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Assessing the Impacts of COVID-19 on Household Incomes and Poverty in Myanmar

A microsimulation approach

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EXECUTIVE SUMMARY

With policy measures imposed by governments around the world to contain and prevent the spread of COVID 19, global and domestic economic activities and trade flows have been interrupted. The unexpected shocks of COVID 19 negatively affect not only Myanmar's economy, but also the livelihoods of Myanmar households. This Working Paper assesses such impacts at the household level using a microsimulation model based on the Myanmar Poverty and Living Conditions Survey (MPLCS) conducted in 2015. Our analysis found:

- Many rural households in Myanmar have incomes from both agricultural and non-agricultural activities. The widespread closure of factories, stores, and other non-farm businesses in April's lockdown period and the subsequent gradual economic recovery have affected almost all Myanmar households. Incomes fell greatly for rural and urban households that rely heavily on vulnerable non-farm income sources. This led to significant increases in poverty during the lockdown month.
- Economic recovery has been primarily driven by an upturn in non-agricultural sectors for which production had fallen sharply during the lockdown period. This may explain why many households with non-agricultural income have quickly recovered post-lockdown. However, many factors adversely affecting agricultural or remittance incomes are external and are expected to be more persistent. As such, the harmful economic impacts of COVID-19 on agricultural households are expected to be prolonged for at least a year.
- However, even with many non-agricultural economic activities returning to near normal, many newly poor households are likely to remain impoverished due to permanent losses of agricultural, non-agricultural, and remittance incomes. In total, there are about 650,000 such households remaining in poverty under a slow recovery scenario and 350,000 under a fast recovery scenario. Most of these households are rural, roughly equally split between farm and non-farm households.
- Consequently, Myanmar's poverty rate is expected in 2020 to rise above its pre-pandemic level with many poor households likely to be more deeply impoverished.
- Income recovery for most farm households depends on the fast recovery of agricultural production, trade, and agribusinesses that need government support. The stimulus plans of the Ministry of Agriculture, Livestock and Irrigation for implementing the COVID-19 Economic Relief Plan (CERP) of the Government of Myanmar emphasize support to farmers, small agri-processors, seed farmers, and agribusiness for planting and income retention. These forms of government support are crucial for farm households to cope with COVID-19 related difficulties and recover lost agricultural and agribusiness income.

1. INTRODUCTION

With policy measures imposed by governments around the world to contain and prevent the spread of COVID-19, global and domestic economic activities and trade flows have been interrupted. The unexpected shocks of COVID-19 negatively affect not only Myanmar's economy, but also the livelihoods of Myanmar households. This Working Paper focuses on assessing such impacts at the household level with a microsimulation model based on the Myanmar Poverty and Living Conditions Survey (MPLCS) conducted in 2015 (MoPF and World Bank 2017). This study complements early analyses on the economywide impacts of COVID-19 on Myanmar's economy (Diao et al. 2020) and on household incomes and poverty from falling remittances (Diao and Maht 2020).

Consistent with Diao et al. (2020), we take into consideration both external and domestic COVID-19 impact channels when assessing their joint impacts on household income and poverty. External impact channels include falling external demand for Myanmar's agricultural and non-agricultural exports and declines in remittance incomes. Domestic impact channels include restrictive policy measures to control the spread of the virus during and after the lockdown period. While negative shocks from these impact channels are comparable with Diao et al. (2020) across economic sectors, in the current study, we consider heterogenous effects on different household incomes. Based on the assumption of no second COVID-19 outbreak and no second nationwide lockdown for the rest of 2020, we identify temporary wages and self-employed non-farm businesses as the most vulnerable sources of income. We also identify low-skilled occupations to be more vulnerable than skilled managerial occupations to restrictive policy measures such as those imposed during April's lockdowns.

Our analysis shows that the widespread closure of factories, stores, and other businesses in April affected almost all Myanmar households. Incomes fell more for rural and urban households that rely heavily on vulnerable non-farm income sources, which led to significant increases in poverty during the lockdown month. As most restrictive policies have gradually started to ease since May and the Myanmar economy is on its way to recovery, many households that temporarily fell into poverty in April are expected to move out of poverty as their incomes slowly return to near pre-lockdown levels towards the end of Myanmar's 2020 fiscal year (FY2020), which ends in September. However, some newly poor households are likely to remain poor due to permanently lost income from agriculture, non-agriculture, and remittances. Therefore, the poverty rate is expected to rise even as many economic activities return to close to normal. Moreover, many poor households will not only remain in poverty, but become further impoverished in 2020.

2. IDENTIFYING HOUSEHOLDS WITH VULNERABLE INCOME SOURCES

The MPLCS covers various income sources at the household and individual levels. We utilize this information to define different household types according to income sources vulnerable to COVID-19 shocks.

Agricultural income

Agricultural exports, which are important to Myanmar's economy, have been negatively affected by COVID-19 related policy measures in importing countries (particularly in China) and by Myanmar's own restrictive measures during the lockdown period. Restrictions in the movement of people and transportation also affect agricultural production and trade for the domestic market (Irrawaddy, 13

May 2020). Moreover, as shown in Diao et al. (2020), negative effects on agriculture also come from the multiplier effects of downstream non-agricultural production because many agricultural products are used as intermediates in non-agricultural economic activities. Thus, it is reasonable to expect that many agricultural households are affected by the combination of external shocks, restrictive domestic policies, and multiplier effects. We therefore treat all households with agricultural income as vulnerable to the combined shocks from both demand and supply sides. At the same time, it is reasonable to expect agricultural income shocks to differ between households with incomes from own farm or agricultural wages. This assumption is supported by a recent agricultural production survey in the Central Dry Zone conducted by the Myanmar Agricultural Policy Support Activity (forthcoming Myanmar Strategy Support Program Policy Note). We therefore group households with agricultural income according to three different income sources, as presented in Table 1.

Table 1. Households with different agricultural incomes, percentage share

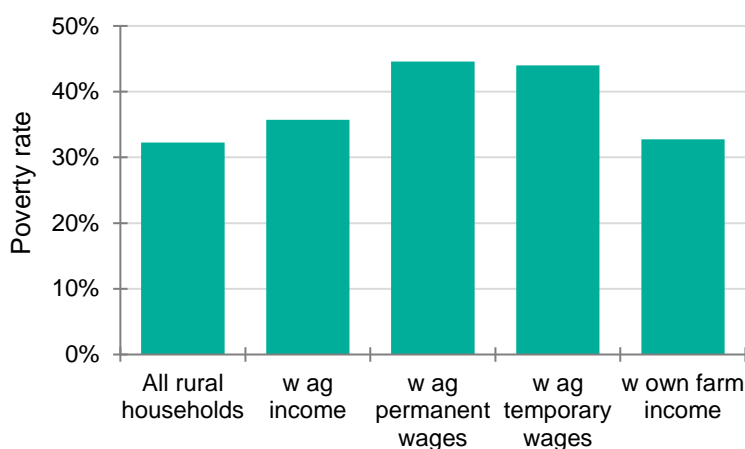
	All		Rural		Urban	
	Total	Poor	Total	Poor	Total	Poor
Any agricultural income	60.2	78.3	77.2	85.4	15.5	24.0
With agricultural permanent wages	7.1	11.4	9.0	12.4	2.3	3.6
With agricultural temporary wages	24.4	40.0	32.2	44.0	3.6	9.9
With own farm income	44.3	52.7	57.0	57.8	11.0	13.6

Source: Authors' calculation from MPLCS 2015.

Note: A household can have multiple types of agricultural incomes. Therefore, aggregation of the share of households with the three types of agricultural incomes is more than the share of households with any agricultural income.

At the national level, about 60 percent of households engage in agriculture as farmers, wage laborers, or both. Many of these households also engage in non-agricultural activities or are remittance receivers. Therefore, almost all agricultural households with agricultural income could be affected by COVID-19 related international or domestic shocks. Figure 1 shows the pre-COVID poverty rates of rural households with different agricultural income sources. Using a uniform national poverty line, we find rural households with either temporary or permanent agricultural wage incomes to have pre-COVID poverty rates higher than households with own farm income. In the simulation, we will assess income and poverty effects on households with different agricultural income sources when agriculture is negatively affected by COVID-19 related shocks.

Figure 1. Pre-COVID poverty rate for rural households with different agricultural incomes



Source: Authors' calculation from MPLCS 2015.

Note: The poverty rate is measured by household and not by individual.

We expect temporary wage income then permanent wage income to be the most vulnerable income sources to COVID-19 related shocks, as farmers are likely to stop hiring temporary workers

before stopping payment to permanent workers. Among own farm income sources, we assume fishery production and fishery supply chains to be very vulnerable to restrictive measures on transportation and travel. Fishery operations have been directly affected by domestic lockdown policies and falling demand for fish products from both domestic and international markets (Chan Mya Htwe 2020; Khine Lin Kyaw 2020).

As a group, livestock production is less vulnerable than fishery production. Though production of livestock with short production cycles, such as poultry and pigs, is as vulnerable as the fishery sector and was seriously affected when restaurants and food caterers closed, the data does not allow us to disaggregate poultry and pig farmers from other livestock producers. Shocks to crop production are assumed to fall in between those for livestock and fishery production, because most export agricultural products are included in this group. Table 2 displays the assumed shocks to various agricultural income sources used in the simulation for the lockdown of April 2020. With these assumptions, combined with others discussed below, the total impact on rural households will be comparable to the SAM multiplier model result for April 2020.

Table 2. Level of shocks to agricultural income sources used in the simulation of the lockdown of April 2020

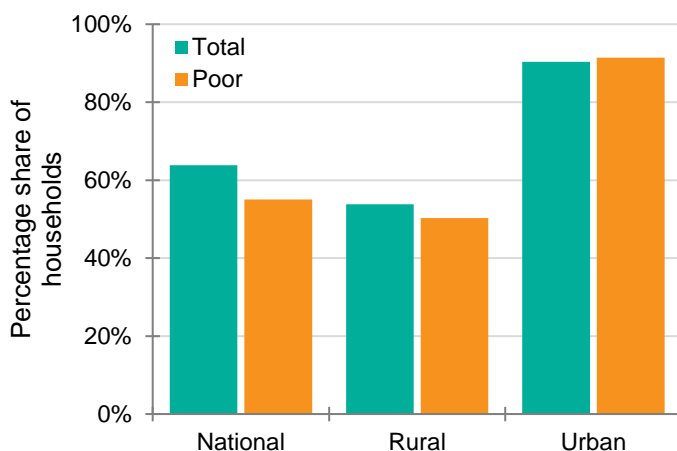
	% change from base
Permanent agricultural wages income	-6.8
Temporary agricultural wages income	-20.0
Crop production, farmer own income	-3.4
Livestock production, farmer own income	-1.7
Fishery production, farmer own income	-5.1

Source: Authors' own assumption applied in Myanmar microsimulation model.

Non-agricultural income

There are slightly more households with non-agricultural income than with agricultural income (Figure 2). However, many households have overlapping income sources and are considered in both the agricultural and the non-agricultural incomes analyses.

Figure 2. Households with non-agricultural incomes, total and pre-COVID poor, percentage share



Source: Authors' calculation from MPLCS 2015.

Compared with households overall, fewer rural poor households have non-agricultural income in the pre-COVID survey data. For urban households, there is no such difference. Moreover, the pre-COVID poverty rate among households with non-agricultural income is 23 percent, which is lower

than among households with agricultural income. However, business closures during the lockdown period are expected to have far larger negative shocks on many non-agricultural sub-sectors than for Myanmar's agricultural sector. This is due to lockdown measures primarily targeting non-essential non-agricultural activities and exempting the agricultural sector. Thus, we expect a significant rise in poverty during the April lockdown among households with non-agricultural income. This will be assessed later in the paper. Nevertheless, agriculture is still affected by restrictive measures on transportation and marketing and by linkages with non-agricultural activities that use agricultural goods as intermediaries. The impacts on perishable agricultural production and trade is also particularly large.

Though COVID-19 related measures did not adversely affect all households with non-agricultural income, affected households with vulnerable income sources are expected to be severely impacted. We therefore disaggregate households with non-agricultural income into three mutually exclusive groups: (1) households with non-agricultural income only from permanent wages, (2) households with greater non-agricultural temporary wage income relative to self-employed non-farm business income, and (3) households with greater self-employed non-farm business income relative to non-agricultural temporary wage income. Table 3 reports the total and poor household shares of the three groups.

Table 3. Households with non-agricultural incomes overall and with three separate types of non-agricultural incomes, percentage shares

	All households (national)		Rural households		Urban households	
	Total	Poor	Total	Poor	Total	Poor
Share of households with non-agricultural income in total households with any income	63.9	55.1	53.8	50.3	90.3	91.4
Share of households with three types of non-agricultural incomes in total households with non-agricultural incomes						
With non-agricultural income only from permanent wages	19.7	17.2	15.1	14.7	26.8	27.7
With greater non-agricultural temporary wage income relative to self-employed non-farm business income	20.1	32.8	25.4	34.6	11.8	25.4
With greater self-employed non-farm business income relative to non-agricultural temporary wage income	60.2	50.0	59.5	50.8	61.4	47.0

Source: Authors' calculation from MPLCS 2015.

The key takeaways from Table 3 are:

- 60 percent of households receiving non-agricultural income engage primarily in self-employed non-farm businesses.
- Slightly more urban households engage in self-employed non-farm business (61.4 percent) than rural households (59.5 percent).
- 20 percent of households receiving non-agricultural income engage primarily in temporary wage work.
- A much higher share of rural households engage primarily in temporary wage work (25.4 percent) than urban households (11.8 percent).
- The share of households with temporary wages as their primary non-agricultural income is higher among poor households.

In the simulations, we apply different shocks to different non-agricultural sectors. Table 4 displays the affected non-agricultural sectors and assumed shocks in the April 2020 simulation when the lockdown was imposed. The same level of shock is applied regardless of whether the type of income a household derives from the sector is through temporary wages or through self-employment.

Table 4. Level of shocks on non-agricultural income in affected sectors in April 2020 lockdown simulation

Sector	% change from base
Mining	-100
Manufacturing	-85
Construction	-100
Trade	-75
Transportation	-65
Hospitality and other private services	-100

Note: Permanent non-agricultural wages are assumed not to be affected.
Source: Authors' own assumption applied to Myanmar microsimulation model

In the April 2020 lockdown simulation as well as in other simulations designed for post-lockdown periods, we did not consider non-agricultural permanent wages to be affected. Though the production and economic activities of many manufacturing factories, stores, and other private businesses were closed or partially closed during the lockdown period, we assumed that permanent employees of these affected enterprises were formal employees with guaranteed salary payments or at least some form of remuneration if the employer laid them off. On the other hand, we assumed temporary employees to have informal jobs and self-employed businesses to have no formal protection from business loss. Thus, April's economic closures adversely affected these two income types. For sectors required to shut down during the lockdown period and remain closed for most of April (e.g. mining, construction, hospitality, other private services), we assumed temporary workers did not receive salary payments and self-employed businesses did not earn income.

For the sectors that were partially affected by lockdown measures in April, which includes manufacturing, trade, and transportation, wages for temporary workers and income for self-employed businesses were assumed to fall by 85, 75, and 65 percent, respectively, in April. We assumed non-agricultural incomes coming from state-owned and foreign enterprises and organizations and from public administration, education, health, electricity, gas, water supply, waste management, science, and other professional activities were not affected and their employees continued to receive salary payments throughout the year.

Remittance income

Remittances are an important income source for the poor in Myanmar, particularly for rural households (Akee and Kapur 2017). The MPLCS data shows that about 24 percent of households nationwide have remittance income either from international or domestic migrant family members (Diao and Mahrt 2020). Migration-based income was significantly and adversely affected during the pandemic. Falling remittance incomes are likely to degrade not only the food and nutrition security of rural households but also their ability to farm productively (Boughton et al. 2020). Thus, remittances are treated as a vulnerable source of income in our analysis. The 50 percent shock on international remittances and 30 percent shock on domestic remittances used in Diao and Mahrt (2020) are also applied in this study.

3. DESIGN OF MODEL SIMULATIONS

The microsimulations in this study are comparable to those in the SAM multiplier model scenarios (Diao et al. 2020). Specifically, the first simulation is designed for April 2020 and includes the two-week lockdown period with income shocks from three impact channels: domestic lockdown measures, declines in agricultural exports, and declines in remittance incomes. In this simulation, shocks by income type follow those presented in Table 2 for agricultural income and Table 4 for

non-agricultural income. Shocks to international and domestic remittances are -50 and -30 percent, respectively.

Similar to Diao et al. (2020), this policy note divides the post-lockdown period into different subperiods according to easing of domestic restrictions and pace of economic recovery. Table 5 summarizes different assumptions in these subperiods under slower and faster recovery scenarios together with the assumed shocks in April mainly due to the two-week lockdown.

Table 5. Level of shock on income types under different simulations, percentage point change from base

	April	May to June		July to September	
		Slower easing	Faster easing	Slow recovery	Fast recovery
Agricultural incomes					
Permanent agricultural wage	-6.8	-6.8	-3.4	-1.7	-1.7
Temporary agricultural wage	-20.0	-20.0	-10.0	-5.0	-5.0
Farming income from crop production	-3.4	-3.4	-1.7	-0.8	-0.8
Farming income from livestock production	-1.7	-1.7	-0.8	-0.4	-0.4
Farming income from fishery production	-5.1	-5.1	-2.5	-1.3	-1.3
Mining (including informal mines)					
Temporary wages	-100.0	-58.0	-31.0	-11.0	-3.0
Self-employed	-100.0	-58.0	-31.0	-11.0	-3.0
Manufacturing					
Temporary wages	-85.0	-54.0	-30.6	-16.1	-4.3
Self-employed	-85.0	-54.0	-30.6	-16.1	-4.3
Construction					
Temporary wages	-100.0	-60.0	-32.0	-9.0	-3.0
Self-employed	-100.0	-60.0	-32.0	-9.0	-3.0
Trade					
Temporary wages	-75.0	-46.0	-19.5	-9.0	-2.2
Self-employed	-75.0	-46.0	-19.5	-9.0	-2.2
Transportation					
Temporary wages	-65.0	-42.0	-21.5	-10.4	-5.2
Self-employed	-65.0	-42.0	-21.5	-10.4	-5.2
Hospitality and other private services					
Temporary wages	-100.0	-62.0	-29.0	-12.0	-4.0
Self-employed	-100.0	-62.0	-29.0	-12.0	-4.0
Remittances					
Domestic	-30.0	-30.0	-30.0	-30.0	-15.0
International	-50.0	-50.0	-50.0	-50.0	-25.0

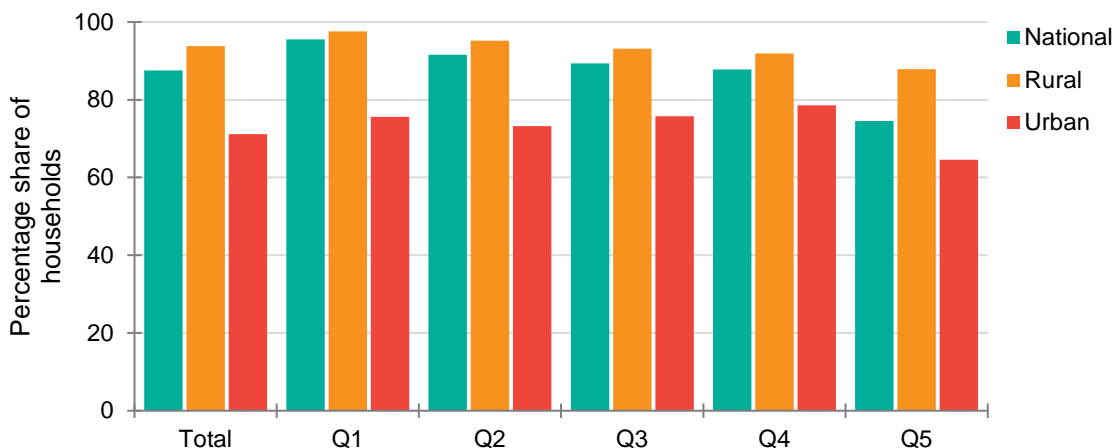
Source: Authors' assumptions applied to Myanmar microsimulation model.

4. HETEROGENEOUS IMPACTS OF COVID-19 SHOCKS ON HOUSEHOLD INCOMES

Excluding households that have income only from permanent wages, managerial occupations, state enterprises, public sectors, and sectors unaffected by the lockdown restrictions, we expect falling exports, declining remittances, and restrictive lockdown measures in April to affect about 9.5 million households or almost 90 percent of all Myanmar households. Figure 3(a) displays

households affected by COVID-19 shocks as a percentage of all households and as a percentage of five wealth quintiles at national, rural, and urban levels. Figure 3(b) displays affected households by agricultural and non-agricultural income.

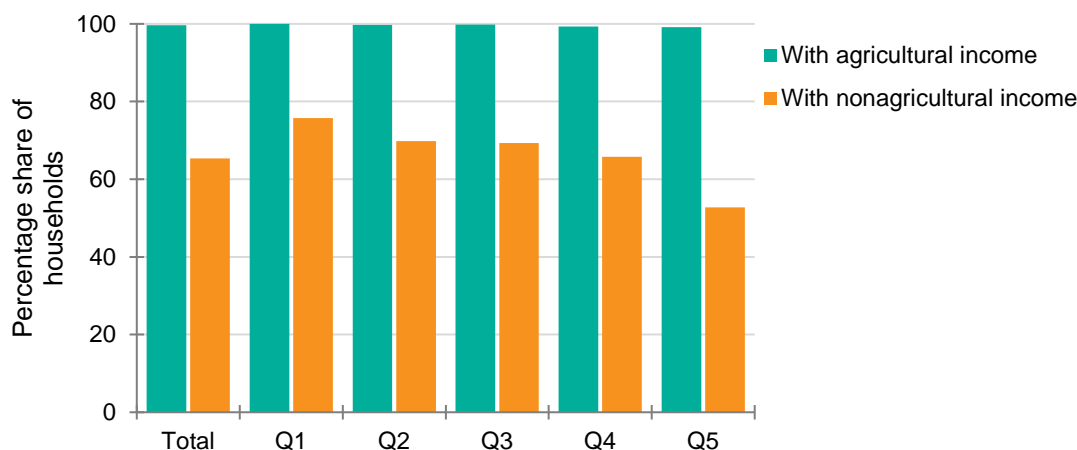
Figure 3(a). Affected households by wealth quintile, percentage share



Source: Authors' calculation from MPLCS 2015.

Note: The wealth quintile is defined by total expenditure instead of income, and it is defined by pre-COVID data of MPLCS. Q1 = poorest quintile; Q5 = wealthiest quintile.

Figure 3(b). Affected households, by whether receive agricultural or non-agricultural income and wealth quintile, percentage share



Source: Authors' calculation from MPLCS 2015.

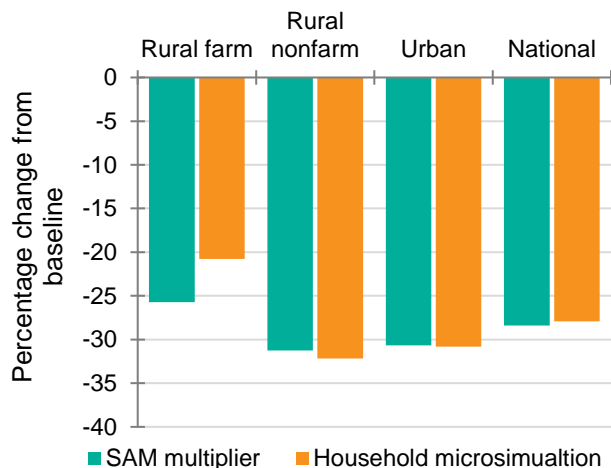
Note: The wealth quintile is defined by total expenditure instead of income, and it is defined by pre-COVID data of MPLCS. Q1 = poorest quintile; Q5 = wealthiest quintile.

Figure 3(a) shows that a greater number of rural households than urban households is disproportionately affected by the shocks. We assume this is due to falling export demand for agriculture and the multiplier effect from non-agriculture sectors to agriculture, which affects almost all households with agricultural income. This can also be seen in Figure 3(b) where households are grouped by agricultural or non-agricultural income. Both Figures 3(a) and 3(b) show that a large number of pre-shock poor households in the lowest wealth quintiles are disproportionately affected, particularly rural households and households with non-agricultural incomes. About 98 percent and 95 percent of rural households in the lowest and second lowest wealth quintiles, respectively, are expected to be adversely affected by COVID-19 shocks. In contrast, households with non-agricultural incomes in the richest quintile are shown to be least affected by the shocks.

In Figure 4, we present a comparison of results from the Myanmar SAM multiplier model (Diao et al. 2020) and results from the household microsimulation model before discussing results of the microsimulation model in detail. Except for the decline in income for rural farm households, which

is slightly smaller in the microsimulation model than in the SAM multiplier model, Figure 4 indicates that the results from the two models are highly comparable at the aggregate level.

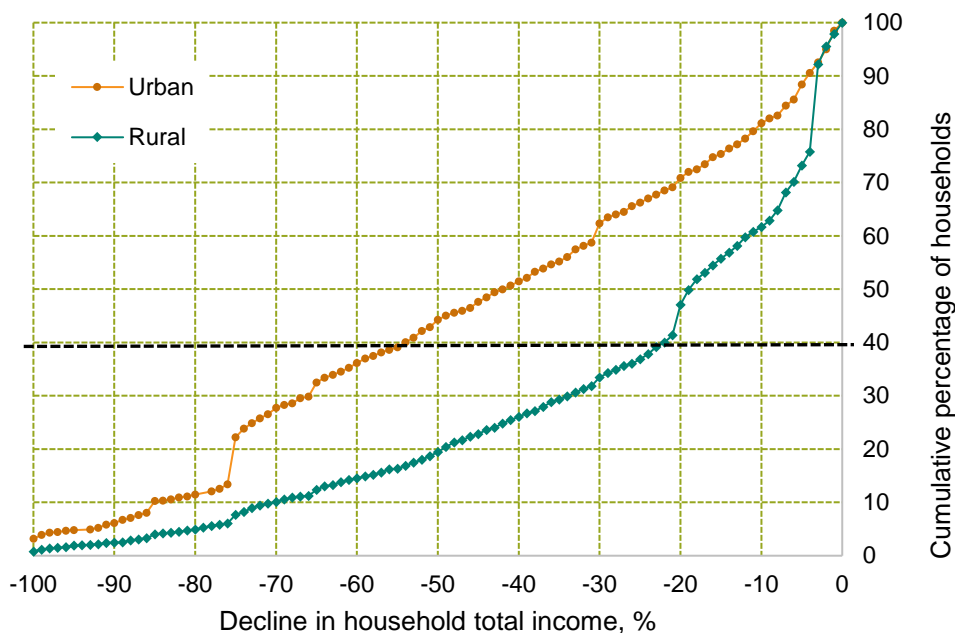
Figure 4. Comparison of Myanmar SAM multiplier model and household microsimulation model regarding reduced household incomes caused by April 2020 COVID-19 lockdown, percentage change from baseline



Source: Myanmar SAM multiplier model and microsimulation model results.

In the SAM multiplier model, there are 15 aggregate household groups defined by five wealth quintiles among rural farm, rural non-farm, and urban households, respectively. Hence, the income effects in the SAM multiplier model are assessed by household group rather than by individual household. In contrast, in the microsimulation model, different income types for individual family members are directly shocked according to the assumptions in Table 5. With household income coming from various sources, which are adversely affected differentially by COVID-19 shocks, we expect the negative effects on total household income to vary significantly across households.

Figure 5. Cumulative distribution of declines in rural and urban household income due to COVID-19 lockdown in April 2020, percentage from baseline



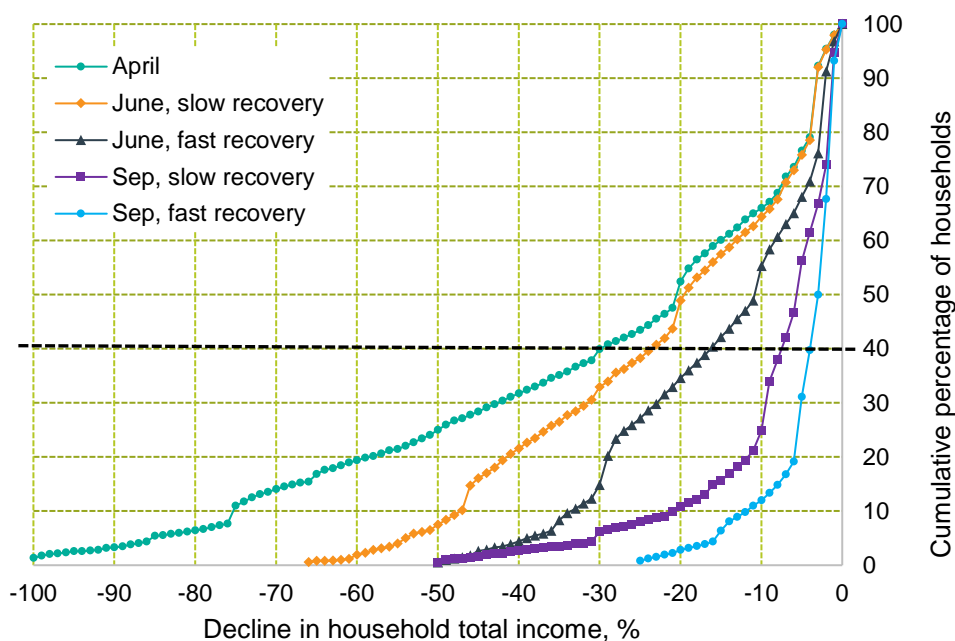
Source: Myanmar microsimulation model result.

Figure 5 presents the cumulative distributions of decline in incomes for rural and urban households, respectively caused by the April 2020 COVID-19 lockdown measures. Households with income only from temporary wages or self-employed businesses in mining, construction, hospitality, or other private services risk losing almost all income. Nationwide, there are about 5 percent of such households for which income is modeled to fall almost 100 percent, and another 10 percent of households with income falling 80 percent.

Figure 5 also shows that the income levels of urban households are more adversely affected by the April 2020 COVID-19 lockdown measures than are those of rural households. The dashed line in Figure 5 shows that the total income for the worst affected 40 percent of urban households fell by 55 percent or more, while the worst affected 40 percent of rural households saw their incomes fall by just over 20 percent or more.

Figure 6 presents similar cumulative distributions of the decline in income for different subperiods in FY2020 and for different economic recovery scenarios. Figures 7(a) and 7(b) then present income impacts for affected household groups with agricultural or non-agricultural incomes, respectively, by month for the two different economic recovery scenarios.

Figure 6. Cumulative distribution of declines in total household income due to COVID-19 lockdown in April 2020 at different points in time under different economic recovery patterns, percentage from baseline

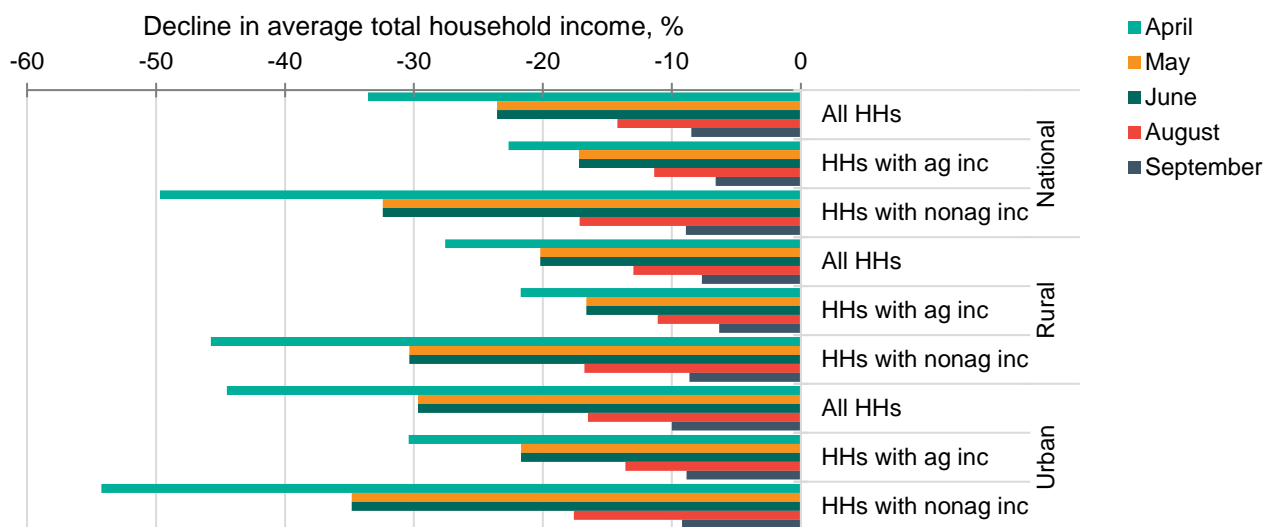


Source: Myanmar microsimulation model result.

With the economy beginning to recover in May, many temporary non-agricultural workers either resumed their previous jobs or found new employment opportunities and many self-employed non-farm businesses were able to reopen. Hence, the number of households with falling income diminished and declines in income became more modest in May than in April. This is shown in Figures 6, 7(a), and 7(b). Household incomes rebound more in the fast recovery scenario than in the slow recovery. However, even with fast recovery, there are still some households unable to fully recover income to pre-shock level by the end of FY2020 in September – 40 percent of households are expected to have incomes 8 percent below pre-shock level with slow recovery and 4 percent below pre-shock level with fast recovery (Figure 6). Figures 7(a) and 7(b) consider affected households with agricultural or non-agricultural incomes at national, rural, and urban levels. By the end of FY2020 in September total income for affected households nationally will be

8.5 percent lower than pre-shock levels with slow recovery (Figure 7(a)) and 4.3 percent lower with fast recovery (Figure 7(b)).

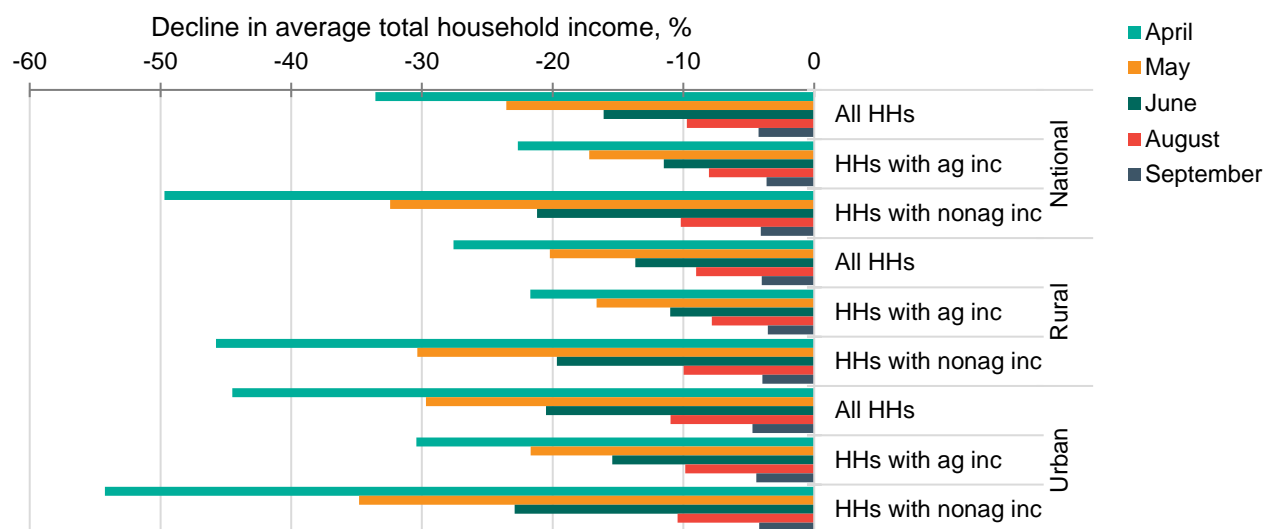
Figure 7(a). Impact of COVID-19 on household incomes by month with slow post-lockdown recovery, percentage change from baseline, affected households only



Source: Myanmar microsimulation model.

Note: A household can have both agricultural and non-agricultural incomes, and hence, the two groups of households are not mutually exclusive.

Figure 7(b). Impact of COVID-19 on household incomes by month with fast post-lockdown recovery, percentage change from baseline, affected households only



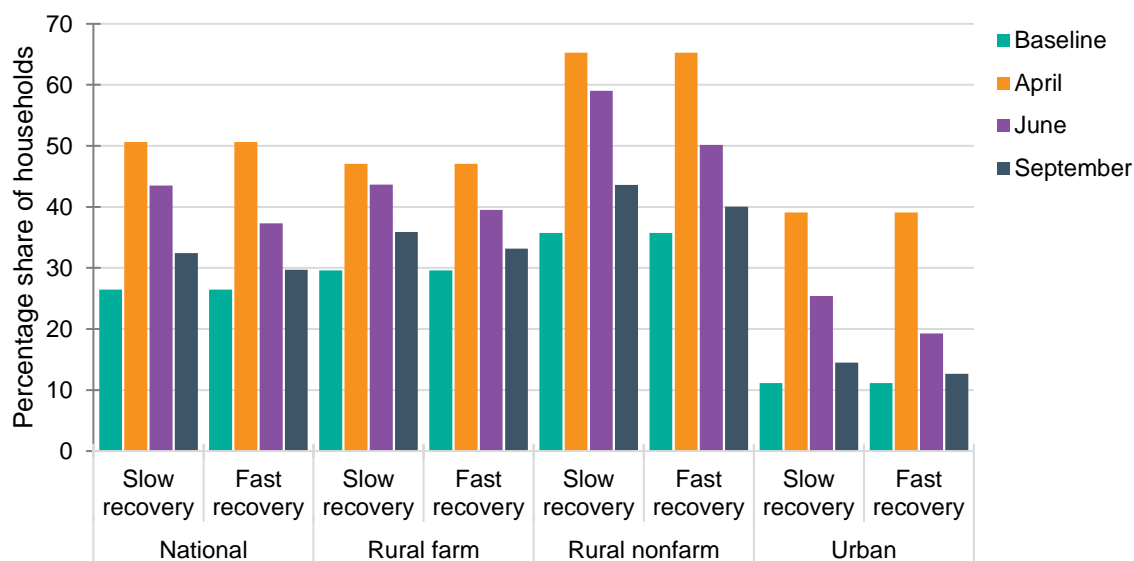
Source: Myanmar microsimulation model.

Note: A household can have both agricultural and non-agricultural incomes, and hence, the two groups of households are not mutually exclusive.

5. THE IMPACTS OF COVID-19 SHOCKS ON POVERTY

Household poverty rates for the nation and for the three household groups defined in the SAM multiplier analysis incorporate the uniform national poverty line and are presented in Figure 8. We consider poverty rates only for April, June, and September. For June and September, we also consider slow and fast recovery assumptions. The pre-shock poverty rate in the MPLCS data is presented as the baseline for comparison.

Figure 8. Household poverty rate in different subperiods of FY2020 under slow and fast recovery scenarios, percentage share

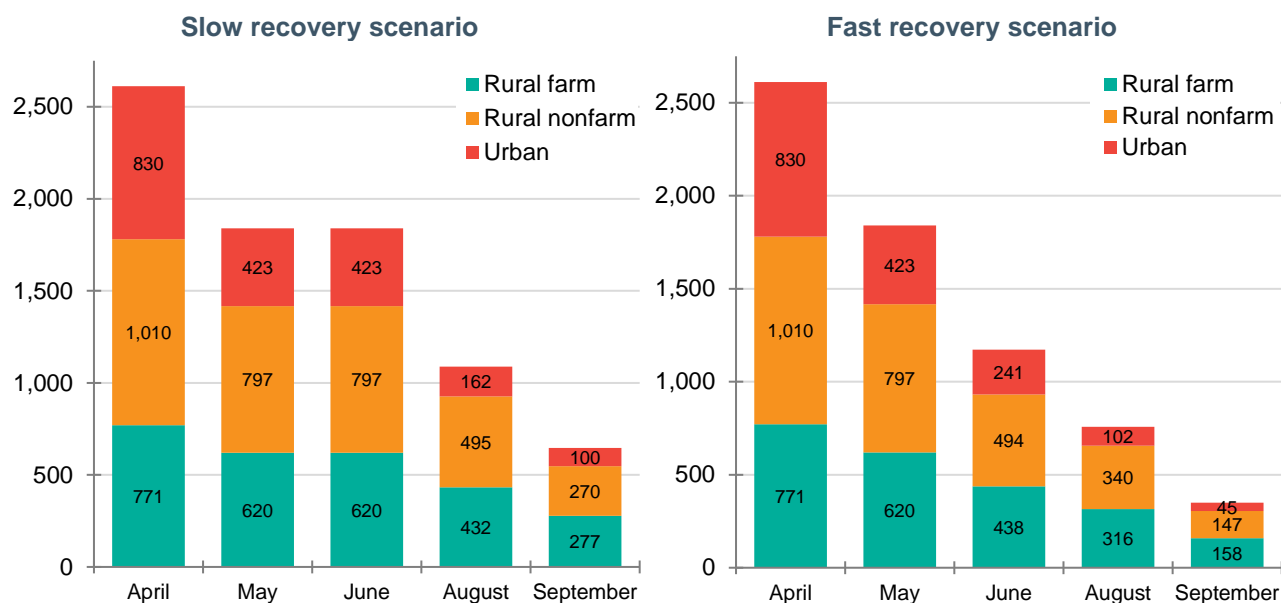


Source: Myanmar microsimulation model results.

Note: In the figure, the poverty rate is measured by households instead of individuals in the figure. June corresponds to the “easing” shock presented in Table 5, while September corresponds to the “recovery” shock.

Figure 8 shows that poverty is expected to rise under the April 2020 lockdown for all household groups and rise the most for rural non-farm households. For rural non-farm households, the poverty rate could reach 65 percent in April, which is 30 percentage points greater than the pre-shock poverty rate for this household group. Nationwide, poverty could be as high as 50 percent in April, although the poverty estimate is slightly less than 50 percent for rural farm households and about 40 percent for urban households. Economic recovery in the two post-lockdown scenarios is expected to help reduce poverty rates. However, even with fast recovery, the poverty rate is expected to be higher (29.7 percent) at the end of FY2020 than the pre-shock level of 26.5 percent, and the poverty rate for rural non-farm households could remain as high as 40 percent.

Figure 9. Number of newly poor households with slow and fast recovery, thousands



Source: Myanmar microsimulation model results.

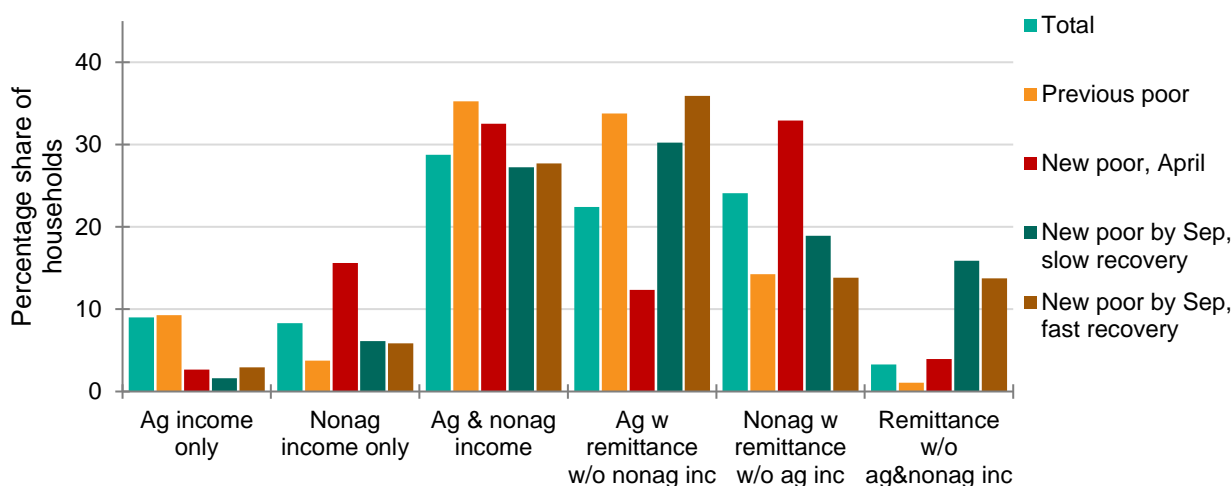
Figure 9 presents the numbers of newly poor households due to COVID-19 shocks under the slow and the fast recovery scenarios. 2.61 million households that were not poor pre-shock are at

risk of falling into poverty in April primarily due to the COVID related lockdown. One million of these households are rural non-farm households, 770,000 are rural farm households, and 830,000 are urban households.

The number of newly poor households declines as the economic recovery progresses. However, by the end of FY2020 in September, about 650,000 households that were not poor pre-shock are expected to remain in poverty under the slow recovery scenario and 350,000 with fast recovery. Most of the households remaining in poverty are rural households, roughly equally split between rural farm and non-farm households.

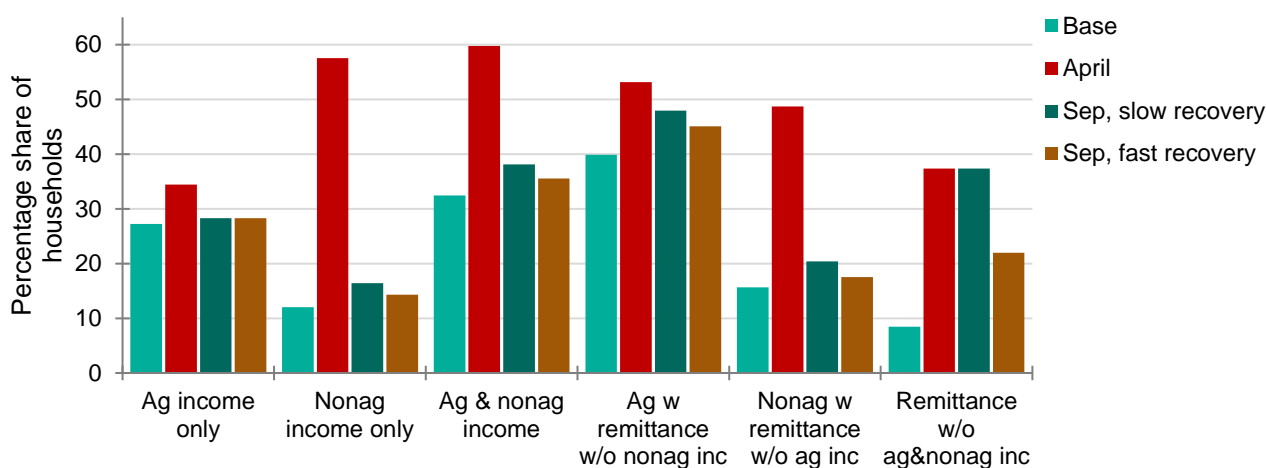
We also consider poverty rate and poverty distribution by income source, focusing on six household groups, as displayed in Figures 10 and 11. Figure 10 presents distributions of these household groups considering all households as well as previously poor and newly poor households. Figure 11 presents poverty rates for the six household groups under different scenarios.

Figure 10. Distribution of total, previously poor, and newly poor households by different income sources under COVID-19 shocks and economic recovery patterns, percentage share



Source: Myanmar microsimulation model result.

Figure 11. Poverty rates for households with different income sources under COVID-19 shocks and economic recovery patterns, percentage share of households



Source: Myanmar microsimulation model result.

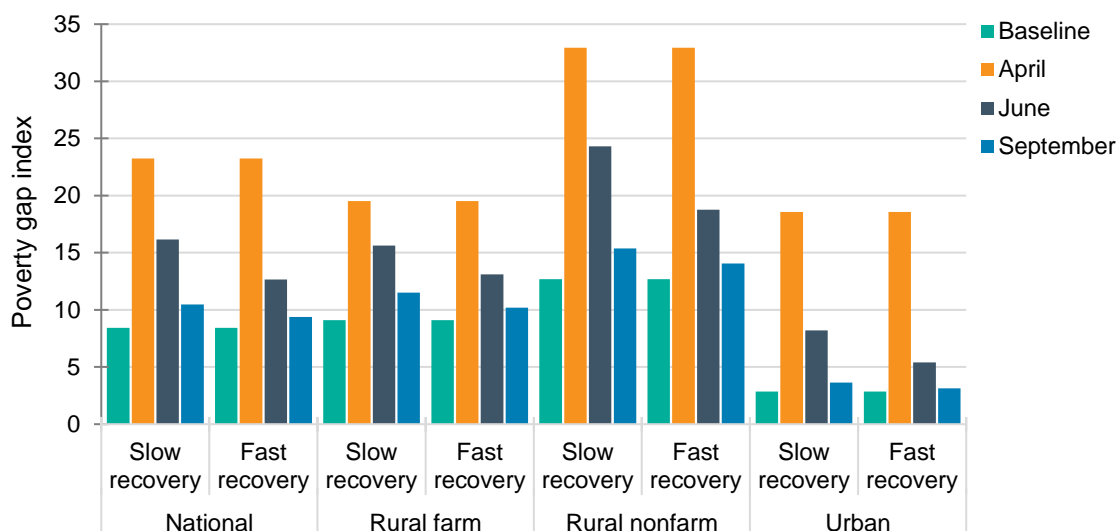
Data from the MPLCS show that most Myanmar households have income from multiple sources. Figure 10 groups these income sources into agricultural income, non-agricultural income, and remittances – 29 percent of Myanmar households have both agricultural and non-agricultural income, 22 percent have agricultural income and remittances without non-agricultural income, and 24 percent have non-agricultural income and remittances without agricultural income. Nine percent of households have agricultural income only, 8 percent have non-agricultural income only, and 3 percent have remittances only. Nationally, 35 percent of all poor households pre-shock have both agricultural and non-agricultural incomes, which is much higher than the share of total households (29 percent). This is also true for households with agricultural income and remittances but no non-agricultural income, which account for 34 percent of total poor households pre-shock and 22 percent of total households.

The COVID-19 outbreak and April 2020 lockdown effects have impacted households with non-agricultural income only more intensely than those with agricultural income only (Figure 11). For example, households with non-agricultural income only have a pre-shock poverty rate of 12 percent, but the poverty rate for this group rose to 57 percent in April, which accounts for 16 percent of the national total newly poor in this period (Figure 10). Poverty rates also rose 60 percent for household groups with both agricultural and non-agricultural income and 49 percent for households with non-agricultural income and remittances but no agricultural income. For the latter group, the pre-shock poverty rate was only 16 percent.

However, economic recovery could help households with non-agricultural income recover more quickly than those with agricultural income but no non-agricultural income. While the shocks on non-agricultural temporary wages in the affected industrial and service sectors and self-employed non-farm businesses are extremely large, shocks on agricultural income were relatively modest during the April 2020 lockdown. Nevertheless, economic recovery mainly benefits households from adversely affected non-agricultural sectors. As such, external shocks, such as falling remittances and declines in agricultural income associated with falling export demand, are highly unlikely to recover quickly in 2020. Thus, the impact of COVID-19 on households with agricultural income is expected to be more persistent and possibly prolonged for at least a year.

The significant income shocks from the COVID-19 outbreak and April 2020 lockdown on previously poor households are causing many of these households to become more impoverished. As presented in Figure 12, the poverty gap index measures the deterioration in the welfare of poor households due to COVID-19 impacts. The index captures the depth of poverty, which is measured by the average expenditure shortfall relative to the poverty line for all poor households and is expressed as a percentage of the poverty line. Larger index values indicate both greater numbers of households with expenditure below the poverty line and the greater amount of additional income needed to lift poor households from poverty.

Figure 12. Poverty gap index at household level in the base under different subperiods



Source: Myanmar microsimulation model result.

Note: June corresponds to the “easing” shock presented in Table 5, while September corresponds to the “recovery” shock.

The poverty gap index is the average expenditure shortfall relative to the poverty line for all poor households expressed as a percentage of the poverty line.

We consider both previously and newly poor households in calculating the poverty gap index. Figure 12 shows a significant increase in shortfalls from the poverty line among poor households in April, especially among rural non-farm households. The value of the index is 8.4 percent nationwide pre-pandemic. This rises to 23.2 percent nationwide and 32.9 percent for rural non-farm households in April. Economic recovery may help many persistently poor households to gradually improve their income during post-lockdown periods. Thus, the value of the poverty gap index falls in the two post-lockdown periods. However, even with fast recovery, the index value in September is still higher than its pre-shock value, both for the nation overall and for the different household groups, which indicates that many poor households could be persistently and more deeply impoverished in 2020.

6. SUMMARY

- Many rural households in Myanmar have income from both agricultural and non-agricultural activities. The widespread closure of factories, stores, and other non-farm businesses in the lockdown period in April 2020 and the gradual economic recovery post-lockdown have affected almost all Myanmar households. Income fell much more for rural and urban households heavily relying on vulnerable non-farm income sources, leading to significant increases in poverty in April.
- Economic recovery is primarily driven by recovery in the non-agricultural sectors, the production of which sharply fell during the lockdown. This explains why many households with non-agricultural income can quickly recover income post-lockdown. However, many factors affecting agricultural or remittance incomes are external and are expected to be more persistent. Thus, the impacts of COVID-19 on agricultural households are expected to possibly be more prolonged for at least a year.
- Even with many non-agricultural economic activities returning to near normal, many newly poor households are likely to remain impoverished due to permanent losses of agricultural, non-agricultural, and remittance incomes. In total, about 650,000 such households remain in poverty with slow recovery and 350,000 with fast recovery. Most of these households are rural, roughly equally split between rural farm and non-farm households.

- The poverty rate is expected to rise above its pre-pandemic level with many poor households likely to be persistently and more deeply impoverished in 2020.
- Income recovery for most farm households depends on the recovery of agricultural production, trade, and agribusinesses that need government support. The stimulus plans of the Ministry of Agriculture, Livestock and Irrigation for implementing the COVID-19 Economic Relief Plan (CERP) of the Government of Myanmar emphasize support to farmers, small agri-processors, seed farmers, and agribusiness for planting and income retention. These forms of government support are crucial for farm households to cope with COVID-19 related difficulties and recover lost agricultural and agribusiness income.

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