

STRATEGY SUPPORT PROGRAM | WORKING PAPER 44

**SEPTEMBER 2023** 

## **Vulnerability and Welfare**

Findings from the fifth round of the Myanmar Household Welfare Survey (March – June 2023)





## CONTENTS

Abstract	5
1. Introduction	6
2. Data and Methodology	7
3. Livelihoods and Economic Status	8
4. Shocks	15
4.1 Security Shocks	15
4.2 Climatic Shocks	21
4.3 Service Sector Shocks	22
4.5 Economic Shocks	27
5. Poverty	30
5.1 Asset Poverty	30
5.2 Income Poverty	31
6. Coping Strategies	34
7. Vulnerability Assessment	38
8. Discussion and Conclusion	40
References	41
Appendix tables	42

## TABLES

Table 1. Percentage of households, by engagement in income generating activities and by main livelihood in the last three months (R5)
Table 2. Share of households receiving support10
Table 3. Median real per adult equivalent daily household income in the last 30 days, by location and main livelihood (R5 kyat)
Table 4. Median real per adult equivalent daily income, by source in households with incomefrom each source in the past 30 days (R5 kyat)
Table 5. Percentage of households with reduced income compared to one year ago, by main         livelihood source
Table 6. Percent of households experiencing security shocks in their community over the past         three months
Table 7. Percent of households experiencing security shocks against their household over the past three months         .20
Table 8. Households negatively impacted by economic shocks, R4 MHWS
Table 9. Income-based poverty headcounts household groups and round (percentage of the population)
Table 10. Coping mechanisms used to deal with lack of food or money in the past 30 days35
Table A. 1 Percentage of rural households by engagement in income generating activities in the last three months, by round

Table A. 2 Percentage of rural households by main livelihood in the last three months, by round         42
Table A. 3 Percentage of urban households by engagement in income generating activities in the last three months, by round
Table A. 4 Percentage of urban households by main livelihood in the last three months, by round
Table A. 5 Average real per adult equivalent daily household income in the last month bylocation and main livelihood (R5 kyat)44
Table A. 6 Percent of households economically affected, by state/region
Table A. 7 Percent of households experiencing community and household insecurity in the past         three months, by state/region
Table A. 8 Percent of urban households experiencing community and household insecurity in the past three months, by state/region
Table A. 9 Percent of rural households experiencing of community and household insecurity in the past three months, by state/region
Table A. 10 Percent of households experiencing of community insecurity in the past three months, by state/region
Table A. 11 Percent of households experiencing climatic shocks in the past three months, by state/region
Table A. 12 Percent of households using different electricity sources, by round and urban rural
Table A. 13 Percent of households experiencing negative economic shocks in the past three months, by state/region
Table A. 14 Percent of urban households experiencing negative economic shocks in the past         three months, by state/region
Table A. 15 Percent of rural households experiencing negative economic shocks in the past         three months, by state/region
Table A. 16 Most important challenges for wage incomes or salary
Table A. 17 Most important challenges for crop production    50
Table A. 18 Most important challenges for crop sale    50
Table A. 19 Most important challenges for farm or non-farm enterprises
Table A. 20 Asset ownership, changes between R1 and R5 of MHWS51
Table A. 21 Table A.20 Reduced food expenditure as a coping strategy, by food group
Table A. 22 Use of each coping strategy by the number of coping strategies used in MHWS R5
Table A. 23 Summary of coping strategies employed, by State/Region in percentage of         households in MHWS R5
Table A. 24 Exploratory regression analysis of characteristics associated with income poverty 56

## **FIGURES**

Figure 1. Self-reflection of change in household income compared to the previous year	12
Figure 2. Percentage of households that have lower income or no income, January-June of 2023	.14
Figure 3. Percent of households reporting different risks in their community over the past three months, for urban and rural households	∍ .16
Figure 4. Percentage of households who experience violence in their community in January- June of 2022 (left) and January-June of 2023 (right)	.17
Figure 5. Percentage of households who experience drug use in their community (top left) gambling in their community (top right) petty crime in their community (bottom left) limited mobility in their community (bottom right) in January-June of 2023	.18
Figure 6. Percent of households experiencing security shocks against their household over the past three months, by state/region	e .20
Figure 7. Percent of farming households experiencing climatic shocks, by MHWS round	22
Figure 8. Percent of households experiencing banking difficulties, by MHWS round	23
Figure 9. Number of days with power cuts	.24
Figure 10. Percent of households accessing the internet (top) and barriers to internet access (bottom)	.25
Figure 11. Percent of households with all children 5-14 enrolled in school, by state/region	27
Figure 12. Cost of the food inflation basket, by round (nominal kyat)	28
Figure 13. Changes in asset poverty December- February 2021 to March-June 2023 (percent the population)	of .31
Figure 14. Regional trends in income-based poverty headcounts, by state/region (percent of the population)	ne .33
Figure 15. Percent of the population that is income poor, by livelihood	.34
Figure 16. Coping strategy by asset class	.37
Figure 17. Characteristics associated with income poverty	.39
Figure 18. Characteristics associated with asset poverty	39

### ABSTRACT

The fifth round of the Myanmar Household Welfare Survey (MHWS), a nationally and regionally representative phone survey, was implemented between March and June 2023. It follows from four rounds that were carried out quarterly beginning in December 2021. This report discusses the findings from the fifth round related to livelihoods, shocks, asset and income poverty, and coping strategies.

The security situation in Myanmar continued to deteriorate during the fifth-round recall period, which spanned from January to June 2023. Households felt insecure in their communities, as reported by 21 percent of households in both rural and urban areas, an increase compared to the previous year. This is because crime and violence continued to increase, affecting 18 and 10 percent of communities, respectively. Further, 7 percent of households were directly affected by violence, either through violence against a household member, robbery, or appropriation and/or destruction of their assets.

Households faced multiple shocks besides insecurity. Disruptions to the internet and electricity also negatively affected household wellbeing and livelihoods. Further, households struggled to receive medical services. Finally, while school attendance recovered compared to the previous year, it declined compared to the last quarter of 2022 and was still under 70 percent in some states/regions.

In R5 income-based poverty increased by 9 percent compared to R2 (+5 percentage points) and declined by 6 percent compared to R4 (-4 percentage points). Sixty-one percent of the population was income poor. The fall in income poverty between R4 and R5 was largely attributable to rising income outpacing a relatively low rate of food inflation at the beginning of 2023 – 8 percent increase in food prices between R4 and R5. Casual wage-earning households, both farm and non-farm, had the highest levels of income poverty. Remittances, assistance from family and/or friends, and salaried income were the primary factors inversely associated with households' probability of being income-poor, whereas remittances, non-farm business income and larger household sizes were inversely associated with asset poverty.

Seventy-one percent of households used at least one coping strategy to meet daily needs during the month prior to the fifth-round survey. The three most common coping strategies used were spending savings, reducing non-food expenditure, and reducing food expenditure. This has been consistent across rounds. Further, some households exhausted some or all their coping strategies.

Compared to the other states/regions, households in Kayah and Chin were the most vulnerable, though our survey struggled to capture some of the most conflict-affected areas, especially in Sagaing. Households in Kayah and Chin were more likely to be impacted by conflict, have income loss, and be income poor. Despite reporting comparatively less conflict, households in Rakhine were also vulnerable; 72 percent of households in Rakhine were income poor and many were mortgaging/selling assets to cope. Further, because most households in Rakhine were surveyed in early May, the welfare indicators for Rakhine do not capture the disastrous effects of cyclone Mocha.

### **1. INTRODUCTION**

From January through June of 2023, households continued to be impacted by security, climatic, and economic shocks. During the recall period for the survey, fighting was ongoing in the states/regions of Kayah, Chin, Sagaing, Kachin, Kayin, Mon, eastern Bago, and Tanintharyi (OCHA 2023a). Along with the endless devastating conflict, in May 2023, Cyclone Mocha made landfall in Rakhine State. The cyclone devastated households across Rakhine State including farmers who lost their harvest and much of their livestock. The cyclone then travelled north bringing rain, flooding, and strong winds to Chin, Sagaing, Magway and Kachin (OCHA 2023b). Households' agricultural production was impacted by this drought and flooding, as well as by other climatic shocks such as irregular temperatures and rainfall that occurred across the country. Further, despite inflation cooling in early 2023, households continued to be affected by economic shocks including high food and fuel prices and job loss. Disruptions to the internet and electricity worsened over the survey period, with most households having regular blackouts. All these factors continued to negatively impact household welfare.

This paper provides an overview of the vulnerability and welfare of households across Myanmar for the fifth round (R5) of the Myanmar Household Welfare Survey (MHWS). The MHWS is a representative phone survey at the national, urban/rural, and state/region levels. The fifth round (R5) of the Myanmar Household Welfare Survey (MHWS) was carried out between March and June 2023. <sup>1</sup> For most indicators, there was a recall period of three months, so therefore most indicators report on the period spanning January through June of 2023. This recall period includes the end of the dry season, which stretches from November to April in the largest part of Myanmar as well as monsoon planting, which began at the end of the survey collection period in May.

In this paper, we provide an update of households' livelihoods and economic status. Thereafter, we examine the security, climatic, health, service, and economic shocks that Myanmar households face. Third, we analyze changes in asset and income poverty for Myanmar's households. Fourth, we study the coping strategies households employ to meet their daily needs. Finally, we explore the association of shocks and household characteristics with asset and income poverty.

The paper is organized as follows: Section two describes the data and methodology. Section three provides an overview of the livelihood and economic status of households. Section four is a description of shocks that have negatively affected Myanmar's people including security, climatic, service, and economic shocks. Section five provides an update on asset and income poverty. Section six is an overview of the coping strategies that households employ. Section seven explores characteristics associated with income and asset poverty. Section eight concludes.

<sup>&</sup>lt;sup>1</sup>R1 was conducted in December 2021 to February 2022, so indicators with a three-month recall are reported for September-February 2022. R2 was collected from April-June 2022. For R2, indicator recall ranges from January- June 2022. R3 was conducted in July-August, and the three-month recall is for April- August 2022. R4 was conducted in October-December 2022; indicators are reported for July-December 2022.

## 2. DATA AND METHODOLOGY

The analysis presented in this paper relies on data from the fifth round of the MHWS. The fifth round of the MHWS was collected through phone survey interviews between March and June 2023 and has 12,953 respondents. Because most questions were asked for a three-month recall period, the data covers the time spanning from January to June. The survey intends to monitor household and individual welfare through a range of different indicators including wealth, livelihoods, food insecurity, diet quality, health shocks, and coping strategies. A novel sampling strategy in combination with the development of household and population weights allows for estimates that are nationally, regionally, and urban/rural representative (MAPSA 2022a; MAPSA 2022b).

The analysis is mainly descriptive and employs straightforward indicators, although the construction of indicators related to shocks and poverty requires more detail. The shock indicators include only self-reported shocks. In the MHWS, respondents were asked about different shocks that their households or their communities experienced in the past three months. Depending on the date the household was interviewed, the past three months includes January-March 2023, February-April 2023, March-May 2023, or April-June 2023. Because of the difficulty in surveying conflict affected areas, it is likely that these MHWS estimates of shocks underrepresent the extent of insecurity in the country.

The poverty line is the minimum welfare level for an individual not to be considered deprived. In previous in-person nationally representative surveys (the Myanmar Poverty and Living Conditions Survey (MPLCS) of 2014-15 and the Myanmar Living Conditions Survey (MLCS) of 2017), the share of poor was calculated using a consumption expenditure aggregate. Unfortunately, in a phone survey, collecting detailed expenditure information is not feasible. Therefore, we use an income-based poverty measure to determine the number of households that fall below the poverty line. Our income-based poverty measure is a comparison of total household income with the national poverty line. Total household income is the sum of income from 13 different economic activities plus remittances and other transfer income received in the past month. It is adjusted for household size using standard adult equivalency scales. Separately, the national food poverty line from the first guarter of 2017 – which was 1,037 kyat (MoPF et al., 2019) - was updated first with the official food CPI until mid-2020, and then with a temporal MAPSA food price index from a national survey of food vendors (MAPSA, 2022c). Then, a spatial deflator was applied to adjust food prices for rural and urban areas within each state/region based on price information from the MAPSA food vendor survey. The nonfood poverty line is calculated using the ratio of the food to the nonfood poverty lines in 2017 and the total poverty lines are the sum of the food and nonfood poverty lines. The income-based poverty measure is found to be highly correlated with the MLCS 2017 consumption-based poverty measure at the state/region level (MAPSA, 2022c).

We compare our different indicators of vulnerability and welfare by the households' main source of income and asset class. We divide households into five groups by their main source of income: non-farm business, non-farm salary, non-farm wage, farm wage/salary, and own farming. Households were categorized into three asset-class groups based on the number of assets they own: asset-poor (0-3 assets), asset-low (4-6 assets) and asset-rich (7-10 assets). This

categorization is based on a count of 10 assets including: improved housing (semi-pucca, bungalow/brick, apartment/condominium), flush toilet, improved water source (piped into house or bottled water), grid-based electricity (not solar), rice cooker, fridge, TV, wardrobe, car/motorcycle/tuk-tuk, and a working computer/laptop/iPad.

Finally, we employ regression analysis to identify factors associated with household income poverty and asset poverty. We use random effects panel linear regressions to estimate the association between specific types of shock and the likelihood of being asset and/or income poor. We include three types of shocks in our analysis: security, climatic, and migration shocks. All three shock indicators are self-reported measures pertaining to the three months prior to the survey round. The security shock indicator is a measure of community insecurity. The climatic shock indicator measures whether the household was negatively impacted by natural or climatic shocks. We also include an indicator of the respondent's inability to work due to a lack of employment or seasonal, safety, and movement restrictions. In our analysis, we control for the main household income source, other sources of income and other household and respondent characteristics. State/region dummies and round dummies are also included in the models. It is important to note that our estimates are only associations between our independent and dependent variables.

## 3. LIVELIHOODS AND ECONOMIC STATUS

In rural areas, household farming is the most important income generating activity with 56.0 percent of households engaged in household farming and 36.4 percent of rural households identifying it has their primary livelihood in the three months prior to the R5 interview (Table 1). Compared to R2, in R5 there was a 3.2 percentage point drop in the share of rural households engaged in household farming but no significant change in the share reporting household farming as their main livelihood (Table A. 1 Table A. 2). Casual wage employment is the second most common livelihood for rural households with 15.9 percent of households primarily engaged in non-farm wage employment and 14.0 in farm wage employment. The share of rural households with farm wage employment declined by 9.9 percentage points between R4 and R5 and the share who consider it their primary livelihood declined by 3.7 percentage points. This is likely due to seasonality between the survey rounds; March through mid-June is low season for farming. However, between R2 and R5, the share of rural households with farm and non-farm wage livelihoods increased by 3 percentage points overall. Finally, in R5, 18.8 percent of rural households depended primarily on non-farm business income, which declined by 3.6 percentage points compared to R2.

In urban areas, the most important source of income in the three months prior to the R5 interview was the operation of household businesses, both in terms of the share of households operating a businesses (48.6 percent) and the share reporting it as their primary livelihood (36.5) (Table 1). However, the share of urban households operating a business dropped by 9.8 percentage points since R2 and the share of households reporting it as their main livelihood fell by 4.4 percentage points (Table A. 3 Table A. 4). Non-farm salary employment was the second most common livelihood in R5 (28.4 percent of urban households) followed by non-farm wage employment (22.1 percent).

In the past year, there has been an overall reduction in household engagement in income earning activities. The share of households engaged in each income generating activity either declined or increased by a small, statistically insignificant amount. Furthermore, there was a statistically significant decline in the number of household income sources, in both rural and urban areas. The number of sources was the lowest in R5 compared to all other rounds.

	Engaged in income generating activity				Main livelihood			
	National	Rural	Urban	Rural vs urban	National	Rural	Urban	Rural vs urban
Own farming	42.9	56.0	9.3	***	27.3	36.4	3.9	***
Farm wage	20.5	26.6	5.0	***	10.9	14.0	2.8	***
Non-farm wage	26.4	24.3	31.7	***	17.7	15.9	22.1	***
Non-farm salary	20.9	12.2	42.9	***	12.6	6.5	28.4	***
Non-farm business	35.5	30.4	48.6	***	23.8	18.9	36.5	***
Other, including remittances	22.0	21.4	23.5	***	7.8	8.3	6.3	***
Number of different income sources <sup>a</sup>	1.68	1.71	1.61	***				

Table 1. Percentage of households, by engagement in income generating activities and by main livelihood in the last three months (R5)

Note: <sup>a</sup>The different income generating activities are specified according to the activities in this table. Asterisks show statistically significant differences between rural and urban households; \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01. Source: Author's calculations based on MHWS data.

Other sources of income, including remittances, were important for both rural and urban households, and were the main source of income for 7.8 percent of households nationally. Most of this other income was from remittances or transfers from family or friends. Very little of the other income was from local and international relief organizations or from government transfers. Table 2 presents different transfers into the household. Between the first half of 2022 and the first half of 2023, apart from remittances, most transfers into households declined. Unemployment benefits are not common in Myanmar; around 0.1 percent of households in R5 received unemployment. Pensions are more common. Around 2.7 percent of rural households and 6.9 percent of urban households received pensions in R5. Support from relief organizations was infrequent. Local relief organization provided support to around 0.8 percent of households in R5, a decrease from the previous year. International relief organizations provided support to about 1.3 percent of households during the same months, again a decline from the previous year and from the previous quarter. A more common form of support was food, non-food items and cash given by friends or family. In R5, 7.0 percent of households received money from this source, but again this was a decline from the previous year and from the previous guarter. Finally, the most important source of support was remittances, 16.4 percent of households received income from remittances in R5, which remained constant from 2022 to 2023.

	R2	R5	R2 vs R5	R5 Rural	R5 Urban	Rural vs Urban
Unemployment benefits	0.1	0.1		0.1	0.3	***
Pensions	4.6	3.9	***	2.7	6.9	
SAC/ local governing entities	0.8	0.5	***	0.6	0.4	
Local relief organization / local NGO	1.1	0.8	***	0.8	0.7	
International relief organization	1.9	1.3	***	1.3	1.2	
Monastery, church, other religious group	0.5	0.3	***	0.2	0.4	
Community-based savings/ credit group	0.3	0.0	***	0.0	0.0	
Family and/or friends	8.9	7.0	***	6.2	9.1	***
Remittances	16.1	16.4		17.1	14.7	***

Note: asterisks denote difference between MHWS rounds and rural and urban and show significance at p-values; \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01.

Source: Author's calculations based on MHWS data.

Median real household income increased by 8.1 percent between R4 and R5 indicating that nominal household income outpaced food inflation and household purchasing power increased – though income dynamics varied considerably between household groups. Overall, this is the first round to round increase in median real income since the survey began in late 2021 (Table 3). Real income is the value of income after adjusting for inflation. Real income in Tables 3 and 4 is presented in terms of the value of the kyat in R5 and provides a measure of the purchasing power of income over time. Median real income rose in rural areas by 10.9 percent but essentially stagnated in urban areas. Table A. 5 in the appendix presents average real household income. Average income is more prone to the influence of very high values compared to median income but is useful for testing the statistical significance of changes over time. Between R4 and R5, average real income rose by 27.4 percent with a rise in both rural and urban income (35.8 and 7.8 percent, respectively). Table 3 and Table A. 5 both indicate that households whose main livelihood is farming are driving the overall increase (33.5 increase in median real income). Household groups reliant on non-farm wage income achieved no gains in median real income (-1.7 percent) and changes in both average farm and non-farm wage income are statistically insignificant (Table A. 5).

In contrast, between R2 and R5, median real total income deteriorated in all household groups except own farm households, with a 10.6 percent decline in rural areas and a 10.0 percent decline in urban areas (Table 3). Farm earnings are inherently linked to food prices which contributed to real farm income outpacing food inflation. In contrast, though, median nominal income rose in the last year for all livelihood groups, but income in household groups other than own farm did not rise by enough to compensate for inflation, thus non-farming households had declining real income.

Table 3. Median real per adult equivalent daily household income in the last 30 days, by location and main livelihood (R5 kyat)

	R1	R2	R3	R4	R5	Percentage change R2-R5	Percentage change R4-R5
National	3,656	3,160	2,891	2,624	2,835	-10.3	8.1
Rural	3,527	2,882	2,536	2,324	2,577	-10.6	10.9
Urban	3,939	3,811	3,716	3,396	3,430	-10.0	1.0
Own farm income	5,436	3,005	2,180	2,340	3,125	4.0	33.5
Farm wages	1,923	1,806	1,700	1,480	1,566	-13.3	5.8
Non-farm wages	2,912	2,590	2,811	2,383	2,342	-9.6	-1.7
Non-farm salary	4,690	4,292	4,183	3,597	3,680	-14.3	2.3
Non-farm business	3,776	3,646	3,302	3,237	3,317	-9.0	2.4
Other, including remittances	3,931	3,892	3,434	3,526	3,776	-3.0	7.1

Note: Real income calculated using a food price index

Source: Author's calculations based on MHWS data.

In the past year, median real income earned from own farm activities, remittances, and other sources, (i.e., rent, pensions, unemployment, and support from friends/family and organizations) increased, while farm wage and non-farm salary income declined, and non-farm wage and non-farm business income declined only slightly. Table 4 presents median real income for households who earned income from each source in the 30 days prior to the interview. Because households may have income from multiple sources or may not even earn income in their primary livelihood during the 30-day recall period, measuring income by livelihood group does not depict actual earnings in each income category. It is important to note that wage income presented in Table 4 reflects both wage rates and hours of work and thus does not depict wage rates over time as hours worked also fluctuates.

	R1	R2	R3	R4	R5	Percent- age change R2-R5	Percent- age change R4-R5
Own farm income	5,065	3,081	2,590	2,196	3,380	9.7	53.9
Farm wages	1,217	1,137	1,091	924	1,084	-4.7	17.2
Non-farm wages	1,792	1,663	1,686	1,423	1,634	-1.7	14.9
Non-farm salary	2,529	2,440	2,357	2,002	2,099	-14.0	4.8
Non-farm business	2,212	1,978	1,863	1,721	1,952	-1.3	13.4
Remittances	936	1,024	1,036	982	1,100	7.5	12.0
Other	434	515	612	505	571	10.9	13.0

Table 4. Median real per adult equivalent daily income, by source in households with income from each source in the past 30 days (R5 kyat)

Note: Real income calculated using a food price index

In January through June of 2023, 40.2 percent of households reported lower income compared with last year, with 24.5 percent facing a significant reduction in income (greater than 20 percent) and 15.7 percent experiencing a small reduction in income (1–20 percent). In the MHWS, households were asked to reflect on their own change in income over the past year. The 40.2 percent of households who reported lower income compared with last year builds on the 55.4 percent of households who earned less income in January through June of 2022 compared to 2021 (Table 5). For 24.9 percent of households interviewed in R2 and R5 this is two subsequent years of income reduction. At the same time, 34.6 percent of households did not see a change in their total household income compared with last year. Further, 25.2 percent of households saw their income increase compared to last year.





Source: Author's calculations based on MHWS data.

In R5, self-employed non-farm workers along with casual non-farm and farm wage earning households were the most likely to report income loss compared to the previous year. Forty-five percent of self-employed non-farm workers, 45.5 percent of casual non-farm earning households and 45.4 percent of farm wage and/or salary earning households reported lower income (the percent of households who reported a large and or small reduction) this year compared to the last (Table 5). This is significantly lower than in R2 where 59.6 percent of non-farm wage households and 63.5 percent of farm wage households reported lower income compared to the previous year. But again, for many households this is two subsequent years of perceived income loss.

Compared to households earning money from other income streams, households employed in non-farm salaried work, both farm and non-farm, were the least likely to see an income reduction compared to the previous year. Further, 29.6 percent of non-farm salaried households saw an increase in income, compared to the previous year. Farming is another income source, where many households felt that they are doing better compared to last year. While 36.3 percent of farmers reported less income compared to last year, 32.5 percent reported more income, with 11.6 percent reporting a large increase in income.

	Large reduction (>20%)	Small reduction (1-20%)	No change (%)	Small increase (1-20%)	Large increase (>20%)
All households	24.5	15.7	34.6	17.7	7.5
Own crop/fish/livestock farming	21.0	15.3	31.3	20.9	11.6
Farm wages/salary	27.2	18.2	35.9	14.6	4.1
Non-farm wage	28.4	17.1	35.4	14.2	4.9
Non-farm salary	15.9	10.9	43.7	22.3	7.3
Non-farm business	28.1	17.1	33.0	15.9	6.0
Other incomes sources	24.5	15.7	34.6	17.7	7.5

Table 5. Percentage of households with reduced income compared to one year ago, by main livelihood source

Source: Author's calculations based on MHWS data.

Kayah, Chin, and Rakhine suffered from the highest shares of households with selfreported reduced income; 64.6, 54.8 and 52.2 percent of households, respectively. Table A. 6 shows the share of households who felt they had lower income this year compared to last in each state/region of the country, and Figure 2 shows the share of households who are economically affected. We classify households as economically affected if they reported a large or small reduction in income compared to last year or if they had no income at all in the past three months (Figure 2). While households in Kayah, Chin, and Rakhine were the most vulnerable, more than 45 percent of households in Kayin, Sagaing, and Tanintharyi were economically vulnerable as well. Rakhine and Tanintharyi are the only states/regions where there were no improvements in the number of households with lower income this year compared to last. While households in Kayah still fared the worst in the country, they were less economically vulnerable compared to the previous round. On the other hand, in Ayeyawady, there was the largest increase in households with higher income this year compared to last, followed by Mandalay and Kachin.





Note: Households are classified as economically affected if they experienced a large or small reduction in income or if they had no income at all in the past three months.

## 4.SHOCKS

#### **4.1 Security Shocks**

In January through June 2023, 21.0 percent of households in Myanmar felt that their community was very or somewhat insecure (Table 6). The number of households who feel insecure has increased steadily since the same period last year (R2), in which 19.6 percent of households felt unsafe in their community. Households' trust in their community has also continued to erode, with 23.2 percent of households having no or low trust in their community. Further, violence has also increased since the same time last year. In R5, 9.6 percent of households reported that there was violence in their community (Table 6). This is an increase from 7.0 percent in R2.

Table 6. Percent of households experiencing security shocks in their community over thepast three months

Community	R2	R5	Rural R2	Rural R5	Urban R2	Urban R5
Feels insecure	19.6	21.0**	18.3	20.9 **	23.0	21.0 **
Low levels of social trust	20.0	23.2***	18.1	21.7 ***	25.0	27.0 ***
Violence	7.0	9.6***	6.2	8.8 ***	9.1	11.8 ***
Observations	12,142	12,953	8425	9010	3717	3943

Note: asterisks denote difference between MHWS round 2 and round 5 at the national, rural, and urban levels. Asterisks show significance at p-values \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01. Source: Author's calculations based on MHWS data.

The percentage of urban households that felt insecure in their community decreased considerably compared to the previous round, from 27.1 percent in R4 to 21.0 percent in R5. Rural insecurity remained high at 20.9 percent of rural households. At the same time, more urban households felt a low level of trust in their communities compared to rural households, and significantly more than at the same time last year (R2), and six months ago (R4) (MAPSA 2023a). Further, households reporting violence also increased in urban communities, from 9.1 percent in R2 to 11.8 percent in R5. In rural communities, there was also an increase in reported violence over the year.

Lawlessness is on the rise in Myanmar. In R5, 19.7 percent of households reported a lot or some gambling in their community, 18.3 percent reported a high risk of burglary, theft, or robbery in their community, and 15.0 percent reported drug use.<sup>2</sup> These issues were more prominent in urban areas, compared to rural areas (Figure 3). Petty crime was particularly widespread in urban areas in the first half of 2023, with 29.1 percent of urban dwellers reporting a risk of being robbed. Another crucial challenge is that 14.4 percent of respondents felt that it was dangerous for them to move around and do everyday tasks in the first half of 2023. Again, this impacted more households in urban areas than rural areas. Further, 10.2 percent of urban

<sup>&</sup>lt;sup>2</sup> Households were if how did you feel about the situation of "gambling" in your community In your community is there 1. Yes, a lot; 2. Yes, some; 3. No, not much; 4. No, not at all; 8. prefer not to answer; 9. Do not know "gambling" in your community. Gambling is then replaced with other indicators such as violence, petty crime, drug use, limited mobility, risk of kidnapping, and bribes.

households and 6.4 percent of rural households reported that it was common for them to pay bribes to authorities. Finally, 2.1 percent of respondents revealed that there was a risk of kidnapping in their community.





Source: Author's calculations based on MHWS data.

The three state/regions where households felt the most insecure between January and June 2023 were Kayah (52.3 percent of households felt insecure), Chin (42.9 percent), and Sagaing (41.6 percent) (Table A. 7 for national Table A. 8 for urban Table A. 9 for rural). The number of households feeling insecure increased in Kayah and Sagaing from the end of 2022 to the first half of 2023, while insecurity fell in Chin and Kachin. Compared to the first half of 2023, households felt more insecure or equally insecure in all states/regions except for Yangon, Chin, and Kachin. But of course, insecurity in Chin and Kachin fell from very high-levels and those states are still the second and fifth most insecure states, respectively.

**Respondents in Chin (36.2 percent) and Kachin (33.2 percent) had the lowest levels of trust in their community** (Table A. 7). Though, levels of trust were similarly low in Kayah (32.7) and Kayin (32.8). Further, trust significantly declined between the first half of 2022 and the first half of 2023 in Sagaing, Kachin, Ayeyawady, Tanintharyi, Bago, Shan, and Rakhine. In the remaining states/regions, levels of social trust remained low. Community insecurity and lack of social trust may be a result of an uptick in crime or violence in the community.

The three state/regions where households reported the most violence were Kayah (19.7 percent of households), Chin (18.2 percent of households), and Tanintharyi (17.3 percent of households. Violence significantly increased between the first half of 2022 and the first half of 2023. The largest increases over the period occurred in Magway, Kayin, and Shan. But reported violence also increased significantly in Bago, Mandalay, Tanintharyi, Rakhine, and Nay Pyi Taw. In Kachin, Kayah, Chin, and Sagaing, violence remained the same, and the highest over the

period. In Ayeyawady, violence also remained the same, with the fewest number of households reporting violence in their community in the beginning of 2023, 2.6 percent (Figure 4).

Figure 4. Percentage of households who experience violence in their community in January-June of 2022 (left) and January-June of 2023 (right)



Source: Author's calculations based on MHWS data.

Along with the highest incidence of violence, 31.8 percent of households in Kayah reported not being able to move around to complete everyday tasks, 28.9 percent of households reported a risk of petty crime, 5.1 percent reported a risk of being kidnapped, and 28.3 reported high drug use in their community (Table A. 11 and Figure 5). In Chin, where violence was equally widespread, 32.9 percent households reported not being able to move

around to complete everyday tasks, and a concerning 5.8 percent of households reported there was a risk of kidnapping. In Tanintharyi, while mobility was higher comparatively, risk of kidnapping, drug use, and gambling were the second highest, respectively, of all the states/regions. Further, in Tanintharyi the largest number of households feared having to pay a bribe. Households in Kayin reported the highest levels of gambling. Finally, 54.3 percent of respondents in Kachin reported some or a lot of drug use in their communities.

# Figure 5. Percentage of households who experience drug use in their community (top left) gambling in their community (top right) petty crime in their community (bottom left) limited mobility in their community (bottom right) in January-June of 2023





Source: Author's calculations based on MHWS data.

Seven percent of respondents were directly negatively impacted by violence and/or crime against their household, including 0.9 percent of households who had a member assaulted or detained, 1.7 percent of households who suffered the destruction or appropriation of an asset, 3.0 percent of households who were impacted by theft or robbery, and 1.1 percent of households who were forced to give bribes or payments (Table 7). The incidence of households or household members being victims of theft/burglary was much higher in urban areas, 4.5 percent versus rural areas 2.4 percent. Theft/burglary of interviewed households decreased compared with the same period last year (R2) and compared with the last quarter of 2022 (R4). This is because crime rates dropped significantly in urban Yangon, Nay Pyi Taw, and Mandalay (Table A. 8). While fewer households had members robbed or their household burgled, more households had an asset destroyed or appropriated and more households had to pay bribes.

## Table 7. Percent of households experiencing security shocks against their household over the past three months

	R2	R5	R2 vs R5	Rural R5	Urban R5	Rural vs Urban
Assault/detention	0.8	0.9		0.9	1.1	
Destruction/appropriation of assets	1.1	1.7	***	1.7	1.9	
Theft/robbery	3.6	3.0	***	2.4	4.5	***
Bribery/forced payments	0.5	1.1	***	1.0	1.5	
Observations	12,142	12,953		9,010	3,943	

Note: asterisks denote difference between the MHWS round 2 and round 5, as well as the difference between rural and urban locals. We did not collect this data in R1. Asterisks show significance at p-values \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01. Source: Author's calculations based on MHWS data.

In R5, households in Kayah state continued to suffer from high levels of violence and crime against them. In Kayah, 9.3 percent of households suffered damage to an asset or had an asset appropriated, and 9.4 percent of households endured theft/robbery (Figure 5 and Table A. 7). While in Kayah, numbers fell slightly compared to the end of 2022, in Chin state, destruction/appropriation of assets increased to 6.4 percent and theft and robbery to 5.1 percent.





While the lowest levels of reported insecurity continued to be in Nay Pyi Taw (7.9 percent), Bago (11.4 percent), and Ayeyarwady (12.5 percent), these regions are still confronting much of the same risks as experienced across the country (Table A. 7). In Bago and Ayeyawady, a similar percentage of households were burgled or had their members robbed. Further, more than 15 percent of households reported high gambling where they lived, and more than 10 percent feared petty crime.

#### **4.2 Climatic Shocks**

In R5, 14.0 percent of farm households reported being negatively impacted by at least one climatic shock over the past three months. The recall period for R5, January through June, begins in the pre/post monsoon season and continues into the beginning of the monsoon. The number of households experiencing climatic shocks was identical to that one year prior. At the same time, the climatic shocks reported were slightly different. The two largest climatic shocks reported were strong winds (6.4 percent of households) and irregular temperature and rainfall (4.0 percent of households) (Figure 7). The incidence of flooding was more prevalent in the same period last year. It should be noted that in May 2023 cyclone Mocha hit Myanmar destroying households in Rakhine, Chin, Sagaing, Magway and Kachin. Most households in these states and regions were interviewed prior to this disaster, so the full extent of this shock is not captured in our dataset.<sup>3</sup>

At the regional level, intense winds were a danger to households in Chin and Rakhine, negatively impacting 19.3 and 17.6 percent of households, respectively (Table A. 11). Drought was the most prevalent in Chin, with 6.9 percent of households negatively impacted. Flooding was also an issue in Chin with 6.9 percent of households negatively impacted there. Further, in Sagaing, 5.6 percent of households were negatively impacted by flooding. Finally, irregular temperatures or rainfall were important issues in Kayin and Bago.

<sup>&</sup>lt;sup>3</sup> In Kachin 1 percent of respondents were interviewed in June after the cyclone hit, in Rakhine 6 precent, in Magway and Sagaing 10 percent, and in Chin 56 percent. Therefore, other than in Chin, most of the damage is not included in the welfare estimates.



Figure 7. Percent of farming households experiencing climatic shocks, by MHWS round

Source: Author's calculations based on MHWS data.

#### **4.3 Service Sector Shocks**

Banking difficulties improved between January through June of 2022 and January through June of 2023, but 2.7 percent of households still paid agent fees to obtain cash while 1.5 percent of the households reported that they faced other financial issues. In the MHWS, households were asked if they had significant difficulties obtaining cash from banks or other financial institutions (Figure 8). At the beginning of 2022, 10.7 percent of households had to pay agent fees to obtain cash, 5.8 percent of household could not take out cash because the bank was either closed or had no cash, and 3.9 percent of households could only withdraw a limited amount of cash. In February through June of 2022, banking difficulties declined significantly, but 7.2 percent of households still needed an agent to obtain cash in each round. In February through June of 2023, these numbers declined to 2.7 percent of households. Further, other issues such as ATMs not working, banks closed, and use of the banking system declined to nearly zero.



#### Figure 8. Percent of households experiencing banking difficulties, by MHWS round

Source: Author's calculations based on MHWS data.

Between the first half of 2022 and 2023, there was a decline in the number households that accessed power from the government or national grid from 65.2 percent to 63.7 percent (Table A. 12). While most urban residents accessed power from the national grid, 90.3 percent, only about half of rural residents, 53.3 percent, did. Instead, 31.1 percent of rural residents accessed electricity from solar home systems, the usage of which increased between 2022 and 2023. The use of rechargeable battery systems also increased to 7.4 percent in rural areas while the use of community and household generators fell.

For residents that accessed electricity from the national power grid, 84.3 percent of households had a power cut of at least one hour from 8:00 am to 8:00 pm for all seven days of the week prior to the interview. In Mandalay and Yangon, 93.6 and 93.0 percent of respondents reported having at least a one-hour power cut per day for seven straight days. In Nay Pyi Taw, on the other hand, 17.0 percent of respondents reported no days of daily power cuts. In Kayah and Tanintharyi, respondents recorded the fewest power cuts during the day, with 33.7 and 23.3 percent of households in the two states experiencing no power cuts during the day, respectively. At the same time, however, most of these townships, instead, faced power cuts at night. Twenty-nine percent of households reported that they were negatively affected by this loss of electricity. The loss of electricity was particularly detrimental to urban residents with 44.3 percent of urban households reporting that they were negatively impacted by this loss (Table 8). In Yangon and Mandalay, the greatest number of households reported that they were negatively affected by the loss of electricity (Table A. 13, Table A. 14, Table A. 15).

Figure 9. Number of days with power cuts



Source: Author's calculations based on MHWS data.

Between January and June of 2023, almost half of the households (48.8 percent) did not have access to the internet regularly. During the same period in the year prior, 54.2 percent of households could not access the internet or could only access it a few times per month (Figure 10). In R5, 21.3 percent of households could not access the internet at all in the month prior to the survey, compared to 22.6 percent in R2, which shows that there has been no improvement in access to the internet over the course of mid-2022 to mid-2023. Internet access was especially difficult in Chin and Sagaing where 75.1 and 68.9 percent of households could not access the internet at all in the month prior to the survey. In Chin, only 2.7 percent of respondents could access the internet anytime they wanted to.

The lack of internet access was a result of internet service disruptions, as reported by 28.4 percent of households. Households also reported not being able to afford to pay for the internet because of high fees (9.3 percent), a limited budget, or no working mobile phone (26.0 percent). But between January to June of 2023 and 2022, these issues declined by 6.0, 3.7, and 1.6 percentage points, respectively. On the other hand, 31.6 percent of households reported that they could not access the internet because they had no electricity or there were service problems. This is compared to 7.1 percent in the previous year. Internet service disruptions were the primary reason for the lack of internet in Sagaing, (82.4 percent of households reported that this is why they had no internet access), Chin (83.9), and Kachin (46.3 percent). In Yangon, Kayin, Shan, Bago, Rakhine, and Kayah, electricity access was the most cited hindrance for accessing the internet.







Of the households who needed medical services, 6.4 percent of households in the month prior to the survey could not access medical services and 14.9 percent of households could only access medical services once or twice. Among households that needed medical services, access to them has increased since February-June of 2022. But in some states/regions medical access continues to be limited. In Chin, 26.9 percent of households could not access medical services in the last month. This is in addition to the 36.4 percent of

households who could only access medical services once or twice. In Kayah and Sagaing, 35.8 and 33.2 percent of households, respectively, either could not access medical services or could only access them once or twice in the last month.

Access to schooling improved tremendously from January through June of 2022 to the same period in 2023, from 52.5 percent of children 5 to 14 enrolled to 76.7 percent. At the same time, enrollment declined by 3.5 percentage points compared with R4 (July-December) of 2022. In February through June of 2022, only 52.5 percent of children 5 to 14 years were attending school, 40.8 percent in urban areas and 56.5 percent in rural areas. In the third quarter of 2022, this number jumped to 76.8 percent nationally, 74.1 percent in urban areas and 77.7 percent in rural regions. While in the fourth quarter of 2022, there were small increases in enrolment to 79.3 percent of children attending school, 80.7 percent of rural children and 75.2 percent of urban children, this declined again in the first half of 2023. Similar to enrollment levels in the third quarter of 2022, in the first half of 2023, 76.1 percent of children were enrolled in urban areas and 76.9 percent in rural regions.

Compared to Q4 of 2022, there were significant declines in enrollment in Yangon, Chin, Magway, Rakhine, and Shan. In many states/regions enrollment is alarmingly low. In Sagaing enrolment was only 44.6 percent of students showing no change from Q4 of 2022. In Chin, Tanintharyi, and Kayah enrollment was 43.2 percent, 62.5 percent, and 57.6 percent, respectively, with a statistically significant decline in enrolment in Chin. In no state/region did enrolment increase between the end of 2022 and the first half of 2023 (Figure 11). In the MHWS, we asked about domestic and child labor. Nearly eight percent of households had a child under fifteen who worked a paid work week in the three months prior to the interview. Rural children were more likely to be engaged in paid work compared to urban ones, 7.9 percent of rural households had a child work for wages compared to 6.5 percent of urban households. Children also worked as domestic laborers in their household or in another family's home. Two percent of households had a helper other than their own children for domestic work and about 2.2 percent of households sent their children to work somewhere else for an income and/or for accommodation before they were 18 years old. The share of rural households which sent their children was double that of urban households, 2.6 percent versus 1.3 percent, respectively.



Figure 11. Percent of households with all children 5-14 enrolled in school, by state/region

Source: Author's calculations based on MHWS data.

#### **4.5 Economic Shocks**

#### 4.5.1 Price shocks

The rate of food inflation slowed to 8.1 percent between R4 and R5, an average monthly rate of 1.5 percent, which is the lowest average monthly increase in food prices between the MHWS survey rounds, considerably lower than the monthly average of 3.6 percent between R2 and R4 (equivalent to a 42 percent annual increase). Inflation is measured by the changing cost of a fixed basket of food items over time. In the past year, the rate of food inflation has been higher in rural compared to urban areas (45.2 and 35.6 percent respectively between R2 and R5) but the cost of the food inflation basket has narrowed considerably since the first survey round (Figure 12).

Rice is the largest contributor to rising food costs in the past year, with long grain prices increasing by 87.6 percent between R2 and R5, while vegetable prices increased by 61.0 percent, pulses by 43.1 percent, animal source foods by 27.5 percent, and bananas by 26.3 percent. Though edible oil prices were a significant factor in food inflation in the first part of 2022, rising by 60 percent between R1 and R3, they increased by merely 1.6 percent in the past year. Falling onion prices drove the lowered inflation rate between R4 and R5 with most other food groups increasing but at slower average monthly rate as compared with R2 to R5. However, the reprieve from high food inflation appears to be short lived. Evidence from MAPSA's most recent rounds of food vendor surveys indicate a 19 percent rise in food prices between R5 of the MHWS to late July/early August, an average monthly increase of 3.2 percent. During this period, rice prices increased by 26 percent (see MAPSA (2023) for a description of previous food vendor surveys).



#### Figure 12. Cost of the food inflation basket, by round (nominal kyat)

Note: Percentage change noted between rounds refers to change in the value of the food inflation basket at the national level. Source: Author's calculations based on MHWS data.

In January through June of 2023, 30.8 percent of households were negatively impacted by higher food prices (Table 8). This is much lower compared to the last quarter of 2022, where 61.5 percent of households were negatively impacted by higher food prices. Although food prices rose slightly more in rural areas compared to urban (8.5 percent versus 7.3 percent), fewer rural households were negatively impacted by higher food prices, possibly because they were able to supplement from their own-production, and or as farmers, benefited from higher prices. In January through June of 2023 the number of households impacted by high fuel prices decreased considerably to 28.6 percent of households from 57.5 percent of households in the previous quarter. While fuel prices jumped considerably between Q1 and Q2 of 2022, they have leveled off at the higher price ever since. In Kayah households were negatively impacted by high food prices, while 60.4 percent of households were negatively impacted by higher fuel prices (Table A. 13).

	R4 National	R5 National	R4 vs R5	R5 Rural	R5 Urban	Rural vs Urban
Higher food prices	61.5	30.8	***	28.9	35.8	***
Higher fuel prices	57.5	28.6	***	27.9	30.4	**
Loss of employment	37.3	20.5	***	20.4	20.7	
Exchange rate fluctuation	20.4	11.5	***	10.7	13.5	***
Loss of electricity	33.2	29.4	***	23.6	44.3	***
Unable to assess money in bank account	5.2	2.9	***	2.2	4.9	***
Observations	12924	12935		9,010	3,943	

#### Table 8. Households negatively impacted by economic shocks, R4 MHWS

Source: Author's calculations based on MHWS data.

#### 4.5.2 Income shocks

**Twenty percent of households were negatively impacted by a loss of employment, which was an improvement from 37.3 percent in July-December of 2022.** But in Kayah, 57.1 percent of households reported a loss of employment in R5, while 38.7 percent of households reported a loss of employment in Chin. This was particularly an issue in the urban areas of Kayah and Chin. At the same time, there was a statistically significant decline in the number of income sources between R2-R5 and R4-R5 in both rural and urban areas. In addition to losing income streams, households continued to face numerous challenges with earning income including reduced working hours and higher prices of farm and non-farm business inputs.

Seventeen percent of salaried/wage workers reported reduced working hours or less work as their main challenge from January through June of 2023, compared to 21.8 percent a year earlier (Table A. 16). In the MHWS, households reported the main challenge they faced in the last three months, based on their principal source of income. Reduced working hours was the largest challenge faced by salaried/wage workers. This was a bigger issue in rural areas, 18.9 percent of wage/salaried workers versus 12.8 percent of wage/salaried workers in urban areas. Further, 5.8 percent of wage/salaried workers reported low/reduced wages as their principal challenge, which is a gradual improvement from 10.8 percent a year prior. In fact, 65.9 percent of wage workers stated they faced no difficulty in R5, compared to 53.5 percent of workers a year earlier. On the other hand, 1.6 percent of workers reported that their wages were not paid or were paid late, which is greater than a year prior. While nationally, 3.7 percent of wage/salary workers reported it was unsafe to travel to their work location, in Kayah, 13.5 percent of wage/salary workers reported this issue, and in Kayin 8.7 percent. Further, in Chin and Kayah, 26.4 and 24.3 percent of wage-earning households reported less work and reduced working hours as their most important challenge.

The main challenges that farmers faced in R5 were high input prices or mechanization services (15.1 percent) and weather (13.2 percent). Compared to the last quarter of 2022, fewer households reported high input prices and high fuel prices as the most important issue they faced (Table A. 17). But high input prices were still a considerable issue in Kayah, faced by 34.3 percent of farmers, Rakhine, 25.3 percent of farmers, and Shan, 21.5 percent of farmers. The

high price of fuel was mainly an issue in Kachin; it was the main challenge faced by 7.7 percent of farmers there. Issues with pests/diseases (6.7 percent) declined as well but were quite high among peri-urban farmers in Yangon, 17.6 percent of farmers. It is important to note that while nationally, 3.8 percent of farmers faced issues hiring workers, in Kayin, 9.2 percent of farmers faced this issue. This was a consistent issue in Kayin in 2022 as well. Finally, weather negatively impacted crop production most in Magway, 21.4 percent of farmers, and Kachin, 17.4 percent of farmers.

The main issues farmers faced in terms of selling their crops were low prices for crops (9.2), though this reduced significantly from R2 (21.9 percent), and difficulty reaching traders (4.5 percent) (Table A. 18). Low prices for crops continued to be a significant issue in Kachin, Rakhine, Tanintharyi, and Shan where at least 15 percent of farmers struggled with low prices. In Kayah, 12.9 percent of farmers reported that there were not many traders with whom to sell their crops. In Chin and Sagaing, 20.4 percent and 11.4 percent of farmers stated that buyers or traders could not reach their farm because of conflict, which was a considerable increase from the previous quarter.

For non-farm enterprises, 10.4 percent reported high prices of raw materials as their main challenge in R5 (Table A. 19). Increasing fuel prices declined as a prominent issue in R5, with 3.8 percent of non-farm enterprises reporting high fuel prices as the main issue they faced compared to 10.8 in the previous year. Twelve percent of non-farm business owners reported that their greatest challenge was that no customers bought their products. This was particularly an issue in Kayin and Chin. This is likely due to the low purchasing power of households across the country. A growing issue that non-farm enterprises are facing is that people are not paying off their debts, and more people are buying on credit. This increased from 0.4 percent in the first half of 2022 to 3.3 percent in the first half of 2023. In Rakhine 7.7 percent of non-farm enterprises faced this issue. Difficulties hiring workers and electricity supply problems have also become more prominent challenges in 2023. Finally, 5.9 percent of non-farm businesses stated that customers could not reach their business, which has not declined since 2022. This was an important challenge in Kayah, Chin, and Sagaing.

## **5.POVERTY**

#### **5.1 Asset Poverty**

Between December-February 2021/2022 and March-June of 2023 the percentage of the population defined as asset poor (0 - 3 assets) increased statistically significantly from 33.8 percent to 37.1 percent (Figure 13). While the percentage of the asset low population (4 – 6 assets) did not change, the percentage of those who are asset rich declined from 26.5 percent to 23.3 percent. Except for computer/laptops/tablets, the ownership of rice cookers, fridges, TVs, wardrobes, car/motorcycle/tuk-tuk declined (Table A. 20). Further, the use of flush toilets declined from 6.6 percent to 6.1 percent. The use of improved water sources also declined. While bottled water use increased slightly to 26.5 percent of households, water piped into the household declined from 4.0 to 2.9 percent. The use of public tap water also decreased. At the same time, the use of protected wells, springs, or ponds increased as did the use of surface water.





Source: Author's calculations based on MHWS data.

#### **5.2 Income Poverty**

Adjusted in accordance with food inflation, the poverty line increased by 42.3 percent between R2 and R5 and 8.1 percent between R4 and R5. The poverty line represents the cost of acquiring a basic bundle of food and nonfood needs. The cost of a bundle is estimated in a base year (2015 in Myanmar) and then in subsequent periods adjusted for food inflation to estimate its current cost. Thus, a non-poor household falls into income-based poverty when their income does not keep pace with the rising costs of the poverty line. To measure poverty in the MHWS we update the poverty line in each round using a food price index (Figure 12). We do not collect sufficient information on nonfood items to separately adjust the food- and nonfood-poverty lines.

Rising real income between R4 and R5 led to the first round to round reduction in income-based poverty since the MHWS survey began in late 2021 with R5 poverty falling to 61.0 percent of the population, which was a 5.6 percent decline compared to R4 (Table 9). The 6.4 percent decline in rural poverty is statistically significant but the -3.1 percent decline in urban poverty is not. Reductions in income-based poverty between R4 and R5 are largest in households whose primary livelihood is own farming (-12.5) while reductions are smaller and/or statistically insignificant in other livelihood groups. These results are largely consistent with changes in median (Table 3) and average real income by livelihood group (Table A. 5).

Despite reductions in income-based poverty in the first half of 2023, poverty increased by 8.5 percent of the population compared to the same time last year (R2), an increase which was significant in rural (7.5 percent) and urban areas (11.9 percent) (Table 9). Compared to other livelihood groups, non-farm salary households saw a considerable rise in poverty between R2 and R5 resulting in a 22.4 percent increase in poverty since last year. Once again, changes in poverty between R2 and R5 closely mirror reductions in real median income (Table 3).

Income-based poverty is negatively associated with asset ownership; in R5, poverty reached 73.8, 59.5, and 42.0 of the population for households classified to be asset poor, asset low, and asset rich, respectively. Between R2 and R5 income-base poverty in assetpoor households increased by only 3.6 percent compared to 7.6 and 9.2 percent in asset-low and asset-rich households.

	R1	R2	R3	R4	R5	Percent- age change R2-R5	Percent- age change R4-R5
National	50.1	56.2	60.7	64.6	61.0	8.5***	-5.6***
Rural	51.6	59.4	65.0	68.2	63.8	7.5***	-6.4***
Urban	46.2	47.8	49.4	55.2	53.5	11.9***	-3.1
Asset-poor (0-3 assets)	64.9	71.3	76.1	79.2	73.8	3.6**	-6.8***
Asset-low (4-6 assets)	49.5	55.3	60.0	63.0	59.5	7.6***	-5.6***
Asset-rich (7-10 assets)	33.1	38.5	41.5	45.0	42.0	9.2**	-6.6**
Own farm	39.8	55.0	63.7	62.1	54.3	-1.2	-12.5***
Farm wages	78.5	82.1	83.9	87.9	88.8	8.1***	1.0
Non-farm wages	64.3	69.3	66.0	76.8	75.2	8.5***	-2.1
Non-farm salary	37.4	40.7	41.2	51.7	49.8	22.4***	-3.6
Non-farm business	48.1	50.2	55.2	57.0	54.7	8.9***	-4.2
Other, including remittances	46.4	46.9	52.9	52.1	49.2	4.8	-5.6

## Table 9. Income-based poverty headcounts household groups and round (percentage of the population)

Note: Due to differences in the treatment of transfer income, income-based poverty headcounts are slightly different compared to earlier reports. Asset classes represent asset ownership in R1 or the first round the household joined the MHWS survey. Asterisks show significance differences between rounds; \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01.

Source: Author's calculations based on MHWS data.

In every state/region, income-based poverty peaked in a round prior to R5 (Figure 14). In most areas poverty was highest in R3 or R4 with the exceptions of Kachin and Kayin where poverty was highest in R1 and R2, respectively, and declined since (-14.9 and -9.9 percent between R2 and R5, respectively). Over the past year poverty increased in all other state/regions with the largest rise in Bago, 30.9 percent. Despite declining overall poverty headcounts between R4 and R5, poverty headcounts remained unchanged in Kayah and increased in three states during this period: Chin (3.3 percent), Shan (6.7 percent), and Tanintharyi (3.8 percent).



## Figure 14. Regional trends in income-based poverty headcounts, by state/region (percent of the population)

Households whose main source of income is farm wages are consistently the most vulnerable livelihood group, followed by non-farm wage earners. In R5, 88.8 and 75.2 percent of the population living in farm and non-farm wage households were income-poor, respectively. (Figure 15). In both R2 and R4, the poverty rate in farm wage households was about 45 percent higher than the national average and 23 percent higher in non-farm wage households. Any increase in poverty for wage earning households is dire, particularly as those who were already poor are likely becoming even poorer.

Households reliant on other forms of income, particularly remittances, are the most resilient livelihood group with poverty rates only rising by 2.8 percentage points since the beginning of 2022 and 2.2 percentage points between R2 and R5. A large decline in median income in salaried households in the last year (-14.3 percent, Table 3) resulted in a 22.4 percent increase in their poverty rate. This large increase and the relatively stable poverty level of the "other income" livelihood group, has put the two livelihood groups nearly on par, with poverty rates of about 50 percent – the lowest of all livelihoods.

**Income poverty in farm households follows a more complex pattern than other livelihood groups.** As farm income is highly seasonal, so is the income poverty status of households whose primary livelihood is own farming (Figure 15). Poverty in farm households was highest in R3, which corresponded to a period considered the lean season, prior to the harvest and sale of major crops. The R2 and R5 surveys were implemented over similar periods in 2022 and 2023, eliminating seasonal influences. Farm earnings are inherently linked to food prices which contributed to farm income outpacing food inflation (Table 3). Thus, unlike other livelihood

Source: Author's calculations based on MHWS data.

groups in which poverty increased significantly between R2 and R5, poverty in farm households was essentially unchanged.



#### Figure 15. Percent of the population that is income poor, by livelihood

Note: R5 poverty rates are labeled.

Source: Author's calculations based on MHWS data.

## **6. COPING STRATEGIES**

Overall, 71.3 percent of households used at least one coping mechanism to deal with lack of food or money in the past 30 days, 71.7 percent of rural residents and 70.2 percent of urban residents (Table 10). Shocks can be particularly damaging to household well-being, when either the household cannot deploy a coping mechanism to ensure the same living standard or, the household is forced to use a coping mechanism that results in permanent loss of assets, income, or safety. In the MHWS, households identified all the coping strategies they used in the past 30 days to cope with lack of food or money. On average, households reported using 2.1 different coping mechanisms over the 30 days prior to the R5 interview. This marks a significant decline in both the percentage of households using a coping strategy and the average number of coping strategies used in January through June of 2023, compared to the last quarter of 2022, and compared to the same period last year.

Table 10.	Coping mechanism	s used to de	al with lack	of food or	r money in	the past 30
days						

	R2	R5	R2 vs R5	R5 Rural	R5 Urban	Rural vs Urban
# coping mechanisms used	3.0	2.1	***	2.1	2.1	
Uses min. 1 coping mechanism	83.3	71.3	***	71.7	70.3	
Spent saving	67.8	57.5	***	59.4	53.0	***
Reduced non-food expense	55.7	45.0	***	44.1	47.3	***
Reduced food expense	54.5	44.8	***	44.4	45.9	
Borrowed money	36.9	27.7	***	29.0	24.5	***
Reduced expense on health	34.6	35.2		35.6	34.4	
Mortgaged household assets/goods <sup>1</sup>	19.7	15.0	***	15.7	13.4	***
Sold household assets/goods <sup>1</sup>	15.1	10.6	***	10.0	12.2	***
Mortgaged non-agri productive assets or means of transport <sup>2</sup>	0.8	0.6		0.4	1.2	***
Sold non-agri productive assets or means of transport <sup>2</sup>	3.3	1.7	***	1.4	2.5	***
Mortgaged/sold house	1.9	1.3	***	1.3	1.1	
Mortgaged/sold land	0.4	0.3	***	0.4	0.1	***
Engaged in high risk activities	3.6	3.5		3.6	3.1	
Migrate entire HH	1.4	1.4		1.4	1.2	
Mortgaged/sold ag productive assets (ag HH only)	1.4	2.4	***	3.2	0.3	***
Number of observations	12142	12953		9010	3943	
Number of farming HHs	5605	5803		5461	478	

Notes: <sup>1</sup>Household assets include radio, furniture, television, jewelry, etc. <sup>2</sup>Non-agric productive assets include sewing machine, wheelbarrow, bicycle, car, etc. Asterisks show significance differences between rounds; \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01. Source: Author's calculations based on MHWS data.

Overall, the most common coping strategies were spending savings (57.5 percent), reducing non-food expenditures (45.0 percent), and reducing food expenditures (44.8 percent). Lower food inflation between R4 and R5 may have reduced the need for households to spend more savings and cut back on food and non-food expenditure. Overall, fewer households reported using these coping strategies in February through June of 2023 compared to the previous quarter and to the same period last year. But thirty-one percent of households reduced both their food expenditure and their non-food expenditure, while 22.6 percent of households had to reduce food and non-food expenditure in all five periods, 9.6 percent of households spent some of their savings in all five periods, while14.7 percent of households reduced their food expenditure in all five periods. Finally, households who reduced their food expenditure did so

<sup>&</sup>lt;sup>4</sup> Households were asked if they used the coping mechanism in the past 30 days. They could answer yes, no, not applicable, or no because they already exhausted the coping mechanisms. A reducing in expenditure is compared to how much they would like to spend, not compared to reduction in the previous period.

mainly by decreasing their spending on meat (88.1 percent), fish (79.8 percent), and oils, fats, and butter (72.7 percent) (Table A. 21). Rural households decreased their expenditures on those food groups more than urban households. Between R2 and R5, though, the largest decreases in expenditure were reported in sugary products, dairy, and grain.

To meet daily needs, 15.0 percent of households mortgaged household assets and 10.6 percent sold household assets. Mortgaging assets was more common in rural areas while selling assets was more common in urban areas. Household assets include gold, jewelry, furniture, technology, and appliances. The most common asset sold and/or mortgaged was gold and/or jewelry. Among panel households, 13.2 percent of households sold assets in more than two periods, while 22.1 percent mortgaged assets in more than two periods. Further, 2.1 percent of panel households mortgaged or sold assets in all five periods. Two percent of households sold non-agricultural productive assets including sewing machines, wheelbarrows, bicycles, cars, and other means of transportation, and less than one percent mortgaged these assets. Some households also mortgaged or sold critical assets such as their dwelling (1.2 percent) or agricultural productive assets, which is higher than the previous period and year. Given the recall period of 30 days, the number of households that have mortgaged and/or sold assets continues to be concerning.

The number of households who borrowed money, 27.7 percent, decreased significantly from the previous round, and the previous year. At the same time, however, 47.7 percent of households continued to be in debt. Households also pursued risky activities to meet their daily needs. This includes 3.5 percent of households that engaged in income-generating activities that they themselves considered risky, and 7.5 percent of households where children worked to complement household income. Finally, 1.4 percent of families migrated with their entire household to deal with the dire economic situation in the month before the survey round. There was no decrease in these three coping strategies over the course of the year.

Among households who used only one coping strategy, the most common coping strategy was spending savings (67.8 percent) (Table A. 22). When households used two coping strategies, most households spent their savings (73.8 percent), and additionally, households also began to reduce their food and non-food expenses, around 53 percent, respectively. Among households that used three coping strategies, nearly all of them spent savings and reduced food and non-food expenditure. Further, around 35.6 percent borrowed money and 51.0 percent reduced their expenditure on health. When households used four coping strategies, they began to increasingly mortgage and sell households assets. Finally, households that used six or more coping strategies, began to sell non-agri-productive assets (10.8 percent), sell agricultural assets (9.9 percent), engage in high-risk activities (25.8 percent), and migrate with their household (11.0 percent).

The situation of households is dire in Kayah and Chin and continues to decline in Rakhine and Kayin as shown by the number of coping strategies used. At the same time, no state/region has been spared from the conflict and economic downturn, and in Mandalay and Nay Pyi Taw, where coping strategy use is lowest, still 66 percent of households in each region used at least one coping strategy. Figure 16 and Table A. 23 show coping strategies in each State/Region of the country. In Kayah, 88.1 percent of households used at least one coping

mechanism in the past 30 days, and households used on average 3.0 different coping mechanisms. Further, compared to other states/regions, more households in Kayah spent their savings (75.4 percent), reduced their non-food and food expenditure (71.6 and 72.8 percent), sold household assets (20.6 percent), and sold non-agri productive assets (5.8 percent). Compared to other states/regions, more households in Chin borrowed money (39.1 percent), reduced expenditure on health (52.7 percent), and mortgaged/sold agricultural productive assets (4.7 percent). In Rakhine State, 79.9 percent of households applied at least one coping mechanism, while using 2.9 mechanisms on average. Rakhine had the greatest number of households mortgage and sell household assets, 27.3 and 20.8 percent, respectively.

Also alarming, is the percent of households who engaged in high-risk activities to meet daily needs, including 11.5 percent in Chin, 10.5 percent in Kayah, and 9.7 percent in Kachin. Further, in Kachin 11.9 percent of households had children working while in Kayah and Sagaing, 9.7 percent had children working. Further, approximately 7.2 percent of households in Kayah and 6.0 percent in Chin migrated from these states.

Asset poor households were more likely to use coping strategies than asset low and asset rich households. Figure 16 shows different coping strategies used by asset class for January through June of 2023. During that period, 62.1 percent of asset poor households reduced their non-food expenditure, 65.3 percent reduced their food expenditure, and 72.3 percent spent their savings. Particularly striking is the difference between asset poor and asset rich households in terms of buying food using credit and borrowing money. Fifty-four percent of asset poor households. Further, 50.1 percent of asset poor households borrowed money compared to 19.5 percent of asset rich households. Finally, asset poor households were most likely to sell and mortgage assets.



#### Figure 16. Coping strategy by asset class

Source: Author's calculations based on MHWS data.

## 7. VULNERABILITY ASSESSMENT

In this section, we explore how shocks and household characteristics are associated with vulnerability. More specifically, we explore the extent to which household characteristics and different shocks are associated with whether households are poor in terms of their income poverty or asset poverty status. Households are considered income poor if their per adult equivalent daily income is less than the poverty line and households are considered asset poor if they own fewer than four out of ten key assets.

The results show that households facing security and climatic shocks experience increased income and asset poverty (Figures 17 and 18). On the other hand, high levels of migration into the community and recent migration by the household are negatively associated with income poverty. Households' income and livelihood profiles matter. Households whose main source of income is from farm wages have a 22.4 percentage point higher probability of being income poor compared to own farm households and a 26.8 percentage point higher probability of being asset poor (Appendix Tables A.24 and A.25). Similarly, non-farm casual wage households are more likely to be income and asset poor than farm households by a magnitude of 12.6 and 13.6 percentage points, respectively. Households earning money from salaried labor are less likely to be income poor than farm households, whereas households with nonfarm business income are less likely to be asset poor. Households where the primary respondent is not able to find work are 14.0 percent more likely to be income poor. Being income poor increases a household's probability of being asset poor by 9.1 percentage points. Assistance helps to avert income poverty. Households who received remittances are 16.5 percentage points less likely to be income poor and households who received assistance from family and friends are 10.8 percentages points less likely to be income poor.

Households in which the respondent has completed only primary education are more likely to be income poor and asset poor by 9.0 and 11.5 percentage points, respectively. Households with more dependents are more likely to be both income and asset poor. However, larger household sizes are associated with a higher probability of income poverty (15.2 percentage points) but a reduced probability of asset poverty (3.8 percentage points). Finally, rural households are more likely to be both income and asset poor, but the probability is much higher for asset poverty compared to income poverty (16.0 vs 2.5 percentage points, respectively).



#### Figure 17. Characteristics associated with income poverty

Note: The dependent variable is income-based poverty. Households are defined as income poor if they have income per adult equivalent per day less than the poverty line. The model also controls for state/region, survey rounds, the sex of the respondent, remoteness, and a township-level indicator for violent shocks based on secondary information from the ACLED dataset. Source: Author's calculations based on MHWS data.



#### Figure 18. Characteristics associated with asset poverty

Note: The dependent variable is asset poverty. Household are asset poor if they have fewer than 4 assets. The model also controls for state/region, survey rounds, the sex of the respondent, remoteness, and a township-level indicator for violent shocks based on secondary information from the ACLED dataset. Regression is limited to R1 and R5, which are the rounds when information is collected on asset ownership.

## 8. DISCUSSION AND CONCLUSION

Vulnerability is increasing in Myanmar. The MHWS survey data for R5, which spans the period of January to June 2023, reveals an increasing frequency of shocks encountered by households, and associated negative consequences for household welfare. The security situation continued to deteriorate, and 21 percent of households felt insecure in their communities, an increase compared to the previous year. This is because crime and violence continued to increase, affecting 18 and 10 percent of communities, respectively. Further, 7 percent of households were directly affected by violence, either through violence against a household member, robbery, or appropriation and/or destruction of their assets. In R5, climatic shocks were equally prevalent compared to the same time last year, though the most common types of shocks (strong wind and irregular temperature and rainfall) differed. Due to the timing of the survey, the full extent of the impacts of cyclone Mocha could not be captured.

Disruptions to the internet and electricity also negatively affected household wellbeing and livelihoods. Further, households struggled to receive medical services. Finally, while school attendance recovered compared to the previous year, it declined compared to the last quarter of 2022 and was still under 70 percent in some states/regions.

Sixty-one percent of the population was income poor in R5. Income-based poverty increased by 9 percent compared to the same time last year but declined by 6 percent compared to compared to the last quarter of 2022. This decline was largely attributable to rising income outpacing a relatively low rate of food inflation (8 percent) in the first half of 2023. Over the past year, poverty increased in all state/regions with the exception of Kayin and Kachin where poverty was highest in the first half of 2022 and continues to decline. Despite an overall decline in poverty since the end of 2022, poverty increased in three states: Chin, Shan, and Tanintharyi.

Households relied on coping strategies to meet their daily needs. Seventy-one percent of households employed at least one coping strategy to meet their daily needs during the month prior to the survey round. The three most common coping strategies used were spending savings, reducing non-food expenditure, and reducing food expenditure. This has been consistent across rounds. Further, some households exhausted some or all of their coping strategies.

Myanmar's households may be more vulnerable than described in this report. Because most households in Rakhine were surveyed in early May, the welfare indicators for Rakhine do not capture the disastrous effects of cyclone Mocha. Further, our survey struggled to capture some of the most conflict-affected areas, especially in Sagaing. Finally, since internally displaced persons or other households in particularly precarious situations have limited access to phones, they are under sampled.

Regression analysis reveals associations between shocks and the probability of being income or asset poor, though these associations are relatively small. Our descriptive statistics and regression analysis reveal that agricultural/non-farm causal wage-earning households are among the most vulnerable. They use the greatest number of coping strategies and are more likely to be economically affected and income poor. Remittance income was the only factor we found that reduces a household's probability of being both income and asset poor.

## REFERENCES

ACLED (2022). ACLED data. Data Export Tool - ACLED (acleddata.com). Accessed September 20, 2022.

- MAPSA (2022a). Phone surveillance, from scratch: Novel sample design features of the nationally representative Myanmar Household Welfare Survey (MHWS). Myanmar SSP Working Paper 16. Washington, DC. International Food Policy Research Institute (IFPRI).
- MAPSA (2022b). Myanmar Household welfare survey Round 2 sample report. Washington, DC. International Food Policy Research Institute (IFPRI).
- MAPSA (2022c). Poverty measurement by phone. Developing and testing alternative poverty metrics from the nationally representative Myanmar Household Welfare Survey (MHWS), Round 1 (December 2021-January 2022). Washington, DC. International Food Policy Research Institute (IFPRI).
- MAPSA (2023). Monitoring the agri-food system in Myanmar: The rising costs of diets and declining purchasing power of casual wage laborers: June 2020 February 2023. Myanmar SSP Research Note 92. Washington, DC. International Food Policy Research Institute (IFPRI). https://doi.org/10.2499/p15738coll2.136678
- MoPF (Ministry of Planning and Finance), UNDP and World Bank (2019). Myanmar Living Conditions Survey 2017 Poverty Report No. 3. Nay Pyi Taw, Myanmar.
- Raleigh, C., Linke, A., Hegre, H., & Karlsen, J. (2010). Introducing ACLED: An armed conflict location and event dataset: Special data feature. Journal of Peace Research, 47(5), 651-660. <u>https://doi.org/10.1177/0022343310378914</u>

World Food Programme. 2022. Myanmar Market Price Update, November 2022. Yangon, Myanmar.

World Food Programme. 2023. Myanmar Market Price Update, January 2023. Yangon, Myanmar.

World Health Organization (2022). WHO Health Emergency Dashboard, COVID 19 Myanmar. https://covid19.who.int/region/searo/country/mm. Accessed October 10, 2022.

## **APPENDIX TABLES**

Table A. 1 Percentage of rural households by engagement in income generating activities in the last three months, by round

	R1	R2	R3	R4	R5	R2-R5	R4-R5
Own farming	55.2	59.2	58.0	61.8	56.0	***	***
Farm wage	33.5	28.6	34.6	36.5	26.6	**	***
Non-farm wage	21.4	26.0	23.0	22.8	24.3	**	**
Non-farm salary	13.2	14.2	14.2	13.1	12.2	***	
Non-farm business	37.2	38.2	36.0	33.7	30.4	***	***
Other, including remittances	15.4	22.7	20.4	22.4	21.4	*	
Number of different income sources <sup>a</sup>	1.76	1.89	1.86	1.90	1.71	***	***

Note: <sup>a</sup>The different income generating activities are specified according to the activities in this table.

Asterisks show statistically significant differences between R2 and R5 households; \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01.

Source: Author's calculations based on MHWS data.

#### Table A. 2 Percentage of rural households by main livelihood in the last three months, by round

	R1	R2	R3	R4	R5	R2-R5	R2-R5
Own farming	37.7	35.5	34.1	36.1	36.4		
Farm wage	15.9	12.4	16.4	17.7	14.0	**	***
Non-farm wage	12.1	14.6	12.7	12.8	15.9	**	***
Non-farm salary	7.2	7.8	7.8	6.9	6.5	***	
Non-farm business	21.9	22.5	21.8	18.9	18.9	***	
Other, including remittances	5.3	7.2	7.0	7.5	8.3	**	*

Note: Asterisks show statistically significant differences between R2 and R5 households; \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01. Source: Author's calculations based on MHWS data. Table A. 3 Percentage of urban households by engagement in income generating activities in the last three months, by round

	R1	R2	R3	R4	R5	R2-R5	R4-R5
Own farming	9.3	10.3	10.2	11.4	9.3		**
Farm wage	4.5	4.4	5.8	6.7	5.0		**
Non-farm wage	29.8	32.1	33.6	34.0	31.7		*
Non-farm salary	38.2	41.4	41.3	41.3	42.9		
Non-farm business	61.5	58.4	57.1	54.4	48.6	***	***
Other, including remittances	20.0	26.8	23.2	23.0	23.5	***	
Number of different income sources <sup>a</sup>	1.63	1.73	1.71	1.71	1.61	***	***

Note: <sup>a</sup>The different income generating activities are specified according to the activities in this table. Asterisks show statistically significant differences between R2 and R5 households; \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01. Source: Author's calculations based on MHWS data.

#### Table A. 4 Percentage of urban households by main livelihood in the last three months, by round

	R1	R2	R3	R4	R5	R2-R5	R4-R5
Own farming	4.1	4.2	3.8	3.7	3.9		
Farm wage	2.0	1.9	3.0	2.7	2.8	*	
Non-farm wage	17.4	19.6	19.8	21.3	22.1	**	
Non-farm salary	25.0	26.6	26.8	27.1	28.4		
Non-farm business	45.1	40.8	40.2	38.6	36.5	***	*
Other, including remittances	6.2	6.8	6.4	6.6	6.3		

Note: Asterisks show statistically significant differences between R2 and R5 households; \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01. Source: Author's calculations based on MHWS data.

Table A. 5 Average real per adult equivalent daily household income in the last month by location and main livelihood (R5 kyat)

	R1	R2	R3	R4	R5	Percentage change R2-R		Percei change	ntage R4-R5
National	6,909	5,185	4,387	4,101	5,226	0.8		27.4	***
Rural	7,356	5,187	4,180	3,955	5,372	3.6	**	35.8	**
Urban	5,760	5,182	4,934	4,492	4,841	-6.6	***	7.8	***
Own farm income	11,197	6,831	4,889	4,980	7,904	15.7	***	58.7	***
Farm wages	2,876	2,530	2,333	2,032	2,093	-17.3	***	3.0	
Non-farm wages	3,676	3,317	3,508	2,913	2,865	-13.6	***	-1.6	
Non-farm salary	6,072	5,362	5,255	4,546	4,862	-9.3	***	7.0	**
Non-farm business	6,208	5,297	4,677	4,458	4,989	-5.8	**	11.9	***
Other, including remittances	5,881	5,582	5,344	5,112	6,545	17.3	**	28.0	***

Note: Real income calculated using a food price index. Asterisks show significance differences between rounds; \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01. Source: Author's calculations based on MHWS data.

#### Table A. 6 Percent of households economically affected, by state/region

	Kachin	Kayah	Kayin	Chin	Sagaing	Tanintharyi	Bago	Magway	Mandalay	Mon	Rakhine	Yangon	Shan	Ayeyawady	Nay Pyi Taw
Total HH income reduction	42.1	64.6	45.7	54.8	46.5	45.8	35.3	43.3	36.1	44.5	52.2	40.8	33.9	35.6	31.2
No changes in total HH income	33.0	16.2	34.3	29.9	29.1	36.8	37.9	32.3	38.3	35.1	29.5	34.7	39.7	32.4	38.6
Total HH income increased	24.9	19.2	20.0	15.4	24.4	17.3	26.8	24.4	25.6	20.3	18.3	24.5	26.4	32.1	30.2
Number of observations	411	240	397	244	1339	370	1213	975	1541	542	529	1830	1491	1540	291

	Kachin	Kayah	Kayin	Chin	Sagaing	Tanintharyi	Bago	Magway	Mandalay	Mon	Rakhine	Yangon	Shan	Ayeyawady	Nay Pyi Taw
Community															
Feels insecure	32.5	52.3	36.6	42.9	41.6	24.6	11.4	21.9	17.5	19.7	19.3	20.9	17.4	12.5	7.9
Low levels of social trust	33.2	32.7	32.8	36.2	30.3	29.6	16.7	20.1	21.0	21.7	23.4	23.9	23.9	20.4	15.1
Violence	13.6	19.7	14.3	18.2	15.3	17.3	5.7	12.3	8.8	5.2	7.9	13.6	8.4	2.6	3.2
Household															
Assault/detention	0.7	1.4	1.1	3.5	2.4	2.8	0.7	2.0	0.5	0.3	0.5	0.7	0.6	0.3	0.0
Destruction/appropriation of assets	2.1	9.3	1.9	6.4	3.5	1.4	1.2	1.7	1.8	2.1	1.6	1.6	1.0	0.8	1.5
Theft/robbery	4.8	9.4	4.1	5.1	2.2	1.5	2.4	1.7	2.5	2.7	3.1	4.9	2.5	2.9	0.8
Bribery/forced payments	1.0	0.3	2.5	3.6	1.4	0.9	1.1	0.7	1.0	0.8	1.0	1.3	1.4	0.8	0.0
Feels insecure	32.5	52.3	36.6	42.9	41.6	24.6	11.4	21.9	17.5	19.7	19.3	20.9	17.4	12.5	7.9

#### Table A. 7 Percent of households experiencing community and household insecurity in the past three months, by state/region

Source: Author's calculations based on MHWS data.

#### Table A. 8 Percent of urban households experiencing community and household insecurity in the past three months, by state/region

	Kachin	Kayah	Kayin	Chin	Sagaing	Tanintharyi	Bago	Magway	Mandalay	Mon	Rakhine	Yangon	Shan	Ayeyawady	Nay Pyi Taw
Community															
Feels insecure	26.6	31.0	31.4	31.3	33.3	16.1	11.4	23.4	19.4	15.3	15.8	23.6	19.9	12.6	8.0
Low levels of social trust	33.3	20.3	26.7	33.2	33.1	19.7	23.5	24.5	26.1	20.8	31.0	27.3	31.1	21.6	23.0
Violence	11.2	26.7	16.7	16.1	18.9	18.2	7.2	13.8	10.2	5.3	13.6	13.9	10.6	1.8	5.6
Household															
Assault/detention	1.3	1.5	1.7	2.6	4.3	5.3	0.2	1.3	0.8	0.0	0.0	0.9	0.6	0.4	0.0
Destruction/appropriation of assets	1.7	12.0	1.7	3.0	3.0	0.0	1.4	1.8	5.2	2.1	0.0	1.4	0.6	0.4	2.1
Theft/robbery	4.0	9.3	6.9	2.4	3.4	0.0	3.0	2.3	5.1	1.6	8.1	5.7	4.1	3.0	0.4
Bribery/forced payments	0.0	1.5	4.5	5.4	2.7	1.2	1.1	1.7	1.4	0.0	3.1	1.6	1.0	0.9	0.0

	Kachin	Kayah	Kayin	Chin	Sagaing	Tanintharyi	Bago	Magway	Mandalay	Mon	Rakhine	Yangon	Shan	Ayeyawady	Nay Pyi Taw
Community															
Feels insecure	35.1	58.3	37.8	45.9	43.3	27.2	11.4	21.7	16.7	21.3	20.0	15.3	16.4	12.5	7.8
Low levels of social trust	33.2	36.2	34.2	36.9	29.8	32.7	15.4	19.4	18.8	22.0	21.9	16.9	20.9	20.2	12.2
Violence	14.7	17.7	13.8	18.7	14.6	17.1	5.4	12.1	8.2	5.2	6.8	13.0	7.5	2.7	2.2
Household															
Assault/detention	0.5	1.4	1.0	3.8	2.1	2.1	0.8	2.1	0.3	0.4	0.6	0.3	0.6	0.3	0.0
Destruction/appropriation of assets	2.3	8.5	1.9	7.4	3.6	1.8	1.2	1.7	0.4	2.1	1.8	2.2	1.1	0.9	1.3
Theft/robbery	5.1	9.5	3.5	5.8	2.0	1.9	2.3	1.6	1.4	3.0	2.2	3.2	1.8	2.9	1.0
Bribery/forced payments	1.4	0.0	2.0	3.2	1.1	0.8	1.1	0.6	0.8	1.1	0.6	0.7	1.5	0.7	0.0

#### Table A. 9 Percent of rural households experiencing of community and household insecurity in the past three months, by state/region

Source: Author's calculations based on MHWS data.

#### Table A. 10 Percent of households experiencing of community insecurity in the past three months, by state/region

	Kachin	Kayah	Kayin	Chin	Sagaing	Tanintharyi	Bago	Magway	Mandalay	Mon	Rakhine	Yangon	Shan	Ayeyawady	Nay Pyi Taw
Drug use	54.3	28.3	27.8	25.5	14.0	29.5	6.6	6.1	8.1	14.9	16.8	13.6	31.3	10.6	5.4
Gambling	21.6	22.9	29.4	11.8	12.1	24.4	18.5	19.2	18.5	12.6	23.2	19.9	22.8	23.4	16.8
Risk of kidnapping	4.9	5.1	2.8	5.8	4.0	5.4	1.0	1.9	1.6	0.2	2.2	2.0	3.4	0.4	0.1
Petty crime	24.6	28.9	21.5	22.2	12.1	15.0	13.5	10.8	17.7	14.1	15.7	33.2	20.0	14.6	10.4
Limited mobility	21.0	31.8	21.2	32.9	19.5	19.5	11.3	13.8	13.1	6.6	13.0	20.4	12.8	7.1	6.4
Bribes	10.1	12.8	10.8	9.9	4.6	12.9	5.6	6.5	6.0	5.2	9.8	11.0	6.3	7.2	3.6

Table A. 11 Percent of farm households	experiencing climatic shocks in the	past three months, b	by state/region
		· · · · · · · · · · · · · · · · · · ·	

	Kachin	Kayah	Kayin	Chin	Sagaing	Tanintharyi	Bago	Magway	Mandalay	Mon	Rakhine	Yangon	Shan	Ayeyawady	Nay Pyi Taw
Negatively affected by any natural or climatic shock	11.6	11.0	15.2	20.2	12.1	9.9	14.5	13.7	10.4	14.4	20.3	5.7	10.9	12.4	4.6
Drought	2.1	6.2	2.0	1.5	3.9	0.6	5.7	6.0	2.0	0.2	6.1	0.0	2.2	0.6	2.2
Flood	6.6	3.0	10.9	7.7	5.8	5.9	4.2	5.5	5.4	7.3	6.1	3.1	6.7	7.6	1.0
Irregular rainfall or temperature	2.5	1.9	1.1	4.7	1.8	1.2	3.2	1.0	2.2	4.0	2.4	1.2	1.8	1.4	0.9
Strong wind	1.3	0.8	3.4	9.1	1.4	4.6	3.1	1.8	1.6	5.2	11.0	1.9	1.0	5.4	1.8

Source: Author's calculations based on MHWS data.

#### Table A. 12 Percent of households using different electricity sources, by round and urban/rural

	R1	R2	R5	Rural R1	Urban R1	Rural R2	Urban R2	Rural R5	Urban R5
Government/national grid	64.6	65.2	63.7	54.1	91.7	54.5	92.5	53.3	90.3
Solar home system	21.4	21.6	23.5	28.5	3.0	28.9	2.9	31.1	4.1
Rechargeable battery system	4.9	4.8	5.8	6.4	1.2	6.2	1.1	7.4	1.6
No electricity	3.9	3.6	3.7	5.1	1.0	4.6	1.1	4.6	1.6
Community transformer/generator	2.6	2.5	1.1	3.3	0.9	3.2	0.7	1.4	0.4
Private transformer/ generator	1.1	1.2	1.2	1.0	1.2	1.2	1.0	1.3	1.2
Household transformer/generator	0.6	0.5	0.3	0.7	0.3	0.6	0.3	0.3	0.3
Other	0.8	0.7	0.6	0.9	0.6	0.7	0.4	0.7	0.5

	Kachin	Kayah	Kayin	Chin	Sagaing	Tanintharyi	Bago	Magway	Mandalay	Mon	Rakhine	Yangon	Shan	Ayeyawady	Nay Pyi Taw
Higher food prices	27.7	59.5	34.6	47.9	25.0	34.9	28.3	33.1	25.8	21.0	42.0	38.8	26.9	29.4	23.7
Higher fuel prices	31.8	60.4	31.9	47.5	28.1	29.6	26.7	27.9	27.7	21.8	36.3	31.0	27.7	24.9	22.1
Loss of employment	16.2	57.1	28.9	38.7	17.7	16.9	21.7	23.0	16.1	16.3	34.6	20.9	16.2	19.1	15.7
Exchange rate fluctuation	13.3	26.5	17.8	19.6	8.6	11.2	10.6	13.7	10.6	9.5	13.9	13.3	10.7	9.8	5.4
Loss of electricity	26.6	39.4	29.0	15.8	25.1	16.0	30.3	25.9	38.3	25.6	24.9	47.5	25.9	14.6	23.4
Unable to assess money in bank account	3.6	4.5	2.7	8.5	2.5	2.6	2.6	2.0	2.8	3.7	4.1	4.6	3.0	1.4	1.0
Observations	411	240	397	244	1339	370	1213	975	1541	542	529	1830	1491	1540	291

#### Table A. 13 Percent of households experiencing negative economic shocks in the past three months, by state/region

Source: Author's calculations based on MHWS data.

#### Table A. 14 Percent of urban households experiencing negative economic shocks in the past three months, by state/region

	Kachin	Kayah	Kayin	Chin	Sagaing	Tanintharyi	Bago	Magway	Mandalay	Mon	Rakhine	Yangon	Shan	Ayeyawady	Nay Pyi Taw
Higher food prices	26.6	55.0	35.0	64.1	27.5	47.0	28.8	28.6	29.0	20.7	47.8	43.8	28.9	36.0	21.5
Higher fuel prices	29.8	57.3	31.8	53.9	27.9	37.1	28.0	31.8	28.2	22.2	40.7	33.8	24.6	24.6	20.7
Loss of employment	16.7	54.3	24.8	43.0	20.6	18.9	14.8	24.7	20.4	21.3	27.2	22.8	16.8	16.1	7.5
Exchange rate fluctuation	17.2	29.7	16.2	11.1	11.8	16.3	9.0	18.0	13.6	10.0	14.1	15.6	11.1	7.4	6.0
Loss of electricity	34.3	45.4	36.5	34.0	35.9	16.6	42.9	45.6	46.0	36.4	48.1	53.6	33.2	40.5	22.2
Unable to assess money in bank account	5.8	4.8	3.3	10.7	4.1	2.3	4.3	1.6	4.7	5.3	7.1	5.9	4.5	2.9	1.8
Observations	162	74	117	88	226	66	267	129	535	141	76	1370	397	193	102

	Kachin	Kayah	Kayin	Chin	Sagaing	Tanintharyi	Bago	Magway	Mandalay	Mon	Rakhine	Yangon	Shan	Ayeyawady	Nay Pyi Taw
Higher food prices	28.2	60.8	34.5	43.6	24.5	31.1	28.3	33.8	24.4	21.2	41.0	28.3	26.1	28.3	24.5
Higher fuel prices	32.7	61.3	31.9	45.8	28.2	27.3	26.4	27.3	27.5	21.6	35.5	25.3	29.0	25.0	22.6
Loss of employment	16.0	57.9	29.9	37.6	17.1	16.3	23.1	22.7	14.3	14.5	36.0	16.8	16.0	19.6	18.8
Exchange rate fluctuation	11.5	25.6	18.2	21.8	7.9	9.6	11.0	13.0	9.2	9.3	13.9	8.2	10.5	10.2	5.2
Loss of electricity	23.2	37.7	27.3	11.0	22.9	15.8	27.7	22.9	34.9	21.9	20.5	35.0	22.8	10.5	23.9
Unable to assess money in bank account	2.5	4.4	2.6	7.9	2.2	2.6	2.3	2.0	2.0	3.1	3.5	1.7	2.4	1.2	0.6
Observations	249	166	280	156	1113	304	946	846	1006	401	453	460	1094	1347	189

Table A. 15 Percent of rural households experiencing negative economic shocks in the past three months, by state/region

Source: Author's calculations based on MHWS data.

#### Table A. 16 Most important challenges for wage incomes or salary

	R2	R5	Rural	Urban
No difficulty	53.5	65.9	64.3	68.7
Reduced working hours / less work	21.8	16.7	18.9	12.8
Low/reduced wages	10.8	5.8	5.0	7.2
Not safe to travel to work location	7.4	3.7	3.6	3.7
Unable to work due to health problems of worker or other household members	3.1	2.2	2.4	1.9
Not safe at work location	1.8	1.6	1.6	1.6
Not able to reach work location	1.2	0.7	0.8	0.6
Late payment/ Wages are not paid		1.6	1.5	1.7
High transportation costs		1.3	1.4	1.1
Number of observations	4240	4892	2879	2013

Note: There was no option for difficulty and other listed options were multi-select responses so the total sum of percent will be greater than 100 in Round 1.

#### Table A. 17 Most important challenges for crop production

	R2	R5	Rural	Urban
No difficulties	29.1	46.6	46.4	53.2
High prices of inputs or mechanization services	28.8	15.1	15.3	9.8
Weather problems	14.4	13.2	13.4	7.0
Pest and disease problems	9.0	6.7	6.8	3.7
Water / irrigation supply problems	4.4	5.1	5.0	10.8
Difficulties hiring workers	3.6	3.8	3.8	3.2
Unable to acquire enough inputs or mechanization services (availability)	2.5	3.1	3.2	2.2
High prices of fuel	5.3	2.2	2.2	3.7
Number of observations	2.1	2.3	2.3	2.0
I cannot reach my own farm	0.9	1.5	1.4	3.7
Number of observations	3292	3545	3372	173

Source: Author's calculations based on MHWS data.

#### Table A. 18 Most important challenges for crop sale

	R2	R5	Rural	Urban
No difficulties	62.2	82.7	82.9	77.4
Low prices for crops	21.9	9.1	9.1	10.6
Buyers or traders cannot reach the farm or I cannot reach them	6.6	4.5	4.5	5.2
Not many traders	4.9	1.6	1.5	5.2
High price of fuel / high transportation cost	2.8	1.5	1.5	1.2
Payment problems	0.9	0.5	0.5	0.3
Markets are closed	0.6	0.1	0.1	0.0
Number of observations	3175	3390	3224	166

#### Table A. 19 Most important challenges for farm or non-farm enterprises

	R2	R5	Rural	Urban
No difficulties	39.4	53.9	56.7	50.3
Fewer/no customers interested in buying products	15.9	11.6	10.0	13.7
High prices of raw materials or supplies	14.0	10.7	9.1	12.7
Customers cannot reach my business or I cannot reach customers	6.1	5.9	5.3	6.8
Unable to acquire enough raw materials / supplies (availability)	5.5	4.5	4.8	4.1
High prices of fuel / high transport costs	10.8	3.8	4.1	3.5
Consumer debt	0.4	3.3	3.9	2.4
Electricity/energy supply problems	2.5	2.7	2.2	3.4
Disruption to banking services, access to cash or loans	4.3	1.9	2.1	1.6
Difficulties hiring workers	0.8	1.6	1.7	1.3
Number of observations	3330	3066	1625	1441

Source: Author's calculations based on MHWS data.

#### Table A. 20 Asset ownership, changes between R1 and R5 of MHWS

	R1	R5	R1 vs R5 t-test
Source of drinking water			
Piped into dwelling/ yard	4.0	2.9	***
Public tap/standpipe	3.2	2.0	***
Tube well or borehole	30.9	31.6	*
Protected well or spring or pond	12.0	13.4	***
Rainwater	2.1	1.9	
Bottled water / sachets	25.6	26.5	***
Unprotected well or spring or pond	12.6	11.5	**
Tanker truck or cart with small tank	0.8	1.0	*
Surface water	8.7	9.1	***

Types of toilet			
Flush toilet	6.6	6.1	*
Pit latrine with concrete floor/slab (improved)	85.9	88.8	***
Pit latrine with open pit (dirt floor)	5.7	3.3	***
Other toilet (bucket toilet, hanging toilet/latrine)	0.4	0.4	
No facility / bush/ field	1.5	1.3	
Number of assets owned			
Rice cooker	0.62	0.60	***
Fridge	0.29	0.26	***
Tv	0.62	0.55	***
Wardrobe?	0.57	0.55	***
Car, motorcycle, scooter/moped, tuk-tuk (mechanized rickshaw)	0.66	0.62	***
Working computer, laptop, I-pad, kindle or similar device	0.10	0.09	
How many working mobile phones are owned in total by members of your house	2.38	2.28	***
Own any agricultural land	0.37	0.37	***

	R2	R5	R5 Rural	R5 Urban
Staple grains, roots and tubers (%)	29.8	39.5	40.0	38.3
Beans and nuts (%)	26.6	35.8	38.2	29.4
Vegetables (%)	21.4	29.4	30.7	26.0
Fruits (%)	26.7	32.7	33.8	29.8
Meats (%)	84.6	88.1	89.3	85.0
Eggs (%)	38.5	49.1	52.6	39.8
Fish (%)	74.2	79.8	81.5	75.3
Dairy (%)	31.7	42.1	42.3	41.6
Sugary products (%)	38.5	50.3	50.5	49.6
Oils, fats and butter (%)	72.9	72.7	76.2	63.5
Condiments (%)	44.1	56.8	59.1	50.9
Restaurant meals, takeaway meals (%)	47.8	54.0	50.6	62.7
Number of observations	5387	4993	3456	1537

 Table A. 21 Reduced food expenditure as a coping strategy, by food group

	1	2	3	4	5	6
Spent saving	67.6	73.8	81.7	93.0	97.8	98.7
Reduced non-food expense	15.1	52.9	80.7	92.9	96.0	98.3
Reduced food expense	12.8	53.5	88.2	97.6	99.1	99.8
Borrowed money	12.0	24.7	35.6	56.4	77.7	92.1
Reduced expense on health	6.4	23.8	51.0	78.6	84.5	94.4
Mortgaged household assets/goods	7.4	14.8	19.6	25.2	43.4	66.7
Sold household assets/goods	2.4	7.0	11.1	18.3	37.3	55.8
Mortgaged non-agri productive assets or means of transport	0.0	0.3	0.7	0.7	2.0	5.0
Sold non-agri productive assets or means of transport	0.1	0.7	2.3	3.0	5.4	10.8
Mortgaged/sold house	0.3	0.9	1.2	1.7	4.9	6.5
Mortgaged/sold land	0.2	0.1	0.3	0.5	0.7	1.6
Engaged in high risk activities	0.9	1.9	2.7	5.7	8.8	25.8
Migrate entire HH	0.8	0.8	0.4	1.3	4.4	11.0
Mortgaged/sold ag productive assets (ag HH only)	1.2	1.7	3.1	4.3	5.8	9.9

	Kachin	Kayah	Kayin	Chin	Sagaing	Tanin- tharyi	Bago	Magway	Manda- lay	Mon	Rakhine	Yangon	Shan	Ayeya- wady	Nay Pyi Taw
Number of coping mechanisms used	2.1	3.0	2.3	2.4	2.0	2.3	2.1	2.1	1.8	2.0	2.9	2.0	1.9	2.1	1.7
Uses at least one coping mechanism (%)	71.0	88.1	77.3	70.3	72.8	73.5	72.6	71.4	65.8	69.5	79.9	71.0	70.2	70.3	66.4
Spent saving (%)	59.9	75.4	68.2	51.1	60.7	56.3	61.5	59.9	54.6	54.2	71.9	53.3	53.8	55.1	45.2
Reduced non-food expenditures (%)	42.6	71.6	47.2	49.2	42.5	46.4	41.5	46.8	37.1	43.5	52.6	50.3	44.7	46.9	35.1
Reduced food expenditures (%)	43.4	72.8	52.3	57.5	44.1	47.2	45.3	44.8	36.9	43.3	59.2	46.2	40.7	45.1	34.1
Borrowed money (%)	30.0	36.5	30.2	39.1	21.3	32.7	30.7	30.0	24.4	26.1	37.3	24.2	28.0	30.1	21.5
Reduced expenditures on health (%)	43.0	55.2	40.9	52.7	32.0	47.4	34.0	37.9	24.3	25.9	49.3	34.9	36.1	37.0	28.0
Mortgaged household assets (%)	10.9	11.9	7.0	4.0	7.1	12.7	22.4	18.1	13.1	16.0	27.3	13.2	6.1	21.4	22.4
Sold household assets (%)	7.3	20.6	12.7	7.7	8.4	11.7	11.1	10.4	12.3	12.3	20.8	10.6	7.2	8.1	9.1
Mortgaged non-ag productive assets/transport (%)	0.7	0.0	0.0	2.7	0.8	1.8	1.0	0.4	1.1	0.0	0.3	0.1	0.7	0.4	0.9
Sold non-ag productive assets/transport (%)	1.2	5.8	3.0	3.0	1.6	1.1	2.5	2.1	1.9	2.0	1.1	1.5	1.5	1.3	1.4
Mortgaged/sold house (%)	1.7	1.3	2.0	0.4	0.8	2.0	2.3	1.1	0.8	1.1	0.5	1.4	1.2	1.3	1.2
Mortgaged/sold land (%)	0.2	0.2	0.3	0.0	0.6	0.0	0.5	0.2	0.3	0.3	0.6	0.0	0.3	0.4	0.0
Engaged in high-risk activities (%)	9.7	10.5	2.3	11.5	5.2	6.6	2.8	3.4	3.1	2.8	5.7	2.0	2.8	2.7	1.1
Migrate entire HH (%)	0.6	7.2	1.5	6.0	1.6	2.6	0.4	1.4	0.9	0.6	4.9	1.5	1.0	0.7	1.0
Mortgaged/sold ag productive assets (ag HH only) (%)	2.4	7.2	3.3	3.0	3.5	0.8	3.0	4.2	2.8	2.5	1.9	0.4	1.6	2.5	1.4
Number of observations	273	141	280	141	960	244	745	627	1050	396	365	1305	1053	1013	203

#### Table A. 23 Summary of coping strategies employed, by State/Region in percentage of households in MHWS R5

#### Table A. 24 Exploratory regression analysis of characteristics associated with income poverty

Independent variables	Coefficients	Independent variables	Coefficients
Travel time to the nearest major market	0.000**	R4 vs R1	0.167***
Number of violent events (ACLED)	0.002	R5 vs R1	0.135***
High level of insecurity	0.037***	Rural vs urban	0.025***
Climate shock	0.014**	Kachin vs Bago	0.093***
High migration into community	-0.019**	Kayah vs Bago	0.175***
No access to work (respondent)	0.140***	Kayin vs Bago	0.074***
Migrated <2 years ago	-0.044***	Chin vs Bago	0.210***
Non-farm business income vs farm	0.010*	Sagaing vs Bago	0.066***
Non-farm salary vs farm	-0.057***	Tanintharyi vs Bago	0.031**
Non-farm wage vs farm	0.126***	Magway vs Bago	0.073***
Farm wage vs farm	0.224***	Mandalay vs Bago	0.026***
Remittances	-0.165***	Mon vs Bago	0.031**
Assistance from family/friends	-0.108***	Rakhine vs Bago	0.088***
Share of dependents	0.078***	Yangon vs Bago	-0.035***
More than 5 household members	0.152***	Shan vs Bago	0.024**
Primary education only (respondent)	0.090***	Ayeyawady vs Bago	0.039***
Respondent is female	0.072***	Nay Pyi Taw vs Bago	0.005
R2 vs R1	0.087***	Constant	0.207***
R3 vs R1	0.126***		

Note: N=60,362. The dependent variable is income poverty. Households are defined as income poor if they have income per adult equivalent per day less than the poverty line. The model also controls for state/region, survey rounds, the sex of the respondent, remoteness, and a township-level indicator for violent shocks based on secondary information from the ACLED dataset. Asterisks show coefficients significant at p-values \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01 Source: Author's calculations based on MHWS data.

#### Table A. 25 Exploratory regression analysis of characteristics associated with asset poverty

Independent variables	Coefficients	Independent variables	Coefficients
Travel time to the nearest major market	0.000***	R5 vs R1	0.012***
Number of violent events (ACLED)	0.002	Rural vs urban	0.160***
High level of insecurity	0.030**	Kachin vs Bago	-0.018
Climate shock	0.053***	Kayah vs Bago	-0.025
High migration into community	-0.012	Kayin vs Bago	0.059***
No access to work (respondent)	-0.005	Chin vs Bago	0.203***
Migrated <2 years ago	0.113***	Sagaing vs Bago	-0.046***
Household is income poor	0.091***	Tanintharyi vs Bago	-0.031
Non-farm business income vs farm	-0.034***	Magway vs Bago	0.058***
Non-farm salary vs farm	-0.011	Mandalay vs Bago	-0.061***
Non-farm wage vs farm	0.136***	Mon vs Bago	-0.007
Farm wage vs farm	0.268***	Rakhine vs Bago	0.179***
Remittances	-0.018**	Yangon vs Bago	-0.004
Assistance from family/friends	0.012	Shan vs Bago	-0.042***
Share of dependents	0.029***	Ayeyawady vs Bago	0.238***
More than 5 household members	-0.038***	Nay Pyi Taw vs Bago	-0.109***
Primary education only (respondent)	0.115***	Constant	-0.038***
Respondent is female	0.014**		

Note: N=24,064. The dependent variable is asset poverty. Household are asset poor if they have fewer than 4 assets. The model also controls for state/region, survey rounds, the sex of the respondent, remoteness, and a township-level indicator for violent shocks based on secondary information from the ACLED dataset. Regression is limited to R1 and R5, which are the rounds when information is collected on asset ownership. Asterisks show coefficients significant at p-values \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01Source: Author's calculations based on MHWS data.

#### ACKNOWLEDGMENTS

This work was undertaken as part of the Myanmar Agricultural Policy Support Activity (MAPSA) led by the International Food Policy Research Institute (IFPRI) in partnership with Michigan State University (MSU). Funding support for this study was provided by the United States Agency of International Development (USAID). This Policy Note has not gone through IFPRI's standard peerreview procedure. The opinions expressed here belong to the authors, and do not necessarily reflect those of IFPRI, MSU, USAID, or CGIAR.

#### INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

1201 Eye St, NW | Washington, DC 20005 USA T. +1-202-862-5600 | F. +1-202-862-5606 ifpri@egiar.org www.ifpri.org | www.ifpri.info

#### **IFPRI-MYANMAR**

IFPRI-Myanmar@cgiar.org www.myanmar.ifpri.info



USAID Canadă Stream Stream Stream

The Myanmar Strategy Support Program (Myanmar SSP) is led by the International Food Policy Research Institute (IFPRI) in partnership with Michigan State University (MSU). Funding support for Myanmar SSP is provided by the CGIAR Research Program on Policies, Institutions, and Markets; the Livelihoods and Food Security Fund (LIFT); and the United States Agency for International Development (USAID). This publication has been prepared as an output of Myanmar SSP. It has not been independently peer reviewed. Any opinions expressed here belong to the author(s) and do not necessarily reflect those of IFPRI, MSU, LIFT, USAID, or CGIAR.

© 2023, Copyright remains with the author(s). This publication is licensed for use under a Creative Commons Attribution 4.0 International License (CC BY 4.0). To view this license, visit https://creativecommons.org/licenses/by/4.0.

IFPRI is a CGIAR Research Center | A world free of hunger and malnutrition