Chapter 18

# REGIONAL VARIATIONS IN RURAL LIVELIHOODS: CHALLENGES AND OPPORTUNITIES

**Ben Belton, Mateusz Filipski, Isabel Lambrecht, and Peixun Fang**

Rural livelihoods in Myanmar are embedded in regional contexts that vary widely in terms of physical geography, climate and agroecology, local resource base, agrarian structure, infrastructure provision, proximity to urban areas and neighboring countries, social networks, institutions, and ethnicities. The composition of livelihoods in each administrative and geographic zone of the country reflects these diverse contexts. Marked variations in livelihood patterns are evident at multiple scales, from the zone or region down to township and village level, so that the composition of livelihoods in villages close to one another sometimes varies widely (Phyo 2022).

Despite the high level of place-based specificity in the composition of livelihoods, many broad similarities and common trends shape livelihoods at subnational and national levels. These include generally low levels of agricultural productivity relative to other countries in the region in terms of both land and labor (World Bank 2016b); high rates of landlessness, legacies of land confiscation, and unresolved struggles over land rights and access (Mark and Belton 2020); and generally poor public infrastructure and services—including electricity, roads, schools, health services, and rural credit—though these were improving rapidly in many places before 2020 (Belton et al. 2017; Lambrecht and Belton 2019); relatively low levels of diversification and capital in the rural nonfarm economy; high rates of international and domestic outmigration (CHIME 2019; World Bank 2016a); and histories of ethnopolitical conflict and insecurity (South 2009).

This chapter synthesizes analyses from four large household surveys, each covering a major agroecological zone, to evaluate interregional variations in the composition of livelihoods and the rural economy. The four agroecological zones examined are the Delta (Ayeyarwady and Yangon), the Dry Zone (Mandalay, Magway, and Sagaing), the Hills and Mountains (represented by southern Shan State), and the Coastal Zone (represented by Mon State). We also synthesize recent secondary sources that offer additional context and insights on regional livelihood dynamics from these and other areas of

Myanmar, including the impacts of the "triple crisis"—COVID-19, the coup, and price inflation—beginning in 2020.

The chapter first examines and compares the status of infrastructure and public services and the composition of rural livelihood activities and incomes across the four zones. More details on the geography of these zones and the surveys deployed in each can be found in a report by Belton and colleagues (2021). We then supplement primary data from surveys with a synthesis of contemporary research on livelihoods and the rural economy in Myanmar, focusing on two areas: (1) agricultural commercialization and (2) nonfarm employment and migration. We next evaluate changes in livelihood vulnerability and resilience occurring since the triple crisis. The final section synthesizes these findings and discusses possible future trajectories.

## Synthesis of results from livelihoods surveys

This section presents a comparative summary of key trends across zones, based on surveys conducted in 839 communities between 2015 and 2018, with respect to (1) recent changes in access to infrastructure, transport, and public services; (2) the composition of livelihood activities; and (3) the composition of rural incomes.

### Infrastructure and services

The provision of most infrastructure and services is uneven across zones, reflecting variations in physical geography and legacies of settlement and conflict (Table 18.1).[1] Access to paved roads is lowest in southern Shan (54 percent of villages), perhaps reflecting the hilly terrain and history of conflict in some areas, followed by the Delta (59 percent), where water-based transport is still the primary means of access to many villages. Mon has the highest rate of access by paved road (95 percent). As a result, Mon has the shortest transport times to nearby urban areas among the four zones, which has implications for how easily individuals can commute for nonfarm work, access inputs, or sell products. Travel times in the monsoon season are roughly 20 to 40 percent longer than in the dry season across zones, indicating that even paved roads may be poorly constructed.

1 Surveys conducted in these four zones were representative of subsets of townships or village tracts, not the entire zone, except for in Mon, where the survey represented the entire rural population of the state. See Belton and colleagues (2021) for details.

**TABLE 18.1** Community-level access to infrastructure and public services, by zone

| Village characteristic | Mon 2015 | Delta 2016 | Dry Zone 2017 | Shan 2018 |
|---|---|---|---|---|
| With paved road (%) | 95 | 59 | 80 | 54 |
| Accessible by car in monsoon (%) | 87 | 32 | 99 | 79 |
| Dry season travel time to closest urban center (average minutes) | 33 | 47 | 46 | 51 |
| Monsoon travel time to closest urban center (average minutes) | 40 | 57 | 66 | 60 |
| Primary school (%) | 80 | — | 79 | 80 |
| Post-primary school (%) | 37 | — | 31 | 15 |
| Public electricity supply (%) | 51 | 12 | 34 | 25 |
| Access to at least one cell phone provider (%) | 97 | — | — | 97 |
| Communities surveyed, number | 143 | 73 | 300 | 323 |

**Source:** Authors' survey datasets.
**Note:** — = missing.

Primary schools are the public service with the highest levels of provision and access, being present in about 80 percent of villages in the zones surveyed (Table 18.1). (No data were collected on this indicator in the Delta.) The share of villages with a post-primary school is lower and much more variable across zones, being lowest in southern Shan and highest in Mon. Nevertheless, access to post-primary education improved significantly in some areas from 2010 to 2020. For example, the share of 17-year-olds in the Dry Zone who had completed eighth grade jumped from 35 percent in 2010 to 60 percent in 2017 (Belton and Filipski 2019).

Access to publicly provided electricity is also variable across regions but generally low, with the highest levels of provision in Mon, at 51 percent, and the lowest in the Delta, at just 12 percent. Many villages access electricity through private transformers, often purchased with pooled community resources. However, even in villages with public electricity, not all households can afford an electricity connection, and power outages are frequent in some areas. For example, in Shan, only three out of four households in villages with access to publicly provided electricity are connected to the network, and these households reported facing power cuts lasting an average of five hours about two times per week. Solar cells are now a widely used source of power, mainly for lighting and charging mobile phones. Access to mobile phone providers became almost universal following the extremely rapid expansion of services that started in 2014, although mobile internet access has been partially hampered since the coup in 2021.

Despite often starting from a low baseline, the rapid acceleration of infrastructure provision and the geographic diffusion of public and private services were key features of the reform period from 2011 to 2020. The construction of rural roads and post-primary schools; the establishment of public electricity supply; and, to a lesser extent, the provision of health services increased sharply during this time across all zones surveyed. This dynamic is illustrated in Figures 18.1 and 18.2.

Figure 18.1 shows the cumulative share of primary and lower secondary schools, roads, and electricity connections established in surveyed villages in the Dry Zone by year over the past century. Figure 18.2 shows the share of villages in southern Shan with schools, paved roads, electricity connections, rural health centers, and mobile internet access by year from 1978 to 2018. Road construction and provision of electricity and post-primary schools accelerated dramatically from 2011 in the Dry Zone. The share of villages with access to schools, electricity, and paved roads also increased sharply in southern Shan over the period, and the share of villages with mobile internet access jumped from 9 percent in 2011 to 87 percent in 2018.

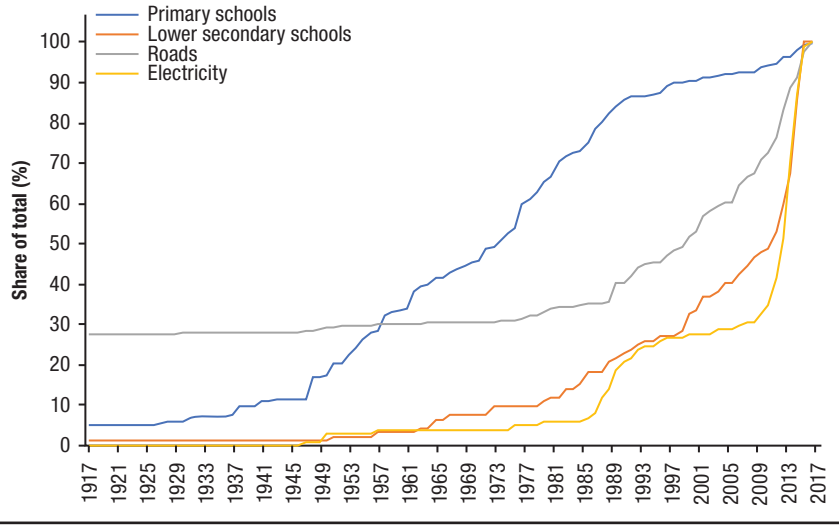
Collectively, these changes in access to infrastructure and services had extremely significant implications for livelihood opportunities. In combination with the liberalization of vehicle imports and financial services, they contributed to improvements in mobility and communication, with sharp reductions in costs and travel time. For example, in Shan, average transport times from surveyed villages to the nearest urban area fell by around 40 percent between 2013 and 2018, an average reduction of 38 minutes, while motorbikes became the most common mode of transport in 87 percent of villages, up from 41 percent in 2013.

Greater mobility has expanded the economic opportunities available to many rural inhabitants. For example, having access to a wide choice of buyers means that markets for agricultural products, such as maize in Shan, tend to be competitive (Cho and Belton 2019). Ease of mobility has also increased the variety of employment that villagers can pursue. For instance, in the Delta, 44 percent of those who reported being engaged in salaried employment commuted to nearby urban areas or other townships or regions for their work (Htoo and Zu 2016).

## Livelihood composition

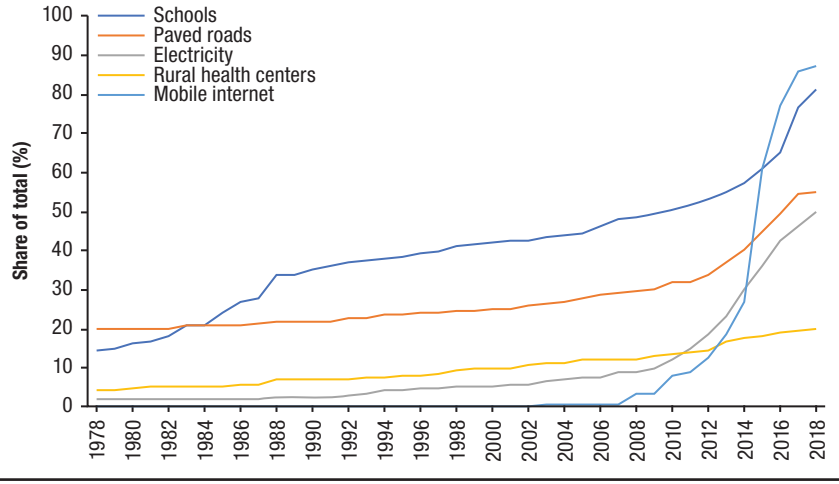
In this section, we review livelihood profiles by zone in terms of the share of households participating in a range of farm and nonfarm livelihood activities. Agriculture is the major livelihood activity in terms of the number of

**FIGURE 18.1** Cumulative share of schools, roads, and electricity connections established in surveyed communities in the Dry Zone by year, 1917–2017, conditional on community having access




**Source:** Authors' survey.

**FIGURE 18.2** Share of villages in southern Shan with schools, paved roads, electricity connections, rural health centers, and mobile internet access by year, 1978–2018




**Source:** Authors' survey.

households participating directly in all four survey zones, except for in the Delta, where a higher proportion of surveyed households engage in wage labor than in crop farming (56 vs. 42 percent), reflecting very high levels of landlessness there (Chapter 6). However, even among farm households, complete dependence on agriculture is relatively uncommon. Most households and individuals pursue diversified livelihoods that combine multiple forms of employment and sources of income. High levels of diversification into off-farm activities reflect the uneven distribution and low average size of agricultural landholdings in all zones (Chapter 6) and the relatively low productivity and profitability of most crops (Chapter 8). These factors mean that many farm households are unable to meet their subsistence needs through farming alone. For instance, among the wealthiest 20 percent of the population in the Delta, only 29 percent of households depended exclusively on agriculture for income in 2015. Among the poorest 20 percent, this figure was just 8 percent (Htun 2016).

Uneven distribution of land makes off-farm employment important for all households except those with the largest landholdings. However, most casual wage employment remains closely linked to agriculture (Chapter 2). Agricultural day labor remains the most important source of income in terms of participation in all zones except Mon. Such employment is of particular importance for landless households and operators of marginal farms (Table 18.2). Agricultural wage work is fairly gender balanced in levels of participation, though often with significant levels of gender differentiation by task and significant gender wage gaps. Casual nonfarm work skews heavily male and is composed largely of manual work, such as construction, carpentry, and hauling loads, or employment in nonfarm enterprises.

Self-employment in own nonfarm enterprises is common across the survey zones. Numbers of nonfarm businesses grew rapidly from 2010 to 2020 (Chapter 16), reflecting factors such as increasing levels of mobility, rising real incomes, and reduced credit constraints. Levels of self-employment in nonfarm businesses are lowest in Shan (16 percent of households) and highest in Mon (29 percent), reflecting regional differences in the degree of the rural economy's transformation (Table 18.2).

Men and women operate nonfarm businesses in equal numbers. However, men are more likely to own more remunerative businesses with higher capital costs, such as machinery rental services. In contrast, women are more likely to own smaller businesses, such as food retail (Aung et al. 2019). The likelihood of a household operating a nonfarm enterprise is not closely correlated with land ownership. However, the type and scale of a business may be linked to the

**TABLE 18.2** Livelihoods and income composition, by zone

| Composition | Mon 2015 | Delta 2016 | Dry Zone 2017 | Shan 2018 |
|---|---|---|---|---|
| *Share of households engaged in activity (%)* | | | | |
| Crop production | 51 | 42 | 57 | 82 |
| Daily wage labor, of which: | 42 | 56 | 55 | 61 |
| Agriculture | 22 | 42 | 48 | 53 |
| Nonagriculture | 28 | 17 | 14 | 20 |
| Salaried work | 8 | 6 | 8 | 7 |
| Own nonfarm business | 29 | 21 | 21 | 16 |
| Remittances | 33 | 15 | 31 | 14 |
| Livestock sales | 25 | 22 | 21 | 52 |
| Aquaculture | 0 | 6 | 0 | 0 |
| Natural resources | 10 | 6 | 3 | 5 |
| *Share of total household income from activity (%)* | | | | |
| Crop production | 24 | 20 | 37 | 47 |
| Daily wage labor, of which: | 15 | 15 | 21 | 12 |
| Agriculture | 6 | 11 | 16 | 7 |
| Nonagriculture | 9 | 4 | 5 | 5 |
| Salaried work | 5 | 3 | 5 | 8 |
| Own nonfarm business | 18 | 34 | 18 | 13 |
| Remittances | 25 | 3 | 13 | 8 |
| Livestock sales | 1 | 1 | 5 | 10 |
| Aquaculture | 0 | 19 | 0 | 0 |
| Natural resources | 12 | 6 | 1 | 1 |

**Source:** Authors' surveys.

resource base of the household. Most rural nonfarm enterprises are very small and operate using only family labor. For instance, only 21 percent of such businesses surveyed in the Dry Zone reported hiring labor (Zu et al. 2017).

Remittances from migrant household members are a significant source of income in Mon and the Dry Zone, received by more than 30 percent of households. Remittances are less common in southern Shan and the Delta, where smaller shares of households have migrant members. Salaried employment provides work for a similar share of households across zones, at around 7 percent, with a gender balance that skews toward women. Women account for a large majority of schoolteachers, which is by far the largest category of salaried employment for rural households. The importance of raising and

selling livestock is highest in Shan, where 52 percent of households raise animals for sale. In the other three areas, a little more than 20 percent of households do so.

Finally, participation in natural resource extraction, such as collecting firewood, cutting bamboo, harvesting non-timber forest products, or fishing, is quite common, except in the Dry Zone. However, these activities are practiced mainly for home use, with few households doing so commercially. The major exception to this is Mon, where 11 percent of households are involved in marine fishing on a commercial basis (Table 18.2).[2] Most people involved in commercial natural resource extraction are men—representing, for example, 72 percent in the Dry Zone (Zu et al. 2017).

## Income composition and wages

The composition and size of rural incomes vary widely by zone, reflecting geographic differences in access to agricultural land, agricultural potential, the degree of development of the rural nonfarm economy, and the extent of migration. In very broad terms, Shan is the zone that is most highly agrarian and Mon the least: crop farming accounts for about twice the share of rural income (46 percent) in surveyed areas of southern Shan than it does in Mon (24 percent). The share of crop farming income in the Dry Zone falls between these figures (35 percent). In the Delta, the share of crop income in total income is just 20 percent, reflecting both high levels of landlessness and the deliberate inclusion in the survey sample frame of village tracts with high concentrations of fish farming. As a result, aquaculture accounts for 19 percent of rural income in the sampled village tracts in the Delta, but this figure is not representative of the entire Delta.

Conversely, the combined share of income contributed by remittances and self-employment in nonfarm enterprises is relatively low in Shan (totaling 21 percent) but high in Mon (43 percent) and also substantial in the Dry Zone (31 percent). The contribution of agricultural wage labor to income is largest in the Delta and the Dry Zone, where there are high levels of landlessness relative to Shan but fewer lucrative nonfarm opportunities, such as international migration, than in Mon.

The extent of participation in nonfarm activities, including migration, accounts for significant differences in average incomes across zones. For example, mean income from crop farming was similar in southern Shan in 2018

2 Our survey in the Delta did not include any coastal areas, so it likely underrepresents the importance of commercial fishing in the zone as a whole.

**TABLE 18.3** Mean and median total crop and non-crop rural incomes in southern Shan and the Dry Zone, kyat per capita

| | Shan (2018) | | | Dry Zone (2017) | | |
|---|---|---|---|---|---|---|
| Income | Median | Mean | Mean (%) | Median | Mean | Mean (%) |
| Crop income | 69,646 | 205,445 | 46 | 11,250 | 213,133 | 35 |
| Non-crop income | 97,500 | 236,417 | 54 | 262,064 | 395,637 | 65 |
| Total income | 260,037 | 441,862 | 100 | 406,667 | 608,771 | 100 |

**Source:** Authors' calculations using survey datasets.
**Note:** Unconditional averages—that is, including all households whether or not earning crop or non-crop income.

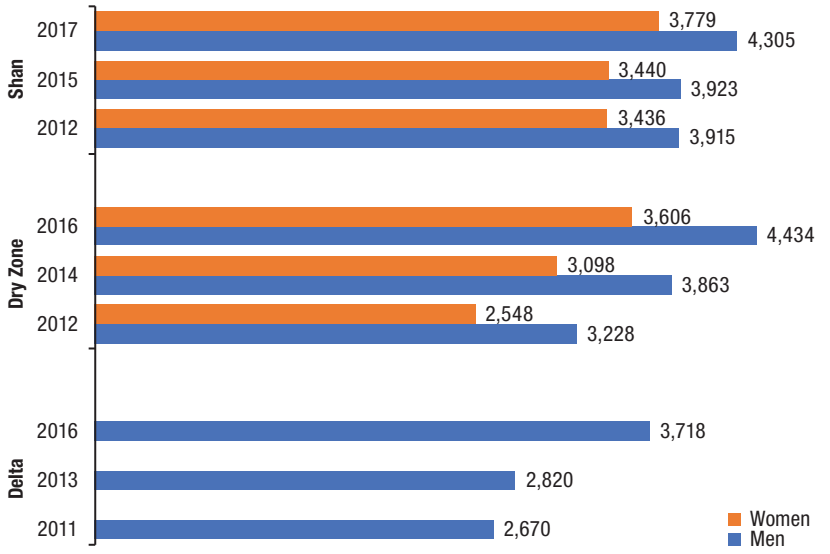
and the Dry Zone in 2017. However, average earnings from non-crop sources in the Dry Zone were 67 percent higher than in southern Shan, resulting in average Dry Zone incomes per capita being 38 percent higher than in southern Shan (Table 18.3).

High levels of participation in off-farm work mean that rural wage rates play an important role in determining incomes, particularly for members of landless and land-poor households that are particularly dependent on casual employment. Wage rates are also important in relation to the profitability of agriculture, as wages account for a significant share of production costs. Our surveys show that average real rural wages (adjusted for inflation) jumped sharply in the post-2010 economic reform period, rising by 39 and 37 percent, respectively, between 2011/2012 and 2016 in the Delta and the Dry Zone (Figure 18.3). Average wages in Shan were higher in 2012 than in either the Delta or the Dry Zone but changed little until 2017, when they rose 9 percent to reach a level similar to that in the Dry Zone.

Significant increases in real rural wages between 2011 and 2020 were linked to accelerating out-migration over the same period. This trend drove labor shortages around periods of peak local demand for agricultural workers. The expansion of post-primary education likely also played a role by delaying entry into the workforce and producing a more educated workforce with higher wage-earning potential, similar to Viet Nam (Liu et al. 2020).

Rising wage rates appear to have contributed to rapid agricultural mechanization prior to 2020 (Chapter 7). However, mechanization in the Dry Zone has not generated sufficient savings to fully offset the costs of rising agricultural wages to farm households. Belton and Filipski (2019) suggest that this implies a shift in the underlying "terms of trade" between agriculture and nonfarm segments of the economy, consistent with a process of structural transformation wherein the competitiveness of agriculture is eroding relative to more productive sectors. The authors contend that this pattern of

**FIGURE 18.3** Average real daily wage rates for casual agricultural workers in the Delta (2011–2016), Dry Zone (2012–2016), and Shan (2012–2017), kyat per capita




**Source:** Authors' analysis using survey datasets.

**Note:** Delta and Dry Zone calculated at constant 2016 prices, for all seasons; Shan at constant 2017 prices, for monsoon season.

development has resulted in a partial shift in the relative economic status of landholders and the landless, favoring the latter.

This outcome, while seemingly troubling from the point of view of the future viability of agriculture, is positive in that it suggests improvements in the relative economic status and mobility of at least some households with limited resources. Thus, the median income of landless households is only 13 percent less than the all-household average for the rural Dry Zone (Belton and Filipski 2019). Similarly, in southern Shan, the average per capita incomes of rural nonfarm households are only 16 percent lower than those of households farming maize. Both these findings suggest that rural income-earning potential has become partially delinked from land ownership.

However, in all zones there is a significant gender wage gap in agriculture. In Shan, women farmworkers hired for the cultivation of maize and pigeon pea earn, on average, 89 percent of the male daily wage. In the Dry Zone, the gap is larger still. Women can expect to earn only 81 percent of what men earn for agricultural wage work of equivalent duration. The reasons for these differences are not clear, though part of the explanation appears related to the gender division of labor across farming tasks, which vary from crop to crop.

This gender gap appears persistent, having changed little even as men's and women's real wages have increased rapidly.

## Meta-conditioners of livelihood trends

This section draws on secondary sources to further assess regional differences and trends in livelihoods during the decade leading up to 2020. We expand on the implications of and relationships between (1) agricultural commercialization and (2) nonfarm employment and migration for the composition and outcomes of livelihoods in Myanmar. Both sets of processes accelerated during this period in response to policy reforms that contributed to greater economic openness and growth.

### Agricultural commercialization

Links between agricultural commercialization, crop productivity, and trade policy are examined in Chapter 10. In this section, we evaluate evidence for the effects of agricultural commercialization on the composition and outcomes of livelihoods in Myanmar. Evidence across studies is mixed, reflecting differences in the cases evaluated, as well as the research perspectives and methodologies applied.

Woods (2020) and Borras, Franco, and Nam (2020) contend that agricultural commercialization associated with the introduction of hybrid maize to upland Shan State by the Thai agro-industrial company CP and the crop's subsequent widespread uptake by smallholders has resulted in almost exclusively negative impacts on rural livelihoods. These authors frame hybrid maize as undermining customary systems of shifting cultivation and subsistence food production, resulting in smallholder farmers' indebtedness to maize traders and leading to rapid and widespread differentiation and dispossession.

However, based on detailed survey-based research on the impacts of hybrid maize on farmer livelihoods in southern Shan, Belton and Fang (2022) find these claims to be exaggerated. They contend that the widespread adoption of hybrid maize reflects its low risk profile relative to other cash crops and the generally positive contributions that maize makes to farm incomes in a rural setting where earning cash income is increasingly imperative to pay for expenses, such as schooling and consumer goods. They also find no evidence that growing maize for sale reduces subsistence food production, in part because nearly all rural households purchase the bulk of the food they consume, irrespective of whether they grow maize (Pritchard, Rammohan, and Vicol 2019).

Belton and Fang (2022) do find some evidence, however, to support Woods's (2020) conclusion that the smallest farmers benefit less from planting hybrid maize than do cultivators with more resources. This tendency is similar to the pattern, documented by Okamoto (2008, 199), that resulted from the widespread uptake of green gram cultivation for export in the 1990s by farmers close to Yangon, where "farmers of all sorts adopted the new crop, and since green gram provided a higher income per acre than paddy, it increased their incomes significantly." Okamoto concluded, "It may be true that income disparities among farmers increased when green gram was cultivated to the fullest extent, but this change was not entirely negative since it improved the economic circumstances of all classes of farmer."

In other settings, agricultural commercialization has been driven by external investors rather than smallholders. Investments in the central Dry Zone by Chinese citizens and wealthy Myanmar farmers growing watermelon—a capital-intensive commercial crop grown for export to China—have been facilitated by short-term leasing of land from smallholder farmers. These leases provide stable incomes to smallholders at rates above those typically earned from crop cultivation but leave soil degraded following heavy application of agrochemicals and polluted with plastic residues from mulching film (Kubo, Pritchard, and Phyo 2021).

Similar tendencies are reported in association with cross-border investments in banana cultivation in Kachin State, where Chinese companies and investors have leased cumulatively large areas of land to establish banana plantations for export to China. Intensive use of fertilizers and pesticides on these plantations has been linked to soil degradation, chemical runoff, and biodiversity loss. Some smallholders benefit by earning rental income, but some rental agreements have been obtained through coercion or deception, and many smallholders, particularly internally displaced persons, have lost land (Hayward et al. 2020).

Myanmar has a long history of land confiscation by the military and allied companies and individuals, for reallocation to agricultural concessions that were established with the stated intent of modernizing agriculture to increase productivity and raise export revenues. Thein and colleagues (2018) estimated that only 15 percent of the 3.9 million acres of land granted to agricultural concessions in Myanmar has been cultivated, with the remainder left idle, often after having been cleared of valuable timber. Using remote sensing techniques, Nomura and colleagues (2019) found similar results for oil palm concessions in southern Myanmar.

Land confiscation has displaced large numbers of smallholder farmers throughout Myanmar, with often devastating impacts on their livelihoods and welfare. For instance, in the Delta, the allocation of large tracts of paddy land formerly cultivated by smallholders and wetlands used for fishing to industrial-scale rice farming concessions and aquaculture companies led to dramatic reductions in the welfare of the affected households. These impacts included much lower incomes, high levels of food insecurity, withdrawal of children from school, and the permanent migration of entire households to Yangon (Mark and Belton 2020).

Thus, top-down forms of agricultural commercialization, whether imposed in response to policy decisions or initiated spontaneously in response to emerging economic opportunities, have tended to result in impacts on livelihoods that range from mixed at best to highly negative at worst. Bottom-up forms of agricultural commercialization instituted by smallholder farming households themselves in response to market opportunities for new crops that potentially offer higher earnings than traditional ones have also resulted in varied livelihood outcomes, but with a general tendency toward more positive results than the top-down forms of commercialization.

Even so, participation in the nonfarm economy may prove more decisive than agricultural commercialization in determining household welfare for smallholders. We expand on this point below.

### Nonfarm employment and migration

Returning to the case of maize cultivation in Shan, Belton and Fang (2022) found that participation in some forms of nonfarm work by maize cultivators—particularly own nonfarm enterprises and salaried work—were much more strongly associated with higher household incomes than crop farming. Similarly, Vicol, Pritchard, and Htay (2018) found that a small boom in export-led production of elephant yam in upland Chin State resulted in relatively minor changes to the overall status of livelihoods, with economic benefits accruing primarily to better-off households. Migration played a much more significant role in determining livelihood trajectories than did participation in yam cultivation. Kmoch and colleagues (2018) also found that households in Chin engaging in remittance and wage-oriented livelihood strategies realized higher incomes than those primarily involved in activities linked to agriculture and natural resources.

In some cases, participation in nonfarm work and migration may facilitate investments that improve agricultural productivity and support agricultural

commercialization. For instance, Faxon's (2020) detailed study of land and livelihoods in Kalay—a lowland district in Sagaing region, bordering Chin State—found that "[f]or many Chin families and a rising number of Burmans, labor migration provided an essential way to earn money that was reinvested in transforming the agrarian landscape" (64). This transformation included investments in commercially managed fishponds constructed on former rice paddy, as well as in rearing pigs and poultry, using remittances received from abroad. Remittances also supported the purchase and rental of agricultural machinery, which reduced demand for labor in a context of increasing labor scarcity precipitated by migration (Faxon 2020).

Land ownership (and, thereby, participation in agriculture) and welfare outcomes are increasingly becoming delinked in Myanmar. This tendency reflects high levels of participation in nonfarm activities by both landless and smallholder households and the difficulty of generating substantial returns from small areas of land. As noted above, Belton and Filipski (2019) found that average incomes earned by landless households in the Dry Zone were only marginally lower than those with small landholdings. Pritchard and colleagues (2019) reached similar results with respect to the relationship between land ownership, nonfarm employment, and food security—a key indicator of welfare—based on surveys in the Delta and the Dry Zone. Although they found that landowning households were more likely than landless households to be food-secure and have higher dietary diversity, crucially, they found no statistically significant relationship between land ownership and food security and diet diversity for households with landholdings less than 5 acres—around the median landholding for farms in both zones (Chapter 10).

Moreover, the same authors found that households participating in the nonfarm economy had superior food and nutrition security outcomes to those dependent exclusively on farming or agricultural labor, regardless of whether they were landed or landless (Pritchard, Rammohan, and Vicol 2019). Hence, while access to land remains an important factor in shaping food security, household participation in the nonfarm economy appears to be of greater importance. This is in large part because, as Pritchard and colleagues show, most food consumed by rural households is purchased, not self-produced. They also observe that the highly seasonal character of much agricultural work means that connections to the nonfarm economy become particularly important for household welfare during "lean periods," when little agricultural work or produce is available.

Considering the implications of the skewed distribution of land ownership for the composition of livelihoods in the Delta, Vicol and Pritchard

(2021) contend that strategies to address rural poverty and food insecurity that hinge on fostering smallholder-led agricultural development, productivity improvements, and commercialization are unlikely to catalyze significant change. The Delta's agrarian history has led to extremely high levels of landlessness, exceeding 50 percent and rising to 80 percent in some villages. Moreover, distribution of land is highly unequal, even among those who own it (Vicol and Pritchard 2021). This scenario means that "policies that prioritize smallholder-led market development will not generate the type of pro-poor outcomes required to address the Delta's pervasive rates of food insecurity and poverty" (Vicol and Pritchard 2021, 1). Rather, the authors contend that rural livelihoods are increasingly characterized by hybridity, diversity, and mobility. Rural development policies, to be effective, must be designed accordingly.

However, in the regional context of highly conflict-affected Kachin State, Forsyth and Springate-Baginski (2022) argue that neither agricultural commercialization nor livelihood diversification into nonfarm work currently offers significant opportunities to smallholders or the landless. Rather, they suggest that the main local beneficiaries of agricultural commercialization in Kachin State to date have been local landowners with access to large areas of forest land, which is customarily used for swidden but can be converted into cropland or plantations. Outside investors also have benefited through leasing land or obtaining agricultural concessions. Forsyth and Springate-Baginski (2022) contend that the nonfarm economy in Kachin offers few employment opportunities beyond dangerous work in jade or gold mining. Potentially lucrative nonfarm occupations, such as trading and fishing, tend to be controlled by migrants with strong ethnic and social ties that exclude locals. These observations underline the regional specificity of livelihoods, reflecting the influence of historical path dependence and the present-day incidence of constraining factors, including conflict.

Climate change also generates regionally specific shocks and stresses to livelihoods that may also induce income diversification. In the central Dry Zone—a region subject to very high climate risk—Phyo (2022) found that farm households have adapted to climate change by altering their agricultural practices and diversifying their livelihoods through nonfarm employment and migration. However, although climate change is an important factor influencing farmers' decision-making, other factors, such as crop price instability and nonfarm business and employment opportunities, are often prioritized over climate risks. Phyo concludes "in many cases, although farmers may be aware of the effects of climate change, their livelihood adaptations are motivated by

a wider array of concerns, which mitigate or even subvert their capacities to respond to climate challenges" (v).

## Vulnerability and resilience since 2020

This section draws on a mix of sources to evaluate trends in livelihood vulnerability and resilience since the onset of the triple crisis in 2020. Ferreira, Salvucci, and Tarp (2021) used a regional analysis of poverty dynamics in Myanmar during the period from 2015 to 2017 to infer likely impacts on welfare in the wake of the COVID-19 crisis. Analyzing nationally representative household survey datasets, the 2015 Myanmar Living Conditions Survey and the 2017 Myanmar Poverty and Living Conditions Survey, they found that poorer households were less integrated into the formal economy and more likely to be working solely in agriculture. The total number of poor people in rural areas was 6.7 times higher than in urban areas (10.2 million vs. 1.5 million), and rural poverty rates remained higher than urban ones (30 percent vs. 11 percent) in 2017.

The same authors found significant movement out of poverty between the two surveys, indicative of the high level of economic dynamism of this period. The probability that people who were poor in 2015 would exit poverty in 2017 was high, at above 40 percent, while the chance that individuals who were nonpoor in 2015 would become poor in 2017 was low, at about 6 percent. Only 20 percent of the population was poor in both 2015 and 2017, whereas more than 60 percent was nonpoor in both years. However, a large part of the population remained close to the poverty line in 2017: 14 percent of the population had consumption expenditure levels within 20 percent of the poverty line and 30 percent were within 50 percent of the poverty line. A large share of the population, thus, remained highly vulnerable to shocks, despite the rapid improvements in welfare that occurred during the reform period.

Consequently, the triple crisis of COVID-19, the coup, and subsequent price spikes has had devastating effects, rapidly reversing more than a decade's worth of gains in living standards. The economy contracted by 18 percent in 2021, following very weak growth in 2020, making the economy around 30 percent smaller than it would have been in the absence of COVID-19 and the coup (World Bank 2024). The estimated national poverty rate increased to about 50 percent (Diao and Mahrt 2020; MAPSA 2022), double that in 2017 and similar to 2005 levels. Headey and colleagues (2022) report even larger estimated increases in poverty rates, with two-thirds of sampled rural households and just under two-thirds of sampled urban households estimated

to fall below the poverty line by September/October 2020. In contrast, only 8 percent of sampled urban households had been poor in January 2020. More than 80 percent of households surveyed in September/October 2020 reported a drop in income since the beginning of the year (Headey et al. 2022). Loss of employment was one of the main channels of impact, with households relying on informal jobs and remittances being most heavily affected (Diao and Mahrt 2020).

Prior to the onset of COVID-19, migration offered a means for migrants and their households to manage shocks and risks and seek upward mobility (Okamoto 2020). The crisis rendered households heavily dependent on remittances especially vulnerable to losses of income. The pandemic severely curtailed the ability of domestic and international migrants to send remittances. Job losses were very common, with the informal nature of most migrant work meaning that few migrants had access to any employment protection or safety nets (Suhardiman et al. 2021). Reportedly, 43 percent of women and 47 percent of men migrants returning to Myanmar during the COVID-19 pandemic had lost their jobs prior to their return, with significant impacts experienced in all sectors of work populated by migrants (IOM 2020). Eighty-three percent of returned internal migrants and 67 percent of returned international migrants reported that they had no savings, and 50 percent reported being in debt, compounding economic challenges for their households. Nevertheless, more than half of returnees (55 percent) planned to re-migrate, with most of these intending to do so as soon as possible (IOM 2020).

Internal and international migration—whether forced for political and security reasons or voluntary for economic ones—has accelerated sharply since the coup (Tun 2022). This new pattern of migration reflects how the economic shock associated with COVID-19 has been compounded by the even more profound shock of widespread political repression and conflict.

As discussed in Chapter 1, conflict increased across Myanmar throughout 2022, affecting states and regions including Bago, Chin, Kayah, Kayin, Magway, Mandalay, Rakhine, and Sagaing (Figure 1.6). The most heavily conflict-affected areas are on Myanmar's periphery and are also among those least touched by the economic dynamism of the decade preceding the crisis. Households in these areas were considerably more likely to remain poor between 2015 and 2017 than households in other areas of the country and, correspondingly, remained more vulnerable to falling below the poverty line (Ferreira, Salvucci, and Tarp 2021). Thus, the most conflict-affected areas of Myanmar at present are also those with the most persistent poverty and the highest levels of vulnerability. They are also among those with the most

limited access to infrastructure and services and the most limited scope for livelihood diversification prior to the crisis (Forsyth and Springate-Baginski 2022; Vicol, Pritchard, and Htay 2018), underlining how histories of conflict have compounded and entrenched regional inequalities.

## Conclusions

Since 2010, Myanmar has undergone two political and economic sea changes in quick succession, with the negative effects of the latter compounded by the global COVID-19 pandemic and inflationary crises. These changes gave rise to an extremely tumultuous period, during which rapid but uneven growth, development, and rural transformation were followed by a violent reversal of fortunes that elevated poverty rates and intensified underlying vulnerabilities. These upheavals are reflected in the shifting livelihood patterns described above. Many rural households benefited from new possibilities and economic opportunities in the period of reform and economic growth, only to face acute challenges and correspondingly large declines in welfare subsequently.

The trends outlined above suggest that longstanding geographic inequalities in opportunity and welfare will continue to widen over at least the medium term in the face of conflict and repression, with internal displacement and economic imperatives expanding migration flows (Chapter 15). Such a scenario will leave the rural economy much diminished relative to the pre-crisis period, increasing the importance of migration for sustaining the welfare of rural households. However, it will also leave households that are heavily reliant on migrant remittances vulnerable to any future shocks that curtail the movement of people or their ability to find work.

Prior to the triple crisis, the nonfarm economy was a major driver of growth in rural incomes and key to lowering poverty. Households with both agricultural and nonfarm income were generally less poor and more food-secure than households dependent solely on farm income. The economic contraction outlined above is likely to have narrowed this advantage, as many households that benefited from nonfarm business activities or employment pre-crisis have experienced substantially reduced income-earning opportunities.

As the nonfarm economy falters in response to depressed demand for goods and services, agriculture will likely continue to provide inadequate levels of food and income for most smallholders. However, the sector may attain greater significance among the range of livelihood strategies rural households pursue than in the recent past, given the paucity of other options. Smallholder agriculture can provide a buffer against shocks affecting nonfarm activities,

such as migration. Agricultural livelihoods appear likely to remain more resilient than those in the rural nonfarm economy during the current crisis despite the constraints that farming households face. Agriculture is worthy of continued attention and support to help maintain its role in underpinning rural livelihoods.

Moreover, as difficult as the situation in Myanmar currently is, evidence from the dynamic period prior to 2020 indicates that many rural people will respond to new economic opportunities where these arise, whether on-farm or off-farm. Both sectors are critical to current survival and offer a basis for future recovery if political circumstances improve.

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