage of distinct shocks experienced, by coping mechanism and type of shock




Note: The sample is restricted to households that reported experiencing one or more shock in the 12 months preceding the survey. Percentages are taken over 16 distinct shocks listed in the 2017 MLCS. "Did nothing" means that the household did not do anything in response to the shock. "Other" includes household members taking on more work, selling assets, and other unspecified responses.
Source: 2017 MLCS.

**Poorer households are more likely to rely on loans to cope with negative shocks, while wealthier households are more likely to use savings.** Controlling for the type of shock experienced, households in the wealthiest quintile are 19.1 percent less likely to borrow and 53.8 percent more likely to save in response to a shock compared to households in the poorest quintile (Annex Table F-1). Households in the top quintile are also 24.4 percent more likely to do nothing in response to a shock. These results indicate that wealthier households tend to have the liquidity to remediate or absorb the negative consequences of shocks, while poorer households are forced to borrow in order to cope with shocks. Moreover, given that poorer households tend to borrow from informal sources that may charge exorbitant interest rates, shocks present significant risks for poor households to fall into deeper poverty due to debt or for non-poor households near the poverty line to fall into poverty.

## Main takeaways and implications

This chapter sheds light on the unequal access to formal financial institutions in Myanmar and the limited usage of many formal financial services. In 2017, only 17 percent of households have a bank account, and while six out of ten households take out loans, most utilise informal sources of credit. Usage of banks as a source of credit is relatively high among agricultural households, likely due to the MADB's targeted financial products for farmers. Poorer households are significantly more likely than wealthier ones to take out loans from informal sources, especially after considering household participation in agricultural activities. Moreover, poorer households are more likely to borrow in response to a negative shock, while wealthier households are more likely to use their savings. This lack of liquidity and tendency to borrow from informal sources places many of the poor and non-poor insecure in a vulnerable position, as they are likely incapable of smoothing their consumption in the face of a negative income shock and are at greater risk of falling into debt.

These findings have one main implication:

i. A better understanding of the exact reasons behind low usage of formal financial services among the poor and non-poor in Myanmar is needed. Karlan, et al. (2014) suggests five general reasons: transaction costs, lack of trust, information or knowledge gaps, social constraints, and behavioural biases. Depending on the primary reasons, targeted interventions can be designed to overcome these barriers and increase savings behaviour.