

INTRODUCTION

Duncan Boughton, Ben Belton, Isabel Lambrecht, and Bart Minten

A decade of rapid, albeit uneven, progress in Myanmar's economic development was thrown into reverse by a series of shocks that began with the COVID-19 pandemic in early 2020. The pandemic was followed by the military coup of February 2021 and the global food, fuel, and fertilizer supply crisis spurred by the armed conflict in Ukraine that began a year later. The coup led to a surge in conflict around the country, hampering and often devastating the livelihoods of the population at large while also causing the internal displacement of about 2.3 million people by the end of 2023, adding to those displaced during prior conflicts (UNHCR 2024). The sharp depreciation of Myanmar's currency since the coup multiplied the inflationary impact of international price increases for fuel, fertilizer, and imported vegetable oils, causing inflation to spiral upward even as employment opportunities withered. By late 2023, over 70 percent of the population was estimated to be in poverty (MAPSA 2024), more than double the 2017 poverty rate of 25 percent (CSO, UNDP, and World Bank 2019).

Though Myanmar's agrifood system was not left unscathed by these shocks, it has proved resilient. Agriculture and the rural economy are essential to Myanmar's development, as 70 percent of the population and 87 percent of the country's poor live in rural areas (MOPF and World Bank 2017a). Agriculture and its associated agro-industries form a key sector of the national economy, employing half of the total labor force and contributing one-third of national GDP—about 23 percent directly in farm incomes and another 11 percent in agro-processing, distribution, marketing, exports, and food retailing (Chapter 2). Ekanayake, Ambrosio, and Jaffee (2019) estimate that nearly half of Myanmar's poverty reduction between 2005 and 2015 was attributable directly to progress in agriculture. Therefore, a well-functioning agrifood system is crucial to the welfare and food security of Myanmar's residents.

The analyses presented in this book fill an important knowledge gap for one of Southeast Asia's major agricultural economies—one largely closed to

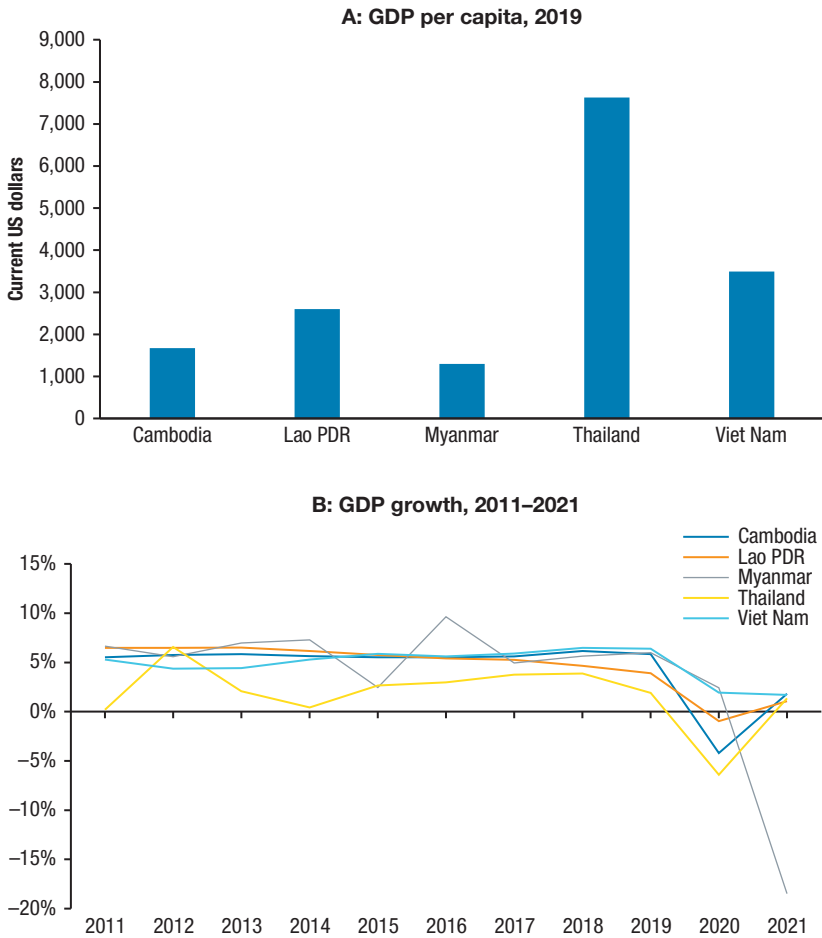
empirical research for several decades. Myanmar is better endowed with land and water resources than many countries in the region, with considerable arable land per person, much of it irrigable, and generally reliable seasonal precipitation patterns that are suited for crop production. However, the performance of its agrifood system lags behind those of neighboring countries. The contributors to this book combine data from standard household and enterprise surveys conducted during the 2015–2020 period with more recent phone surveys and a mix of analytical approaches to provide empirical insights into patterns of rural transformation over the succession of recent crises and to examine how the impacts of disease, conflict, international commodity price surges, and domestic policy changes have interacted to unravel livelihoods and dramatically worsen welfare. This understanding is useful for guiding near-term humanitarian assistance interventions and, if there is a resolution to the current crisis that ensures lasting peace and good governance, the design of future inclusive and sustainable growth strategies.

This introductory chapter places Myanmar’s development in a regional context and describes the timeline and nature of the crises that later chapters will explore in depth. We then outline the specific objectives of the book and its organization, concluding with a brief overview of the data sources used for the analyses presented in the following chapters.

Myanmar’s development in regional context

Independent since 1948 and known as Burma until renamed by the military junta in 1989, Myanmar has yet to evolve into a unified national state (Myint-U 2019). Its economic development has also been held back by decades of military rule, ethnic conflict, and centralized planning (Brown 2012; Fujita and Okamoto 2009). In 2019, Myanmar’s per capita GDP was just under \$1,300. By comparison, Cambodia, Myanmar’s poorest neighbor, had a per capita GDP of almost \$1,700, Lao People’s Democratic Republic (PDR) was almost double at \$2,600, and Viet Nam at almost \$3,500 and Thailand at more than \$7,500 were even higher (Figure 1.1, panel A).

Myanmar’s low per capita GDP reflects the delayed structural transformation of its economy. At the turn of the millennium, agriculture, forestry, and fishing combined accounted for the largest share of its GDP at 57 percent. Comparable shares for Myanmar’s poorest neighbors, Cambodia and Lao PDR, were 34 percent and 33 percent, respectively. The figure for Viet Nam was just 23 percent, while in Thailand, the share of its economy made up

FIGURE 1.1 Myanmar's GDP, 2019, and GDP growth, 2011–2021, in a regional context

Source: Data from World Bank (2024a).

Note: Lao PDR = Lao People's Democratic Republic.

by agriculture had fallen to single digits a decade before. As discussed in Chapter 3, Myanmar's agriculture sector was underperforming due to low productivity, high inequality in land access, and underinvestment in transport infrastructure.

Although it took catastrophic Cyclone Nargis in 2008 to trigger meaningful change,¹ Myanmar's development policies finally turned a corner under the quasi-civilian Union Solidarity and Development Party (USDP) government beginning in 2011. In contrast with earlier economic reforms during which market liberalization efforts were accepted as a macroeconomic necessity, these were now fully embraced to promote foreign direct investment and spur economic growth. From 2011 to 2019, Myanmar's economic growth was among the highest in Southeast Asia (Figure 1.1, panel B). The opening of the country to international mobile phone service providers; relaxation of import restrictions on nearly all goods, including vehicles; reform of the banking sector; loosening of restrictions on internal movement and migration; and expansion of education opportunities combined to dramatically change the economy. Major investments in road and energy infrastructure were also made—although these were geographically biased toward Bamar-majority regions of the country (Chapter 18 discusses regional development patterns). A national land use policy was also formulated with broad engagement by civil society, focusing on more equitable and secure access to land resources (Chapter 6).

The transition that took place in Myanmar was not without its limitations. The USDP administration arguably laid much of the groundwork for continued reform under the National League for Democracy government that took office in 2016. The poverty headcount fell dramatically from 48.2 percent in 2005 to 24.8 percent in 2017. However, there was a large gap between rural and urban poverty headcounts of 30.2 percent and 11.3 percent, respectively (MOPF and World Bank 2017b). Moreover, the rate of poverty reduction was modest relative to its economic growth and, therefore, less pro-poor and inclusive than it might have been (World Bank 2019).

The transition also failed to establish a fully democratic system. The Myanmar Armed Forces (MAF) continued to play a large role in ruling the country; it still controlled the security forces, key cabinet positions, and 25 percent of the seats in the national and regional legislatures (Crouch 2020; Thawngmung 2019). Further, conflict continued in many ethnic states, and in Rakhine State it flared up significantly in 2016 and 2017 (Thawngmung 2019).

1 See Warr and Aung (2019) for an analysis of the impact of Cyclone Nargis on poverty and inequality.

Multiple shocks, multiple consequences

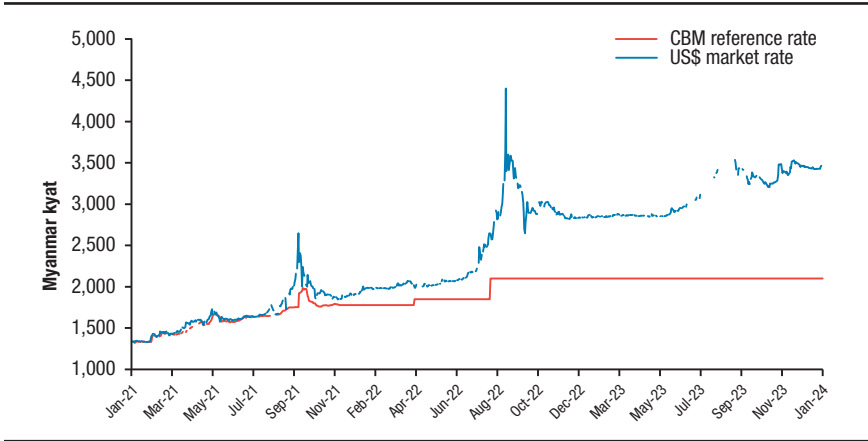
Myanmar has endured three types of shocks since early 2020: the COVID-19 pandemic, economic and social disruption following the military coup and subsequent widespread conflict, and international commodity price surges. These led to dramatic declines in economic growth, resulting in an estimated 18 percent contraction of Myanmar's economy in 2021, as measured by GDP per capita (Figure 1.1). These shocks have overlapped in time, magnifying their economic effects. For example, the rapid depreciation of the Myanmar kyat after the military coup multiplied the impact of international commodity prices on domestic inflation. Figure 1.2 illustrates the fast depreciation of the Myanmar kyat against the US dollar since the beginning of 2021. While the kyat was traded at around K1,300/\$1.00 at the beginning of 2021, its official value had declined by 60 percent by September 2022 to K2,100/\$1.00. Informal market rates were K3,500/\$1.00 at the end of 2023.

The earliest reports of COVID-19 coincided with the beginning of the 2019/20 tourist season, resulting in large-scale trip cancellations. Social distancing measures were introduced as awareness grew of the potential for disease spread. Wet markets remained open to maintain access to food. However, the closure of international borders and uncoordinated road closures by local authorities led to the loss of perishable produce. In early April 2020, the government ordered a three-week nationwide shutdown to coincide with the annual water festival and traditional New Year celebrations, cognizant of the country's very constrained health system resources and the population's reliance on public transport during these holidays.

The pandemic response had an immediate impact on Myanmar's economy, as well as on poverty. Closures and reduced operations in industries and small and medium nonfarm businesses led to significant reductions in household incomes (Diao and Mahrt 2020; World Bank 2024b). Further, border closures and lockdown measures reduced out-migration, while at the same time many internal and international migrants decided to return home. Remittance flows decreased significantly, reducing household income and cutting off an important social safety net (ILO 2020).

One way to visualize the effects of successive waves of COVID-19 is to use Google Community Mobility data, made publicly available from the inception of the pandemic until October 2022. Figure 1.3 shows changes in the percentage of phone users who stayed at home from early 2020 to late 2022 relative to a five-week baseline period at the beginning of 2020 prior to the widespread emergence of COVID-19.

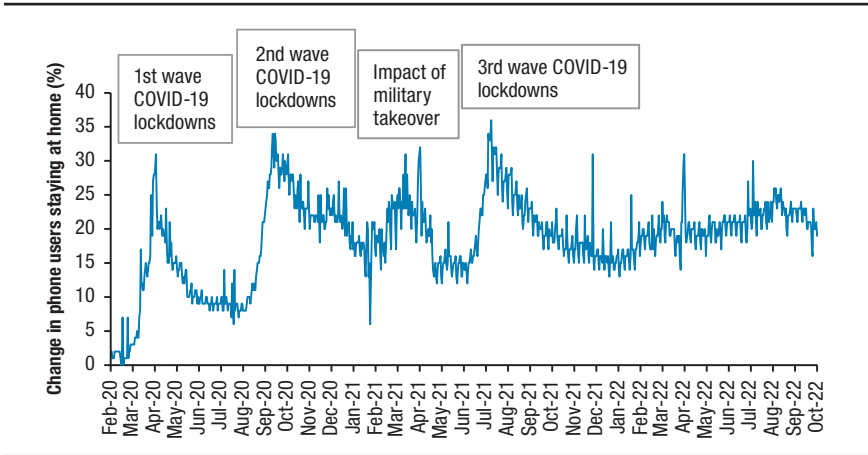
FIGURE 1.2 Myanmar kyat, official and market exchange rates to US dollar, 2021–2023



Source: Data from CBM (2023), private money changers.

Note: CBM = Central Bank of Myanmar.

FIGURE 1.3 Shocks to Myanmar’s economy, 2020–2022



Source: Based on data from Google (2022).

Note: Y-axis measures the percentage change relative to February 2020 in the extent to which phone users stayed at home.

The government moved quickly to establish a COVID-19 Economic Recovery Plan (CERP) to mitigate the economic consequences of the pandemic (GoM 2020). CERP focused initially on COVID-19’s impact on urban sectors of the economy, such as the closure of garment factories, which employed more than half a million workers. However, with the nation’s rice supply dependent on the monsoon growing season and concerns about the potential effects of lost migrant worker remittances on farm household

input purchases, CERP expanded the seasonal loans provided through the Myanmar Agricultural Development Bank. As a result of such proactive measures to support the economy, combined with effective public health campaigns, the economic effects of shutdowns on the agrifood system were relatively transient during the initial COVID-19 wave and during a second wave from September to December 2020 (Boughton et al. 2021).

The impacts of the military coup on February 1, 2021, had consequences of an entirely different scale and duration. Although the first few weeks saw little bloodshed, widespread protests and the emergence of a national Civil Disobedience Movement resulted in a shutdown of the health and education sectors, manufacturing, and the banking system. Given that the economy, especially the informal sector, depends heavily on cash transactions, the banking shutdown quickly and widely disrupted economic activity. Large queues formed at automated teller machines, withdrawal amounts were limited, and tokens were allocated to ration access to cash. The Myanmar kyat depreciated rapidly (Figure 1.2).

In mid-2021, a third wave of COVID-19—the highly contagious and lethal Delta variant—began during this political and economic chaos (Figure 1.3). Most civilian hospitals were closed or seriously understaffed, and the country also had extremely limited domestic supplies of medical oxygen. While accurate statistics on total infections and deaths are unavailable, reported cases and deaths soared in July and August 2021 (WHO 2023). Compared to earlier COVID-19 waves, the financial resources of affected households were heavily drained by medical and funeral expenses and by lost work opportunities for family members who had to care for sick relatives. Whereas previous waves had primarily affected urban centers, the breakdown of public health services and lack of adherence to disease prevention measures, combined with the much more contagious nature of the variant, meant that rural areas saw more severe impacts during this third wave.

Russia's invasion of Ukraine on February 24, 2022, just over a year after the military coup in Myanmar, resulted in a further surge in international commodity prices. By mid-April, the US dollar price of urea fertilizer, crucial for agricultural production, was 180 percent higher than a year earlier (Baffes and Koh 2023). Price increases of imported fertilizer were further exacerbated by international freight rates, which more than doubled because of COVID-19 disruptions to shipping. Increased international fuel prices—approximately 60 percent higher in US dollars in April 2022 compared with a year earlier—added to in-country distribution costs (Trading Economics 2023). The domestic price of fertilizer was further affected by the depreciation of the kyat

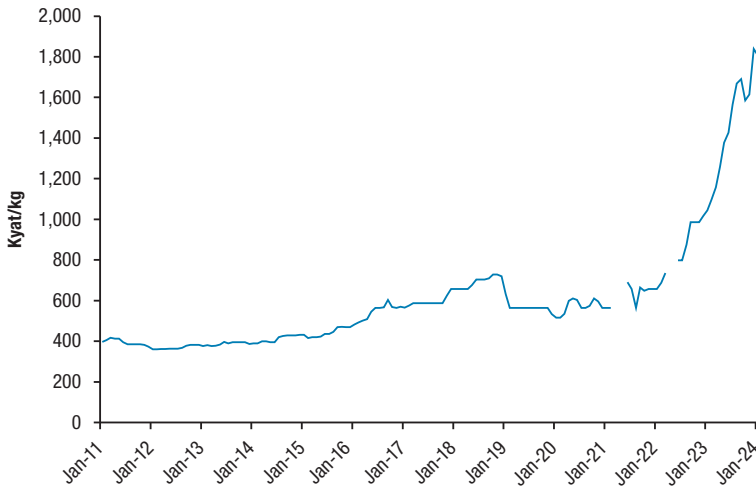
following the coup. In the year to August 2022, it lost more than half its value on the parallel market.

Myanmar's consumers were also negatively affected by food price inflation, which peaked at an annual rate close to 40 percent a year after the coup (MAPSA 2022a). The price of rice—the country's basic staple—increased steadily from 2021 through 2023. By December 2023, its price in Yangon's retail markets was three times higher than before the coup (Figure 1.4). International rice prices increased by 30 percent over the same period.² Farmgate prices for rice did not change as much. However, increased transaction costs contributed significantly to the rise in retail prices (Minten et al. 2023). Retail prices for other commodities also rose dramatically. Myanmar depends heavily on imported vegetable oil, so the combination of international price increases and disruptions to palm oil imports from Indonesia led to a quadrupling of domestic vegetable oil prices (MAPSA 2022b).

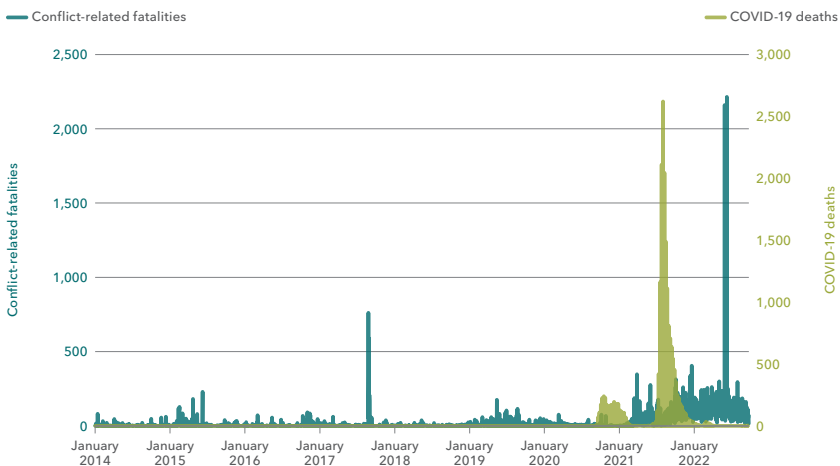
Adding to the economic disruption, violent conflict widened geographically as armed resistance to the coup expanded in the wake of regime crack-downs on street protests. Myanmar has long been plagued by repressive military rule and armed conflict—often, but not limited to, conflicts between the MAF and ethnic armed organizations (EAOs). In the two decades prior to the 2011 transition, MAF tried to contain EAOs through military offensives, ceasefires, and clientelism (Stokke et al. 2022). The strategy was largely the same after 2011 but was carried out within the new political context. The result was continued ethnic conflict across the country. Figure 1.5 gives an overview of the change in the number of fatalities because of violent events since 2014. While ceasefires slowed conflict in Kayin and Shan States, negotiations failed in Kachin and northern Shan States, where hostilities resumed with significant clashes in 2015 and 2019 (ACLED 2022). The August 2017 spike in fatalities in Figure 1.5 reflects violence between MAF and the Rohingya in Rakhine State.

However, the course of these conflicts altered after the February 2021 military coup. The tenuous ceasefire agreements that had held conflict at bay during civilian government rule collapsed, and violence resumed or intensified between MAF and EAOs (Stokke et al. 2022). The ousted leaders of the civilian government, as well as activists from ethnic groups, formed the People's Defense Force and declared war on the MAF. Figure 1.5 shows a sharp increase in fatalities in 2021 and a further spike in 2022. In this period, the

² The Indica rice price index was 118.5 in December 2020 and 154.3 in December 2023 (FAO 2023a).

FIGURE 1.4 Retail price of rice in Yangon (Emata variety, medium), 2011–2023

Source: Data from FAO (2023b).

FIGURE 1.5 Security and health shocks per month in Myanmar, 2014–2022

Source: ACLED (2022); WHO (2023).

Myanmar military bombed and burned hundreds of villages, reprising the tactics it had used previously in confrontations with ethnic minority groups and that had provoked a mass exodus of Rohingya in 2017. This also led to a surge in internal displacements during 2022.

Conflict erupted in townships that war had touched since Myanmar's independence, as illustrated in Figure 1.6 (ACLED 2022). In March 2021, fighting broke out in Sagaing and Mandalay Regions. By May 2021, this conflict had spread to Chin State and Magway Region. In the southeast, fighting broke out in Bago Region in March 2021 and Kayah and Kayin States in May 2021. Fighting commenced in Mon State, Tanintharyi Region, and southern Shan State in September 2021, though at a comparatively lesser scale. In Kachin, intense fighting began right after the coup and then picked up again in mid-2022. Additionally, tensions between MAF and the Arakan Army are growing in Rakhine State and southern Chin State. Intermittent fighting has been recorded in those areas since June 2022 (OCHA 2022).

In addition to these recent shocks, Myanmar is susceptible to climate shocks, including cyclones, erratic monsoons, irregular rainfall, droughts and floods, and high winds. It is already experiencing the negative consequences of climate change. Globally, the country is ranked among the three countries most vulnerable to climate change and extreme weather events because of the large proportion of its population that lives in hazard-prone areas, its geographic location, and its socioeconomic conditions (UNDRR 2015). Between 2000 and 2019, the country had 14.4 fatalities related to climate shocks per 100,000 inhabitants—10 more fatalities than the next most affected territory, Puerto Rico (Eckstein, Künzel, and Schäfer 2021).

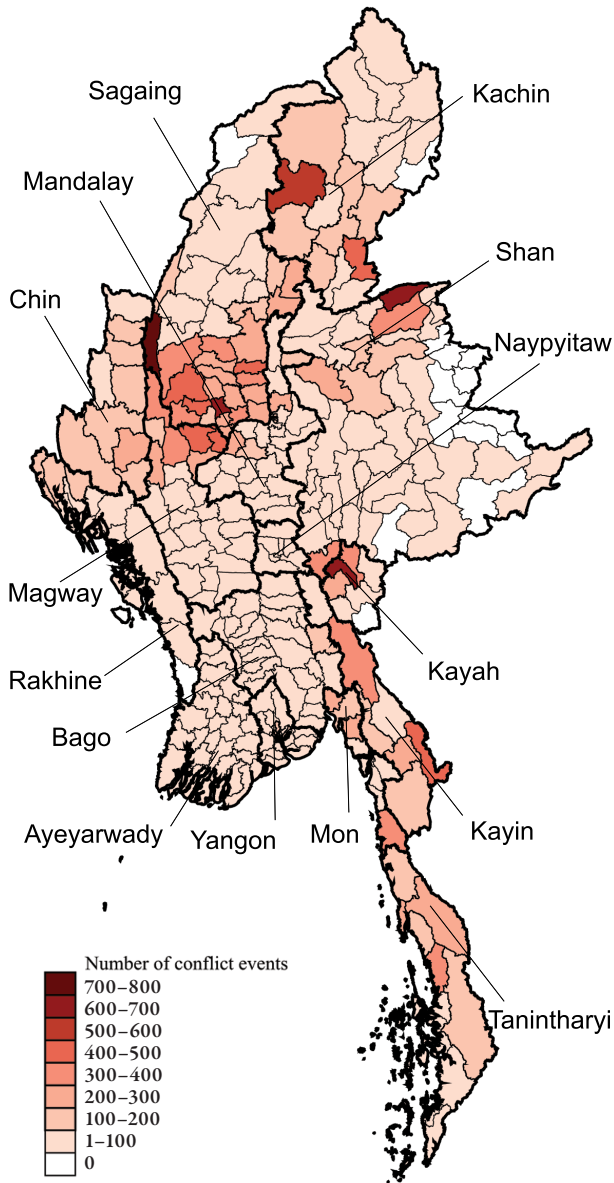
The most extreme climate event in Myanmar's recent history was Cyclone Nargis in 2008, which killed more than 138,000 people in the Ayeyarwady Delta (Thawngmung 2019). The country has been fortunate to avoid a major negative weather event amid the succession of recent shocks, but one (or more) could occur at any time. Given the erosion of household resilience since 2020, another cyclone like Nargis would cause devastation on a scale that neither the country nor its development partners are in any position to manage.

Objectives and roadmap for the book

A decade of empirical research on Myanmar's agrifood system enables us to address the following objectives in this book:

- To provide an overview of the evolution of Myanmar's agrifood system and its role in the economy prior to and during the recent crises (Chapters 1–3).
- To measure welfare outcomes in terms of poverty and nutrition for different household types and the factors associated with them (Chapters 4 and 5).

FIGURE 1.6 Conflict events reported by township, 2021–2022



Source: ACLED (2022).

Note: Number of battles, violent incidents, or explosions reported.

- To examine the performance of specific components of the agrifood system: farm-level production, upstream input supply and mechanization services, downstream processing, retailing, and international trade (Chapters 6–14).
- To understand, through gender, youth, and ethnicity lenses, the regional dynamics of rural livelihoods and the interaction between land access, migration, and farm and nonfarm employment (Chapters 15–18).
- To identify investments and policies needed for Myanmar’s agrifood system to serve as a springboard for recovery and long-term economic development (Chapter 19).

Addressing the first objective, Chapter 2 measures the contribution of the agrifood system as a whole to economic growth and employment in Myanmar. The authors use economywide modeling to identify which agricultural value chains have the potential to drive inclusive economic growth and improved nutritional outcomes in the future. Chapter 3 takes a retrospective look at agricultural performance to identify structural impediments and policy and investment gaps on the supply side that have prevented the agrifood system from fulfilling its potential.

Addressing the second objective, Chapter 4 examines household consumption and nutrition, focusing on how recent food price inflation and income losses have undermined food and nutrition security. Possible interventions to mitigate the potentially serious long-term consequences are identified. Chapter 5 examines the impact of different kinds of shocks—conflict, climate, health, and economic—on household income and welfare and how household coping strategies have evolved in response. These chapters reveal a high degree of fragility in livelihoods in the face of multiple shocks that affect the demand side of the agrifood system, despite a relatively resilient supply side.

The following four chapters characterize the farm production components of the agrifood system. Chapter 6 analyzes the distribution, tenure, and use of agricultural land across the main agroecological zones in Myanmar and evaluates the influence of successive land policy regimes on land access. Chapter 7 documents the rapid rise of agricultural mechanization in Myanmar in the decade prior to 2020 and analyzes the factors associated with this dramatic change and its implications for agricultural households and workers. The chapter also addresses changes in access to mechanization services since the onset of COVID-19. Chapter 8 examines the regional distribution,

productivity, profitability, and extent of technology adoption in Myanmar's major crops, including rice, pulses, and maize, highlighting reasons for underperformance and recommendations for improvement. Chapter 9 documents the characteristics of livestock and fisheries, two of Myanmar's most dynamic high-value agrifood sectors, assessing both traditional small-scale producers and more specialized production systems and their contributions to rural employment and national nutrition security.

The next five chapters examine upstream and downstream linkages connecting farm production to the rest of the agrifood system. Chapter 10 examines changes in farm commercialization over time, giving close attention to fertilizer (the most important purchased input in value terms), marketed crop surpluses, and the factors associated with farmer marketing decisions. Chapter 11 focuses on the structure and performance of the rice value chain. Chapter 12 contrasts the dynamism of the maize–poultry–fish value chain nexus with challenges facing the oilseeds and pulses value chains in a context of market liberalization. Chapter 13 drills down into the food processing sector, which accounts for more than half of all registered industrial enterprises in the country, analyzing the underlying drivers of domestic and international demand for processed food products. Chapter 14 examines trends in international trade for Myanmar's agricultural products broadly, noting the constraints imposed by the unpredictable trade practices of the country's larger neighbors. An overall picture emerges of a sector struggling to realize its potential for adding value to farm produce due to internal and external constraints.

The final chapters examine rural and urban livelihoods more broadly, applying a gender lens and considering how migration and off-farm employment complement regional agrifood system constraints and opportunities. Chapter 15 provides insights into the widespread phenomenon of rural out-migration using data collected in different parts of the country between 2015 and 2019 and through phone surveys during the recent crises. Migration has been and continues to be critical in sustaining or improving rural livelihoods in Myanmar. Chapter 16 looks beyond farming as the main livelihood in rural areas and shows a vibrant rural nonfarm economy, though one that is inevitably affected by the ongoing crises. Chapter 17 spotlights women and youth, using nationally representative data to demonstrate their importance to the country's agricultural production. Chapter 18 provides a more detailed synthesis of the regional diversity of rural development and livelihoods, emphasizing the uneven development paths seen both across and within regions.

Chapter 19, the concluding chapter, points to implications from the analysis for future policy and public investment priorities to enable the agrifood system to support recovery and economic growth.

Data sources

The analysis in this book uses a wide range of primary sources (Table 1.1). Research between 2015 and 2019 was undertaken using household surveys in purposefully selected townships in four agroecological zones. These were combined with stacked value chain surveys for several important agricultural commodities. The data, survey instruments, and related documentation are publicly available on Harvard Dataverse under the Myanmar Food Security Policy Project (MFSPP) data series (Harvard Dataverse 2020).

From the onset of COVID-19 in early 2020, non-random phone surveys of actors at all stages in the agrifood system were conducted at frequent intervals. In addition, a 12-round panel phone survey of 2,000 households was conducted over the same period.

Beginning in late 2021, a multi-round nationally and regionally representative phone survey of approximately 12,000 households, the Myanmar Household Welfare Survey (MHWS), was launched under the Myanmar Agriculture Policy Support Activity (MAPSA). A multi-round survey of approximately 5,500 farm households belonging to the same sample, the Myanmar Agricultural Performance Survey (MAPS), was also launched. These data, survey instruments, and related documentation are publicly available on Harvard Dataverse under the IFPRI Dataverse data series (Harvard Dataverse 2024).

We also rely on secondary data, including from national household surveys conducted by the Central Statistical Organization (CSO) (Table 1.1). The Myanmar Living Conditions Survey (MLCS), fielded in 2017, is a comprehensive household survey that provides information on the living conditions of the people of Myanmar and agricultural practices across the country (CSO 2019). It provides data representative of the country and at the level of its states and regions. In total, 13,730 households participated in the survey. We also rely on the food consumption module of the nationally representative Myanmar Poverty and Living Conditions Survey (MPLCS), fielded in 2015 (MOPF and World Bank 2017a, 2017b; World Bank 2024b). MPLCS is a cross-sectional household survey that contains data from 3,658 households interviewed between January and April 2015.

TABLE 1.1 Major data sources used in this book

Dataset	Year	Zone
Myanmar Food Security Policy Project (MFSPP)		
Aquaculture	2016	Delta
Pulses and oilseeds	2017	Dry Zone
Maize	2018	Shan
Poultry and pigs	2019	Yangon
Myanmar Agriculture Policy Support Activity (MAPSA)		
Value chain agents	2020–2022	National
Social Accounting Matrix (SAM)	2021	National
Myanmar Household Welfare Survey (MHWS)	2022	National
Myanmar Agricultural Performance Survey (MAPS)	2022	National
Central Statistical Organization (CSO)		
Myanmar Poverty and Living Conditions Survey (MPLCS)	2014–2015	National
Myanmar Living Conditions Survey (MLCS)	2017	National

Source: Compiled by authors.

Together, these primary and secondary datasets provide a strong foundation for analyses to address the book’s objectives. More details on these surveys are provided in the Appendices.

References

- ACLED (Armed Conflict Location & Event Data). 2022. ACLED database. Accessed December 15, 2024. <http://acleddata.com>
- Baffes, J., and W.C. Koh. 2023. “Fertilizer Prices Ease but Affordability and Availability Issues Linger.” World Bank blog, January 5. Washington, DC: World Bank.
- Boughton, D., J. Goeb, I. Lambrecht, et al. 2021. “Impacts of COVID-19 on Agricultural Production and Food Systems in Late Transforming Southeast Asia: The Case of Myanmar.” *Agricultural Systems* 188: 103026.
- Brown, I. 2012. *Burma’s Economy in the Twentieth Century*. Cambridge, UK: Cambridge University Press.
- CBM (Central Bank of Myanmar). 2023. “Reference Exchange Rate.” February 25. <https://forex.cbm.gov.mm/index.php/fxrate>
- Crouch, M. 2020. “Pre-emptive Constitution-Making: Authoritarian Constitutionalism and the Military in Myanmar.” *Law and Society Review* 54 (2): 487–515.

- CSO (Central Statistical Organization). 2019. *Myanmar Living Conditions Survey 2017: Report 02: Technical Report*. Nay Pyi Taw.
- CSO, UNDP (United Nations Development Programme), and World Bank. 2019. *Myanmar Living Conditions Survey 2017: Report 03: Poverty Report*. Nay Pyi Taw.
- Diao, X., and K. Mahrt. 2020. "Assessing the Impacts of COVID-19 on Household Incomes and Poverty in Myanmar: A Microsimulation Approach." Myanmar Strategy Support Program Working Paper 2. International Food Policy Research Institute (IFPRI), Washington, DC.
- Eckstein, D., V. Künzel, and L. Schäfer. 2021. *Global Climate Risk Index 2021*. Briefing Paper. Bonn, Germany: Germanwatch.
- Ekanayake, I.J., A.M. Ambrosio, and S.M. Jaffee. 2019. *Benchmarking of Myanmar's Food Systems: Evidence and Strategic Directions*. Washington, DC: World Bank.
- FAO (Food and Agriculture Organization of the United Nations). 2023a. FAOSTAT database. Accessed 2023. www.fao.org/faostat
- FAO 2023b. "Food Price Monitoring and Analysis (FPMA) Tool." Accessed December 2024. <https://fpma.fao.org/giews/fpmat4/#/dashboard/tool/domesticFAO>
- Fujita, K., and I. Okamoto. 2009. "Overview of Agricultural Policies and the Development in Myanmar." In *The Economic Transition in Myanmar After 1988: Market Economy Versus State Control*, eds. K. Fujita, F. Mieno, and I. Okamoto, 169–215. Singapore: National University of Singapore Press.
- GoM (Government of the Republic of the Union of Myanmar). 2020. *Overcoming as One: COVID-19 Economic Relief Plan*. Nay Pyi Taw.
- Google. 2022. "Google COVID-19 Community Mobility Reports." www.google.com/covid19/mobility/
- Harvard Dataverse. 2020. "Myanmar Food Security Policy Project Dataverse." <https://dataverse.harvard.edu/dataverse/FSPP>
- Harvard Dataverse. 2024. "IFPRI Dataverse." <https://dataverse.harvard.edu/dataverse/IFPRI?q=Myanmar>
- ILO (International Labour Organization). 2020. *COVID-19: Impact on Migrant Workers and Country Response in Myanmar*. Geneva.
- MAPSA (Myanmar Agriculture Policy Support Activity). 2022a. *Monitoring the Agri-food System in Myanmar: Food Vendors - March 2022*. Myanmar Strategy Support Program Research Note 78. Washington, DC: MAPSA, IFPRI.
- MAPSA. 2022b. *Monitoring the Agri-food System in Myanmar: Understanding the Rapid Price Increase of Vegetable Oils*. Myanmar Strategy Support Program Research Note 77. Washington, DC: MAPSA, IFPRI.

- MAPSA. 2024. *Livelihoods and Welfare: Findings from the Sixth Round of the Myanmar Household Welfare Survey*. Myanmar Strategy Support Program Working Paper 53. MAPSA, IFPRI, Washington, DC.
- Minten, B., J. Goeb, K.Z. Win, and P.P. Zone. 2023. "Agricultural Value Chains in a Fragile State: The Case of Rice in Myanmar." *World Development* 167: 106244.
- MOPF (Ministry of Planning and Finance) and World Bank. 2017a. *An Analysis of Poverty in Myanmar: (Part 1) Trends between 2004/05 and 2015*. Nay Pyi Taw: MOPF.
- MOPF and World Bank. 2017b. *An Analysis of Poverty in Myanmar: (Part 2) Poverty Profile*. Nay Pyi Taw: MOPF.
- Myint-U, T. 2019. *The Hidden History of Burma: Race, Capitalism, and the Crisis of Democracy in the 21st Century*. London: Atlantic Books.
- OCHA (United Nations Office for the Coordination of Humanitarian Affairs). 2022. *Myanmar Humanitarian Update No. 23, 31 October 2022*. Yangon, Myanmar.
- Stokke, K., K.K. Moo Kham, N.K.L. Nge, and S.H. Kvanvik. 2022. "Illiberal Peacebuilding in a Hybrid Regime: Authoritarian Strategies for Conflict Containment in Myanmar." *Political Geography* 93: 102551.
- Thawngmung, A.M. 2019. *Everyday Economic Survival in Myanmar. Economic Perspectives in Southeast Asian Studies*. Madison, WI: University of Wisconsin Press.
- Trading Economics. 2023. "Gasoline." Accessed January 2024. <https://tradingeconomics.com/commodity/gasoline>
- UNDRR (United Nations Office for Disaster Risk Reduction). 2015. *Global Assessment Report on Disaster Risk Reduction 2015*. New York.
- UNHCR (United Nations High Commissioner for Refugees). 2024. "Myanmar UNHCR Displacement Overview 05 Feb 2024." <https://data.unhcr.org/en/documents/details/106598>
- Warr, P., and L.L. Aung. 2019. "Poverty and Inequality Impact of a Natural Disaster: Myanmar's 2008 Cyclone Nagris." *World Development* 122: 446–461.
- WHO (World Health Organization). 2023. "COVID-19 Myanmar." WHO Health Emergency Dashboard. <https://covid19.who.int/region/searo/country/mm>
- World Bank. 2019. *Myanmar—Economic Transition amid Conflict*. Washington, DC.
- World Bank. 2024a. "World Bank Open Data." <https://data.worldbank.org/>
- World Bank. 2024b. World Development Indicators database. Accessed 2023. <https://databank.worldbank.org/data/source/world-development-indicators>

