# THE MYANMAR BUSINESS ENVIRONMENT INDEX 2020

*Measuring Economic Governance for Private Sector Development*

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# Preface

Recent reforms in Myanmar have led to a process of decentralization, one in which the states and regions are playing an increasingly important role in the political and economic life of citizens. While many policies and procedures are still determined at the Union level, there is growing awareness and recognition that, in a country as diverse as Myanmar, states and regions are critical actors in advancing the democratic transition and responding to the specific needs of local populations. This is an extraordinary development after decades of centralized military rule, but it is still very much a nascent one, and subnational governance institutions, practices, and capacity will need significant improvements and reforms to fulfill these new functions. This evolution of democratic governance will require time and much practice to become institutionalized, but signs of adaptation and innovation are already emerging as states and regions become more established in their new roles.

One critical concern of governments at both the Union and the state and region levels is how to generate the economic growth necessary to increase incomes and economic well-being, create jobs and new businesses, and improve the tax base that makes it possible for the government to deliver basic services to citizens. A dynamic private sector is key to stable economic growth and thriving communities, and a more conducive business environment can bring many tangible benefits to both governments and citizens. These benefits could take many forms: building roads and bridges that allow for more efficient transportation of goods, services, and people; supporting a skilled labor force that helps businesses increase productivity; ensuring that the law upholds business contracts and resolves business disputes in a transparent and fair manner; and making sure that administrative procedures such as registering a business or paying taxes do not impose an unreasonable burden on businesses. The corona virus (Covid-19 ) pandemic has further underscored the need, in the age of globalization and burgeoning e-commerce, to streamline government services and take advantage of information and communication technologies to administer the government and its services to citizens and businesses. If these aspects of the business environment are not in place, then it will be burdensome to start or run a business, and it will be increasingly difficult to compete with businesses elsewhere in Myanmar and abroad.

In this context, The Asia Foundation initiated the first ever Myanmar Business Environment Index (MBEI) in 2018, surveying 4,874 Myanmar businesses in the service and manufacturing industries across the country and gathering a multitude of other hard data to map a more comprehensive, in-depth picture of the challenges they face and where government can target reforms to improve the business environment. The results were published in 2019 and were widely disseminated to government officials and the private sector in all states and regions of Myanmar. In 2020, the Foundation carried out the second installment of the MBEI, surveying 5,605 businesses across the country. Conducting the two installments two years apart allows us to begin to track the progress states and regions have made over time.

MBEI 2020 also includes methodological improvements over the first MBEI, with new indicators to provide more concrete measures of aspects of the business environment relevant to state, region, and township officials and decision-makers. Benchmarking the business environment to help governments devise targeted policy reforms has been a distinctive program of The Asia Foundation in a number of countries, one of the most successful being Vietnam's Provincial Competitiveness Index (PCI), which recently celebrated its 15th anniversary and has become an integral part of the government's private-sector development and economic growth agenda. It is widely used by governments at all levels, business associations, the media, civil society, and investors both domestic and foreign. We hope that the first two MBEI surveys have laid the groundwork for regular diagnostics of the business environment in Myanmar that will also continue into the future.

The Foundation's goal for the MBEI is to provide government officials with the information and tools to better understand the business environment in their state, region, or township and help them design and prioritize reforms that will help businesses prosper in their specific localities.

For businesses and other stakeholders, we hope that this report can be a valuable resource for business decision-making. The results reported here are merely a fraction of the vast trove of data that has been collected as part of the MBEI. More-detailed data is also available on all of the indicators, down to the township level for townships included in the survey, and we encourage everyone to explore this data for their specific needs, interests, and geographical areas. The MBEI data is available at https://opendevelopmentmyanmar.net/mbei. Other, related reports published by the Foundation include the first MBEI report *Myanmar Business Environment Index 2019: Measuring Economic Governance for Private Sector Development,* and the reports *Myanmar's Economic Governance Actors* and *Good Practice in Subnational Economic Governance in Myanmar:* Findings from the 2019 Myanmar Business Environment Index. In June 2020, as Myanmar confronted the impact of Covid-19 on businesses, the Foundation also carried out a rapid survey of 750 Myanmar businesses to capture the issues facing them, and the results are presented in the report *Covid-19 Impact on Businesses: A Survey.* All these reports can be downloaded from The Asia Foundation's website at www.asiafoundation.org

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The research project was developed and implemented under the overall leadership of Dr. Kim Ninh and Dr. Matthew Arnold, country representatives of The Asia Foundation in Myanmar, and benefited from assistance and input provided by Peter Brimble, senior technical advisor of the DaNa Facility, Linn Maung Maung, trade, competitiveness, and investment lead of the DaNa Facility, and Tom Coward, team leader, Inclusive Growth and Livelihoods Team and Priti Prajapati, private sector development adviser of FCDO.

Edmund Malesky, professor of political economy at Duke University and Director of Duke's Center for International Development, led the development of the MBEI's research methodology and was the primary author for the presentation of its analytical findings. Dean Dulay, doctoral candidate at Duke University, served as research assistant and coauthor of the report. Two Duke research assistants provided valuable support: Nitin Subramanian assisted with data visualization, and Alessandra Waggoner provided background research.

Critical data collection was carried out by The Asia Foundation's MBEI project team in Yangon, led by Ville Peltovuori, who oversaw the survey implementation and contributed to the refinement of the survey methodology as well as data analysis. Kyaw Thu, Nyan Win, Jon Keesecker, Marip Ja Dim, San Yi, Ye Wana Hlaing, Phyo Wai Htun, and Thiri Maung from the MBEI project team undertook valuable background research, collected observational data, and provided additional feedback and contextual analysis that facilitated the final report.

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# List of Acronyms

| | |
|---|---|
| **ACC** | Anticorruption Commission |
| **CDC** | City Development Council |
| **CEO** | Chief executive officer |
| **CSO** | Central Statistical Organization |
| **DALMS** | Department of Agricultural Land Management and Statistics |
| **DAO** | Development Affairs Organization |
| **DICA** | Directorate of Investment and Company Administration |
| **DISI** | Directorate of Industrial Supervision and Inspection |
| **EGI** | Economic governance index |
| **FCDO** | Foreign Commonwealth and Development Office |
| **GAD** | General Administration Department |
| **GDP** | Gross domestic product |
| **IPCC** | Intergovernmental Panel on Climate Change |
| **kW** | Kilowatt |
| **LURC** | Land-Use Rights Certificate |
| **MBEI** | Myanmar Business Environment Index |
| **MOLIP** | Ministry of Labor, Immigration, and Population |
| **MSIC** | Myanmar Standard Industrial Classification |
| **MyCO** | Myanmar Companies Online |
| **NLD** | National League for Democracy |
| **OSS** | One-stop shop |
| **PCI** | Provincial Competitiveness Index [Vietnam] |
| **PPS** | Probability proportional to size [sampling] |
| **SD** | Standard deviation |
| **S/R** | State/region |
| **SRS** | Stratified random sampling |
| **SMEs** | Small and medium-sized enterprises |
| **SOE** | State-owned enterprise |
| **TDI** | Township Development Indicators |

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# Executive Summary

**The 2020 Myanmar Business Environment Index (MBEI) aims to identify constraints in Myanmar's business regulatory environment and provide a tool for identifying reform opportunities that spur growth.** The MBEI is an economic governance index (EGI), a specialized instrument pioneered by The Asia Foundation to measure the performance of local authorities and to assess the local business environment through quantitative indicators. Between 2016 and 2018, The Asia Foundation carried out extensive desk research, expert interviews, and focus group discussions to adapt the EGI model to the specific Myanmar context and to find ways to best measure these constraints through survey and administrative data. This led to the 2019 MBEI report and economic governance ranking, which were based on data collected in 2018.[1] After releasing the report in 2019, we again invested heavily in contextual research and upgraded the index to capture Myanmar's efforts to improve governance at the national, state and region (S/R), and township levels.

**Subnational EGIs have been used in Indonesia, Sri Lanka, Bangladesh, Cambodia, Mongolia, and Vietnam, and the tool has become widely accepted by diverse governments to understand economic growth, attract investors, and engage in public-private dialogue.** In Vietnam, the Provincial Competitiveness Index (PCI) recently celebrated its 15th anniversary and has been deeply incorporated into local- and central-government policies and planning. Currently, all of Vietnam's 63 provinces have published actions plans to improve their PCI scores, and the central government uses PCI data to monitor private-sector development strategy and anticorruption campaigns.

**The MBEI represents the voice of private businesses from across Myanmar.** The MBEI is based on a nationwide survey of 5,605 firms—many of them small and medium-sized enterprises (SMEs)—in Myanmar's service and manufacturing sectors. To ensure comparability between S/Rs, the MBEI excludes the primary sector (agriculture, forestry, fisheries, and mining) and foreign firms operating in Myanmar, which are not well distributed across the country. To capture the views of businesses, the MBEI uses a two-stage, stratified random sample (SRS) to ensure representation at the state and region level as well as the township level. Survey responses are combined with objective data gathered from observations of township offices, recorded by our field team, taken from statistical yearbooks, and drawn from other administrative sources available from government ministries. This combination ensures highly reliable estimates of economic governance at the local level that are based on business perceptions but also anchored by objective measures.

**The MBEI measures 10 core components of good economic governance.** The overall MBEI score comprises 10 subindices. A state or region that is considered to perform well on the MBEI is the one that has (1) low entry costs for business start-up, (2) easy access to land and security of business premises, (3) limited time requirements for bureaucratic procedures and inspections, (4) minimal informal charges, (5) sufficient and well-maintained physical and telecommunications infrastructure, (6) a transparent business environment and equitable access to business information, (7) minimal crowding-out of private activity due to policy biases toward state, foreign, or connected

firms, (8) limited pollution and environmental damage, (9) sound labor training policies, and (10) fair and effective legal procedures for dispute resolution and maintaining law and order. The MBEI innovates on the traditional EGI model by measuring the environmental and labor-recruitment dimensions to provide a holistic image of local economic governance that incudes socioeconomic factors.

**This report details the results of the second iteration of the MBEI.** This year's MBEI features several improvements over the MBEI 2019 report, which was the first of its kind in Myanmar. First, new indicators have been added, allowing for more nuanced and complete analyses by subindex and by S/R that more closely track Myanmar's reform efforts. We also dropped 16 indicators that were deemed problematic by experts for being obviated by Myanmar's national-level reforms or because their impact on business performance was ambiguous. Second, this year's report features a subset of 1,200 panel firms—firms that were surveyed in both this wave and last. Analysis of their performance along core indicators—indicators that were collected consistently in 2018 and 2020—allows for the measurement of improvements of S/Rs over time.

**MBEI measurements are weighted to reflect business confidence and expansion.** Weighting the index by contribution to private sector performance, offers concrete policy information to officials about what to prioritize. To generate the weights, subindices were regressed on average, annual, firm-level employment growth since establishment. Subindices most strongly correlated with these measures received higher weights in the index (see chapter 5 for methodological details on calibration and regression results). This step allows local leaders to better prioritize reform efforts. The four highest-weighted subindices, each accounting for 15% of the national index, are land access (subindex 2), transparency (subindex 6), environmental compliance (subindex 8), and labor recruitment (subindex 9).

**MBEI rankings reflect aggregate economic governance rather than the overall market or the efforts of individual administrators.** When comparing Myanmar's S/Rs, it is important to remember the purpose of the MBEI: it is designed to measure economic governance as experienced by domestic businesses operating in the service and manufacturing sectors throughout Myanmar. These businesses are largely SMEs and do not participate in the agriculture, fishery, forestry, or mining sectors. In other words, the MBEI does not purport to rank the overall market, nor the performance of individual administrators. Markets are largely out of control of governments in the short run, and in Myanmar economic governance is determined not strictly by the most recent administrator but by a history of accrued policy and administrative decisions. Rather than point to winners or losers, the MBEI is designed to point to areas of economic governance that S/R governments can focus on to help grow the private sector locally.

**National-level findings suggest that businesses remain optimistic despite operating in a challenging environment.** While challenges to economic governance remain, there are reasons for this optimism. In addition to describing the variance in economic governance across Myanmar's S/Rs, we also detail national-level and S/R-level findings that apply to all firms in the country. While businesses unsurprisingly report facing many obstacles, in many areas they also show glimmers of optimism and confidence in Myanmar's future. Here are a few highlights from the study's findings:

- *Yangon, Sagaing, Nay Pyi Taw, and Bago have the highest scores for economic governance in the country, although they have achieved this distinction through different constellations of reforms.* Yangon and Nay Pyi Taw (along with Mandalay) excel at infrastructure, environmental compliance, and labor recruitment, which reflects the benefits of urbanization and the greater fund of human capital in their localities. Sagaing and Bago, with less-dense populations, excel at reducing favoritism towards businesses with connections, regulatory costs, post-entry regulatory compliance, and in instilling confidence in the legal system and law enforcement.

- *Variation in S/R performance on different subindices helps to pinpoint where subnational governments can innovate and where the challenge lies with central policies.* Some subindices reveal significant differences between the highest and lowest S/Rs, while other subindex scores do not differ much between subnational administrations. The greatest differences between minimum and maximum scores are found in labor recruitment (subindex 9) and infrastructure (subindex 5). Favoritism (subindex 7), transparency (subindex 6), and land access (subindex 2) exhibit very little vari-

***Each state and region in Myanmar demonstrates different strengths and weaknesses with respect to governance. No state or region stands out as superior to all others with respect to overall economic governance.***

ation and smaller differences between the lowest and highest scores. High variation implies that there are important differences in how S/R and township governments are interpreting and implementing central policies, and what new initiatives they are devising of their own. Combination of low variation and low scores indicates that the governance issues are very similar across S/Rs, pointing to either structural problems in the Myanmar economy or issues with central laws and regulations.

- *Higher scores in land access (subindex 2), transparency (subindex 6), environmental compliance (subindex 8), and labor recruitment (subindex 9) are significantly and positively correlated with employment growth among respondent firms.* Consequently, they receive the greatest weights in the final 2020 MBEI. For local leaders pursuing governance reform, initiatives targeting these subindices will be most likely to improve economic well-being by stimulating firm growth and employment.

- *Differences in economic governance are more pronounced among townships within S/Rs than between S/Rs, pointing to the importance of township authorities to the reform process.* Less than nine points separate the top S/R from the bottom, and different S/Rs excel in different dimensions of governance. No S/R stands out as a top-ranked performer on every index. Consequently, differences among S/Rs account for just 27% of the variation in firm-level experiences of governance. By contrast, there is a 14-point gap between the highest- and lowest-ranked townships, and differences between townships within S/Rs account for over 39% of the variation in firm-level experiences of governance. This is because most firms in Myanmar, and therefore most respondents in the MBEI, are SMEs, and their primary interactions with government are with bureaucrats at the township level. Economic governance can only improve if these agencies are part of the reform process.

- *Firms in townships with better governance have hired more new workers on average since their establishment than firms in townships with poorer governance, and better-governed townships have higher levels of economic welfare, measured by night light data.* These associations hold true even after accounting for the underlying endowments, location, and wealth of the localities. The finding illustrates how economic governance is correlated with improvements in welfare.

- *Economic governance has improved in Myanmar since 2018.* The Core MBEI rose 5.4 points, from 55.1 in 2018 to 60.6 in 2020, an 10% improvement. And every single S/R improved on the Core MBEI.

- *Improvements over time were not uniform, but instead were concentrated in a few subindices. Governance improved in six areas measured by the MBEI.* Subnational governments in Myanmar, including both S/Rs and townships, recorded improvements in reducing the burden of post-entry regulation (subindex 3), augmenting infrastructure (subindex 5), enhancing transparency (subindex 6), reducing favoritism (subindex 7), strengthening environmental compliance (subindex 8), and facilitating labor recruitment (subindex 9).

- *Three areas of governance did not improve significantly.* These include ease of entry (subindex 1), improving land access (subindex 2), and limiting informal charges (subindex 4).

- *The quality of governance declined in only one subindex, law and order (subindex 10).*

- *Entry costs are reasonable, but not improving.* Only a small share of businesses encountered significant waiting periods or administrative burdens when registering and licensing their businesses. However, panel data indicates that waiting periods are not declining significantly over time.

- *Land-titling issues are less problematic; however, land security remains an issue even when firms have property rights.* Possession of land titles among private businesses is frequent and improving. However, firms still feel uncomfortable about the security of their business premises. Half of all businesses with land titles fear expropriation, and almost all businesses without titles fear changes in rental contracts that might undermine operations.

- *Many businesses perceive administrative procedures for post-entry regulation as satisfactory and improving.* One-stop shops for administrative procedures have proliferated, and firms point to the friendly staff in those offices. Members of the research team confirmed this by observing that

more OSS desks were occupied during business hours, and OSS and GAD staff were friendly and helpful.

- *Despite improvements in post-regulation procedures, concerns remain about the capacity and efficiency of township offices such as GAD and DAO.* Firms claim to be spending more time on bureaucratic procedures and blame declining efficiency among bureaucrats who handle their paperwork.

- *Informal charges are less of a problem for service and manufacturing SMEs than generally perceived.* As in 2018, very few firms in 2020 admit to paying bribes, either in direct questions or in shielded questions meant to protect their identity. Even when bribes are paid, they are not overly burdensome for firms, accounting for a very small share of total revenue. The widespread agreement that bribery is needed to win procurement contracts, however, shows that, while petty corruption is not a burden, malfeasance at a larger scale may be taking place beyond the experience of most SMEs.

- *A special analysis of corruption confirms the finding that petty corruption is not a problem for respondents in Myanmar, but grand corruption remains a very serious concern.* Bribes during business entry are close to zero, however, nearly 70% of firms pay bribes to receive construction licenses at a cost of 3.4 million Kyat (US$2,430) per firm.

- *Quality of infrastructure has improved a great deal but remains a significant issue, and this is especially true for construction-heavy physical infrastructure.* Almost 60% of firms say that rural road quality is good or very good. Firms now lose only three days annually due to flooded or blocked roads, a huge improvement from 14 days in 2018. Firms are generally more optimistic about electricity and the internet. Three-quarters of firms believe that their access to electricity, internet, and telephone service is good or very good. Work stoppages and damage from power outages has also declined precipitously.

- *Transparency has improved but remains uniformly poor in all S/Rs.* Only 18.5% of firms in the leading Magway Region have access to plans for public investments such as airports and highway projects. In Kayah State, not even 1% of all firms have access to these plans. The lack of transparency with respect to government documents is not confined to large-scale construction projects. Only 6.9% of firms in the median S/R, have access to its state budget. National-level statistics corroborate these results. Only 18% of firms have access to S/R laws and regulations, presumably easy-to-find public information. Despite the uniformly low scores on this subindex, dramatic improvements are possible, as seen in Yangon, from relatively simple interventions such as posting this information on an easy-to-find website and publicizing its existence.

- *Favoritism towards connected businesses is not widespread, and scores on the aggregate subindex are improving.* Only two S/Rs, Shan and Magway, score under 9 out of 10 on this subindex. The general perception among firms is that bias in favor of connected firms is most common in connection with loans and access to land. Even in these areas, only around 7% of all firms believe that favoritism exists.

- *Environmental compliance has improved over time, but more work needs to be done.* Fewer than 10 percent of firms believe that pollution has a significant, negative effect on their business. In the median S/R, over half of firms believe that state support is lacking. Despite improvements, there is not a single S/R where more than half of businesses believe that inspections are done to protect the environment, and there is not a single S/R where more than one-third of businesses believe that the government supports water conservation.

- *Access to qualified labor is improving but remains hard to find.* Panel data indicates that labor recruitment and quality have improved, but businesses are still concerned. Labor recruitment is difficult regardless of the position to be filled. In the national sample, only 40.3% of respondents say it is easy to recruit managers, and only 48.3% of respondents find it easy to hire accountants. The situation is equally bad for blue-collar positions. Only 45.6% of respondents find recruiting rank-and-file manual workers easy. Even worse, only 26.7% of respondents find it easy to recruit technicians. Difficult recruiting puts a greater burden on firms to train their workers. On average, it takes a firm 51 days to train a new worker sufficiently to do the job. While there are many explanations for the difficulty of finding and training

workers, one reason may be the generally low levels of education in Myanmar. For example, administrative data shows that high school enrollment rates are only 44% (CSO, UNDP, and WB 2018).

- *Firms believe that powerful officials are above the law.* Most firms appear to think that government officials are above the law, and the situation has worsened over time. Just 26.5% of businesses believe that they can appeal an unjust decision to a higher government office, and only 20.1% believe that officials will discipline offending staff.

- *The security situation needs improvement.* Only 26.2% of firms believe that the security situation is good. According to the interviews 8.3% of firms say that they were victims of a crime in the past year. A poor security situation introduces uncertainty that reduces investment, and it creates a barrier to entry for businesses that fear violent crime.

**The data contained in the MBEI provides government, businesses, and other stakeholders with a valuable resource for improving economic governance and thereby boosting Myanmar's future prospects for economic growth.** The MBEI serves as a diagnostic tool for both Union and S/R governments in Myanmar to better understand local economic governance.

**This report is just a summary of the extensive MBEI data, which can be used for more detailed diagnostics at the S/R, township, or subindex level.** The next step, taking advantage of this wealth of data, is to facilitate discussions between government, businesses, and civil society to identify solutions that will improve Myanmar's business environment by working to address the challenges outlined in this report.

**In addition to providing lawmakers with insights into future policy and administrative reform, the MBEI is a source of information for businesses and investors considering investment or expansion.** Finally, it can also be a resource for donors and civil society organizations as they seek to support economic and governance reforms. Ultimately, the MBEI is designed to be a resource for improving the business environment, which is critical to private sector development and Myanmar's goal of sustainable and inclusive economic growth.

# 1

# Introduction and Main Findings

## 1.1. Why economic governance matters for development and growth in Myanmar

**Myanmar continues to face challenges to achieving inclusive economic growth.** In the past decade, the government of Myanmar has undertaken a number of important economic reforms to liberalize the economy and spark new economic growth. Fundamental changes in investment promotion, bureaucratic organization, trade openness, monetary policy, and other areas have helped lay the groundwork for new economic activity. The resulting economic growth, however, has failed to reach all corners of the country. In many states and regions, poverty rates remain high, and inadequate employment opportunities prevent widespread improvement in economic welfare. As Myanmar's Southeast Asian neighbors have demonstrated, government measures are required to ensure that a robust and dynamic private sector is able to flourish in all of Myanmar's states and regions.

**The current Myanmar government has recognized reforming the business environment as a policy priority and a key driver of future economic growth.** In its 2015 manifesto on economic policy, and again with the release of its 12-point economic policy in 2016, the National League for Democracy (NLD) government has reiterated its commitment to a more attractive and stable business environment. These documents called for new economic growth built on a competitive and vibrant private sector. Among the government's flagship achievements in this respect have been the 2016 Myanmar Investment Law and the 2017 Companies Law, increased investment in education, new measures to combat corruption, and the development of a digital registry of companies. In 2018, the government further reinforced this commitment with the release of the Myanmar Sustainable Development Plan (MSDP), an overarching strategy for achieving sustainable and inclusive economic growth by 2030. Pillar two of the MSDP specifically emphasizes the importance of a robust private sector and the improvement of Myanmar's business environment. These and other measures point to a continued commitment on the part of the Myanmar government to promoting reforms that encourage business growth. These have led to modest improvements at the national level. The country is currently ranked 165 out of 190 in the World Bank's 2020 Doing Business report, up from 171 in 2019.

**Economic governance reforms that stimulate private-sector activity will be even more important after the Covid-19 pandemic.** Small and medium-sized enterprises were heavily damaged by the dual economic shocks of the disease and the social isolation that ensued. According to a follow-up survey by The Asia Foundation with Myanmar Business Environment Index (MBEI), 29% of respondents were forced to temporarily close their business, while another 92% struggled with declining sales. As they struggled, these businesses were forced to lay off over 16% of their workforce (Asia Foundation 2020b).

While government programs were found to be effective in some ways, two-thirds of surveyed businesses were unaware of the support programs available. This lack of knowledge points to the importance of transparency and administrative efficiency, which are at the heart of the MBEI project (Asia Foundation 2020b).

**Academic research has shown that business activity is a fundamental building block of local economic growth.** Scholars have demonstrated that subnational economic development is most likely to occur in educated regions with a concentrated group of entrepreneurs who run productive firms (Banerjee and Duflo 2005, La Porta and Shleifer 2008). It is an obvious point, but one that can be easily overlooked when scholars and practitioners take a bird's eye view of local economic development, weighing poverty alleviation, inequality, and unemployment measures in their decision-making. Importantly, decisions made by local businesses affect all of these measures. Businesses do not include just glitzy, multinational corporations or lumbering, state-owned enterprises (SOEs). They run the gamut from small farms to food stands and market stalls, single-family operations, SMEs, high-tech startups, and global champions. These are the actors that risk capital in long-term plans, employ workers, innovate with new goods and services, and pay the bulk of the taxes that fund public goods and redistribution programs.

**Weak and confusing economic governance structures inhibit the ability of Myanmar businesses to thrive and contribute to growth.** Unclear business licensing procedures complicate business planning, inadequate infrastructure reduces the attractiveness of investing, and SMEs lack the capital to expand and integrate into regional supply chains. Opaque and overlapping governance structures often make it difficult for local administrators to implement procedures consistently across states and regions. While some business regulatory functions reside with Union ministries, others fall to S/R and township offices. As a result, local economic governance in Myanmar is at times inefficient and poorly understood by many of those affected by it.

## 1.2. Measuring subnational economic governance to promote private-sector development

**By combining survey results from thousands of private businesses, most of them quite small and without political connections, the MBEI assembles the collective voice of private enterprise in Myanmar on the subject of economic governance, in their respective S/Rs and the country as a whole.**

**The 2020 MBEI aims to identify constraints in Myanmar's business regulatory environment and provide a tool for identifying reform opportunities that spur growth.** The MBEI is an economic governance index (EGI), a specialized instrument pioneered by The Asia Foundation to measure the performance of local authorities and to assess the local business environment through quantitative indicators. In 2018, The Asia Foundation carried out extensive desk research, expert interviews, and focus group discussions to adapt the EGI model to the specific Myanmar context and to find ways to best measure these constraints through survey and administrative data. This led to the 2018 MBEI report and ranking. After releasing the report in 2019, we again invested heavily in contextual research and upgraded the index to capture Myanmar's efforts to improve governance at the national, S/R, and township levels (see Bissinger 2019).

**EGIs have been used in Indonesia, Sri Lanka, Bangladesh, Cambodia, Mongolia, and Vietnam, and the tool has become widely accepted by governments as a way to understand economic growth, attract investors, and engage in public-private dialogue.** In Vietnam, the Provincial Competitiveness Index (PCI) recently celebrated its 15th anniversary and has been deeply incorporated into local and central government policies and planning. Currently, all of Vietnam's 63 provinces have published actions plans to improve their PCI scores, and the central government uses PCI data to monitor private-sector development strategy and anticorruption campaigns.[2]

**Many independent researchers have taken advantage of the PCI's fifteen years of time-series data to demonstrate that improving provincial economic governance is positively correlated with beneficial business and economic outcomes.** Scholars have shown that overall economic governance is associated with new business entry, formalization, investment growth, and overall economic welfare. Some scholars have even found changes in the PCI to be associated with better public-service delivery. Finer-grained studies have highlighted the strengthening of property rights, reduced corruption, and increased transparency as the most important governance determinants of economic performance.[3]

**The objective of the MBEI is to help government, businesses, and stakeholders understand economic governance in Myanmar and to foster reforms that address business challenges and support economic growth.** By benchmarking constraints and opportunities in local economic governance across Myanmar's S/Rs, the MBEI is intended to help Union and subnational governments identify promising policy and administrative reforms and to help local authorities consider the social and environmental impacts of business activities in their economic planning. Ultimately, the MBEI is intended to promote a business-enabling environment that is conducive to sustainable and inclusive economic growth. The MBEI elaborates on the traditional EGI model by also measuring socioeconomic factors such as labor recruitment and relations and environmental impacts, in order to provide a more holistic picture of local economic governance.

**MBEI rankings reflect aggregate economic governance rather than the overall market or the efforts of individual administrators.** When comparing Myanmar's S/Rs, it is important to remember the purpose of the MBEI: it is designed to measure economic governance as experienced by domestic businesses operating in the service and manufacturing sectors throughout Myanmar. These businesses are largely SMEs and do not participate in the agriculture, fishery, forestry, or mining sectors. In other words, the MBEI does not purport to rank the overall market or the performance of individual administrators. Markets are largely out of control of governments in the short run, and economic governance in Myanmar is determined not strictly by the most recent administrator but by the history of accrued policy and administrative decisions. Rather than naming winners or losers, the MBEI is designed to identify areas of economic governance that S/R governments can focus on to help grow the private sector locally.

**This report details the results of the second iteration of the MBEI.** This year's MBEI features several improvements over the 2019 MBEI report. First, new indicators have been added, allowing for analysis by subindex and by S/R that more precisely tracks Myanmar's reform efforts, and 16 indicators have been dropped, because they were deemed problematic by experts, they were obviated by national reforms, or their impact on business performance was ambiguous. Second, this year's report features a subset of 1,200 panel firms—firms that were surveyed both this year and last year. Analysis of their performance along core indicators—indicators that were collected consistently in 2018 and 2020—allows for the measurement of improvements over time.

**The report is divided into six chapters.** Chapter 1 is organized around critical questions for first-time users of an economic governance index. First, we explore the meaning of economic governance and the approach economists and management scholars have used to frame the key issues. Next, we briefly describe the MBEI and the features of governance that it measures. Third, we summarize our methodological approach. Chapter 2 presents the main findings of the project, including overall S/R and township rankings, subindex scores, and the relationship between good governance and firm-level employment growth. It analyzes changes in economic governance over time, and it features a special investigation into informal charges in Myanmar. Chapter 3 provides basic information on MBEI respondents to give readers a sense of who they are and the challenges they face. Chapter 4 details our main findings for each of the 10 subindices and assesses S/R performance according to specific indicators. Chapter 5 provides state and region diagnostics to help guide policy and administrative reform of economic governance. Chapter 6 offers a detailed discussion of the MBEI methodology.

***MBEI rankings reflect aggregate economic governance rather than the overall market or the efforts of individual administrators.***

# 1.3. What is economic governance?

In his presidential lecture to the American Economics Association, Avanish Dixit defined economic governance as "the processes that support economic activity and economic transactions by protecting property rights, enforcing contracts, and taking collective action to provide appropriate organizational infrastructure" (Dixit 2009, 5).

**Economic governance is a broad term that can take on a variety of meanings, from macroeconomic policies to micro-level poverty-alleviation programs. In this report, we follow Dixit in using the term economic governance to refer to the actions that policymakers and administrators can take to ensure a suitable environment for private business activity.** Technically speaking, economic governance is not perfectly synonymous with "business environment." The business environment consists of many factors, not all of which are under the immediate influence of government. For example, proximity to large markets is an important aspect of a company's business environment, but it is not directly under the government's control. Population size and physical distance from Yangon or ports are difficult to change in the short or medium term, if at all. By contrast, administrative regulation and related inspections are features of economic governance, because these elements of the business environment are wholly under the control of government. Economic governance therefore refers to those elements of the business environment that local governments are in a position to change in the short or medium term.

**Experts and academics have disaggregated economic governance into 10 key areas or themes.** These 10 areas are derived from separate literatures of international academic scholarship that demonstrate the correlation between government institutions and policies and business performance.[4] In creating the MBEI, we have tried to adapt these broader findings from the economic, management, and political science literatures to the Myanmar context.

**MBEI scores cover 10 critical facets of economic governance.** As we describe in detail in chapter 3, we chose the aspects of economic governance that were most important to the Myanmar business context and then selected measures to track performance in these dimensions across Myanmar's S/Rs. We discuss these dimensions chronologically, as business managers encounter them in the course of the business life cycle, from entry, to land acquisition, to decisions about expansion and growth. Specifically, a state or region that is considered to perform well on the MBEI is the one that has (1) low entry costs for new businesses, (2) easy access to land and reliably secure business premises, (3) time requirements that are not excessive for bureaucratic procedures and inspections, (4) minimal informal charges, (5) adequate and well-maintained physical and telecommunications infrastructure, (6) a transparent business environment and equitable business information, (7) minimal crowding out of private businesses by policies that favor state, foreign, or connected firms, (8) limited pollution and environmental damage, (9) sound labor training policies, and (10) fair and effective legal procedures for resolving disputes and maintaining law and order.

# 1.4. MBEI focus and basic methodology

**The Myanmar Business Environment Index measures economic governance as experienced by formal, domestic firms in Myanmar's service and manufacturing sectors.** As we noted above, the MBEI does not purport to cover all business sectors in Myanmar, nor does it measure all aspects of Myanmar's business environment. The MBEI includes services (e.g., retail, banking, hospitality) and manufacturing (e.g., food or garment production); however, it does not cover the primary sector (agriculture, mining, forestry, and fisheries), because the legal regimes for these businesses are distinctive and the businesses are concentrated in particular localities. Furthermore, the MBEI focuses on domestic businesses rather than foreign enterprises operating in Myanmar, because foreign investors are concentrated in just a few S/Rs, have limited comparability, and face

different regulatory rules and procedures than most domestic firms face. For example, the MBEI measure of land access does not include foreign-owned agribusinesses in Tanintharyi Region, nor does it include domestically owned mining operations in Kachin State. Rather, the MBEI is focused specifically on domestic firms in the service and manufacturing sectors, most of which are SMEs located in cities and towns throughout Myanmar. Finally, we screened out all new firms with fewer than four employees before interviewing. This decision was necessary because, although the sample frame did not include a measure of formality, we worried that fully informal firms have too little interaction with government to answer nuanced questions about administrative and regulatory procedures. We needed firms that had engaged in some of the processes. As a proxy for formality, we excluded these micro-businesses

**The MBEI is designed specifically to measure governance rather than overall market size or attractiveness.** The purpose of the MBEI is not to assess the overall attractiveness of Myanmar's business environments. Rather, the MBEI is focused specifically on one element of the business environment: government policies and institutions that facilitate business success. As we argued above, governance is something that can be improved in the short and medium term and is linked to business performance and growth.

TABLE 1.1

## Summary of MBEI Data Collection, Calculation, and Calibration

| Subindex | Core Indicators | New Indicators | Dimensions (Weight within Subindex) | Weight in MBEI (%) |
|---|---|---|---|---|
| Entry costs | 7 | 10 | 1. Survey Data (60%)<br>2. Hard and Observational Data (40%) | 10 |
| Land access and security | 6 | 13 | 1. Survey Data (60%)<br>2. Hard and Observational Data (40%) | 15 |
| Post-entry regulation | 11 | 7 | 1. Survey Data (60%)<br>2. Hard and Observational Data (40%) | 5 |
| Informal charges | 8 | 1 | 1. Survey Data (60%)<br>2. Hard and Observational Data (40%) | 5 |
| Infrastructure | 13 | 11 | 1. Survey Data (60%)<br>2. Hard and Observational Data (40%) | 5 |
| Transparency | 14 | 5 | 1. Survey Data (60%)<br>2. Hard and Observational Data (40%) | 15 |
| Favoritism in policy | 7 | 1 | 1. Survey Data (100%) | 5 |
| Environmental compliance | 7 | 5 | 1. Survey Data (60%)<br>2. Hard and Observational Data (40%) | 15 |
| Labor recruitment | 7 | 5 | 1. Survey Data (60%)<br>2. Hard and Observational Data (40%) | 15 |
| Law & Order | 12 | 3 | 1. Survey Data (60%)<br>2. Hard and Observational Data (40%) | 10 |

### 1.4.1. Themes and indicators covered by the MBEI

**The ten MBEI subindices are built upon 153 indicators relating to specific features of economic governance.** Ninety-two of the indicators are core indicators, repeat measures from the MBEI 2019 report that are also used in the Core MBEI, a companion index that measures change over time, while 61 new indicators were developed for the 2020 MBEI. Table 1.1 shows the number of indicators used in each subindex, while table 1.2 gives a more precise list of the individual, actionable policy indicators that comprise each of the subindices in the MBEI. Each of these indicators is described in more depth in chapter 4, and the methodology of their selection and incorporation in the index is described in chapter 6.

**As we describe in more detail in chapter 6, the MBEI is composed of three types of indicators:** (1) *perceptions-based data* drawn from a nationally representative survey of 5,605 firms in all fourteen states/regions and Nay Pyi Taw; (2) *observational data* collected by our research team in visits to township offices to gather information about the availability, quality, and transparency of local government services; and (3) *administrative data* from published administrative records such as the 2019 census (MOLIP 2019) and government handbooks. We refer to observational and administrative data collectively as "hard" data to distinguish these from the perceptions-based survey measures.

### 1.4.2. Brief methodology

**The index is produced in a three-step sequence that we refer to as the "three Cs."** These are: (1) *collect* business survey data and published data sources, (2) *calculate* ten subindices and standardize them on a 10-point scale, and (3) *calibrate* the composite MBEI as the weighted sum of ten subindices with a maximum score of 100 points. The research design also has a number of important design elements that make the results easily translatable into local governance reforms. This section provides a brief overview of this process, while chapter 6 provides a full discussion of the methodology.

**COLLECTION: The Asia Foundation collected both survey and nonsurvey data for inclusion in the MBEI.** The survey instrument reflected the key issues covered by the subindices and incorporated input from discussions with businesses and policymakers. It included twelve modules that were organized by topic, with a final set of control questions to assess the circumstances of the interview. This soft data was then combined with hard data gathered from observations of township offices, statistical yearbooks, and other administrative sources available from government ministries. Observational data was collected by our field team, which visited local township offices to examine the type of information available to businesses and the assistance provided by local offices. These observations were recorded on scales that were comparable across townships. The hard data was used to address perceptions and anchor biases in responses. After all, many SMEs may not have sufficient familiarity with other locations to rate their home S/R on a five-point scale.

**MBEI survey data is built upon a nationally representative sample of 5,605 private, domestic firms.** This sample combines two distinct groups. One group comprised 4,405 firms drawn from a sampling frame of 103,082 provided by the Central Statistical Organization (CSO) business registry database (Thien et al. 2019), which records every firm in the country that holds a current operating license from a township Development Affairs Organization (DAO) or a City Development Council (CDC). It also includes a sample of firms that received registration certificates from the Directorate of Investment and Company Administration (DICA) or the Directorate of Industrial Supervision and Inspection (DISI). A random sample of 1,200 firms was drawn from the 4,876 respondents in the 2018 MBEI survey to create a panel dataset of firms that answered the survey both years and have a unique perspective on changes in governance over time. The 2018 MBEI dataset was itself drawn from a sample frame supplied by the Ministry of Labor, Immigration, and Population (MOLIP). We use the answers to core indicator questions provided by these 1,200 firms to create a panel dataset that allows us to precisely document change over time.

**Each indicator was chosen to provide actionable policy information that can easily be tracked and monitored by local administrators and businesses over time.** The MBEI team does not want to simply report that, for example, transparency is low; rather, we seek to provide clear information on policy levers that can be used to increase transparency at the S/R and township levels. For instance, the MBEI tells leaders how many of their businesses report that operating license fees are publicly posted in local DAO offices and how many businesses are able to easily access

local budgets and cadastral maps.

**After the successful launch of the 2019 MBEI, the research team performed a thorough review of each indicator used in the ranking.** We consulted with local government officials, firms, and academic researchers. After careful consideration, we decided to upgrade the methodology to improve the precision of the index. Improvements were necessary to correct for mistakes or misunderstandings in previous measures, but also because national reforms had obviated the need for certain pieces of information. Some indicators were dropped from the index, new indicators were added, and many indicators were modified slightly by improving the wording in survey questions or providing more local context. For instance, rather than asking firms if they possessed a generic "land title," we asked them about the specific land title they possessed, including Land Grant documents for urban firms and Form 7 for enterprises in agricultural areas engaging in nonfarm businesses.

**Making these methodological changes had important implications for our ability to track improvements over time. Because the indicators used in the 2019 MBEI and 2020 MBEI differ, tracking improvements by looking at overall scores is not possible.** We cannot tell whether changes in scores reflect actual improvements in state-level scores or are simply an artifact of changes in the composition of the index. For instance, dropping an indicator that states received low scores on would raise the overall scores in the MBEI, but this increase would not reflect any actual governance improvements in Myanmar.

**To address this problem, the research team created two separate indices.** The *2020 MBEI* includes all **153** of the new and improved indicators and captures the overall quality of economic governance in Myanmar today. However, scores on this index can only be compared cross-sectionally across units (firms, townships, and states) in Myanmar in 2020; they cannot be compared to 2018 data. We also created a Core *MBEI*, which is a narrower set of 92 indicators that were used both in 2018 and 2020. Core indicators are only taken from panel firms, those that answered the MBEI survey in both years. This ensures that all improvements or declines result directly from actual changes in policy and not from any change in the composition of the firms responding.

**CALCULATION: MBEI scores on the 153 indicators are combined into 10 subindices.** Considerable effort was made to ensure that these subindices were theoretically meaningful and distinct, and that they corresponded to actionable policy measures affecting private-sector entry and growth in Myanmar. Improvement in these subindices is seen as critical for Myanmar to continue to develop and prosper (see chapter 4 for a full discussion of the motivation behind the selection and measurement of each indicator).

**To create subindices, each indicator was standardized to a scale of 1 to 10, where 1 is the lowest score reported by a respondent and 10 is the highest.** This decision is critical because it implies normalizing the MBEI scores around the best practices already found in Myanmar. Thus, the MBEI directs S/R governments to improve their performance, not against some ideal and possibly unattainable standard of good governance, but rather against the best practices of their peers within the same national political framework. For example, while the MBEI scores for states and regions range from 53 to 61, any S/R could in theory attain a perfect score of 100 by adopting all best practices currently found in Myanmar. After indicators were rescaled, a weighted average was taken to create the subindex. Weighted averages were employed to better incorporate hard data when available. To limit perception biases, survey data received a weighting of 60%, whereas hard data received 40%.

**MBEI scores are calculated to allow for separate analyses of distinct subgroups.** Importantly, all subindices were created at the level of the respondent firm. That is, each firm had a unique governance score created by its survey answers and township-level observational and administrative data. This approach allows us to aggregate individual respondent answers to whatever level of governance we deem to be necessary for a particular research goal. While the MBEI focuses on aggregate performance at the S/R and township level, we can also generate separate economic governance scores at the township level, by sector of the firm, by gender of the business owner, and by a range of other features that allow us to track inequality in the administration of economic governance.

TABLE 1.2

# List of All Indicators Used in the MBEI, by Subindex

**Key**
Survey data
Observational or administrative data

## Subindex 1: Entry Costs

**CORE INDICATORS**

1. Waiting over three months to be fully legal (%)
2. Number of documents to be fully legal (#)
3. Number of days for operating license at CDC or DAO (#)
4. Number of days for business registration certificate at DICA (#)
5. Had difficulty with any registration procedure (%)
6. Share of documents required to obtain a DAO business operating license (%)
7. Agreement that the DAO staff was helpful and knowledgeable (%)

**NEW INDICATORS**

8. Number of procedures needed to apply for a CDC or DAO operating license (#)
9. Number of procedures needed to apply for a DICA registration certificate (#)
10. Number of procedures needed to apply for a DISI registration certificate (#)
11. Research team visited the DAO more than once for license procedures (%)
12. DAO office is working at capacity (%)
13. DAO office has necessary physical resources (%)
14. OSS office is working at capacity (%)
15. OSS office has necessary physical resources (%)
16. OSS office staff are friendly and helpful (%)
17. DAO standard application form exists and is available (%)

## Subindex 2: Land Access and Security

**CORE INDICATORS**

1. Firm owns land and has title (%)
2. Length of time to obtain land documentation (days)
3. Firm believes it has at least moderate risk of expropriation (%)
4. Firm believes it has at least moderate risk of changes in rental contract (%)
5. Firm believes it is likely to receive fair compensation in case of expropriation (%)
6. Firm has done land procedures and encountered no difficulties (%)

**NEW INDICATORS**

7. Firm had a land dispute in the past two years (%)
8. Firm has a Land Grant or Form 7 (%)
9. Firm owner owns land in another person's name (%)
10. Firm has faced obstacles in acquiring or expanding business premises (%)
11. Number of documents required to obtain a GAD Land Grant (#)
12. DALMS staff is helpful (%)
13. GAD standard application form exists and is available (%)
14. DALMS standard application form exists and is available (%)
15. GAD office has necessary physical resources (%)
16. DALMS office has necessary physical resources (%)
17. GAD office is working at capacity (%)
18. DALMS office is working at capacity (%)
19. Total number of documents required for DALMS Form 105 (land map) (#)

## Subindex 3: Post-Entry Regulation

**CORE INDICATORS**

1. Number of inspection visits for businesses (# of examination)
2. Inspections help business comply with regulations (% agree)
3. Firms spend less than 10% of their time on bureaucratic procedures (%)
4. Government officials process paperwork effectively (% agree)
5. Government officials are friendly (% agree)
6. Doesn't take many trips to get stamps and signatures (% agree)
7. Paperwork is simple (% agree)
8. Fees are listed publicly (% agree)
9. GAD staff are helpful (%)
10. One-stop-shop desks with personnel in attendance (#)
11. One-stop-shop exists in a township (%)

**NEW INDICATORS**

12. Regulatory fees are made easily ascertainable by government disclosures (%)
13. Time taken to examine and inspect the business (minutes)
14. Government agencies are technically competent (%)
15. Number of inspections disrupts business operations (%)
16. Number of documents required to renew DAO business operating license (#)
17. Number of documents required to renew GAD Land Grant (#)
18. DAO staff are helpful (%)

## Subindex 4: Informal Charges

**CORE INDICATORS**

1. Firms have to make gifts in the form of money (% disagree)
2. Firms paying less than 2% of sales revenue in bribes (%)
3. I usually know the amount of the bribe in advance (% agree)
4. Gifts in the form of money increase the speed of service delivery (% agree)
5. Making a gift in the form of money is essential to win a procurement bid (% agree)
6. Made a gift or extra payment during an inspection (% agree)
7. Inspections create opportunities for regulators to make money through gifts (% agree)
8. Complaints per 10,000 citizens (#, 2019)

**NEW INDICATORS**

9. Need to make a gift or pay money to get a loan (% agree)

## Subindex 5: Infrastructure

**CORE INDICATORS**

1. Hours out of service of telephone and other telecommunication services last month (hours)
2. Hours of power outage last month (hours)
3. Number of days in a year that roads are blocked by flooding, mud, or poor road conditions (#)
4. Firm was damaged by an unexpected power outage or unstable power supply (% agree)
5. Number of power outages experienced last month (#)
6. Time between registering for and receiving electrical service (aggregate, days)
7. Urban roads are good or very good (%)
8. Telephones are good or very good (%)
9. Electricity is good or very good (%)
10. Internet is good or very good (%)
11. Water quality is good or very good (%)
12. Hospital/clinic quality is good or very good (%)
13. Mobile phones per capita (%)

**NEW INDICATORS**

14. Number of the last five outages that were announced in advance (#)
15. Rural roads are good or very good (%)
16. Time between registering for and receiving electrical service (private home meter, days)
17. Time between registering for and receiving electrical service (public home meter, days)
18. Time between registering for and receiving electrical service (private business meter, days)
19. Time between registering for and receiving electrical service (public business meter, days)
20. Households with access to water during dry season (%)
21. Individuals aged 15 and above who used the internet in the last seven days (%)
22. Railroad density (km/km2)
23. Road density, weighted by road type (km/km2)
24. Share of households with a public or community electrical grid (%)

## Subindex 6: Transparency

**CORE INDICATORS**

1. Accessibility of state or region's budget (%)
2. Accessibility of Union laws (%)
3. Accessibility of implementing documents and regulations of Union ministries (%)
4. Accessibility of state/region laws and regulations (%)
5. Accessibility of new infrastructure plans (%)
6. Accessibility of public investment plans such as hydropower projects, airports, and highways (%)
7. Accessibility of land-use allocation plans and maps (%)
8. Accessibility of planning documents for the development of state/region industries and sectors (%)
9. Accessibility of forms for completing regulatory procedures (%)
10. Predictability of changes in laws and regulations at the Union level (%)
11. Predictability of changes in regulations at the S/R level (%)
12. Predictability of implementation rules at the S/R level (%)
13. Share of GAD documents with information publicly posted (%)
14. Share of DAO documents with information publicly posted (%)

**NEW INDICATORS**

15. Share of DAO documents with examples provided
16. Share of DALMS documents with examples provided
17. Share of DALMS documents with information publicly posted
18. Ease of acquiring information on DAO schedule of fees (score of 1–3)
19. Transparency survey score for government websites (possible range: 0 to 15)

## Subindex 7: Favoritism in Policy

**CORE INDICATORS**

1. No Favoritism by local authorities towards businesses with strong connections (%)
2. Favoritism in land access (%)
3. Favoritism in loan access (%)
4. Favoritism in mineral exploitation licenses (%)
5. Favoritism in simpler administrative procedures (%)
6. Favoritism in state agency contracts (%)
7. Favoritism in information access (%)

**NEW INDICATORS**

8. Other privileges and favoritism (%)

## Subindex 8: Environmental Compliance

**CORE INDICATORS**

1. Pollution has a slight or no negative effect on the firm's business prospects (%)
2. Overall environmental quality is good (%)
3. Local authorities take timely action to deal with pollution (%)
4. State support for saving water (%)
5. State support for waste recycling (%)
6. Purpose of government inspections is to protect society and the environment (% agree)
7. Households with improved toilet sanitation (%)

**NEW INDICATORS**

8. State support for reducing air pollution (%)
9. State support for reducing water pollution (%)
10. State support for saving electricity (%)
11. Number of garbage trucks per 10,000 people (#)
12. Road transport carbon intensity of the economy

### Subindex 9: Labor Recruitment

**CORE INDICATORS**

1. Ease of recruiting rank-and-file manual workers (%)
2. Ease of recruiting technicians (%)
3. Ease of recruiting accountants (%)
4. Ease of recruiting supervisors (%)
5. Ease of recruiting managers (%)
6. Primary school enrollment rate (%)
7. Middle school enrollment rate (%)

**NEW INDICATORS**

8. Firm needs to train new employees (%)
9. Quality of local labor meets the firm's needs (%)
10. Number of days after hiring before employee can do the job (#)
11. High school enrollment rate (%)
12. Labor exchange office placements per 10,000 people (#)

### Subindex 10: Law and Order

**CORE INDICATORS**

1. If an official breaks the law, I can appeal to a higher level for resolution (%)
2. When violations of the law are discovered, officials will discipline the offending staff (%)
3. Legal system will uphold property rights and contracts (% agree)
4. Business disputes are heard by courts at all levels in the state or region (% agree)
5. Court hears/resolves economic cases quickly in the state or region (% agree)
6. Court enforces economic cases quickly in the state or region (% agree)
7. State or region legal aid agencies support businesses when disputes arise (% agree)
8. Judgements by the court are fair (% agree)
9. The security situation is good (% agree)
10. Victim of crime last year (%)
11. Reported to the local police (%)
12. Total number of selected crimes per 10,000 citizens per year (#, 2018)

**NEW INDICATORS**

13. Number of judges per 10,000 citizens (#, 2018)
14. Number of riots and protests per 10,000 citizens (#, 2014-2017)
15. Number of armed clashes per 10,000 citizens per year (#, 2018)

**CALIBRATION: Final MBEI scores are calibrated using weights that reflect the relative importance of each topic to key economic outcomes.** A simple summation of the ten subindices yields an unweighted index with a maximum of 100 possible points. While this is clearly the easiest and simplest method of calculating the final MBEI, it is inappropriate as a policy tool for the simple reason that some subindices are more important than others in explaining private-sector development. Hence, it is important to reweight the subindices based on their actual contributions to economic welfare. To do so, the research team used multiple regression analysis to determine how each of the subindices influenced the key economic performance variables that researchers and practitioners in Myanmar have deemed the most important gauges of private-sector development.[5] In particular, we looked at the relationship between the MBEI and average annual employment growth in our sample of firms. In essence, we learned which subindices provide businesses with incentives to increase the size of their projects and create jobs. We favor this outcome variable, because the ultimate goal of local officials is to enhance the economic welfare of the populace.

Subindices that have a significant, positive correlation with employment growth—land access (subindex 2), transparency (subindex 6), environmental compliance (subindex 8), and labor recruitment (subindex 9)—are placed in the highest weight class of 15%. Those with the least correlation with positive, private-sector development outcomes—, post-entry regulation (subindex 3), informal charges (subindex 4), infrastructure (subindex 5), and favoritism (subindex 7)—are placed in the lowest weight class of 5%. The medium weight class of 10% is reserved for those with a positive but statistically insignificant correlation with employment growth. This includes entry costs (subindex 1) and law and order (subindex 10). These weights are shown in the final column of table 1.1.

2

# Results of the 2020 MBEI

This chapter presents the main results of the 2020 MBEI statistical analysis. It is divided into six sections. First, we present the overall MBEI and subindex scores of Myanmar's 14 S/Rs and Nay Pyi Taw. Next, we disaggregate the index to study economic governance at the township level. Third, we look at the implications of economic governance for employment and welfare in local governments. Fourth, we study how economic governance has changed over time on all subindices. Fifth, we present the results of specialized survey experiments that measure the frequency and cost of informal charges for Myanmar businesses. The final section concludes with summary findings and policy recommendations at the indicator level.

## 2.1. State and region scores

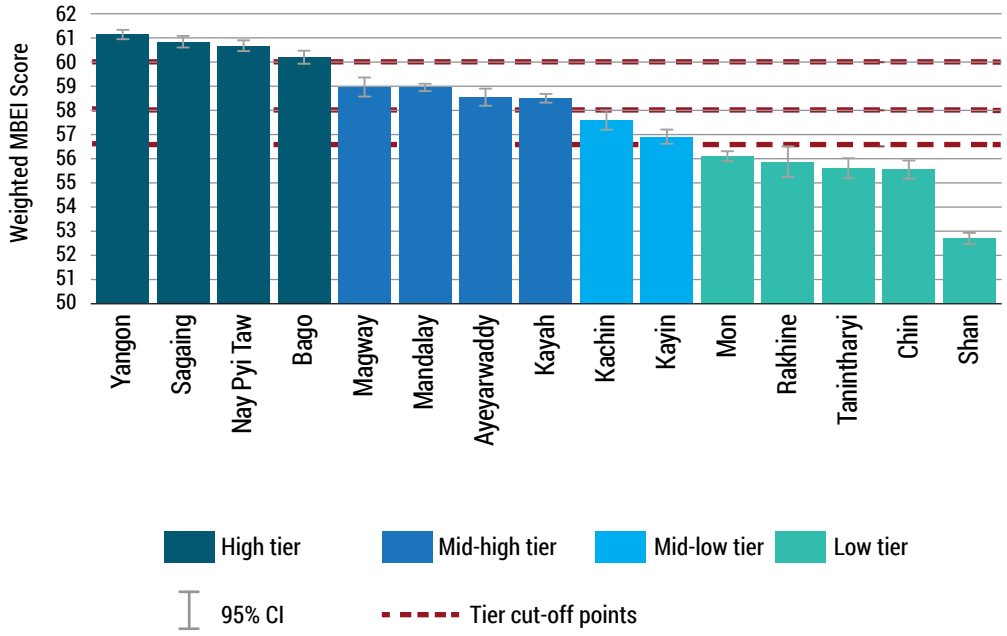
**The aggregate MBEI summarizes scores of 153 separate indicators across the ten dimensions of economic governance.** Locations with higher scores are those that are currently providing higher-quality economic governance for existing private-sector businesses, and those that are better positioned to attract future investment and growth. At its foundation, the MBEI is an effort to explain why some parts of the country perform better than others in terms of private-sector dynamism and growth. Using survey data from businesses that describe their perceptions of the local business environment, as well as credible and comparable data from official and other sources regarding local conditions, the MBEI rates Myanmar's S/Rs on a 100-point scale.

**The top-performing S/Rs in the 2020 MBEI are Yangon with score of 61.13, Sagaing, with a score 60.84 , and Nay Pyi Taw, with a score of 60.67 out of 100.** Together with Bago, they are the highest tier of economic governance in the country and the most hospitable locations for business investment in Myanmar. With scores just slightly above 60, however, even these highest-ranked locations still have room for improvement. With scores above 58, Mandalay, Magway, Ayeyarwady, and Kayah also stand out as locations with propitious economic governance. Figure 2.1 provides the full rankings for the country's S/Rs.

**Myanmar's states and regions exhibit relatively little overall variation in economic governance compared to other countries where subnational EGIs have been conducted.** The full range of scores from bottom to top is less than nine points. This means that business experience with governance is generally more consistent than in Vietnam and Cambodia, for instance. In other words, most of Myanmar's S/Rs provide adequate but middling governance, and there are few obvious superstars or laggards. This may be due to the country's long history of centralized, Union-level control over policy and administration. It is partly for this reason that this report emphasizes the individual S/R diagnostics of chapter 4 over a direct ranking of Myanmar's S/Rs. Nonetheless, a comparison of economic governance across Myanmar's S/Rs does yield some interesting insights.

**With respect to overall quality of economic governance, Myanmar's states and regions fall into four tiers, as shown in figure 2.1.** Although variation between S/Rs is relatively

FIGURE 2.1
## 2020 Myanmar Business Environment Index




mild in Myanmar, these tiers reflect distinct levels of performance in the MBEI dataset. The colors in figures 2.1 and 2.2 identify four tiers of governance: (1) S/Rs rated above 60.0 on the overall index, (2) S/Rs rated between 58.0 and 60.0, (3) S/Rs rated between 56.5 and 58.0, and (4) S/Rs rated below 56.5. We selected these cut-off points because this is where the tiers are relatively robust across changes in methodology.

**Altering the methodology slightly, such as removing or adding indicators or altering the calibration weights, changes rankings within categories, but does not lead to states and regions jumping from one basket to another.** This point is demonstrated in figure 2.1, where we show the range bars depicting 95% confidence intervals around the average scores for each locality. These confidence intervals include the variance caused by sampling error and indexing procedures. Although the interpretation of confidence intervals is complicated, they can best be thought of as the range of MBEI scores that are possible for each state if we were to rerun the entire indexing methodology. For instance, in repeated iterations, Ayeyarwady's score might be anywhere between 58.18 and 58.91, with the most likely score centered around 58.54.

**These tiers help distinguish between real differences in governance, which statisticians refer to as statistically significant differences, and those that are simply artifacts of our methodological choices.** When confidence intervals overlap, as they do between Sagaing and Yangon, we cannot say for certain that Sagaing has better economic governance than Yangon. If we were to repeat the indexing procedures, their relative positions could well be reversed. However, we can say for certain that Sagaing and Yangon both have significantly better governance than Mandalay, as its confidence interval is well below the other two locations and does not overlap. In repeated iterations of the index, it is highly unlikely that Mandalay would surpass the other two. Knowing this fact allowed us to designate tiers that are robust with regard to indexing methodology.

**Different states and regions excel and underperform in different aspects of governance.** Figure 2.3 illustrates this point by depicting the highest and lowest scores on each subindex. Notice how locations such as Kayah State and Mandalay Region appear as both the highest ranked states on some criteria and the lowest ranked states on others. Also notice the number of different states that received the highest score on one subindex or another. These states have the policies that are currently the most conducive to business success, and they are the most likely places to look for best practices. After weighting the

index by subindices that are most strongly associated with employment creation in the past year, however, we arrive at the MBEI rankings shown in figure 2.1.

**Parsing subindex scores, we see that S/Rs in tier 1 and tier 2 illustrate two distinct pathways to good governance.** Yangon, Nay Pyi Taw, and Mandalay, the three most urban locations, follow one path, performing well on infrastructure, environment, and labor recruitment. These features of governance build on their advantages as well-resourced urban centers with higher levels of human capital. Yangon also ranked first in transparency by making a large number of regulations publicly available. Sagaing and Bago follow a second path – with less dense populations, they excel at reducing favoritism towards businesses with strong connections, low post-entry regulatory costs, and in instilling confidence in legal systems and law enforcement

**The second and third tiers are made up of S/Rs that have middling scores on all indices or excel at one or two features of governance, but fare extremely poorly in others.** Ayeyarwady, for instance, ranks near the top of the country on land access, post-entry regulation, and transparency, but struggles on infrastructure. Rakhine, Chin, and Shan States have the lowest overall rankings in the index, which may result from ongoing conflicts distracting decision-makers from business-level decisions. Particularly notable are Rakhine's struggles with environmental compliance and providing good infrastructure for businesses.

**High variation in some subindex scores points to large differences in subnational business environments and consequently very big differences in the experiences of businesses across the country.** High variation implies that there are important differences in how S/R and township governments are interpreting and implementing central policies, as well as devising new initiatives of their own. Low variation indicates that the governance issues are very similar across states, pointing to either structural problems in the Myanmar economy or issues in central laws and regulations. Figure 2.4 is a radar graph that illustrates the differences in variation across subindices by plotting the minimum, median, and maximum scores for each subindex. We can observe the variation in scores by looking at the distances between these three lines in the graph. Labor recruitment (subindex 9), and infrastructure (subindex 5) have the greatest distances between minimum and maximum scores.[6] The larger variance for these measures indicates that a few S/Rs excel in these areas, while others have struggled. By contrast, transparency (subindex 6) and land access (sub-index 2) show very little variation or distance between the lowest and highest scores.[7] The tight concentration of S/Rs on these measures is an indication that these subindices may capture more intractable, national-level reform dilemmas.

FIGURE 2.2

**Map of 2020 Myanmar Business Environment Ranking**

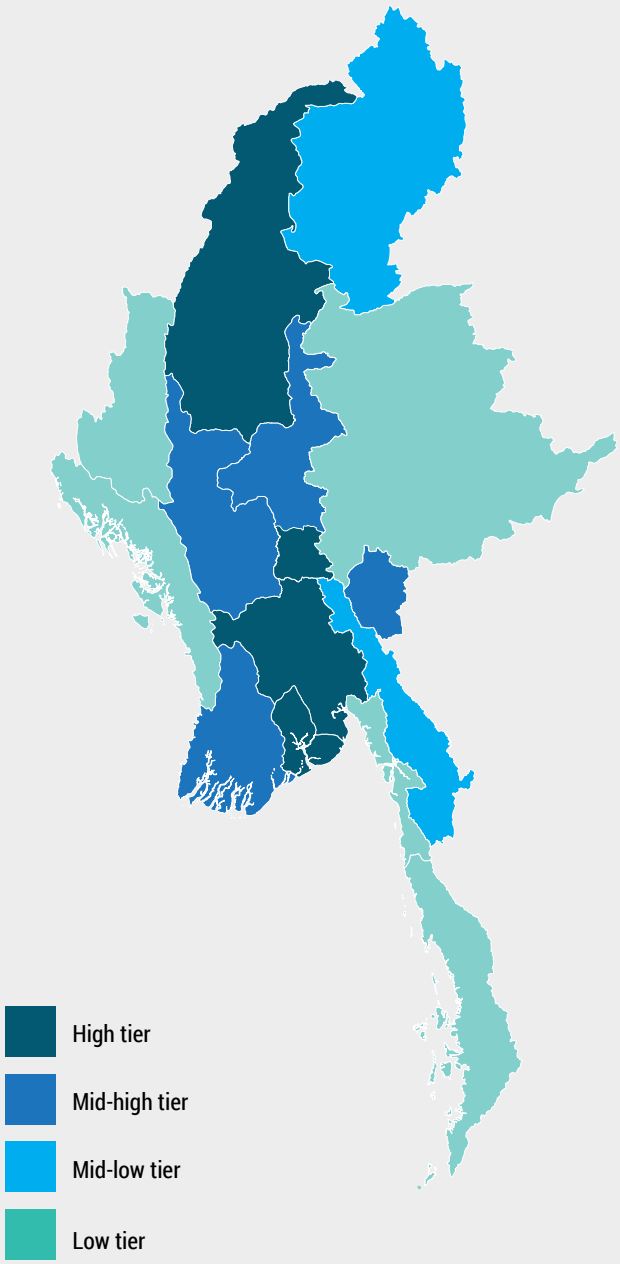


FIGURE 2.3

# The Ten MBEI Subindex Rankings

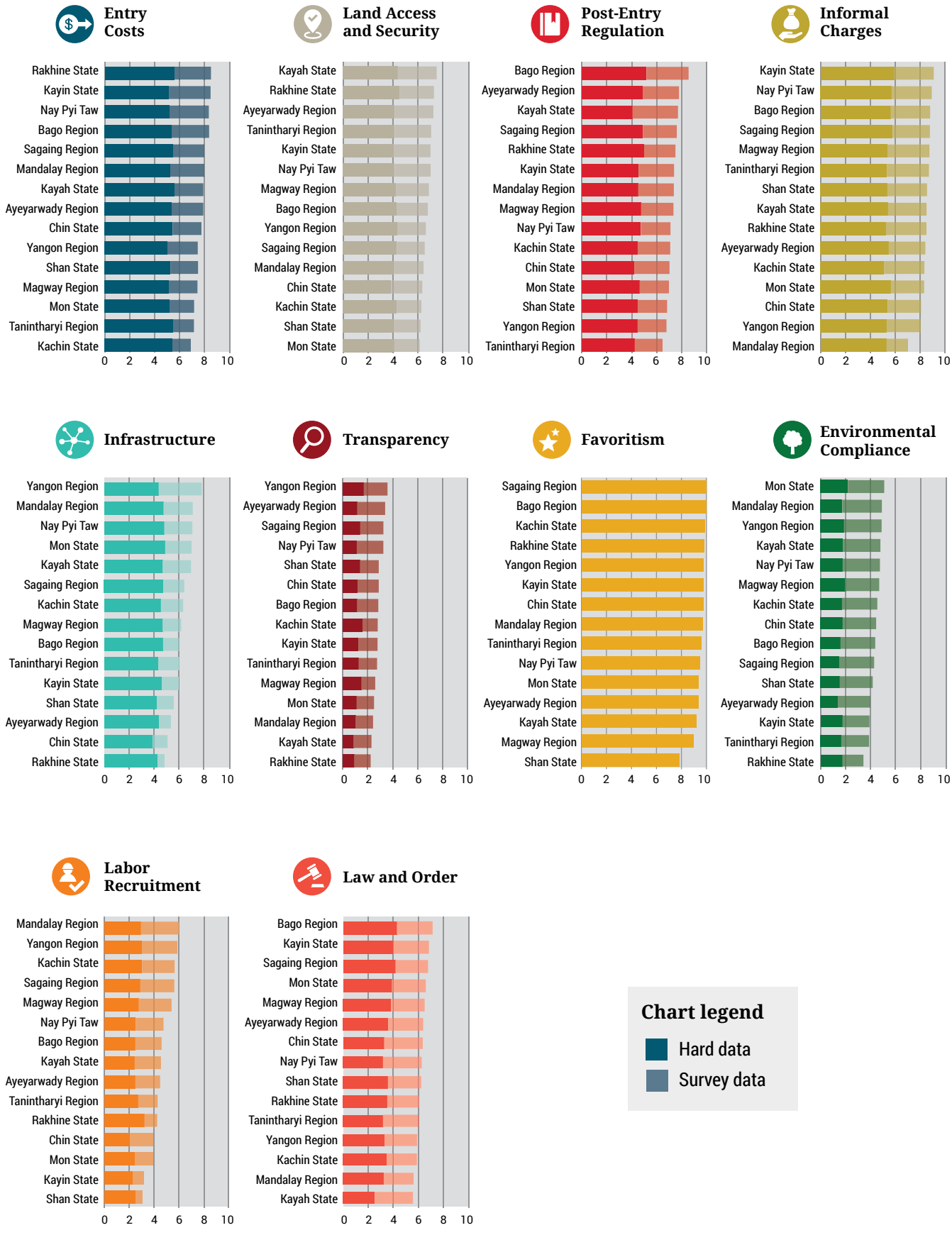
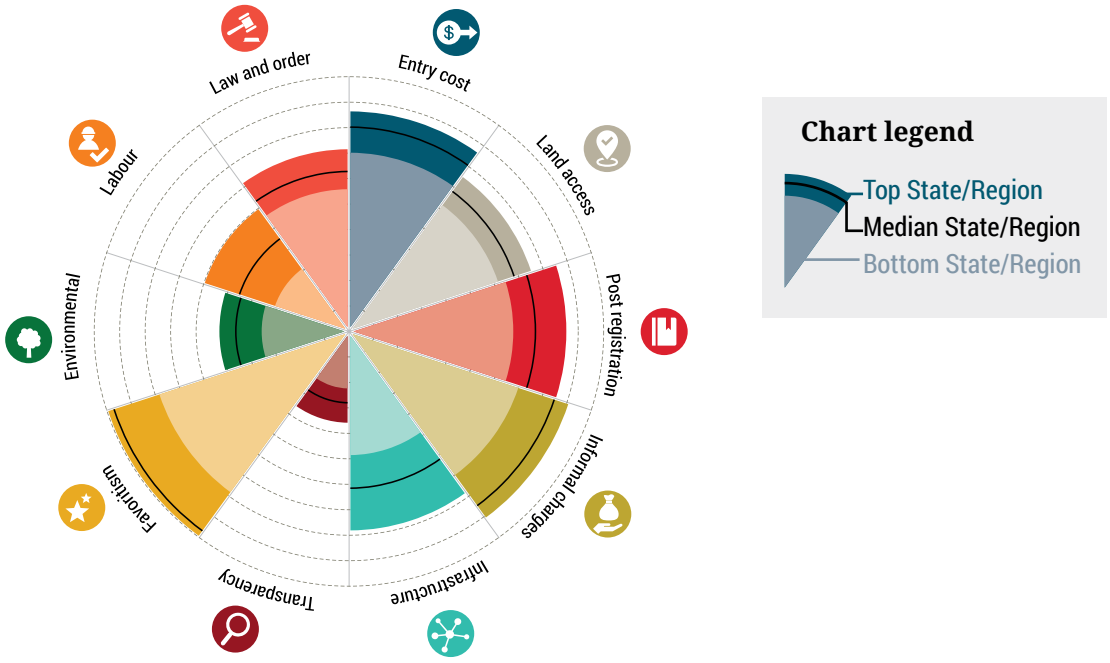


FIGURE 2.4
**Radar Graph of 2020 MBEI Subindices**




# 2.2. Township scores

**The MBEI can also provide government and businesses with a township-level picture of economic governance in Myanmar.** The MBEI aggregates measurements to the S/R level in order to provide subnational governments with actionable information for improving local economic governance. However, economic governance measurements are also possible at the township level, within the townships randomly sampled for the MBEI. This provides a more localized and granular picture of subnational economic governance in Myanmar. Indeed, this more-detailed data is particularly useful in researching the relationship between economic governance and economic growth. Figure 2.5 shows the composite scores of 76 townships in the MBEI nationwide sample.[8]

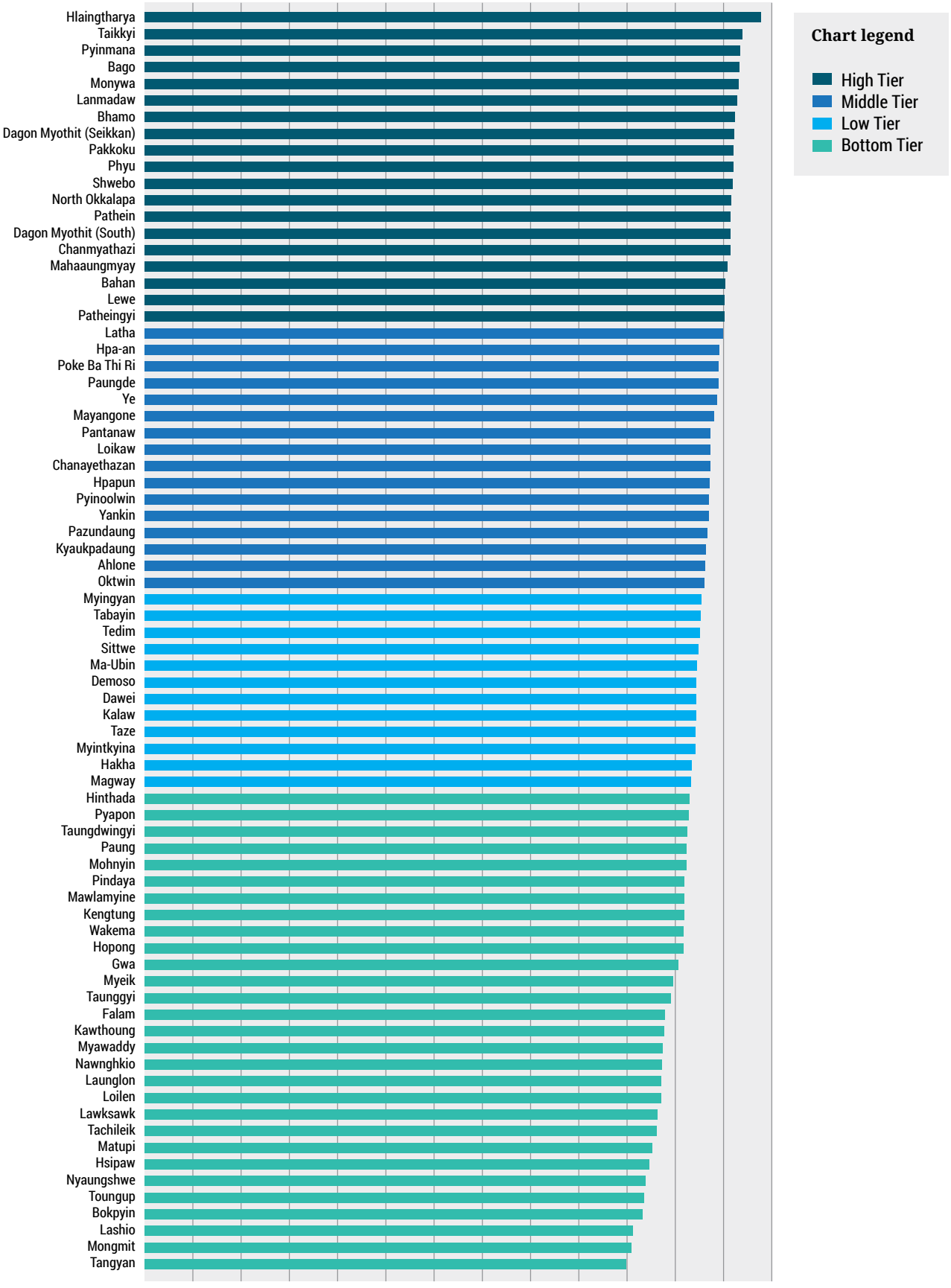
**There is greater diversity in economic governance among Myanmar's townships than among the states and regions.** While legal and policy decisions may take place at the Union and S/R levels, businesses nonetheless experience economic governance differently at the township level. This is likely due to differences in administration and implementation. Probing further with an analysis of variance, the standard deviation of the MBEI between S/Rs is 2.91, implying that differences between states and regions explain about 28% of the variation in firm-level experiences with economic governance.[9] By contrast, the standard deviation of townships within S/Rs is 4.5. Differences between townships within S/Rs explain about 40% of variation in firm-level experiences with governance. Nevertheless, the four tiers (high, mid-high, mid-low, and low) appear among townships as well. These represent statistically significant differences in performance among townships in economic governance (see figure 22.5).

**Many states and regions have both well-performing and poorly performing townships.** Most S/Rs have both high- and low-ranking townships. This diversity is partly responsible for the overall middling scores of most S/Rs. But in some states—notably Chin and Rakhine—their sample townships are mostly near the bottom of the rankings. This contributes to the overall low scores of these states.

**Together, these findings suggest that improving governance has to do more with reforming interactions between firms and township-level administrative offices than with high-level reforms at S/Rs** (Bissinger 2019).

FIGURE 2.5

## MBEI Ranking at Township Level



# 2.3. Implications for economic growth

**The 2020 MBEI provides compelling evidence of the association between economic governance and improved economic welfare in Myanmar.** At the heart of the MBEI is the following question: Does improving economic governance matter? Taking the steps to enhance a local government's performance on any of the 153 MBEI indicators requires leaders' valuable time and resources, as well as comprehensive planning and coordination among local actors. Determining whether such actions are worth the effort is not a trivial exercise.

**To research this question, we examined the correlation between the MBEI and economic performance, using econometric analysis.** This allows us to separate out the contribution made by initial conditions (i.e., the fundamental underlying factors that contribute to growth but are very difficult or impossible to address in the short term, such as location, market size, and human resources). In doing so, we adjust our estimates to account for the influence of structural variables by using them as control variables, including historical wealth (measured by lag GDP per capita), market size (measured by population density), and geographic spread (measured by surface area). We hope to see whether governance practices explain why some areas outperform others or why some areas have similar economic outcomes despite having very different initial conditions. Actual improvements in these governance practices should lead to improvements in economic performance, even without significant changes in the physical and human infrastructure in a region.

**In order to provide the clearest possible picture, we analyze the relationship between economic growth and economic governance at the township level.** To increase our variation and precision, we disaggregate the MBEI to the township level, our primary sampling unit. Because of our sampling procedures, we have reliable estimates at this level, and we can better isolate localized economic performance. Using the township-level data allows us, by a technique called S/R fixed effects, to control for the overall development of the state and region in which the townships are embedded. In other words, we are going to compare townships inside Yangon to one another, rather than Yangon townships to those in Chin state. This allows us to show that it is not just that Yangon outperforms other states, but rather that governance is associated with the level of welfare of townships within Yangon.

**We consider two outcome variables that we believe are relevant to economic performance: average annual employment growth and nighttime luminosity.** First, we use average annual employment growth—the number of new workers that each company in the township has added since its origin, divided by the age of the firm. This measure is a nice proxy for economic welfare, showing how business growth increases employment opportunities, raises incomes and lifts citizens out of poverty. Second, we use nighttime luminosity as a proxy for economic activity. Measuring welfare poses an additional challenge. Gross domestic product (GDP), the standard measure of economic activity, is especially difficult to determine in developing countries, where the informal sector is large and institutional constraints can be severe. This is especially true at the subnational level. To avoid these problems, we take advantage of new technology and economic findings, which have shown that evening luminosity observed from satellites is an excellent proxy for economic activity (Chen and Nordhaus 2011, Henderson et al. 2012, Bickenbach 2016).[10]

**The results show a positive relationship between employment growth and economic governance, measured by the MBEI, that is statistically significant at the .05 level.** The top panel of figure 2.6 provides a graphical depiction of the results. The y-axis shows the residual labor growth after removing endowments, structural conditions, and state-level effects. The x-axis does the same thing for weighted MBEI. The correlation between these two variables demonstrates the partial regression, the relationship between employment and governance after netting-out structural conditions. The coefficient shows that, all else equal, a one-point improvement in economic governance is associated with 0.24% improvement in average annual employment growth. To put this number in perspective, imagine a firm that began operations in 2015 with 10 workers. Shifting from the lowest township MBEI in the country, 49.9 points, to the highest, 63.9 points, would yield average employment growth of 3.4%, which over five years would imply the hiring of nearly two additional workers.

**Economic governance is also associated with**

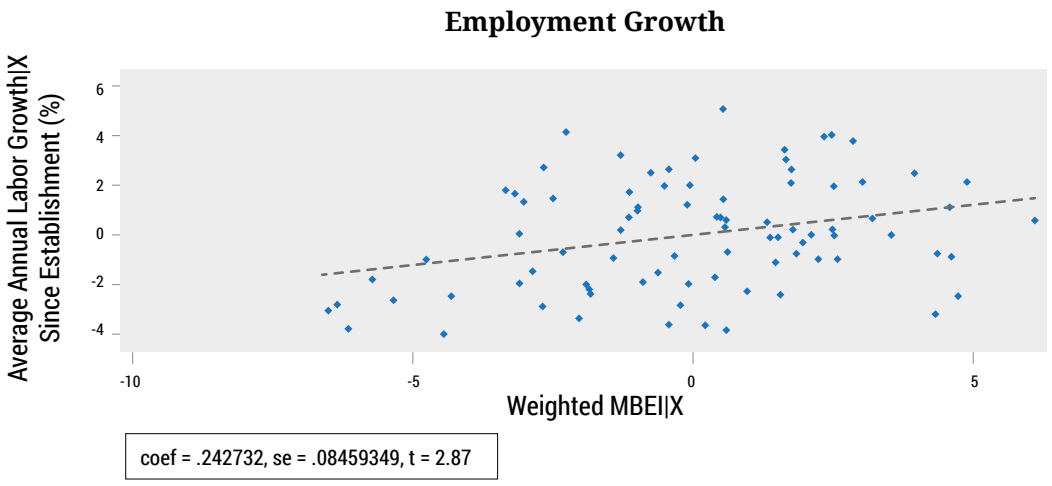
*We hope to see whether governance practices explain why some areas outperform others or why some areas have similar economic outcomes despite having very different initial conditions.*

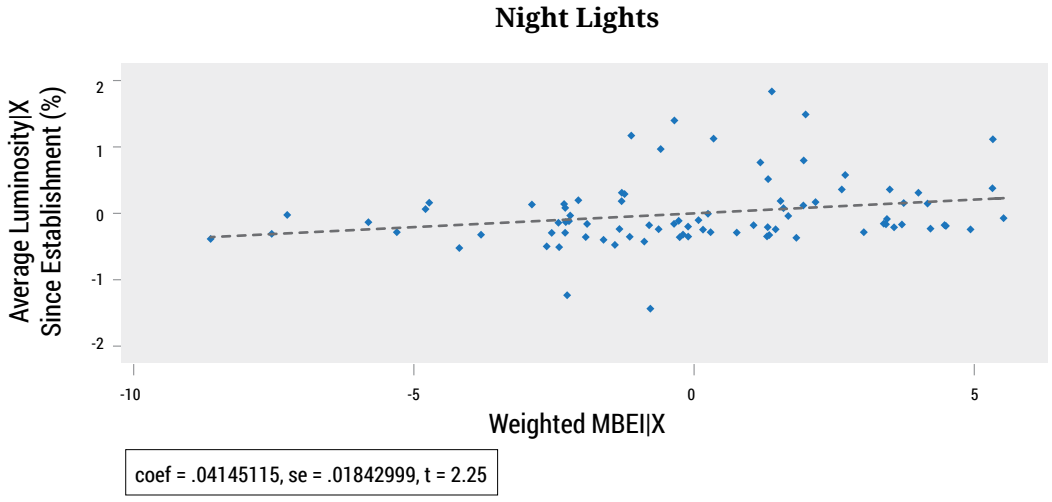
**increases in nighttime luminosity.** The bottom panel of figure 2.6 also shows a statistically significant relationship after holding structural conditions constant. The slope of the line implies that, all else equal, an increase of one point would lead to a 4% increase in luminosity, indicating a sizeable amount of economic activity. Moving from the lowest to highest scores would increase night light activity in the township by 58%.

**In short, economic governance and economic welfare are highly correlated. Much more work is needed to determine the full causality of the relationship, but these initial estimates are impressive.**

FIGURE 2.6

## Relationship between Economic Governance and Township Employment Growth




Regressions control for population density (1000s), firm age suface area (1000 lm), GDP per capita (ln, lag1) labor size at start (ln) , and sector fixed effects

# 2.4. Documenting changes in subnational governance over time

**To measure change over time, we rely on the Core MBEI, which is a narrower set of 92 indicators that were used both in 2018 and 2020.** Core indicators are only taken from the 1,200 panel firms, those that answered the MBEI survey in both years. Using the same firms ensures that all improvements or declines result directly from actual changes in policy and not from any change in the composition of the firms responding. Because these indicators are measured exactly the same way in both time periods and drawn from the exact same sample of firms, the Core MBEI allows for longitudinal comparisons, allowing us to precisely track governance improvements over time.

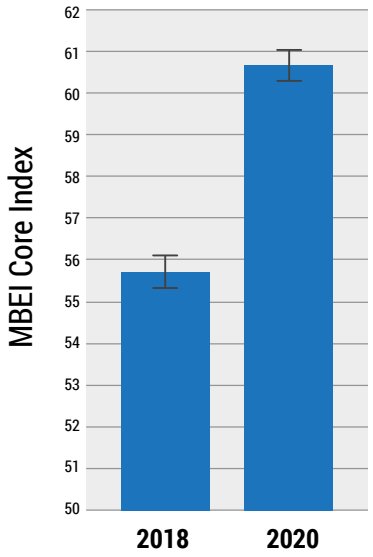
**We find strong evidence for governance improvements in Myanmar between the 2018 and 2020 waves.** This can be seen in figure 2.7, which shows that the firm-level Core MBEI. The graph reports the average firm-level score using survey weights to reflect the nationally representative average. According to figure 2.7, the core MBEI rose over 5 points, from 55.1 in 2018 to 60.6 in 2020, a 10% improvement. This rise is consistent with both the World Bank's Doing Business index and the World Economic Forum's Global Competitiveness Rankings, and testifies to important efforts by authorities in Myanmar to improve economic governance across the country.

### 2.4.1. Which S/Rs improved the most?

Every single S/R recorded a positive change in economic governance over time. This can be seen in Figure 2.8, which employs a "pair graph," made famous by Edward Tufte. The graph shows the 2018 Core MBEI scores with light-blue triangles and the 2020 scores with blue circles. Not a single S/R shows a decline, with the circle below the triangle. Each state's scores are connected by a line representing the two years from 2018 to 2020. The length of that line represents the degree of change over time. The longer the line, the greater the change.

FIGURE 2.7

**Change Over Time in Core MBEI, Measured at Firm Level**




The largest overall improvements were achieved by the local leaders of Ayeyarwady (9.1 points), Yangon (7.9 points), Sagaing (7.8 points), and Nay Pyi Taw (7.7 points). The smallest improvements were recorded by Mon (0.2 points) and Tanintharyi (1.2 points), which were among the highest-ranked provinces in the 2018 Core MBEI.

### 2.4.2. What features of economic governance improved the fastest?

Improvements over time were not uniform, but instead were concentrated in a few sub-indices. Figure 2.9 shows that, according to the 1,200 panel firms that answered in both years, S/Rs in Myanmar recorded statistically significant and positive changes in reducing the burden of post-entry regulation (subindex 3), augmenting infrastructure (subindex 5), enhancing transparency (subindex 6), reducing favoritism (subindex 7), strengthening environmental compliance (subindex 8), and facilitating labor recruitment (subindex 9). We probe the specific advances in these indices in more detail below.

FIGURE 2.8

**Change in Core MBEI at Firm Level, by State or Region**

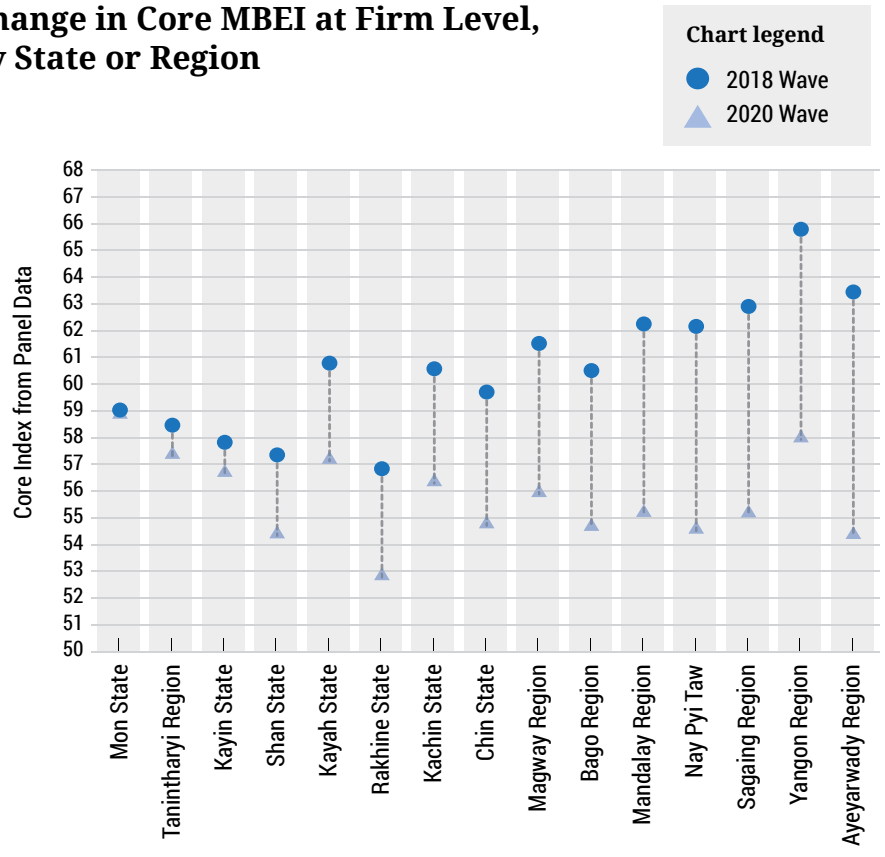
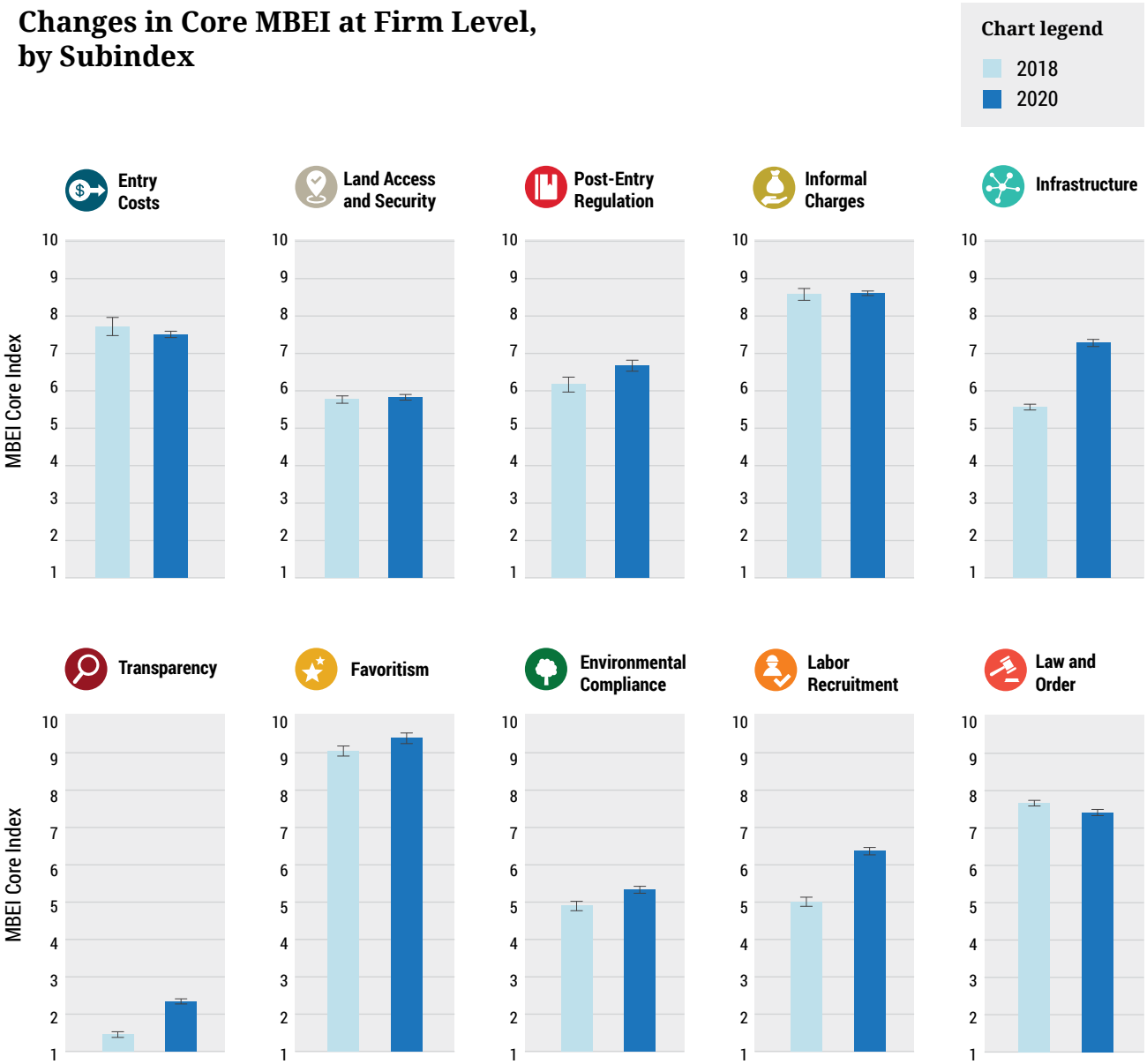


FIGURE 2.9

## Changes in Core MBEI at Firm Level, by Subindex




## *Post-entry regulatory compliance*

**Table 2.1 reports changes in the median S/R over time for each indicator to illustrate how the average S/R performed.** Table 2.1 is advantageous in that reduces the influences of outliers on average scores. However, it is important to note that it can lead to slightly different results than using the nationally weighted firm-level scores shown in figure 2.9.

**Advances were made in reducing the burden that businesses face beyond simply easing entry costs at GAD and OSS offices.** The biggest jumps are evident in the observed performance of one-stop-shop (OSS) and General Administration Department (GAD) offices. In 2018, 71% of townships in the median S/R had a functioning OSS for completion of regulatory procedures by businesses. In 2018, an average of two of the OSS desks (2.02) had employees at work when we visited them during regular working hours. In 2020, by contrast, 100% of townships in the median S/R have a functioning OSS and an average of nearly four (3.45) desks with staff at work when we visited them. In 2018, only half of the GAD regulatory staff we interacted with were considered helpful by observers who requested information about administrative procedures. In 2020, 73% of GAD regulatory staff were considered helpful.

**Evidence of improvements in regulatory procedures were also found in the survey data.** The overall burden of regulatory inspections declined from an average of 2.7 inspections per year in the median S/R in 2018 to an average of 1.93 inspections per year in the 2019 survey. Seventy-three percent of businesses responded that regulatory fees were publicly posted at the time of their last visit to a township office in the median S/R in 2020, a tremendous improvement from 51% in 2018. Seventy-seven percent of firms in the median S/R in 2020 reported that bureaucratic officials were friendly during regulatory procedures, up from 72% in 2018.

**Bureaucratic procedures remain a concern for post-entry regulation, however.** Whereas in 2018, 80% of panel firms in the median province reported that officials were effective at handling bureaucratic paperwork, only 65% feel that way in 2020. Relatedly, the share of firms spending less than 10% of their managers' time on bureaucratic procedures declined from 95% to 90%. Sixty-five percent of businesses in the median S/R answered that multiple office visits and stamps were not necessary to complete procedures in 2020, up just one point from 64% in 2018 (table 2.1).

TABLE 2.1

## Core Post-Entry Regulation Indicators, by Year

| Core MBEI indicator | Median S/R, by year | |
|---|---|---|
| | 2018 | 2020 |
| 1. Number of inspection visits for businesses (#) | 2.7 | 1.9 |
| 2. Inspections help business comply with regulations (% agree) | 83.1% | 80.7% |
| 3. Firms spend less than 10% of their time on bureaucratic procedures (%) | 95.1% | 89.5% |
| 4. Government officials process paperwork effectively (% agree) | 79.9% | 64.8% |
| 5. Government officials are friendly (% agree) | 72.0% | 76.5% |
| 6. Doesn't take many trips to get stamps and signatures (% agree) | 63.7% | 64.7% |
| 7. Paperwork is simple (% agree) | 71.2% | 71.1% |
| 8. Fees are listed publicly (% agree) | 50.9% | 73.0% |
| 9. GAD staff are helpful (%) | 50.0% | 73.3% |
| 10. One-stop-shop desks with personnel in attendance (#) | 2.0 | 3.5 |
| 11. One-stop shop exists in a township (%) | 71.0% | 100.0% |

Shaded rows denote observational indicators.

## *Infrastructure*

**Both the survey data and the hard data show evidence of substantial infrastructure improvements.** Nearly every core indicator shows large advances. Work stoppages and damage caused by infrastructure deficiencies were significantly reduced. Lost work time due to power outages in the median S/R declined from an average of 30 hours in 2018 to an average of 17 hours in 2020. In 2018, 48.6% of firms in the median S/R reported that these outages caused damage or spoilage. In 2020, that proportion fell to 37.2%. Time lost to blocked or flooded roads declined from 14 days in the median S/R in 2018 to less than 3 days in 2020. Changes are also evident in how firms rate the quality of infrastructure. Firms in the median S/R increased their rating of road quality (from 50% to 64%), telephone coverage (from 69% to 82%), electricity (from 53% to 77%), and internet service (from 57% to 79%). At the same

time, cell phone penetration among businesses in the MBEI increased from 45% in 2018 to 90% in 2020 (table 2.2).

TABLE 2.2

## Core Infrastructure Indicators, by Year

| Core MBEI indicator | Median S/R, by year | |
|---|---|---|
| | 2018 | 2020 |
| 1. Hours of out of services of telephone and other communication services last month (hours) | 11.0 | 12.9 |
| 2. Hours of power outages last month (#) | 29.7 | 16.7 |
| 3. Number of days in a year that roads are blocked by flooding, mud, or poor road conditions (#) | 14.3 | 2.8 |
| 4. Firm was damaged by an unexpected power outage or unstable power supply (% agree) | 48.6% | 37.2% |
| 5. Number of power outages experienced last month (#) | 7.3 | 6.5 |
| 6. Time between registering for and receiving electrical service (aggregate, days) | 45.5 | 50.9 |
| 7. Urban roads are good or very good (%) | 50.1% | 64.4% |
| 8. Telephones are good or very good (%) | 68.9% | 81.7% |
| 9. Electricity is good or very good (%) | 53.1% | 76.8% |
| 10. Internet is good or very good (%) | 56.7% | 79.4% |
| 11. Water quality is good or very good (%) | 63.7% | 72.4% |
| 12. Hospital/clinic quality is good or very good (%) | 41.9% | 50.9% |
| 13. Mobile phones per capita (%)[11] | 44.9% | 90.0% |

Shaded rows denote observational indicators.

## *Transparency*

**Overall transparency remains quite low, but access to information has improved.** First, we can look at firms' assessment of their ability to obtain legal documents necessary for running their businesses from national and local governments. In 2018, just 0.4% of firms in the median S/R said it was easy or very easy to get information on plans for infrastructure rollouts, which is necessary for planning business expansion or relocation. In 2020, 14% of firms said it was possible to get this information. Fourteen percent is still low, but the scale of the improvement is reason for optimism. Similar improvements in access can be seen in the case of public investment plans (up from 3.2% to 8.6%), land-use allocation plans and maps (up from 6.9% to 12%), S/R regulations and laws (up from 0.6% to 19%), forms for completing regulatory procedures (up from 14.5% to 29.9%), and the S/R budget (up from 3.1% to 4.4%). Personal observation by our researchers in 2018 found that, in the median township, almost no townships had information on regulations posted publicly in GAD or DAO offices. In 2020, we found that 13% of a set of necessary business documents were available in GAD offices and 9.3% were located by our team in DAO offices. Again, the numbers are quite low, but they display a positive trajectory (table 2.3).

**One puzzle is that firms' beliefs about the predictability of laws and regulations did not track improvements in information access.** In 2018, in the median S/R, just 6.2% of firms said

changes in Union laws and regulations were predictable. About 11% said changes in S/R laws and regulations and changes in their implementation rules were predictable. In 2020, the predictability of Union laws increased only slightly, to 7.3%, while the predictability of S/R laws and their implementation fell to 6.9%. Lack of predictability may reflect the fact that transparency remains quite low despite the improvements (table 2.3).

TABLE 2.3

## Core Transparency Indicators, by Year

| Core MBEI indicator | Median S/R, by year | |
|---|---|---|
| | 2018 | 2020 |
| 1. Accessibility of state or region's budget (%) | 3.1% | 4.4% |
| 2. Accessibility of Union laws (%) | 5.1% | 20.4% |
| 3. Accessibility of implementing documents and regulations of Union ministries (%) | 1.4% | 8.1% |
| 4. Accessibility of state/region laws and regulations (%) | 0.6% | 19.0% |
| 5. Accessibility of new infrastructure plans (%) | 0.4% | 14.1% |
| 6. Accessibility of public investment plans such as hydropower projects, airports, and highways (%) | 3.2% | 8.6% |
| 7. Accessibility of land-use allocation plans and maps (%) | 6.9% | 12.0% |
| 8. Accessibility of planning documents for the development of state/ region industries and sectors (%) | 1.3% | 10.1% |
| 9. Accessibility of forms for completing regulatory procedures (%) | 14.5% | 29.9% |
| 10. Predictability of changes in laws and regulations at the Union level (%) | 6.2% | 7.3% |
| 11. Predictability of changes in regulations at the S/R level (%) | 11.3% | 6.9% |
| 12. Predictability of implementation rules at the S/R level (%) | 11.2% | 7.3% |
| 13. Share of GAD documents with information publicly posted (%) | 0.0% | 12.5% |
| 14. Share of DAO documents with information publicly posted (%) | 0.0% | 9.3% |

Shaded rows denote observational indicators.

## *Favoritism*

**In 2020 there appears to be less favoritism towards businesses with connections.** The share of firms claiming that there is no favoritism toward connected businesses jumped from 74% in 2018 to 89% in 2020. Drilling deeper into particular forms of perceived favoritism, we find reduction of bias in land access (declined from 16.9% in 2018 to 5.5% in 2020), access to business loans (declined from 10.5% in 2018 to 8.3%), mineral exploitation permits (declined from 1.4% in 2018 to 0.5%), and favoritism in winning state agency contracts (declined from 2.6% to 0.5%). Bias in access to information remained stagnant, while more businesses reported a bias in simpler administrative procedures towards businesses with more contacts (increase from 4.2% in 2018 to 5.5%).

TABLE 2.4

## Core Favoritism Indicators *(over Time)*

| Core MBEI Indicator | Median S/R by year | |
|---|---|---|
| | 2018 | 2020 |
| 1. No Favoritism of local authorities towards businesses with strong connections (%) | 74.4% | 89.4% |
| 2. Favoritism in land access (%) | 16.9% | 5.5% |
| 3. Favoritism in loan access (%) | 10.5% | 8.3% |
| 4. Favoritism in mineral exploitation license (%) | 1.4% | 0.5% |
| 5. Favoritism in in simpler administrative procedures (%) | 4.2% | 5.5% |
| 6. Favoritism in state agency contracts (%) | 2.6% | 0.5% |
| 7. Favoritism in information access (%) | 3.4% | 3.7% |

## *Environmental Compliance*

**Environmental compliance appears to have improved as well.** In the median S/R in 2018, only 39% of businesses responded that their environmental quality was good, 42% thought leaders took timely action to deal with the pollution, and just 7% knew of local government programs to assist firms with recycling. Eighty-four percent of firms in 2018 did not believe pollution was damaging their business. In 2020, all of these indicators showed improvements, even among the same firms in the very same industries. Over half of respondents reported that environmental quality was good (52%) and that local governments acted in a timely manner to protect the environment (52%), and 18% believed the state provided support for recycling. Moreover, in 2020, 93% of firms in the median S/R did not believe pollution was harmful to their business. The only negative trend is an environmental indicator on state support for water-saving technologies, which remained stuck at about 10% (table 2.5).

TABLE 2.5

## Core Environmental Compliance Indicators, by Year

| Core MBEI indicator | Median S/R, by year | |
|---|---|---|
| | 2018 | 2020 |
| 1. Pollution has a slight or no negative effect on the firm's business prospects (%) | 83.8% | 93.0% |
| 2. Overall environmental quality is good (%) | 39.3% | 52.0% |
| 3. Local authorities take timely action to deal with the pollution (%) | 42.1% | 51.9% |
| 4. State support for saving water (%) | 10.2% | 9.8% |
| 5. State support for waste recycling (%)[12] | 6.9% | 17.7% |
| 6. Purpose of government inspections-to protect society and the environment (%, agree) | 25.7% | 22.1% |
| 7. Households with improved toilet sanitation (%) | 83.6% | 91.7% |

Shaded rows denote observational indicators.

## *Labor Recruitment*

**Labor quality remains low, but firms are growing more confident that they can recruit high-quality workers for operations requiring either skilled or unskilled employees.** In the median S/R, 43% of firms in 2020 reported that hiring manual workers was easy or very easy, up from 37% in 2018. Improvements over 2018 were observed in recruitment of workers with technical skill (27%, vs. 20%, in 2018) accountants (48% vs. 38%), mid-level managers (45% vs. 32%), and general managers, (40% vs. 30%). These changes were correlated with improvements in education.

TABLE 2.6

### Core Indicators of Labor Recruitment, by Year

| Core MBEI indicator | Median S/R, by year | |
|---|---|---|
| | 2018 | 2020 |
| 1. Ease of recruiting rank-and-file manual employees (%) | 37.4% | 43.0% |
| 2. Ease of recruiting technicians (%) | 20.3% | 26.9% |
| 3. Ease of recruiting accountants (%) | 38.3% | 47.8% |
| 4. Ease of recruiting supervisors (%) | 32.3% | 44.8% |
| 5. Ease of recruiting managers (%) | 29.9% | 40.4% |
| 6. Primary school enrollment rate (%)[13] | 89.7% | 94.9% |
| 7. Middle school enrollment rate (%)[14] | 53.4% | 72.7% |

Shaded rows denote observational indicators.

### 2.4.3. Stagnant areas of economic governance

No significant improvements were found in three subindices, where scores remained roughly the same as last year. These were ease of entry (subindex 1), access to land (subindex 2), and reducing informal charges (subindex 4). This stagnancy reflects limited change in some key subindices, but also mixed results on a variety of subindices where positive scores are countervailed by negative scores. In terms of law and order (subindex 10), we observe general declines in the overall indicator score.

## *Entry Costs*

**Entry costs were already quite reasonable, making it hard to achieve significant new improvements.** In the median S/R, in both 2018 and 2020, just 24% of firms reported that they waited over three months to be fully legal, an average of more than 4.5 supporting documents were necessary to secure an operating license, and only about 8% of firms had trouble complying with entry procedures. The time required to obtain a DICA registration certificate declined only slightly, from 31 days in 2018 to 30 days in 2020 (one explanation could be that just three firms in the MBEI sample had made use of the DICA online portal[15] at the time of interviews.) Importantly, 76% of the panel firms reregistered as businesses in 2019. Consequently, the 2020 figure shows activities that took place after the 2019 wave.

There are a few positive notes, however. The average time required to obtain an operating license, either from the DAO or the CDC, declined from 31 days to 25 days. In addition, the proportion of townships where DAO staff were considered knowlegeable and helpful by our observers increased from 72% in 2018 to 78% in 2020 (table 2.7).

TABLE 2.7

## Core Indicators of Entry Costs, by Year

| Core MBEI indicator | Median S/R, by year | |
|---|---|---|
| | 2018 | 2020 |
| 1. Waiting over three months to be fully legal (%) | 24.2% | 24.5% |
| 2. Number of documents to be fully legal (#) | 4.5 | 4.6 |
| 3. Number of days for operating license at CDC or DAO (#) | 31.0 | 24.8 |
| 4. Number of days for business registration certificate at DICA (#) | 31.2 | 30.1 |
| 5. Had difficulty with any registration procedure (%) | 8.2% | 8.8% |
| 6. Share of documents required to obtain the DAO business operating license (%) | 72.0% | 78.2% |
| 7. Agreement that the DAO staff was helpful and knowledgeable (%) | 50.0% | 81.5% |

Shaded rows denote observational indicators.

## *Land Access and Security of Tenure*

**Although the overall index did not improve significantly, there were marginal improvements in almost every indicator of land access.** In the median province, panel firms that report having some form of land title for their main business premises increased from 70% in 2018 to 80 % in 2020. For firms that applied for land titles, the average waiting time to receive the title declined from a staggering 127 days in 2018 to 121 days in 2020. Correspondingly, while 56% of firms in 2018 said they had at least a moderate fear of expropriation, that fell to 45% in 2020.

One area of concern to keep track of, however, is that while landholding has improved, firms that rent land for their primary business premises express growing concern. Ninety-one percent of renters express at least moderate fear changes in their rental terms might damage their business, compared to only 85% of firms in 2018 (table 2.8).

TABLE 2.8

## Core Land-Access and Security-of-Tenure Indicators, by Year

| Core MBEI indicator | Median S/R, by year | |
|---|---|---|
| | 2018 | 2020 |
| 1. Firm owns land and has a title (%) | 69.6% | 79.5% |
| 2. Length of time to obtain land documentation (days)[16] | 126.96 | 121.79 |
| 3. Firm believes it has at least moderate risk of expropriation (%) | 56.4% | 45.2% |
| 4. Firm believes it has at least moderate risk of changes in rental contract (%) | 85.4% | 90.6% |
| 5. Firm believes it is likely to receive fair compensation in case of expropriation | 86.0% | 73.9% |
| 6. Firm has done land procedures and encountered no difficulties (%) | 66.1% | 100.0% |

### *Informal Charges*

**No apparent progress was made this year in combating informal charges, which were already at a relatively low level.** While no progress was apparent at the firm level, improvements in the median S/R indicator scores suggest some S/Rs have improved while others have declined. In the median S/R in 2020, 88% of firms reported that they did not need to make gifts in the form of money to operate, up from 79% in 2018. Of those that made cash gifts, 96% said they totaled less than 2% of sales revenue, a common benchmark for bribe schedules that are deemed to inhibit business activity. In 2018, 88% of firms paid less than 2% of revenue in informal charges. In the median S/R, 2.8% of firms gave gifts to regulatory inspectors in 2020, down from 4.1% in 2018. Relatedly, in 2018 more than 5% of firms thought the primary purpose of regulations was for regulators to collect bribes. In 2020, this share fell below 2%. Administrative data on reductions in complaints to township branches of the Anticorruption Commission (ACC) remained roughly the same, averaging just under three complaints per 10,000 citizens.

There has been less progress in grand corruption. In both 2018 and 2020, 100% of firms that competed for government contracts reported that bribes were necessary to win the bid (table 2.9).

TABLE 2.9

**Core Informal-Charges Indicators, by Year**

| Core MBEI indicator | Median S/R, by year | |
|---|---|---|
| | 2018 | 2020 |
| 1. Firms have to make gifts in the form of money (% disagree) | 78.5% | 87.6% |
| 2. Firms paying less than 2% of sales revenue in bribes (%) | 87.6% | 96.1% |
| 3. I usually know amount of bribe in advance (% agree) | 54.8% | 38.6% |
| 4. Gifts in the form of money increase the speed of service delivery (% agree) | 84.9% | 81.6% |
| 5. Making a gift in the form of money is necessary to win a procurement bid (% agree) | 100.0% | 100.0% |
| 6. Made a gift or extra payment during an inspection (% agree) | 4.1% | 2.8% |
| 7. Inspections create opportunities for regulators to make money through gifts (% agree) | 5.4% | 1.8% |
| 6. Complaints per 10,000 citizens | 2.6 | 2.4 |

Shaded rows denote observational indicators.

### 2.4.4. Declining areas of economic governance

As figure 2.9 showed using firm-level analysis of the sub-index, aggregate scores on law and order (subindex 10) have grown worse. As we show below, this decline is also reflected in several core indicators between 2018 and 2020.[17]

### *Law and Order*

**Declines in law and order are clearly the largest concern in the Myanmar business environment.** Firms in 2020 are dramatically less likely than in 2018 to believe that the legal system will support them in seeking redress. In 2018, 51% of panel respondents said that they could appeal to a higher authority if a lower-level official violated the law. Only 27% of panel

respondents feel that way in 2020. In 2018, almost half of respondents (44%) said that when violations of the law are discovered, S/R leaders will discipline the offending staff. Less than one-fifth (19%) feel that way today. Confidence in the court system is also in decline. Fewer firms believe that the courts will hear their business cases (down from 84% in 2018 to 77% in 2020), will resolve these cases quickly when they do accept them (down from 57% to 49% ), will make fair decisions (down from 66% to 53%), and will enforce their decisions (down from 74% to 51%). In addition, fewer firms believe they will receive legal aid to pursue disputes in local courts (down from 77% in 2018 to 73% in 2020).

**Firms also believe that crime and conflict are affecting business success.** Only 28% believe the security situation is good, compared to 39% in 2018. Administrative data confirms this: crimes per 10,000 citizens increased from 0.5 to 1.5 in 2020 (table 2.10). One positive sign, however, is that panel respondents in the median S/R who experienced a crime decreased from 12% in 2018 to 6% in 2020. In other words, the proportion of panel firms that reported being victims of a crime fell, yet the overall perception of the security situation still worsened. One source of the change in perceptions could be the perceived dangers of armed conflict.

TABLE 2.10

## Core Law &-and-Order Indicators, by Year

| Core MBEI indicator | Median S/R, by year | |
|---|---|---|
| | 2018 | 2020 |
| 1. If official breaks the law, I can appeal to higher level for resolution (%) | 51.1% | 27.1% |
| 2. When violations of the law are discovered, officials will discipline the offending staff (%) | 44.1% | 19.2% |
| 3. Legal system will uphold property rights and contracts (% agree) | 71.2% | 78.6% |
| 4. Business disputes are heard by courts at all levels in the state or region (% agree) | 84.1% | 77.0% |
| 5. Court hears/resolves economic cases quickly in the state or region (% agree) | 56.6% | 49.4% |
| 6. Court enforces economic cases quickly in the state and region (% agree) | 74.2% | 50.9% |
| 7. Provincial legal aid agencies support businesses when disputes arise (% agree) | 76.6% | 72.7% |
| 8. Judgements by the court are fair (% agree) | 66.0% | 53.0% |
| 9. The security situation is good (% agree) | 38.8% | 28.4% |
| 10. Victim of crime last year (%) | 11.6% | 5.8% |
| 11. Reported to the local police (%) | 50.0% | 29.9% |
| 12. Total number of selected crimes per 100,00 citizens | 0.5 | 1.5 |

Shaded rows denote observational indicators.

# 2.5. Special analysis of informal charges

In this special analysis, we take advantage of shielded responses embedded in the MBEI survey that allow us to protect respondents from admitting involvement in corruption. Using these techniques, we confirm that close to 0% of firms paid informal charges to obtain their operating licenses. This number is consistent over time and between panel firms and new firms. However, when we study bribes paid to obtain construction licenses, the answers are much different. About 70% of the 129 respondents who applied for a construction license in 2019 paid an informal charge to obtain it, and the average size of these payments per firm was 3.4 million Kyats (US$2,430). As construction licensing is a rare activity that only the largest and most sophisticated firms engage in, this is a useful window into grand corruption.

In the panel analysis in table 2.9 above, we concluded that petty corruption, measured by our direct questions about informal charges, was low and declining over time. There are two concerns with this conclusion. First, corruption is an extremely sensitive topic, punishments for corruption are significant, and firms may fear retribution from bureaucrats for speaking honestly. And while firms may want to report corruption so that it can be reduced, they certainly don't want to admit any culpability for their own involvement. Second, the questions laid out in table 2.8, other than the one regarding procurement, may only be capturing reductions in petty corruption. Grand corruption is less visible and harder to detect, and generally involves elite firms engaged in procurement, trying to enter restricted sectors, or pursuing large-scale business expansion.[18]

*while firms may want to report corruption so that it can be reduced, they certainly don't want to admit any culpability for their own involvement.*

To address this severe form of social desirability bias, we added two list experiments to the survey that were aimed only at firms that had engaged in bribery during business entry (box 2.1) or while applying for construction licenses for projects on their business premises (box 2.2) in the past year (see Malesky et al. 2015 for a detailed description of the methodology). As the wording of the questions in the two boxes suggests, respondents were randomly divided into two groups: those who were randomly assigned to the list of four activities in Form A, and those who were randomly assigned to Form B.

Both forms contained a list of three nonsensitive, ordinary activities, randomly ordered, that related to obtaining an operating license or a construction permit. For instance, in box 2.1, one of the nonsensitive activities is "search for information about business registration procedures on the agency website." However, only Form A contains a sensitive activity related to bribery: "paid informal charge to expedite application." Form B contains a placebo clause, such as "traveled to Europe to observe business registration practices there" (in the case of an operating license) or "paid for 3D-printed model of planned construction project by foreign architectural firm." These placebo clauses have close to a zero probability of drawing an affirmative answer.

Neither the respondent, nor the enumerators who interacted with the respondent or entered the data, knew which form the respondent received, and the survey only asked the respondent to indicate the number of activities they engaged in. This allowed respondents to reveal sensitive information without fear of incriminating themselves, thus removing the motivation to lie. The beauty of the list experiment is that the difference in mean score between the forms is the share of firms that engaged in the sensitive activity—in this case, paying informal charges to obtain an operating license. For instance, in a similar question related to entry procedures in the Vietnamese PCI, the average number of activities engaged in by those receiving Form A was 2.6, compared to 2.3 for Form B. The difference in means is 0.3, indicating that 30% of firms paid bribes during registration (Malesky et al. 2015).

**Using the list experiment above for operating licenses, we confirm our finding in figure 2.10 that petty corruption is close to zero.** For all three groups of firms—2018 panel respondents (top), 2020 panel respondents (middle), and 2020 new respondents (bottom), we observe no statistically significant difference in activities during registration. For instance, among the 2020 panel firms, firms that received Form A reported engaging in 1.373 activities, compared to 1.407 activities among those that received Form B. The confidence intervals overlap, indicating that these differences are not statistically different from one another. In fact, those receiving the nonsensitive list actually completed slightly more activities. This is why the predicted bribe shares are actually -2% and -4%, respectively.

BOX 2.1

## List Experiment to Measure Bribery in Business Entry

**Q29:** Please take a look at the following list of things that firms normally need to do to apply for an operating license or register their business. Please tell us how many of these activities your own business engaged in when you last applied for or renewed these documents. Do not tell us which activities; we only need to know the *total number of actions* you engaged in.

| FORM A | FORM B |
|---|---|
| • Searched for information about business registration procedures on the agency website<br>• Hired a broker/facilitator to help complete procedures.<br>• Hired a lawyer / law firm to advise on procedures<br>• Paid informal charges to relevant officials to expedite the procedures<br>☐ 0 activities<br>☐ 1 activities<br>☐ 2 activities<br>☐ 3 activities<br>☐ 4 activities | • Searched for information about business registration procedures on the agency website<br>• Hired a broker/facilitator to help complete procedures.<br>• Hired a lawyer / law firm to advise on procedures<br>• Traveled to Europe to observe business registration practices there<br>☐ 0 activities<br>☐ 1 activities<br>☐ 2 activities<br>☐ 3 activities<br>☐ 4 activities |
| ☐ *888-[No answer]* ☐ *999-[Don't know]* | ☐ *888-[No answer]* ☐ *999-[Don't know]* |

BOX 2.2

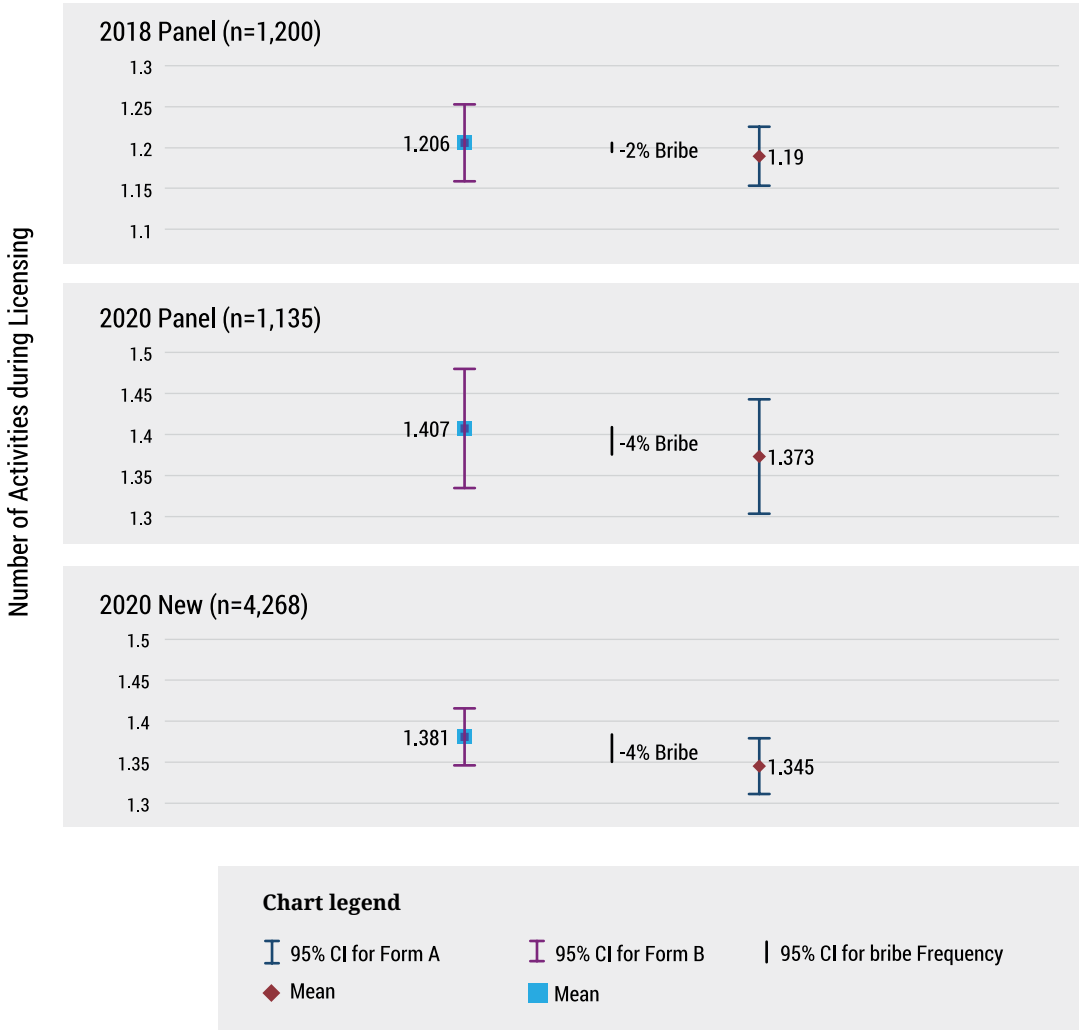
## List Experiment to Measure Bribery in Construction Permits

**Q106:** Please read this list of common activities that people normally engage in when applying for a construction permit. Please tell us how many of these activities your own business engaged in when you last applied for or renewed the documents. Do not tell us which activities; we only need to know the *total number of actions* you engaged in.

| Form A | Form B |
|---|---|
| • Paid application fees<br>• Had legal documents certified<br>• Paid site-inspection fees<br>• Paid informal charges to expedite application<br>☐ 0 activities<br>☐ 1 activities<br>☐ 2 activities<br>☐ 3 activities<br>☐ 4 activities | • Paid application fees<br>• Had legal documents certified<br>• Paid site-inspection fees<br>• Paid for 3D-printed model of planned construction project by foreign architectural firm<br>☐ 0 activities<br>☐ 1 activities<br>☐ 2 activities<br>☐ 3 activities<br>☐ 4 activities |
| ☐ *888-[No answer]* ☐ *999-[Don't know]* | ☐ *888-[No answer]* ☐ *999-[Don't know]* |

FIGURE 2.10

## Share of Firms Paying Bribes for Operating Licenses




Bribe frequency is calculated as the difference between the mean scores of the two forms that ask *how many* of the listed activities the business engaged in as part of business entry procedures.

In short, the statistical evidence indicates that firms made no additional, cash gifts when licensing their operations.

**However, informal charges to obtain construction permits are extremely common.** Turning to bribes during construction licensing, figure 2.11 tells a very different story. In 2019, 332 firms started a construction project, and 137 of them applied for construction permits for their planned buildings. Only three of those firms used brokers; the rest did it directly. Dropping these three firms and the five that refused to answer the question provides us with a sample size of 129 firms to determine whether informal charges are common in construction procedures.

There are three things to notice about figure 2.11. First, the mean number of activities is higher for Form A, which contained, as one activity, the sensitive item about informal charges. Second, the mean of Form A (2.42) is .7 higher than the mean of Form B (1.72), indicating that the share of firms paying informal changes is 70%. Third, unlike the results in figure 2.10, the confidence indices of the Form A and Form B results do not overlap, indicating that the difference between the mean number of activities is statistically significant.

**In other words, seven out of every 10 firms that applied for construction permits paid an informal charge to obtain them.** On a similar question on the Vietnamese PCI, the analysis

FIGURE 2.11
## Share of Firms Paying Bribes for Construction Permits

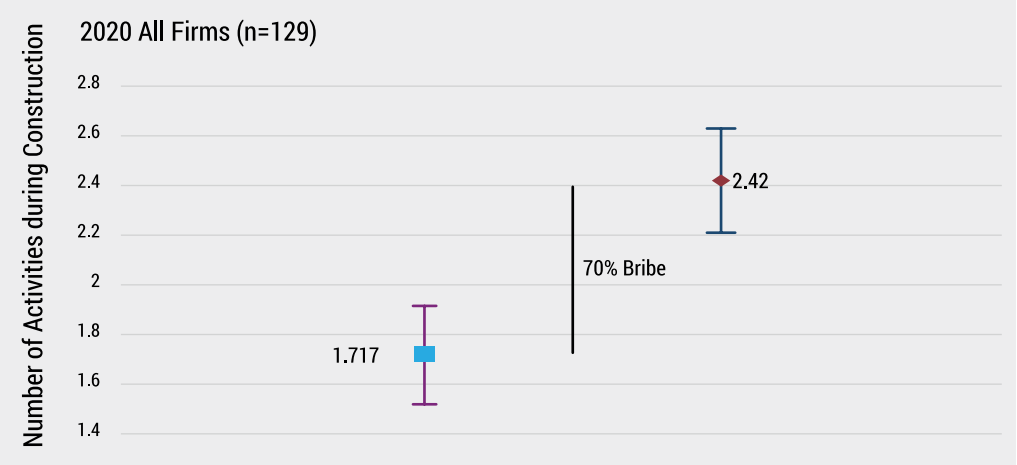



**Chart legend**

- 95% CI for Form A
- Mean
- 95% CI for Form B
- Mean
- 95% CI for bribe Frequency

Bribe frequency is calculated as the difference between the mean scores of the two forms that ask *how many* of the listed activities the business engaged in as part of procredurs to receive a construction permit.

BOX 2.3
## List Experiment to Measure Size of Construction Bribes

**D5: Q16.1** Now, tell us the total cost of these activities for your business. Remember, we only need to know the total cost of all fees, not the cost of any individual fee.

| Form A | Form B |
|---|---|
| • Paid application fees<br>• Had legal documents certified<br>• Paid site-inspection fees<br>• Paid informal charges to expedite application | • Paid application fees<br>• Had legal documents certified<br>• Paid site-inspection fees<br>• Paid for construction project simulation by digital-modeling company |
| ☐ Kyat | ☐ Kyat |
| ☐ *888-[No answer]* ☐ *999-[Don't know]* | ☐ *888-[No answer]* ☐ *999-[Don't know]* |

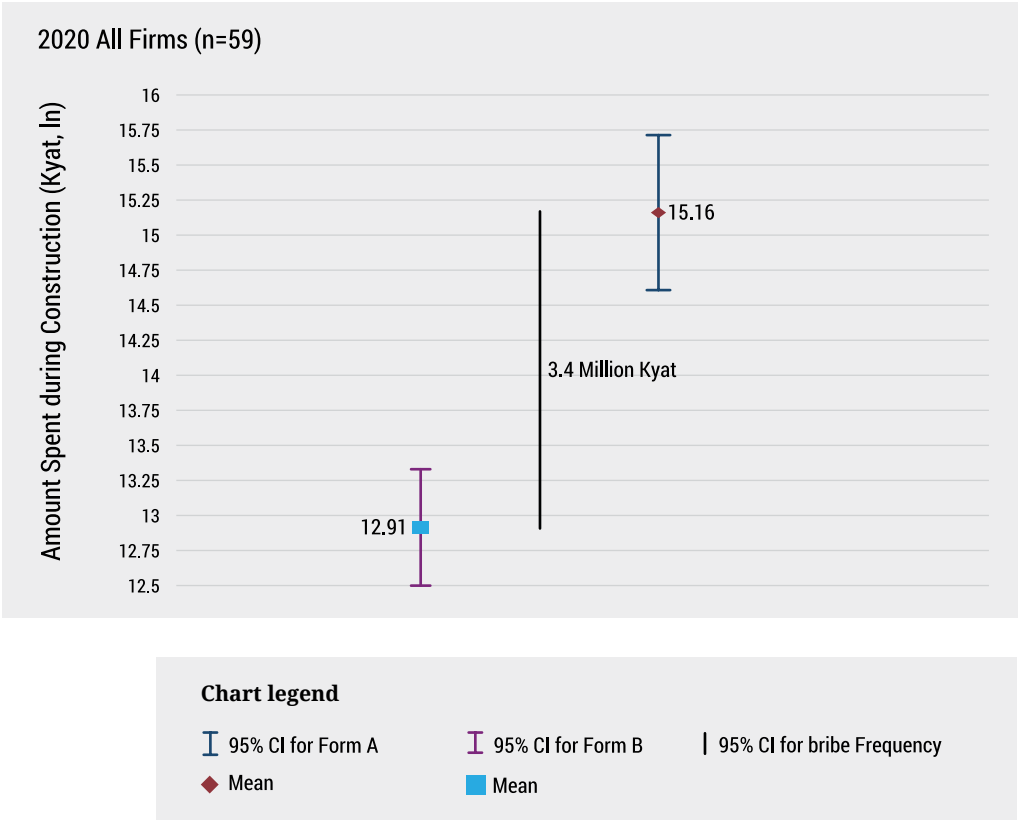
found that three out of every 10 of the 1,700 firms surveyed had made informal payments.

**In 2020, we pushed the analysis a bit further by asking firms to disclose the prices they paid for each of the listed activities.** We used the exact same items as in the construction question above, but this time, we asked how much firms paid, in kyat, for each of the activities.

To constrain disparate costs associated with widely varying firm and construction-project sizes, we transformed the number using the natural log. The distribution of the total cost of administrative procedures necessary to obtain a construction permit is shown in figure 2.12 for the 59 firms that answered the cost question.[19] The mean natural log for firms answering Form B is 12.91, which, when exponentiated, equals 404,335 kyats (US$289) for all construction-related activities. The mean for firms answering Form A is 15.16, which is equivalent to 3,836,227 kyats (US$2,742) for all construction activities. The graph clearly shows that these means are significantly different from one another, as the confidence intervals do not overlap.

**Subtracting the results of Form B from the results of Form A gives us an average bribe size of 3.4 million kyats (US$2,430) per firm to obtain a construction permit.** This figure is a little over twice the size of the average construction-permit bribe in the Vietnamese PCI survey.

FIGURE 2.12
## Cost of Bribes Paid for Construction Permits




Bribe amount is calculated as the difference between the mean scores of the two forms that ask *how much* the firm paid when the business engaged in the listed activities for the construction permit.

# 2.6. Conclusions and policy implications

We have noted above that the MBEI is an effort to represent the collective voice of entrepreneurs and managers of private-sector businesses in Myanmar. What are these businesses saying?

- *Yangon, Sagaing, Nay Pyi Taw, and Bago have the highest scores for economic governance in the country, although they have achieved this distinction through different constellations of reforms.* Yangon and Nay Pyi Taw along with Mandalay excel at infrastructure, environmental compliance, and labor recruitment, which reflects the benefits of urbanization and the greater fund of human capital in their localities. Sagaing and Bago, with less-dense populations, excel at reducing favoritism towards businesses with connections, regulatory costs, post-entry regulatory compliance, and in instilling confidence in the legal system and law enforcement.

- *Variation in S/R performance on different subindices helps to pinpoint where subnational governments can innovate and where the challenge lies with central policies.* Some subindices reveal significant differences between the highest and lowest S/Rs, while other subindex scores do not differ much between localities. The greatest differences between minimum and maximum scores are found in labor recruitment (subindex 9) and infrastructure (subindex 5). Favoritism (subindex 7), transparency (subindex 6), and land access (subindex 2) exhibit very little variation and smaller differences between the lowest and highest scores. High variation implies that there are important differences in how S/R and township governments are interpreting and implementing central policies, and what new initiatives they are devising of their own. Combination of low variation and low scores indicates that the governance issues are very similar across S/Rs, pointing to either structural problems in the Myanmar economy or issues with central laws and regulations.

- *Higher scores in land access (subindex 2), transparency (subindex 6), environmental compliance (subindex 8), and labor recruitment (subindex 9) are significantly and positively correlated with employment growth among respondent firms.* Consequently, they receive the greatest weights in the final 2020 MBEI. For local leaders pursuing governance reform, initiatives targeting these subindices will be most likely to improve economic well-being by stimulating firm growth and employment.

- *Differences in economic governance are more pronounced among townships within S/Rs than between S/Rs, pointing to the importance of township authorities to the reform process.* Less than nine points separate the top S/R from the bottom, and different S/Rs excel in different dimensions of governance. No S/R stands out as a top-ranked performer on every index. Consequently, differences among S/Rs account for just 27% of the variation in firm-level experiences of governance. By contrast, there is a 14-point gap between the highest- and lowest-ranked townships, and differences between townships within S/Rs account for over 39% of the variation in firm-level experiences of governance. This is because most firms in Myanmar, and therefore most respondents in the MBEI, are SMEs, and their primary interactions with government are with bureaucrats at the township level. Economic governance can only improve if these agencies are part of the reform process.

- *Firms in townships with better governance have hired more new workers on average since their establishment than firms in townships with poorer governance, and better-governed townships have higher levels of economic welfare, measured by night light data.* These associations hold true even after accounting for the underlying endowments, location, and wealth of the localities. The finding illustrates how economic governance is correlated with improvements in welfare.

- *Economic governance has improved in Myanmar since 2018.* The Core MBEI rose 5.4 points, from 55.1 in 2018 to 60.6 in 2020, an 10% improvement. And every single S/R improved on the Core MBEI.

- *Improvements over time were not uniform, but instead were concentrated in a few subindices. Governance improved in six areas measured by the MBEI.* Subnational governments in Myanmar, including both S/Rs and townships, recorded improvements in reducing the burden of post-entry regulation

***Yangon, Nay Pyi Taw, and Mandalay excel at infrastructure, environmental compliance, and labor recruitment, which reflects the benefits of urbanization and the greater fund of human capital in their localities.***

(subindex 3), augmenting infrastructure (subindex 5), enhancing transparency (subindex 6), reducing favoritism (subindex 7), strengthening environmental compliance (subindex 8), and facilitating labor recruitment (subindex 9).

- *Three areas of governance did not improve significantly.* These include ease of entry (subindex 1), improving land access (subindex 2), and limiting informal charges (subindex 4).

- *The quality of governance declined in only one subindex, law and order (subindex 10).*

- *Entry costs are reasonable, but not improving.* Only a small share of businesses encountered significant waiting periods or administrative burdens when registering and licensing their businesses. However, panel data indicates that waiting periods are not declining significantly over time.

- *Land-titling issues are less problematic; however, land security remains an issue even when firms have property rights.* Possession of land titles among private businesses is frequent and improving. However, firms still feel uncomfortable about the security of their business premises. Half of all businesses with land titles fear expropriation, and almost all businesses without titles fear changes in rental contracts that might undermine operations.

- *Many businesses perceive administrative procedures for post-entry regulation as satisfactory and improving.* One-stop shops for administrative procedures have proliferated, and firms point to the friendly staff in those offices. Members of the research team confirmed this by observing that more OSS desks were occupied during business hours, and OSS and GAD staff were friendly and helpful.

- *Despite improvements in post-regulation procedures, concerns remain about the capacity and efficiency of township offices such as GAD and DAO.* Firms claim to be spending more time on bureaucratic procedures and blame declining efficiency among bureaucrats who handle their paperwork.

- *Informal charges are less of a problem for service and manufacturing SMEs than generally perceived.* As in 2018, very few firms in 2020 admit to paying bribes, either in direct questions or in shielded questions meant to protect their identity. Even when bribes are paid, they are not overly burdensome for firms, accounting for a very small share of total revenue. The widespread agreement that bribery is needed to win procurement contracts, however, shows that, while petty corruption is not a burden, malfeasance at a larger scale may be taking place beyond the experience of most SMEs.

- *A special analysis of corruption confirms the finding that petty corruption is not a problem for respondents in Myanmar, but grand corruption remains a very serious concern.* Bribes during business entry are close to zero, however, nearly 70% of firms pay bribes to receive construction licenses at a cost of 3.4 million kyats (US$2,430) per firm.

- *Quality of infrastructure has improved a great deal but remains a significant issue, and this is especially true for construction-heavy physical infrastructure.* Almost 60% of firms say that rural road quality is good or very good. Firms now lose only three days annually due to flooded or blocked roads, a huge improvement from 14 days in 2018. Firms are generally more optimistic about electricity and the internet. Three-quarters of firms believe that their access to electricity, internet, and telephone service is good or very good. Work stoppages and damage from power outages has also declined precipitously.

- *Transparency has improved but remains uniformly poor in all S/Rs.* Only 18.5% of firms in the leading Magway Region have access to plans for public investments such as airports and highway projects. In Kayah State, not even 1% of all firms have access to these plans. The lack of transparency with respect to government documents is not confined to large-scale construction projects. Only 6.9% of firms in the median S/R, have access to its state budget. National-level statistics corroborate these results. Only 18% of firms have access to S/R laws and regulations, presumably easy-to-find public information. Despite the uniformly low scores on this subindex, dramatic improvements are possible, as seen in Yangon, from relatively simple interventions such as posting this information on an easy-to-find website and publicizing its existence.

- *Favoritism towards connected businesses*

*is not widespread, and scores on the aggregate subindex are improving.* Only two S/Rs, Shan and Magway, score under 9 out of 10 on this subindex. The general perception among firms is that bias in favor of connected firms is most common in connection with loans and access to land. Even in these areas only around 7% of all firms believe that favoritism exists.

- *Environmental compliance has improved over time, but more work needs to be done.* Fewer than 10 percent of firms believe that pollution has a significant, negative effect on their business. In the median S/R, over half of firms believe that state support is lacking. Despite improvements, there is not a single S/R where more than half of businesses believe that inspections are done to protect the environment, and there is not a single S/R where more than one-third of businesses believe that the government supports water conservation.

- *Access to qualified labor is improving but remains hard to find.* Panel data indicates that labor recruitment and quality have improved, but businesses are still concerned. Labor recruitment is difficult regardless of the position to be filled. In the national sample, only 40.3% of respondents say it is easy to recruit managers, and only 48.3% of respondents find it easy to hire accountants. The situation is equally bad for blue-collar positions. Only 45.6% of respondents find recruiting rank-and-file manual workers easy. Even worse, only 26.7% of respondents find it easy to recruit technicians. Difficult recruiting puts a greater burden on firms to train their workers. On average, it takes a firm 51 days to train a new worker sufficiently to do the job. While there are many explanations for the difficulty of finding and training workers, one reason may be the generally low levels of education in Myanmar. For example, administrative data shows that high school enrollment rates are only 44% (CSO, UNDP, and WB 2018).

- *Firms believe that powerful officials are above the law.* Most firms appear to think that government officials are above the law, and the situation has worsened over time. Just 26.5% of businesses believe that they can appeal an unjust decision to a higher government office, and only 20.1% believe that officials will discipline offending staff.

- *The security situation needs improvement.* Only 26.2% of firms believe that the security situation is good. According to the interviews 8.3% of firms say that they were victims of a crime in the past year. A poor security situation introduces uncertainty that reduces investment, and it creates a barrier to entry for businesses that fear violent crime.

# 3

# Who Answers the MBEI Survey?

**The MBEI uses a very rigorous sampling process to ensure that the sample of 5,605 respondent firms accurately reflects the underlying population of businesses at the national, S/R, and township levels.** This precision is what allows for the accurate comparison of business environments across localities, knowing that conclusions are not biased by which firms answered the survey in which localities.

**To measure change over time, the 2020 MBEI included 1,200 firms that also answered the survey in 2018.** Because these are the exact same respondents, they are more accurately able to gauge change in their local business environment. Studying these firms also gives us a sense of how businesses have prospered in the time between the two surveys.

**In general, the average firm responding to the MBEI is quite small, in terms of both number of employees and investment capital; it operates in services or food processing; and it is formalized through an operating license from the DAO.** Medium and large firms in a variety of service and manufacturing sectors are included in the MBEI sample, but, as in the country as a whole, they are a very small share of the overall business activity.

**Panel respondents, due to survival bias and differences in the original sample frame, tend to be older, slightly larger, more formalized, and slightly more likely to be involved in manufacturing or wholesale and retail sales.** Looking at panel firms over time, we find evidence of growing sophistication in the time between the two surveys. Respondents have improved their documentation of their business activities, have increased employment, and have moved out of low-end services into manufacturing. One exception to the pattern, however, is the declining size of firm equity in the time between the two survey waves.

In this chapter, we explore the distribution of firms represented in the MBEI report.

## 3.1. Age of firms

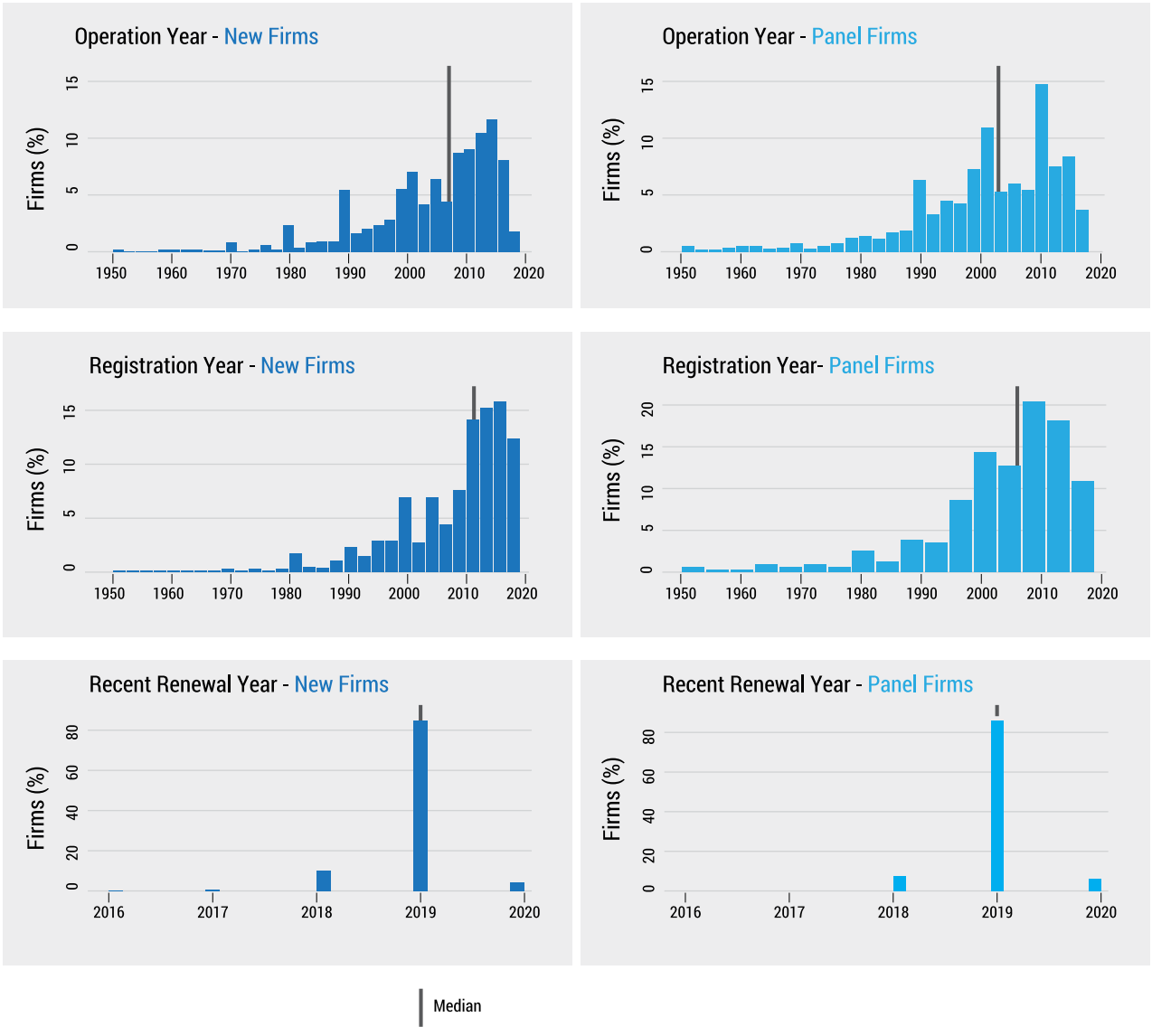
**The median firm in the MBEI survey has been in business for over 10 years and renewed its operating license in 2019. This means the firms have experience and can also speak knowledgeably about current registration procedures.**

Figure 3.1 presents six panels reflecting different features of the age of firms. The three illustrations on the left side of the graph describe the 4,405 new firms. The three on the right present the same data for the 1,200 panel firms. On each side of the graph, we look at three different measures of a firm's age: (1) the year it began operations as a formal or informal firm, (2) the year it first received an operating license or business registration certificate, and (3) the year it last renewed its operating license or registration certificate.

**The first thing to notice in the graph is that panel firms are significantly older than new respondents.** The median panel firm began operations in 2003, and only 7% of panel firms are younger than five years. By contrast, the median newly sampled firm started in 2007, and 15% of the new firms are younger than five years. The same pattern can be seen in registration certificates and operating licenses. The median panel firm first formalized operations in 2006, compared to 2011 for the new firms. Seventeen percent of new firms formalized operations after 2015, but only 8% of panel firms did. On the final statistic, however—most recent renewal—both samples show a median year of 2019, as almost all operating licenses must be renewed annually.

**The differences in age reflect three methodological patterns.** First, to be eligible for the panel, a firm's operations needed to be recognized by MOLIP before 2017 so that it showed up in the labor-inspections dataset. This allowed them to be selected for the 2018 MBEI. Thus, panel firms are firms that were operating in 2017. They were randomly selected both for the original sample and again for the 2020 panel analysis. Second, the panel data reflects some survivor bias. Panel firms could only be included in the new analysis if they did not go out of business between 2018 and today. Third, the CSO data appears to capture more-recent registrations, whereas the MOLIP dataset may need to be updated.

FIGURE 3.1
## Age of Firms in MBEI Sample



# 3.2. Size of firms by number of employees

**The average private firm in Myanmar is quite small.** In both the new sample (figure 3.2) and the panel sample (figure 3.3), over 95% of respondent firms have fewer than 50 employees. Of the new firms, 76% have fewer than 10 employees. Panel firms in 2020 are a bit bigger, with just 56% smaller than 10 employees. These numbers are in line with international comparisons. Hsieh and Olken (2014) show that in India, Indonesia, and Mexico, 98%, 97%, and 92% of firms, respectively, have fewer than 10 employees, and these small firms employ 65%, 54%, and 22% of the labor force.

**In comparing firms with fewer than four employees, firms with four to nine employees, and firms with 10 to 50 employees, however, we do notice some important differences between new and panel firms.** By design, the new MBEI sample includes no firms with fewer than four employees, while 14% of the panel firms in 2020 have fewer than four employees. About 47% of the new firms, but just 32% of the panel, have five to nine employees. Panel firms (35%) are also more likely to have 10 to 50 employees than are new firms (23%).

**Panel firms appear to have grown significantly over time.** Remember, these are the same 1,200 respondents, so growth in the number of employees can only have come from hiring new workers, not from differences in the sampling process. In figure 3.3, we can see that the share of micro-firms declined from 32% to 14%, while the share of medium-size firms grew from 30% to 35%. The shift has led to a statistically significant change in mean employment size, from 14 to 17 employees (*median* employment size grew from six to seven workers). As we showed in chapter 1, employment growth among panel firms appears to be greater in locations with higher MBEI scores.

FIGURE 3.2
## Employment Size of New MBEI Firms

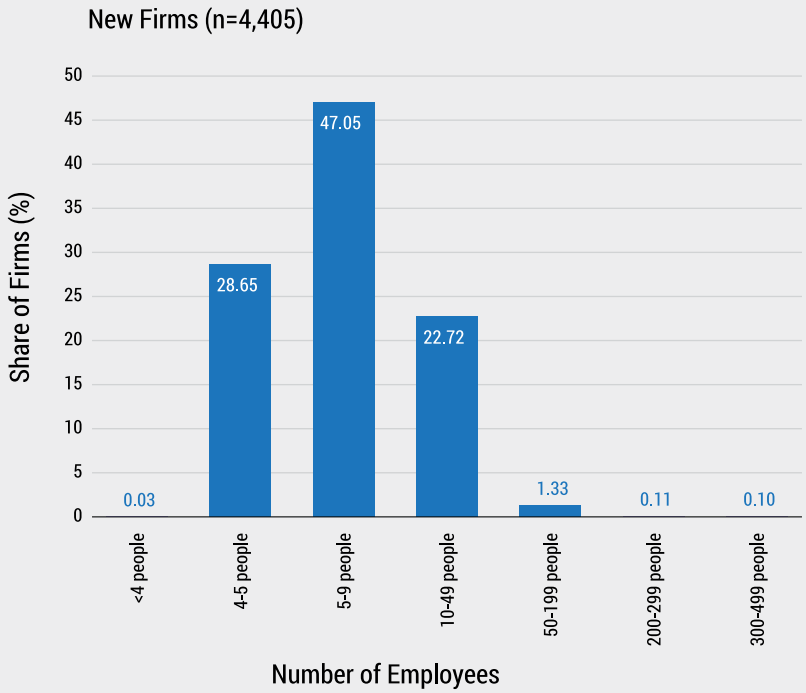
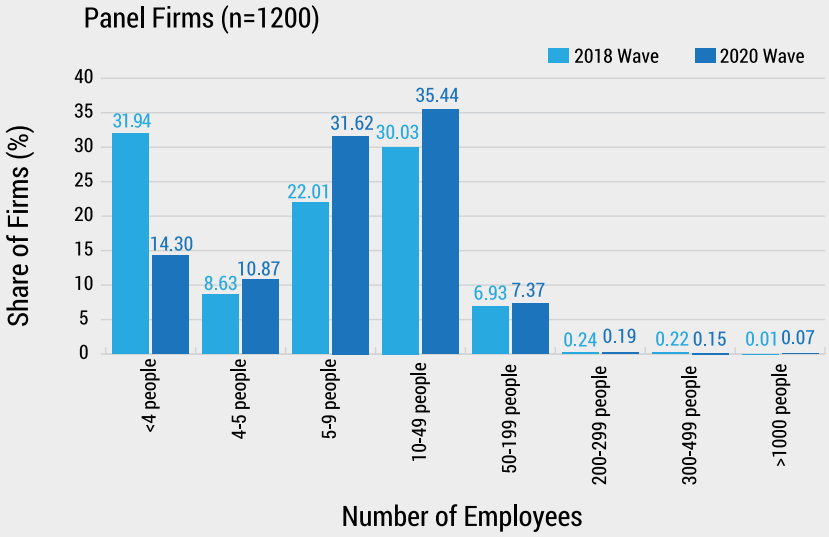



FIGURE 3.3
## Employment Size of Panel Respondents in 2018 and 2020



# 3.3. Size of firms by equity capital

**MBEI findings indicate that the equity capital of private businesses in Myanmar is extremely small.** Equity capital is the amount of money invested by all shareholders and lenders that would be returned to them if the company were liquidated. It is a useful proxy for the amount of capital invested in the business. Figures 3.4 and 3.5 illustrate that three-quarters of both samples have less than 500 lakh kyats (US$35,800) in equity capital. About half have less than 200 lakh kyats (US$14,300).

**Panel firms tend to be 15% larger than new firms on average.** The difference is significant, although not as extreme as with number of employees. The median panel firm has an equity size of 350 lakh kyats (US$25,500), compared to 200 lakh kyats (US$14,315) for the median new firm, a statistically significant difference ($p < .01$). The panel also has a higher proportion of large firms. Six percent of panel firms have equity capital above 10,000 lakh kyats (US$716,000) compared to just 2% of new firms.

**Average investment size has actually declined over time among panel firms. This trend stands in contrast to employment size.** In 2018, only 62% of the 1,200 panel respondents had equity capital less than 500 lakh kyats, and 34% were medium-size, with between 500 and 5,000 lakh kyats (US$357,000) in equity capital. In 2020, however, 68% of respondents had equity capital less than 500 lakh kyats and only 26% would be considered medium-size in terms of investment. Part of the decline certainly had to do with the 8% annual inflation between the two surveys, which is not captured by the blunt scale used for the question. However, inflation cannot account for all of the decline.

FIGURE 3.4
**Equity Capital Size of New MBEI Firms**

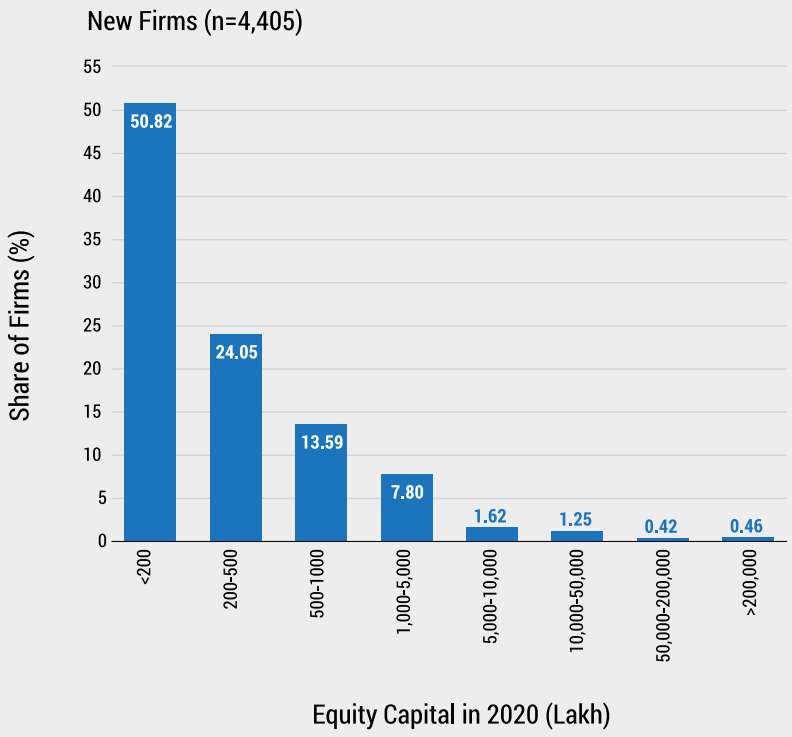
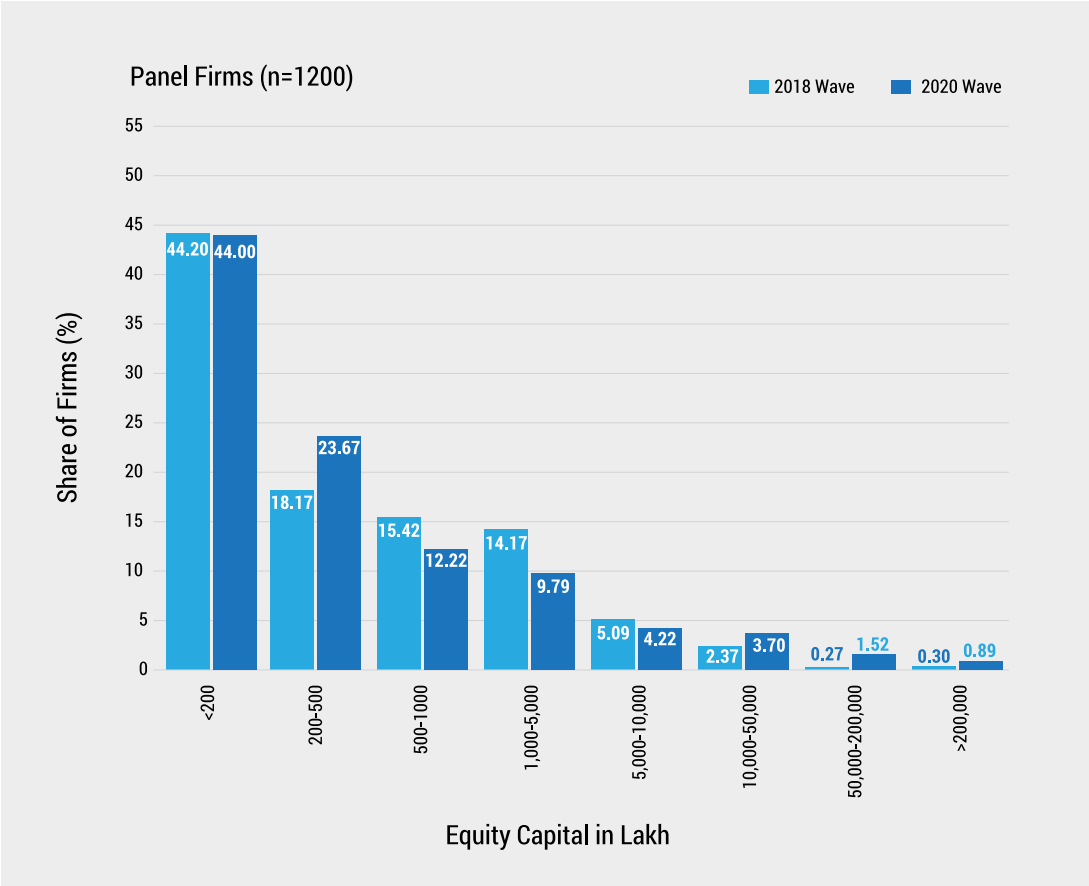


FIGURE 3.5
**Equity Capital Size of Panel Firms in 2018 and 2020**




# 3.4. Level of formality

**Businesses in Myanmar have four main ways to formalize their operations.** These include (1) obtaining an operating license at the township DAO, (2) obtaining an operating license at the CDC in large municipalities, and obtaining a company registration certificate at (3) the national DICA or (4) the DISI (Bissinger 2016). Figures 3.6 and 3.7 illustrate the overall level of formalization in the MBEI sample.

**A preponderance of firms have only a DAO operating license.** This is true in both the new-firm and panel-firm samples (70% and 65%, respectively). About a quarter of firms (new 25%, panel 23%) have operating licenses from municipal CDCs, corresponding to the DAO license for businesses in the urban areas of Yangon, Nay Pyi Taw, and Mandalay.[20] Twenty-one percent of the new firms have registration certificates from DICA or DISI. In contrast, 37% of the panel respondents have these registration certificates, which is consistent with their larger size, age, and sophistication.

**Seventeen percent of the CSO sample and 24% of the panel have no operating license. These firms either have no documentation (5% of new firms and 8% of the panel) or have only a membership card for their township SME association (12% new, 16% panel).** The high incidence of informality among the new firms is a puzzle, because the sampling frame includes only firms with some form of operating license. Informality among these firms most likely means they paid a commercial or property tax but do not have an operating license.

**The panel data shows that formalization increased over time.** Effective informality has decreased from 10.4% to 8%, and a larger proportion of firms have operating licenses from the CDC (an increase of 5 percentage

points from 17.6% in 2018) or registration certificates through DICA (an increase of 3.7 percentage points from 6.7% in 2018). In addition, six times as many firms report having more than one document, meaning that they are much more formalized and their activities are more transparent to state regulators. DISI certificates were only asked about in 2020 and are not comparable over time.

FIGURE 3.6
## Formality of New MBEI Firms ,

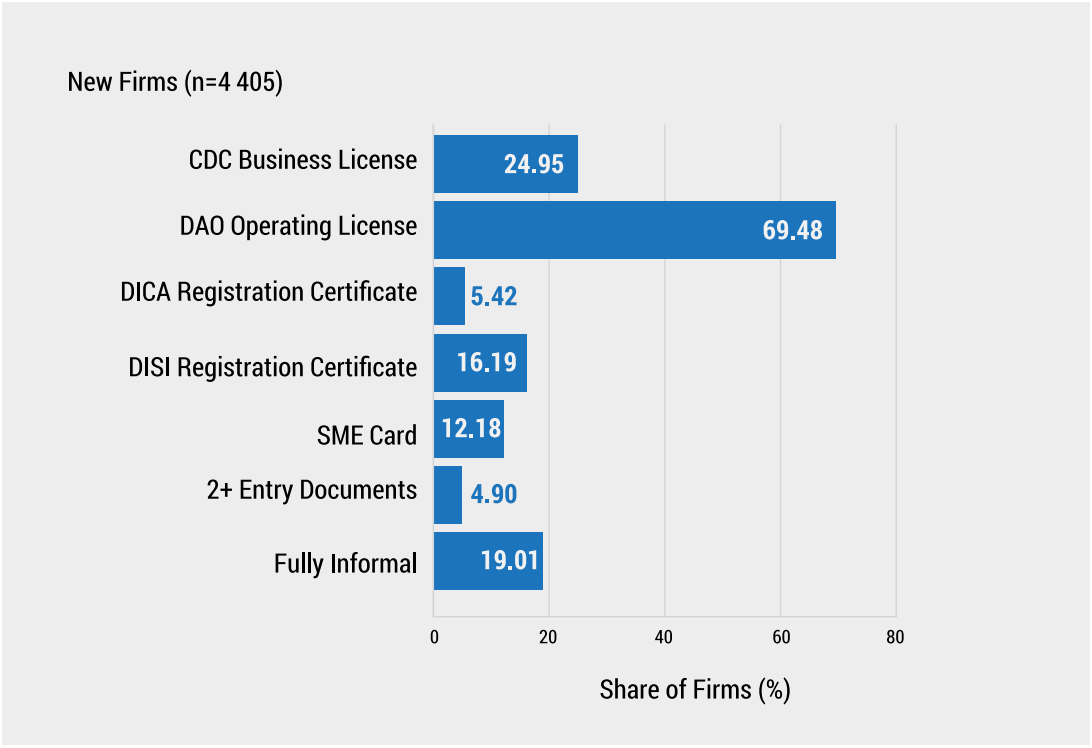
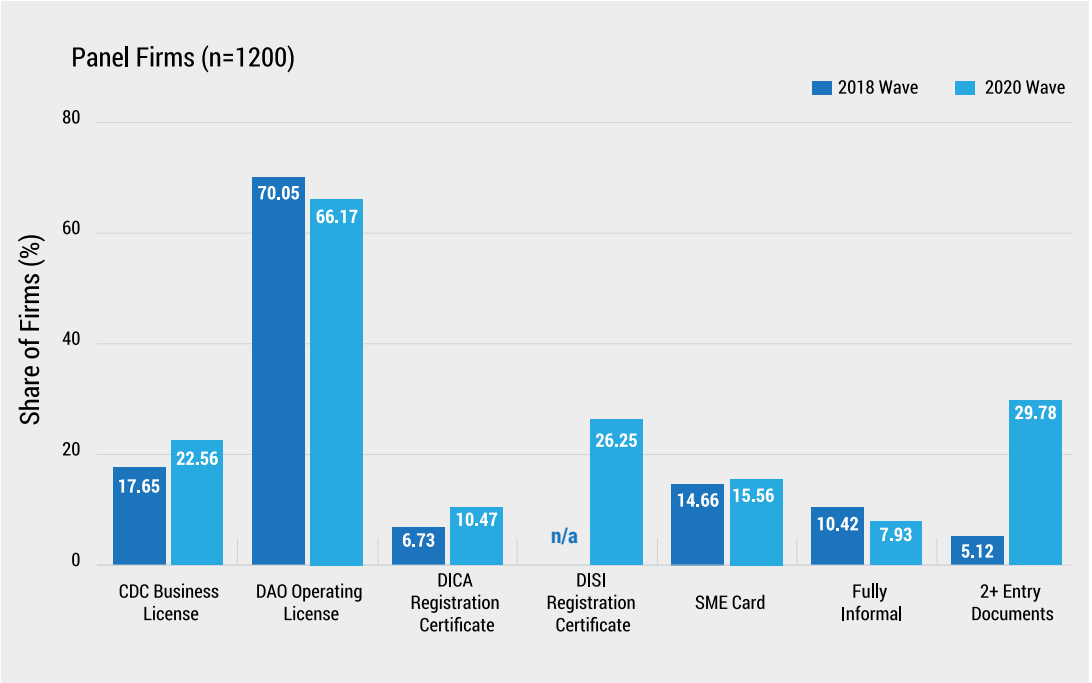



FIGURE 3.7
## Formality of Panel Firms in 2018 and 2020



# 3.5. Sector and industry specialization

**In both samples, about one-third of respondents operate in manufacturing or construction and two-thirds work in some form of services.** There is a slightly greater proportion of manufacturing firms in the panel dataset (30%) than among new MBEI firms (21%), as seen in figures 3.8 and 3.9.

**The samples differ more dramatically in the distribution of the service sector.** While 49% of the new MBEI respondents operate in restaurants or hotels, only 30% of the panel is involved in those industries. By contrast, a greater proportion of panel firms (27%) than new firms (20%) operate in the wholesale/retail sector. Within the 1,200 panel firms, there has been a slight shift out of food and accommodations and into manufacturing.[21]

**Digging deeper, the largest manufacturing sector is food processing as shown in figure 3.10.**

FIGURE 3.8
**New MBEI Firms, by Broad Sector**

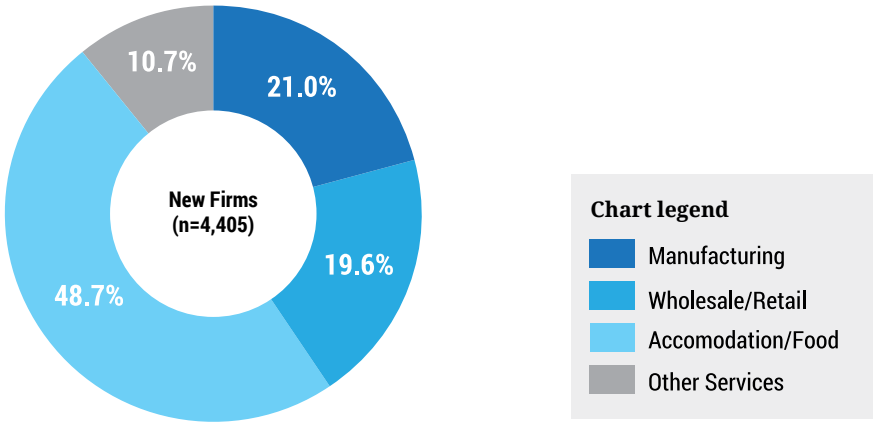
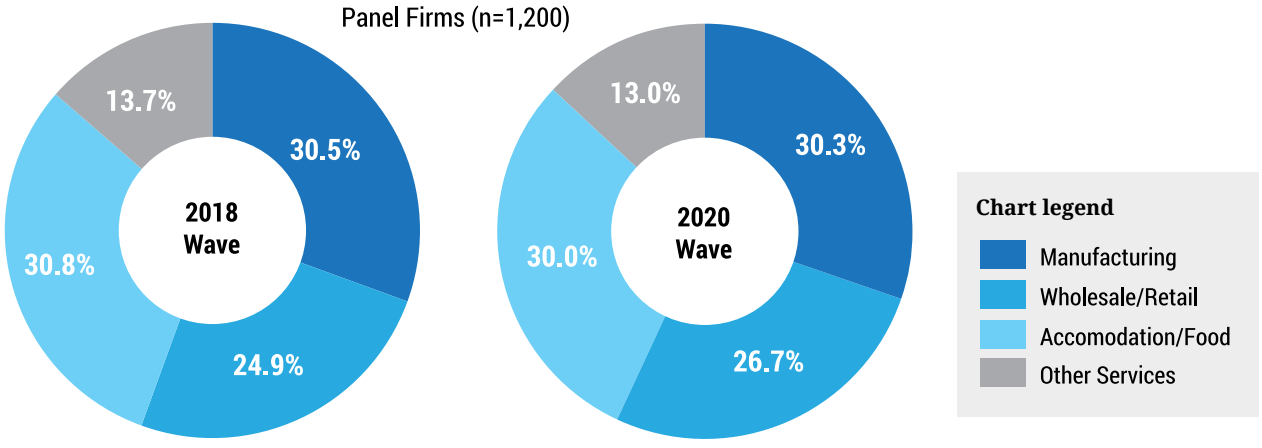



FIGURE 3.9
**Panel Respondents in 2018 and 2020, by Broad Sector**



**Both new firms from the CSO dataset and panel firms are heavily weighted toward food processing, with only a tiny fraction of firms in other sectors. Twenty-four percent of new firms and 26% of panel firms report food processing as their major industry.** The next-largest sector for both new and panel firms is basic metals, accounting for about 15% of panel firms and 12% of new respondents. Printing, furniture, and wood products all have small representations.

There appears to be some changing of industry specialization among the panel firms over time, but more investigation is needed to determine whether this represents a real shift in business concentration or just differences in coding and descriptions of products.

FIGURE 3.10
## New Manufacturing Firms, by Industry

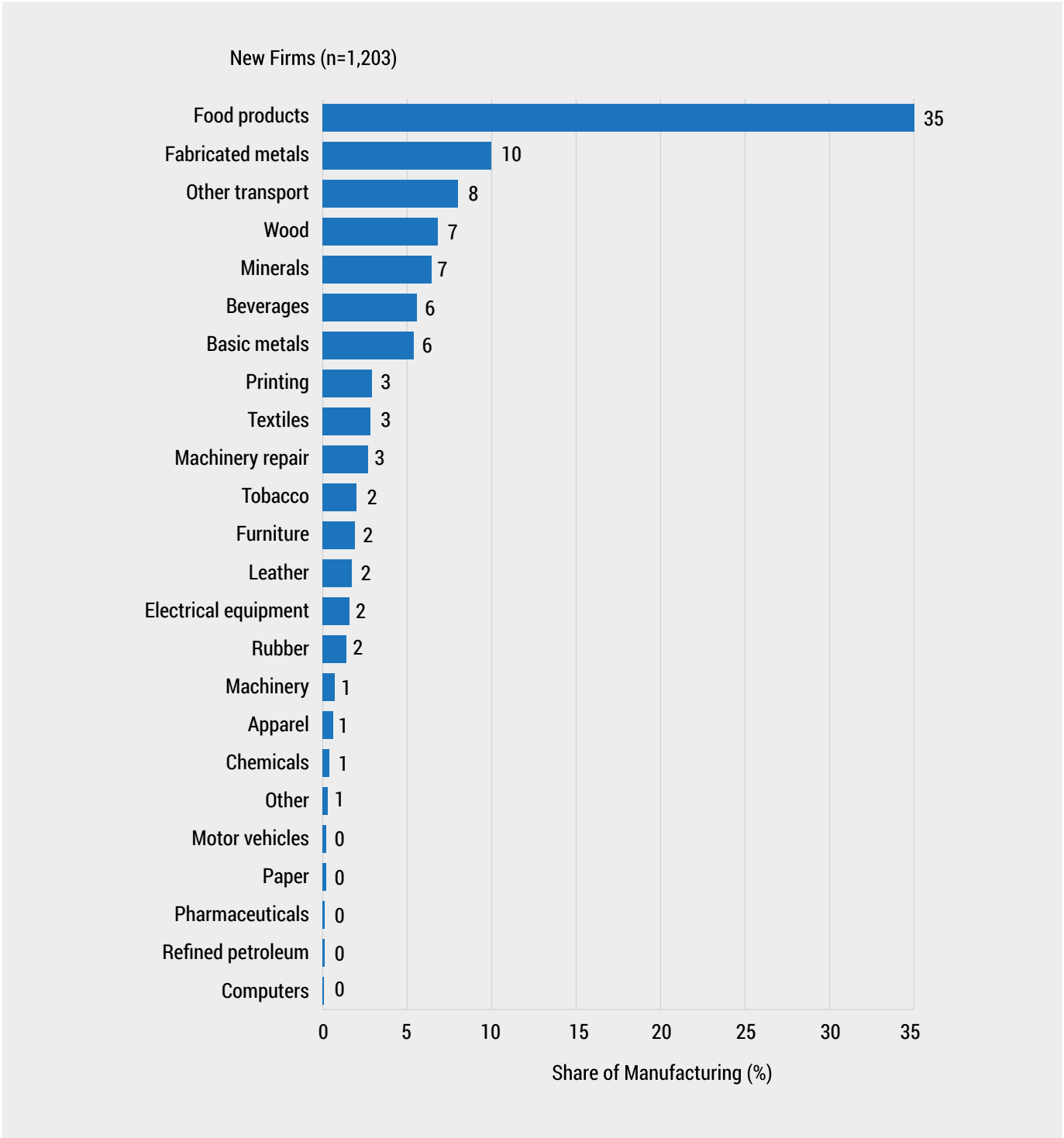
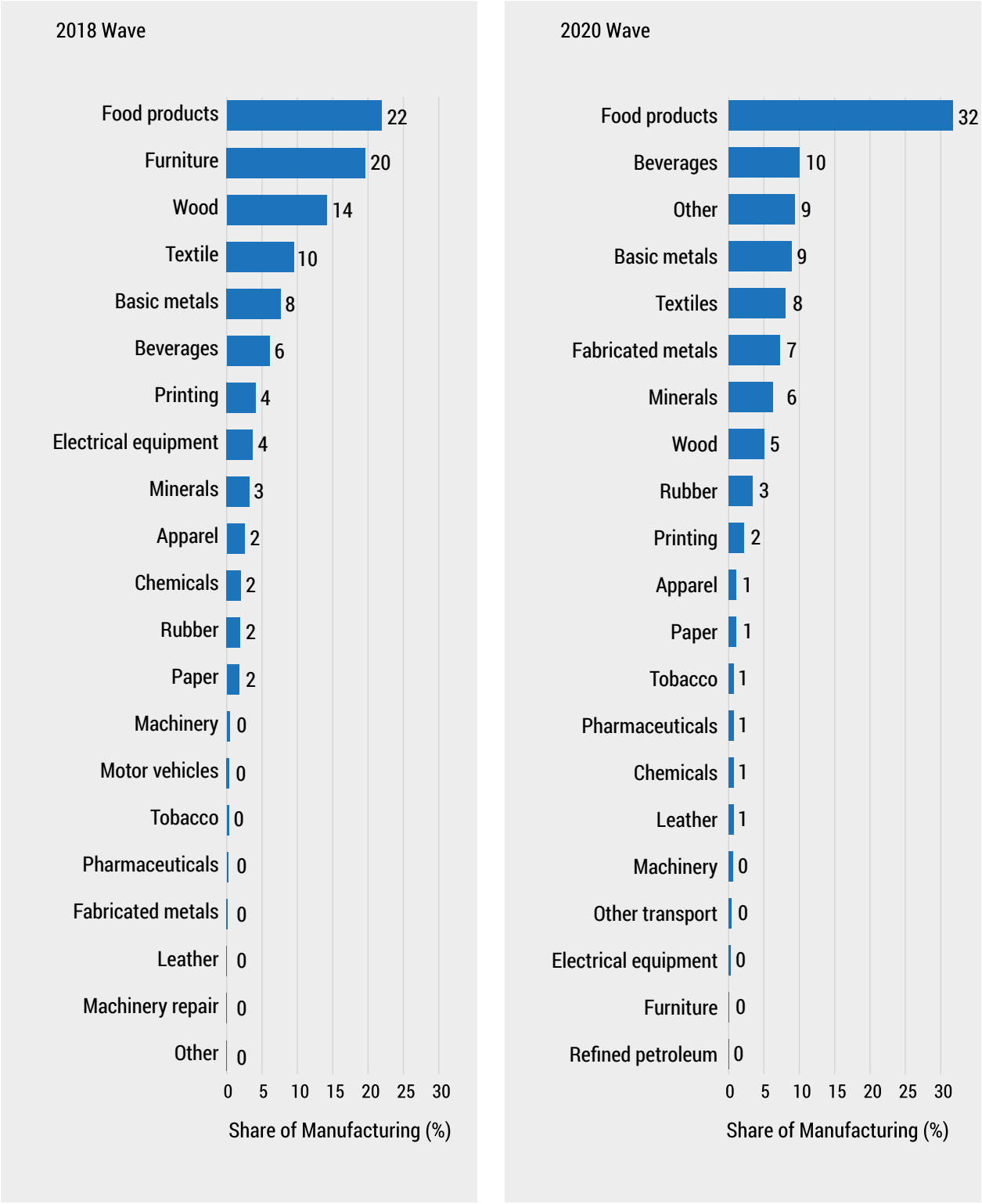


FIGURE 3.11

## Panel Firms in 2018 and 2020, by Industry

Panel Firms (n=400)



# 4

# State of Economic Governance in Myanmar

In this chapter, we describe the logic and measurement choices behind each subindex and indicator in the MBEI. Each of the 10 sections is organized as follows. First, we detail the motivation behind the creation of each subindex, summarizing the views of economists and practitioners about the importance of the concept and the specific policy discussions surrounding the underlying issues in Myanmar. Next, we summarize the overall rankings on each subindex and highlight particularly noteworthy scores and performances.

Recall that there are three types of indicators included in every subindex. The first type of indicator, which we call a *survey indicator,* is derived from our original, face-to-face survey of 5,605 firms. These indicators capture firms' experiences and perceptions of their engagement with local governments. The second type of indicator we refer to as an *observational indicator.* Our research team collected these indicators by visiting township-level offices and recording how they were received at these offices, what information was available, and the quality of the facilities. The final type of indicator, which we refer to as an *administrative indicator,* was not collected directly by our team, but assembled from publicly available sources including the census database, statistical handbooks, and public databases. We refer to observational and administrative indicators as *hard data* because they do not depend upon the subjective assessments of the respondent firms.

Also recall that the *2020 MBEI* includes all 153 of the new and improved indicators and captures the overall quality of governance in Myanmar today. However, scores on this index cannot be compared to 2018 data; they can only be compared cross-sectionally across units (firms, townships, and states) in Myanmar in 2020. In addition, we created a *Core MBEI,* which is a narrower set of **92** indicators that were used both in 2018 and 2020. Because these indicators were measured exactly the same way on both occasions and among the exact same sample of firms, the Core MBEI allows for longitudinal comparisons that can precisely track governance improvements over time. Below, we distinguish between *core indicators*—those included in the 2018 and 2020 MBEI—and *new indicators*—those only included in the new MBEI.

In the following sections of this chapter, we summarize each subindex with a bar graph depicting each S/R's performance on a 10-point scale. Dark colored bars in the graph depict the average score on the *survey indicators,* while light colored bars denote the average score on the *hard data.*

Each section also includes a table with descriptive statistics for each measure at the S/R level (minimum, median, maximum) to give a sense of the range of possible performances in the country. For comparative purposes, the tables provide descriptive data on three different MBEI datasets: (1) the panel MBEI in 2018, (2) the panel MBEI in 2020, and (3) the full MBEI in 2020. Bivariate correlations are included to illustrate the stability of each indicator over time and between the newly sampled and panel firms.

# 4.1. Entry costs

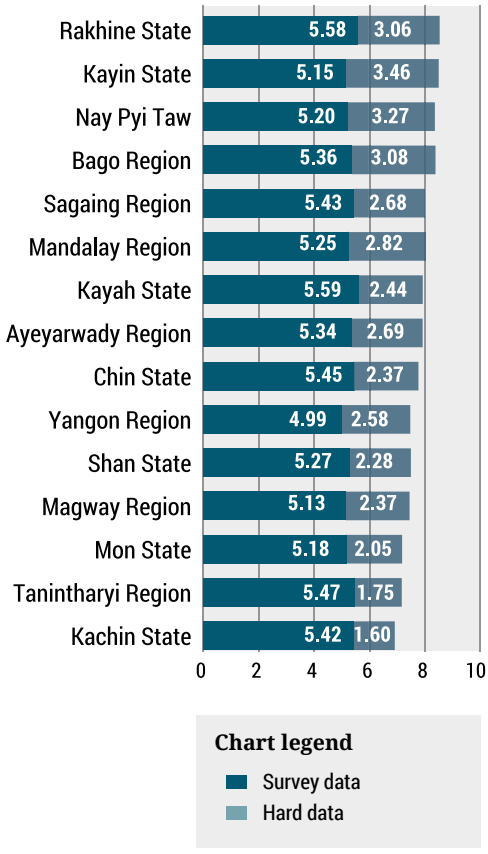
Businesses benefit from efficient regulatory structures. Regulatory burden has become a focal point of economic development policy in Myanmar and other emerging markets. Theoretically, regulations are meant to limit environmental damage and to protect the public by ensuring safe labor conditions, safe products, and sanitary food. In practice, however, regulation can tie up businesses in red tape, reducing productivity and limiting their growth. Regulations have been shown to raise entry costs, limit entrepreneurship, and protect inefficient monopolies. Djankov et al. (2002) identified a strong correlation between the costs and time required to start a business and the size of the informal economy. Subsequent micro-level studies have shown that registrations of new companies and new corporate entities are higher when entry and other more general regulatory obstacles to business are lower. This is especially true in industries with higher nonregulatory obstacles to entry—for example, more expensive equipment or other inputs—and where technology or global demand shifts have occurred.

In Myanmar, regulatory delays may occur as a business is trying to start its operations, which we call entry costs, or after operations have begun. In this subindex, we assess Myanmar localities based on the administrative costs of start-up. The World Bank Doing Business 2020 report ranked Myanmar 70th out of 190 economies (in the top 40%) on their starting-a-business measure. However, the Doing Business methodology focuses on large, limited liability companies in Yangon, omitting the vast majority of smaller enterprises outside the industrial capital and neglecting the wide subnational variation in the country. In fact, in the World Bank's enterprise survey, respondents reported that regulation was far less of a burden in getting started (World Bank 2016). The MBEI therefore provides us with a more nuanced and complete picture by looking at smaller firms that may be more likely to face substantial entry costs, and by examining the variation in entry costs within the country.

**Business entry costs—and particularly business registration—have received much attention in recent years from business and government in Myanmar.** In some instances, policymakers in Myanmar have done an excellent job of streamlining registration and licensing procedures to start a business in Myanmar (Trautwein 2014). For example, efforts have been made to improve registration certification at DICA and even to open an online portal for business access and registration. Similar efforts have also been made to improve licensing at some DAOs around the country, which have endeavored to reduce the constraints and waiting periods to receive operating licenses. In sum, this index measures the burdens facing firms, while also measuring the capacity constraints of government agencies.

Figure 4.1 provides the overall scores, by S/R, for ease of business entry. States and regions are scored on a ten-point scale. The dark blue bar represents the cumulative score on survey questions about businesses' experiences and perceptions of the administrative requirements to start a business. For example,

FIGURE 4.1
**State and Region Rankings on Entry Costs, Subindex 1**



we asked businesses how long it took to get legal documentation to commence operations and how many steps and supporting documents were necessary along the way. These indicators are described in more detail below. States and regions could get a maximum score of six points on these indicators. The other four points on the scale of 10 come from our team's direct observations of the business entry process. These indicators include assessments of whether the entry offices were operating at capacity, whether they had appropriate resources to do their jobs, whether staff were friendly, and whether a one-stop-shop was available to reduce the number of steps that businesses had to take.

**Differences in performance on S/R indicators are substantially driven by differences in the observations by our research team, and possibly by the unique characteristics of large CDCs.** The first thing to notice about figure 4.1 is that the survey scores are much more concentrated than the observational scores. The difference between the minimum and maximum survey scores at the S/R level is about half a point (4.99-5.59), whereas the difference in observational scores is about 2.9 points (1.60–3.46). Second, the municipalities of Yangon, Nay Pyi Taw, and Mandalay tend to do a bit worse on the survey data. This is likely because these locations tend to have more firms, making more demands of registration officials, and more of these firms have complicated needs that must be handled by CDCs or DICA offices. In addition, the operating procedures of CDCs are slightly different compared to townships that are not under CDCs and can require more technical expertise and paperwork.

As figure 4.1 shows, Rakhine and Kayin States score best on facilitating business entry. Rakhine firms are particularly positive in the survey data, but Kayin was strong in the observational indicators, at 3.46. Kachin State is the worst-performing S/R. It also has the lowest observational data score, at 1.6. These differences are due to the differing capacities of the S/R government agencies. For example, our teams discovered that all the townships in Kayin have a standard DAO application form that is made available to firms immediately upon entering the office. On the other hand, this is true for only 23% of Kachin townships. All the township DAOs in Kayin have sufficient physical resources, such as desks, official forms, and computers, to do their job effectively. By contrast, our field team found that none of the Kachin township DAOs have sufficient physical resources. **A positive takeaway is that straightforward improvements in the capabilities of the DAO, such as giving local offices hard copies of standard application forms, or giving desks and computers to offices that lack them, will significantly reduce barriers to entry for new entrepreneurs.**

Survey data provides more detailed information about firms' experiences with obtaining entry documentation. It currently takes firms in Tanintharyi on average less than 11 days to get their operating license. By contrast, in Yangon, getting documentation from the CDC takes about 41 days. DICA registration takes a bit longer, ranging from 11 days in Ayeyarwady and Rakhine to 98 days for firms in Kayin. In Shan State, the median state and region, it took 31 days on average. DICA certificates are also more complicated to obtain, with firms in the median S/R, Mandalay Region, saying that it takes, on average, 1.41 procedures to obtain this document. Obtaining DAO or CDC operating licenses is more streamlined, requiring just 1.09 procedures in Sagaing, the median S/R. The benefit of using survey data to examine time-to-documentation is that it gives a more comprehensive picture than observation or anecdotal evidence of how firms around the country experience acquiring these documents

In the next few pages, we further document the specific indicators we used to calculate the scores for the entry costs subindex. Table 4.1 summarizes this discussion.

## Core indicators collected in the 2018 and 2020 MBEIs

The entry costs subindex contains seven core indicators that were measured both in 2018 and 2020.

### 1. Waiting over three months to be fully legal (%)

The length of time required to obtain all relevant documents, licenses, and stamps is a helpful indicator of entry costs: the more days it takes, the higher the cost; the fewer days it takes, the lower the cost. This indicator is defined as the share of firms that took longer than three months to procure all the required documentation. We believe that firms that take more than three months to procure all the necessary documents are subject to unnecessary opportunity costs, economic losses, and uncertainty, which make the underlying costs

of setting up a business prohibitively high (World Bank 2018). This indicator may speak to the presence of red tape and inefficiency, but it may also point to a lack of information; both the bureaucrat and the entrepreneur may not know which documents are required to formally register a business or the necessary steps to do so (Lambert et al. 2011). One concern with this indicator is that some firms may not understand their legal responsibilities and therefore may under- or overestimate the requirements.

### 2. Number of documents to be fully legal (#)

The more documents needed to fully register a business, the higher the cost of business entry. The rationale for this indicator is straightforward: each additional document takes up some of the entrepreneur's time and money, while also adding uncertainty as to whether the entrepreneur will receive the document on time or at all. Since each document increases entry costs, the total number of documents is a useful indicator of the total entry costs to setting up a business (Ciccone and Papaioannou 2007).

### 3. Number of days for operating license at CDC or DAO (#)

### 4. Number of days for business registration certificate at DICA (#)

These two indicators provide a count of the days it took for the firm to get the relevant entry document from the municipal CDC or the township DAO (Bissinger 2019). We use the document that the business claims to have obtained most recently. These indicators measure entry costs to a business, because the longer it takes to receive a document, the greater the opportunity cost to setting up the business (World Bank 2018).

### 5. Had difficulty with any registration procedure (%)

This indicator measures the share of firms that had difficulty obtaining any of the supporting documents required for starting a business (such as a certificate of safety or an advertisement license). Requirements vary by township, sector, and document, but businesses are often required to obtain numerous supporting documents to apply for operating licenses and registration certificates. Sometimes these can be quite difficult to obtain, such as when one needs to collect signatures from neighbors to open a pub or a restaurant. The more difficult it is to obtain the documents required to start a business, the more time and resources are consumed, and the higher the overall costs will be (World Bank 2018). A business may lose money on rent and other fixed costs if it cannot open in a timely manner, since the business may have to wait for the completion of all the administrative documents before beginning operations.

### 6. Share of documents required to obtain a DAO business operating license (%)

This observational indicator measures, for each S/R, the share of a set of supporting documents required by the township DAO to apply for a particular license or certificate—in this case, the Business Operating License. The share of documents is calculated from a predetermined list of nine documents. These include application forms, support letters from other government offices, and neighbor signature forms. For this indicator we focus on general supporting documents that may apply to all the industries included in the survey. The more supporting documents needed to start a business, the more cumbersome the process will be, and the higher the costs.

### 7. Agreement that the DAO staff was helpful and knowledgeable (%)

This indicator was collected during observational visits and direct interactions with DAO officials about the procedures for business registration. Enumerators coded how officials responded to a set of standardized questions about how to start a business in the township. This indicator measures the share of township DAOs in a given S/R where enumerators deemed the staff to be helpful and knowledgeable. Knowledgeable and helpful DAO staff make it easier for businesses to complete their registration correctly and in a timely manner.

## New indicators added in the 2020 MBEI

Ten new indicators were added to the entry costs subindex in 2020 to better capture firms' experience with business entry procedures. These are as follows.

### 8. Number of procedures needed to apply for a CDC or DAO operating license (#)

### 9. Number of procedures needed to apply for a DICA registration certificate (#)

### 10. Number of procedures needed to apply for a DISI registration certificate (#)

These three indicators measure the number of formal steps needed to get a CDC or DAO operating license, a DICA registration certificate, or a DISI registration certificate. These include mandatory checks of the company name, obtaining a reference letter from the ward or village head, polling neighbors about potential noise and other distractions, criminal-history checks of owners and managers, payment of stamp duties, and proof of bank accounts. While all are justifiable for protecting the public, more procedures to acquire these documents mean higher costs of entry for an individual firm. The fewer procedures needed, the lower the entry costs. These indicators are conceptually similar to the duration indicators. Potential business owners may not start their businesses if they must expend so much effort completing procedures. On the margin, they may find the costs and the uncertainty enough of a deterrent to give up. And the more procedures, the more likely it is that a firm will choose to circumvent the rules and operate outside of the law. This leads to lower tax returns for the government and less access to public services for the firm—a lose-lose proposition. Having more procedures makes things more complicated. In environments where transparency is low and procedures and requirements are not well-known, this lack of information will lead to mistakes, further wasting the firm's time and money.

### 11. Research team visited the DAO more than once for license procedures (%)

This is an observational indicator that is calculated from a binary variable equal to one if someone from our research team had to visit the township DAO office more than once to get information on licensing procedures. We use the proportion of townships scoring a one to calculate the indicator for each S/R. Our research team visited during normal business hours and sought to discuss business licensing with the staff. We therefore consider this indicator a good measure of the treatment a firm's representative would receive when visiting a DAO office during business hours. The implications are straightforward: having to visit the DAO office more than once entails greater cost and effort. In that sense it is similar to the other indicators. This indicator also speaks to the underlying qualities of the DAO office. If firm representatives must visit the DAO more than once, this may mean that the office is disorganized or unclear about requirements and protocols. Such red tape and inefficiency directly affect business performance by taking time away from profit-making activities.

### 12. DAO office is working at capacity (%)

### 14. OSS office is working at capacity (%)

These measures were collected by enumerators during observational visits to each township. These two indicators measure the proportion of townships within each S/R where the research team determined that the DAO/OSS office was working at capacity—in other words, making full use of its resources. These indicators are related to entry costs in two ways. First, they serve as proxy measures for the underlying capacity of the local DAO/OSS. The higher the capacity of these offices, the more efficiently they can process licenses, certificates, and other documents, and the sooner new firms can begin operating legally, leading to the benefits discussed above such as greater security and reduced opportunity costs. Second, this indicator measures enumerators' assessments of the capacity of these local agencies, which are likely to be shared by firms in the locality. If firms think that these agencies are operating inefficiently, they may be discouraged from starting a business, and if they do start a business they, may choose to operate informally. Businesses without licenses and necessary documents have weaker property rights, and this uncertainty about their future may prevent them from making the investments necessary for stable, long-term profitability, as they can't be sure they will be around in six months.

### 13. DAO office has necessary physical resources (%)

### 15. OSS office has necessary physical resources (%)

These two observational indicators measure the share of townships in each S/R where the DAO or OSS office had adequate equipment and materials to do its job effectively, as assessed by our research team. This measure is conceptually very similar to the one above. It therefore also speaks to the underlying capacity of the local office, as well as firms' perceptions of the office's underlying capacity. This measure has the added benefit of asking about physical resources specifically. Resources like computers, fax machines, and hard copies of documents are necessities for

an efficiently functioning office. Even if the staff is highly trained, they can't do their job without certain resources. A low score on this indicator implies that physical resources may be creating a bottleneck in these offices. An upgrade of the physical infrastructure would be an obvious and workable solution.

### 16. OSS office staff are friendly and helpful (%)

This indicator measures the share of townships in each S/R where our research team found staff members at the OSS office to be helpful with requirements and procedures. Researchers noted whether staff were present and whether they were willing and able to answer questions about OSS services. The indicator is calculated from a binary measure equal to one if the staff is deemed helpful and zero if otherwise. Helpful staff members imply greater transparency, because the staff can more readily share information. Helpful staff also speed required tasks, providing necessary documents more readily, processing these documents faster, and saving firms both time and money.

### 17. DAO standard application form exists and is available (%)

This indicator measures the share of township DAOs where observers confirmed that a standard application form existed and was available to all who entered. This variable is very straightforward. The greater the proportion of a state or region's township DAOs that have a standard application form available, the lower the entry costs for new firms. If the DAO does not have a readily available application form, then firms cannot pursue the process of formalization. It wastes the firms' time, potentially forcing them to return to the DAO multiple times, and may force the firm to operate without a license, which is both illegal and detrimental to the local government. The added value of this indicator is that the solution is simple. If the S/R scores poorly on this measure, it simply has to make application forms for DAO operating licenses more widely available.

TABLE 4.1

## Comparison of Entry Costs Subindex, 2018–2020

| Core Indicators Collected in the 2018 and 2020 MBEIs | | | | | |
|---|---|---|---|---|---|
| Indicator | Source | S/R Measure | Dataset | | |
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| Entry subindex | (Survey*.6)+ (Hard*.4) subindex1_final_wy1 | Min<br>Median<br>Max<br>Correlation with previous year | 6.50<br>7.42<br>8.79 | 6.09<br>7.62<br>9.21<br>0.11 | 7.02<br>8.02<br>8.64<br>0.58 |
| Survey indicators | Scaled survey data | Min<br>Median<br>Max<br>Correlation with previous year | 5.08<br>5.37<br>5.60 | 4.82<br>5.35<br>5.58<br>-0.16 | 4.99<br>5.34<br>5.59<br>0.60 |
| Hard indicators | Scaled hard data | Min<br>Median<br>Max<br>Correlation with previous year | 1.18<br>1.98<br>3.42 | 0.75<br>2.37<br>3.83<br>0.11 | 1.60<br>2.58<br>3.46<br>0.59 |
| 1. Waiting over three months to be fully legal (%) | MBEI survey question: Q27 | Min<br>Median<br>Max<br>Correlation with previous year | 3.9%<br>24.2%<br>38.0% | 4.0%<br>24.5%<br>55.3%<br>0.28 | 6.8%<br>21.1%<br>46.2%<br>0.83 |
| 2. Number of documents to be fully legal (#) | MBEI survey question: Q28 | Min<br>Median<br>Max<br>Correlation with previous year | 3.86<br>4.50<br>6.23 | 3.36<br>4.59<br>7.69<br>0.44 | 2.58<br>4.27<br>5.91<br>0.77 |
| 3. Number of days for operating license at CDC or DAO (#) | MBEI survey question: Q25_r1/Q25_r2 | Min<br>Median<br>Max<br>Correlation with previous year | 18.15<br>30.95<br>63.26 | 16.78<br>24.82<br>41.50<br>0.32 | 10.30<br>22.94<br>41.02<br>0.76 |

| | | | | | |
|---|---|---|---|---|---|
| 4. Number of days for business registration certificate at DICA (#) | MBEI survey question: Q25_r3 | Min<br>Median<br>Max<br>Correlation with previous year | 7.00<br>31.22<br>188.50 | 1.00<br>30.10<br>105.00<br>0.16 | 10.73<br>31.04<br>98.11<br>0.68 |
| 5. Had difficulty with any registration procedure (%) | MBEI survey question: t_q26_2_1 to t_q26_2_8 | Min<br>Median<br>Max<br>Correlation with previous year | 3.7%<br>8.2%<br>24.8% | 0.0%<br>8.8%<br>32.4%<br>-0.03 | 2.4%<br>6.9%<br>30.7%<br>0.91 |
| 6. Share of documents required to obtain a DAO business operating license (%) | Observational data question: DAO QA4 | Min<br>Median<br>Max<br>Correlation with previous year | 44.7%<br>72.0%<br>100.0% | 37.8%<br>78.2%<br>100.0%<br>0.57 | 45.2%<br>78.7%<br>100.0%<br>0.97 |
| 7. Agreement that the DAO staff was helpful and knowledgeable (%) | Observational data question: DAO Z5 | Min<br>Median<br>Max<br>Correlation with previous year | 50.0%<br>50.0%<br>100.0% | 39.4%<br>81.5%<br>100.0%<br>-0.14 | 37.8%<br>80.4%<br>100.0%<br>0.97 |

## New Indicators Added in the 2020 MBEI

| Indicator | Source | S/R Measure | Dataset | | |
|---|---|---|---|---|---|
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| 8 Number of procedures needed to apply for CDC or DAO operating license(#) | MBEI survey question: Q25r1_6_1 to Q25r1_6_8 and Q25r2_6_1 to Q25r2_6_6 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.50<br>1.09<br>3.10 |
| 9. Number of procedures needed to apply for DICA registration certificate (#) | MBEI survey question: Q25r3_6_1 to Q25r3_6_6 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.72<br>1.41<br>2.65 |
| 10. Number of procedures needed to apply for DISI registration certificate (#) | MBEI survey question: Q25r4_6_1 to Q25r4_6_6 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.89<br>1.38<br>2.10 |
| 11. Research team visited the DAO more than once for license procedures (%) | Observational data question: DAO Q2 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.0%<br>45.4%<br>85.8% |
| 12. DAO office is working at capacity (%) | Observational data question: DAO Z4 | Min<br>Median<br>Max<br>Correlation with previous Year | | | 45.7%<br>100.0%<br>100.0% |
| 13. DAO office has necessary physical resources (%) | Observational data question: DAO Z6 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.0%<br>66.4%<br>100.0% |
| 14. OSS office is working at capacity | Observational data question: OSS Z4 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.0%<br>53.6%<br>100.0% |
| 15. OSS office has necessary physical resources (%) | Observational data question: OSS Z6 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.0%<br>33.3%<br>100.0% |
| 16. OSS office staff are friendly and helpful | Observational data question: OSS Z5 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.0%<br>78.4%<br>100.0% |
| 17. DAO standard application form exists and is available (%) | Observational data question: DAO A1a | Min<br>Median<br>Max<br>Correlation with previous year | | | 23.2%<br>100.0%<br>100.0% |

# 4.2. Land access and security

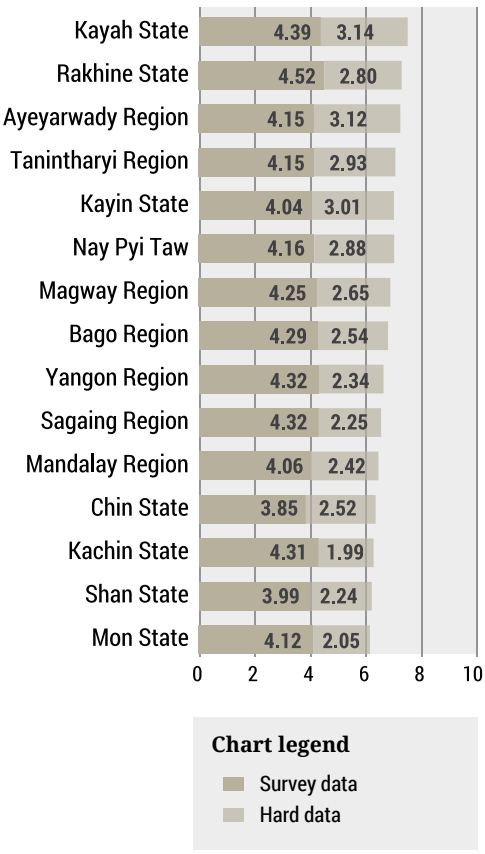
Businesses benefit from property-rights institutions that protect them from state expropriation of land, capital, or intellectual property (North 1991, Acemoglu and Johnson 2005, Johnson et al. 2002). Property rights cannot be guaranteed simply by fiat; they must be ensured by cross-cutting institutions that check the power of the state, provide representation of the business community in decision-making, and allow businesses to appeal state actors' decisions in independent courts. A great deal of work has shown that within states, subnational governments that protect property rights enjoy greater business entry and investment growth, as businesses feel more confident taking long-term risks (Deininger and Jin 2005, Field 2005, Li et. al. 1998).

**In Myanmar, access to land and security of land tenure are the fundamental property rights affecting the performance of businesses.** Land rights affect the types of investments a business will undertake, their profitability, and whether a business can begin operations at all (Leckie and Simperingham 2009, Guyitt 2014).

**Land access and security can be complicated in Myanmar.** Land access in Myanmar is complicated by a long history of state control, land transfers to private companies, and protracted armed conflict in various parts of the country. A great deal of research has studied the severe issues with land access and formalization for individual citizens. There is concern that many citizens have trouble obtaining enough land to farm and that, even when they do, the complications and expense of the titling process remain problematic (Leckie and Simperingham 2009, Guyitt 2014). Important studies have also highlighted the threats to welfare and poverty alleviation that insecure property rights have caused in Myanmar (Myanmar Centre for Responsible Business 2018). Insecure land tenure leads to uncertainty, which can make businesses reluctant to pursue investments that might improve long-term profitability, because they are not sure if they will be there to reap the benefits. Taken to the extreme, potential entrepreneurs may shy away from even starting a business if they think the government can simply take their land away. Land-related issues are a significant problem in Myanmar. It is important to remember, however, that previous research has largely focused on the perspectives of individual citizens, farmers, and workers, rather than the views of businesses. The MBEI focuses specifically on the land needs of businesses, using survey findings, administrative data, and observational data.

This subindex combines survey questions that focus on the ease of obtaining land documents and the degree of security that firms feel in their land tenure. These survey measures are supplemented by observational data that assess the capacities of the Department of Agricultural Land Management and Statistics (DALMS) and the GAD, the two government agencies that deal with land titling and property rights. This subindex measures a firm's assessment of its security of land tenure, the degree of formality of that tenure, and the capacity of the GAD and the DALMS to process land titles and issue requisite titling

FIGURE 4.2
**State and Region Rankings on Land Access and Security of Tenure, Subindex 2**



documents (such as the land map) and deal with other land-related issues in a timely and efficient manner.

**Figure 4.2 illustrates that Kayah State performs best on the land access and security subindex, whereas Mon State performs worst.** Again, this variation is attributable mostly to differences in the observational data. Like the previous subindex, these differences reflect differences in efficiency and capacity (or lack thereof) of relevant government agencies. For example, the township GADs in Kayah need only 1.7 documents, on average, before providing a firm with a Land Grant. On the other hand, firms need 4 documents on average to receive this license in Mon. Cumbersome bureaucratic procedures are made worse by red tape and low capacity. The field team notes that in none of the surveyed township GADs in Mon are application forms readily available, wheras in Kayah practically all the GAD offices (86%) have easily available application forms.

**There are also large differences among S/Rs on specific survey indicators.** Tanintharyi and Magway require 50 or fewer days to complete the land titling process and deliver a land title. In Kayin, on the other hand, it takes more than 200 days for firms to receive any form of land title. Furthermore, firms may do relatively poorly on basic measures. Only 61% of firms in Rakhine State have a Land Grant or a Form 7—the highest percentage among all S/Rs. This speaks to the overall low level of formal titling that is still a problem throughout the country.

**Land titling has improved over time, but land security remains a major concern.** According to the panel data, only 69.6% of firms had a title in 2018's median S/R, but now 79.5% of these firms have a land title. One reason for this improvement may be that there has been a small reduction in the length of time it takes to procure a land title. Once again considering the panel firms, it took a firm in the median S/R 127 days to obtain a Land Grant or Form 7 land-use certificate in 2018. In 2020, it took 122 days. Yet even with a land title, firms do not feel that their tenure is secure. In the best performing S/R, 31.2% of firms have at least a moderate fear of expropriation (Bago Region), while 75.8% of firms have at least a moderate fear of changes in their rental contract (Chin State).

## Core indicators collected in the 2018 and 2020 MBEIs

The land access and security of tenure subindex contains six core indicators that were measured both in 2018 and 2020.

### 1. Firm owns land and has a title (%)

This indicator measures the share of firms that have a formal title to the land they consider their own. Businesses that lease their land are not considered in this equation. A greater likelihood of firms owning land implies that land is easier to access in that area (De Soto 2000). This may be for several reasons: there may be unused and available land for purchase, or the process of acquiring land

may be more straightforward and less hindered by lack of information or bureaucratic inefficiencies. Lack of a formal title implies much lower security of tenure than having formal title. Absent a formal land title, entrepreneurs' land can be more easily expropriated by the government, or their ownership can be more easily contested by others who wish to claim it. Moreover, as titles are often used as collateral in banking transactions, lacking title limits access to capital and constrains investment.

### 2. Length of time to obtain land documentation (days)

The number of days it takes to obtain a land title is a useful indicator of the difficulties and delays in the process. The longer it takes to procure this document, the more costs and wasted time business owners accrue.

### 3. Firm believes it has at least a moderate risk of expropriation (%)

This indicator is derived from a binary variable that shows whether a firm perceives a moderate-or-greater risk of expropriation. The indicator gets at the heart of many issues concerning tenure stability. Stable tenure implies that the firm expects to own and operate on the land for the foreseeable future—for the length of time in the lease, for example. When the risk of expropriation is sufficiently high, the firm is, by definition, insecure in its tenure (Feder and Feeny 1991). The implications for business may be that a firm does not make necessary long-term investments (e.g., in machinery) because they will be profitable only over a period of time and the firm is uncertain that it will retain tenure over that period.

### 4. Firm believes it has at least a moderate risk of changes in rental contract (%)

This indicator is limited to firms in each S/R that rent or lease their land. It measures the firm's perceived risk of unexpected changes in the rental or lease contract. As with the risk of expropriation and compensation, the greater the risk that a firm will face unexpected changes to the land contract, the more insecure its land tenure (Feder and Feeny 1991). A sudden change in the terms of a land contract means that tenure is unstable. Contract terms that were profitable for the firm may become unprofitable after a sudden change. In these cases, it may no longer make sense to continue the business. The ultimate implication of unexpected changes for business performance is that uncertainty over contract terms may discourage potential entrepreneurs from starting a business and may derail potentially profitable and scalable businesses, preventing them from taking off.

### 5. Firm believes it is likely to receive fair compensation in case of expropriation (%)

This indicator measures the share of firms in each S/R that believe that they will receive fair compensation in the event of an expropriation. Occasionally, governments must exercise eminent domain—that is, taking private land for a public use such as expanding roads or creating industrial zones. These uses may be in the public's best interest, but individual entrepreneurs will be injured if they are not compensated fairly for their land. Uncertainty over fair compensation increases the cost of acquiring land, as the entrepreneur is more uncertain about economic returns (McMullen and Shepherd 2006). If entrepreneurs are not fairly compensated for public takings, they will have spent money on start-up costs and operations only to lose their income stream. In cases of great uncertainty, entrepreneurs may even postpone investing fully in the property, preferring a wait-and-see approach. This hesitancy reduces business activity, employment, and ultimately tax revenues. While not explicitly connected, this indicator is consistent with the spirit of the National Land Use Policy Part 6 (2016), which describes dispute resolution and appeal.

### 6. Firm has done land procedures and encountered no difficulties (%)

This indicator measures the share of firms in each S/R that have not encountered any difficulties with land-related procedures they have pursued. This is a useful and straightforward indicator of land access. If a firm encounters difficulty, this situation could easily imply that procedures to acquire land are cumbersome, confusing, or inefficient (Ciccone and Pappaioannou 2007).

## New indicators added in the 2020 MBEI

Thirteen new indicators were added to the land access and security subindex in 2020 to better capture firms' perceptions of the security of their property. These are as follows.

### 7. Firm had a land dispute in the past two years (%)

This indicator measures the share of firms per

S/R that have had a land-related dispute in the past two years. The greater the share of firms, the lower the score on land access and security. The lower the share, the higher the score. Land disputes can indicate several problems with land tenure. First, more disputes may be evidence of weakness in underlying property rights. If outside actors think a firm can lose its property, they may initiate a dispute in order to acquire the land. Second, if a firm has been involved in a conflict in the past two years, that firm may feel greater uncertainty over its long-term security. This will lead to a lack of necessary investments if these investments will only be profitable in the medium to long term. Third, land disputes may be exacerbated by weak legal systems. These disputes may drag on in court, causing the firm to spend money on litigation. With no end to legal disputes in sight, the firm cannot focus on growing its business.

### 8. Firm has a Land Grant or Form 7 (%)[22]

This indicator gauges how secure the land is by coding as 1 all firms that have Land Grant or Form 7 documentation and coding all others as 0. It improves upon the indicator from 2018, which asked about a generic land title but left it up to the firm to judge whether the document they held was applicable. This created confusion about the level of tenure security. In practice, this can be very confusing, because many different land documents exist in Myanmar that vary in their level of security. The two most secure documents are the *Land Grant* for urban settings and *Form 7* for agricultural locations. In Myanmar, grant land is officially owned by the government, but can be leased to private users, usually through a CDC or GAD, for a stipulated period of time. A Land Grant confers a property right that can be sold, transferred, or mortgaged. This land can be taken back by the local authorities, but this is relatively rare. In practice, 73% of respondents who claim to have any title have Land Grants.

In rural areas, Myanmar authorities issue a Form 7 for agricultural activities, which is often referred to as a land-use rights certificate (LURC). Just over 4% of respondents (147 firms) in the MBEI dataset have this as their primary form of land documentation. *Importantly, only five of the firms with a Form 7 list their primary sector as agriculture.* Thirty-five percent (52 firms) report that their primary business activity is in manufacturing, predominantly food processing; 46% (67 firms) list their primary activity as wholesale or retail trade; 12% (17 firms) list their primary activity as food services and accommodations. In essence, these firms are using the Form 7 to engage in nonfarm activities in rural areas. Because the Form 7 confers similar rights to the Land Grant, we code it as similarly secure. Many firms have other documents that they mistakenly believe are as secure as Form 7 or a Land Grant. Some 14.5% of MBEI respondents who claim to have a land title list Form 105 as their primary documentation. However, Form 105 is merely a prerequisite to acquiring a Form 7. It lists the name of the owner or lessee, the plot number, the status of the land (commercial, government, or agricultural), and the land type, and it often includes a map of land boundaries.

Other documents are similarly misunderstood. About 95 MBEI respondents list Form 106, a legal documentation of the land's history, as their primary land documentation. Twenty-two firms list Form 15, which is a sublet of primarily agricultural land, as their primary documentation. And 23 firms have only a Form 39, which allows the transfer of agricultural land to other uses, and can eventually be upgraded to a Land Grant.[23]

Forms 105, 106, 15, and 39 do not independently have the same exchange or mortgage privileges as a Land Grant or Form 7 and cannot be considered a secure title. Thus, for this indicator they are coded as zero. Both the Land Grant and Form 7 documents provide their holders (and the firm) with some security in their property, and both allow owners to mortgage, exchange, or sell their land. This indicator is therefore a direct measure of land security. The more secure the documentation, the more a firm can risk long-term investments.

### 9. Firm owner owns land in another person's name (%)

This indicator measures the share of firm owners in a given location who own land in another person's name. The greater the share of land "ownership" in another person's name, the less secure land tenure is. A firm owner holding land in another person's name is inherently less secure than one holding land in their own name. Most obviously, the person whose name is on the land title has legal rights over the land, and the firm owner is to some extent subject to the landowner's whims. In extreme cases, this may lead to disputes. The true owner may change the terms of use—for example, by raising the rent.

Firm owners who are unable to bargain have to bite the bullet and bear the cost, lowering firm profitability. Furthermore, this indicator also speaks indirectly to how cumbersome land titling can be.

### 10. Firm has faced obstacles in acquiring or expanding business premises (%)

This indicator asks entrepreneurs if they have encountered any difficulties in acquiring land or expanding their business premises. The greater the share of firms that have faced obstacles, the more difficult it is to acquire land. The rationale for this indicator is straightforward: if the entrepreneur had trouble acquiring or expanding his land, it suggests bureaucratic inefficiencies ("red tape"), a lack of information on how to proceed, or simply a lack of available land for purchase (Demsetz 1974, Knight 2012). This indicator can be explicitly linked to Part 5 of the National Land Use Policy (2016), which details the procedures for land acquisition.

### 11. Number of documents required to obtain a GAD Land Grant (#)

This observational indicator measures the mean number, for each S/R, of supporting documents required by township GAD offices to apply for the GAD Land Grant. This measure is the average score of all surveyed township GAD offices in a given state or region. Supporting documents considered include application forms, land maps, bank statements, and letters of support from the DAO. The indicator is scored from 0 to 5, with 0 corresponding to no supporting documents required and 5 corresponding to 5 supporting documents required. The more required documents there are, the costlier and more cumbersome the process, and the more difficult to gain access to land.

### 12. DALMS staff is helpful (%)

This observational indicator measures the share of townships in each S/R where our research team determined that staff members at the DALMS office were helpful at explaining requirements and procedures. Staff helpfulness was assessed based on whether staff were present, willing, and able to answer questions related to DALMS services. The indicator is calculated from a binary measure equal to 1 if the enumerator agrees that the DALMS staff was helpful, 0 otherwise. Helpful staff members imply greater transparency, because they are forthcoming with information. Helpful staff members also imply that tasks are easier to accomplish, saving the firm both time and money.

### 13. GAD standard application form exists and is available (%)

### 14. DALMS standard application form exists and is available (%)

These two observational indicators measure the share of township GAD/DALMS offices in the S/R where an application form exists and is available. In the case of GAD, the indicator refers to the application form for a Land Grant. In the case of DALMS, it refers to the application for Form 105. For any given S/R, the greater the share of township GAD/DALMS offices that have an available standard application form, the lower the entry costs. The lower the share, the higher the entry costs. If the GAD/DALMS office does not have an available application form, firms cannot complete the process of formalization. It wastes the firm's time, potentially forcing them to return to the GAD/DALMS multiple times, and it may just force the firm to forgo formal documentation, which is illegal for the firm and disadvantageous to the local government. The added value of this indicator is that the solution is simple. If the S/R scores poorly on this measure, it simply has to ensure that GAD/DALMS application forms are made more widely available. Finally, this measure is related to a similar indicator in subindex 1, but is different in a key respect. A low score on this measure implies that land access and security, in addition to entry costs, are being negatively affected. The more difficult it is to acquire these application forms, the more cumbersome land formalization procedures are. Lack of formal land titles, as discussed above, has negative consequences for firm security and productivity.

### 15. GAD office has necessary physical resources (%)

### 16. DALMS office has necessary physical resources (%)

These two indicators measure the share of townships in the S/R that observers determined have the necessary equipment and supplies to operate effectively and serve firms. This measure speaks to the underlying capacity of the local office, as well as to firms' perceptions of that underlying capacity. This measure has the added benefit of asking about physical resources specifically.

Physical resources, such as computers, fax machines, and hard copies of documents, are clearly necessary for the efficient functioning of an office. Even if the staff are highly trained, if they do not have the necessary physical infrastructure they cannot do their job well. A low score on this indicator implies that physical resources may be a bottleneck in these agencies' performance, and suggests an upgrade of physical infrastructure as a clear and workable solution.

### 17. GAD office is working at capacity (%)

### 18. DALMS office is working at capacity (%)

These two observational indicators measure the share of township GAD/DALMS offices in the S/R that enumerators found to be operating at capacity—in other words, making full use of their resources. This indicator is analogous to an indicator in subindex 1. It differs in that a low score on these two indicators implies that documents related to land security and tenure are not produced as efficiently, and firms that need land-related property rights may choose to circumvent these processes, thereby operating less securely than they otherwise would.

### 19. Total number of documents required for DALMS Form 105 (land map) (#)

This indictor measures, for each S/R, the mean number of supporting documents required by township DALMS offices to apply for a particular license or certificate—in this case, Form 105 (land map). This measure is the average score for all surveyed township DALMS offices in a given state or region. Supporting documents for this appraisal included application forms and letters of support from other ministries. The indicator is scored from 0 to 7, with 0 corresponding to no supporting documents required and 7 corresponding to 7 supporting documents required. The more required documents there are, the costlier and more cumbersome the process, and hence the more difficult access to land will be.

TABLE 4.2

## Land Access and Security-of-Tenure Subindex, 2018–2020

| Core Indicators Collected in the 2018 and 2020 MBEIs | | | | | |
|---|---|---|---|---|---|
| Indicator | Source | S/R Measure | Dataset | | |
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| Land access and security subindex | (Survey*.6)+ (Hard*.4) | Min<br>Median<br>Max<br>Correlation with previous year | 5.16<br>5.75<br>6.72 | 4.91<br>5.82<br>6.53<br>0.03 | 6.17<br>6.83<br>7.53<br>0.24 |
| Survey Indicators | Scaled survey data | Min<br>Median<br>Max<br>Correlation with previous year | 5.16<br>5.75<br>6.72 | 4.91<br>5.82<br>6.53<br>0.03 | 3.85<br>4.16<br>4.52<br>0.48 |
| Hard indicators | Scaled hard data | Min<br>Median<br>Max<br>Correlation with previous year | | | 1.99<br>2.54<br>3.14 |
| 1. Firm owns land and has a title (%) | Scaled survey data<br>MBEI Survey Question: Q33_a | Min<br>Median<br>Max<br>Correlation with previous year | 52.1%<br>69.6%<br>89.3% | 55.5%<br>79.5%<br>96.9%<br>0.24 | 57.1%<br>79.8%<br>92.9%<br>0.47 |
| 2. Length of time to obtain land title (days) | MBEI survey question: Q36ar1 | Min<br>Median<br>Max<br>Correlation with previous year | 67.33<br>127.96<br>196.62 | 25.06<br>121.79<br>224.15<br>0.36 | 44.67<br>97.04<br>201.14<br>0.75 |

| | | | | | |
|---|---|---|---|---|---|
| 3. Firm believes it has at least a moderate risk of expropriation (%) | MBEI survey question: Q38 | Min<br>Median<br>Max<br>Correlation with previous year | 24.4%<br>56.4%<br>68.2% | 25.7%<br>45.2%<br>62.8%<br>0.27 | 31.2%<br>50.0%<br>72.9%<br>0.26 |
| 4. Firm believes it has at least a moderate risk of changes in rental contract (%) | MBEI Survey Question: Q44MBEI survey question: Q38 | Min<br>Median<br>Max<br>Correlation with previous year | 70.0%<br>85.4%<br>96.1% | 78.5%<br>90.6%<br>98.2%<br>0.62 | 75.7%<br>86.8%<br>96.0%<br>0.86 |
| 5. Firm believes it is likely to receive fair compensation in case of expropriation(%) | MBEI survey question: Q39 | Min<br>Median<br>Max<br>Correlation with previous year | 64.1 %<br>86.0 %<br>98.3 % | 33.9 %<br>73.9 %<br>91.8 %<br>0.52 | 60.1%<br>76.0%<br>93.5%<br>0.90 |
| 6. Firm has done land procedures and encountered no difficulties (%) | MBEI survey question: Q43_1 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>66.1%<br>100.0% | 50.0%<br>100.0%<br>100.0%<br>-0.03 | 61.6%<br>83.6%<br>100.0%<br>0.38 |

## New Indicators Added in the 2020 MBEI

| Indicator | Source | S/R Measure | Dataset | | |
|---|---|---|---|---|---|
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| 7. Firm had a land dispute in the past two years (%) | MBEI survey question: Q45 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.0%<br>0.7%<br>4.9% |
| 8. Firm has a Land Grant or Form 7 (%) | MBEI survey question: a_q34a_1 & a_q34a_2 | Min<br>Median<br>Max<br>Correlation with previous year | | | 23.9%<br>43.4%<br>61.2% |
| 9. Firm owner owns land in another person's name (%) | MBEI survey question: Q33_2 | Min<br>Median<br>Max<br>Correlation with previous year | | | 12.8%<br>29.7%<br>70.1% |
| 10. Firm has faced obstacles in acquiring or expanding business premises (%) | MBEI survey question: Q41 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.1%<br>5.0%<br>10.7% |
| 11. Number of documents required to obtain a GAD Land Grant (#) | Observational data question: GAD A4 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.47<br>3.94<br>5.14 |
| 12. DALMS staff is helpful (%) | Observational data question: DALMS Z5 | Min<br>Median<br>Max<br>Correlation with previous year | | | 23.2%<br>100%<br>100% |
| 13. GAD standard application form exists and is available (%) | Observational data question: GAD A1 and A1a | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.0%<br>45.0%<br>91.5% |

| | | | | | |
|---|---|---|---|---|---|
| 14. DALMS standard application form exists and is available (%) | Observational data question: DALMS A1 and A1a | Min<br>Median<br>Max<br>Correlation with previous year | | | 18.2%<br>100.0%<br>100.0% |
| 15. GAD office has necessary physical resources (%) | Observational data question: GAD Z6 | Min<br>Median<br>Max<br>Correlation with previous year | | | 12.4%<br>82.3%<br>100.0% |
| 16. DALMS office has necessary physical resources (%) | Observational data question: DALMS Z6 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.0%<br>58.2%<br>100.0% |
| 17. GAD office is working at capacity (%) | Observational data question: GAD Z4 | Min<br>Median<br>Max<br>Correlation with previous year | | | 45.7%<br>100.0%<br>100.0% |
| 18. DALMS office is working at capacity (%) | Observational data question: DALMS Z4 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.0 %<br>99.1%<br>100.0% |
| 19. Total number of documents required for DALMS Form 105 (land map) (#) | Observational data question: DALMS A4 | Min<br>Median<br>Max<br>Correlation with previous year | | | 2.28<br>4.08<br>7.00 |

## 4.3. Post-entry regulation

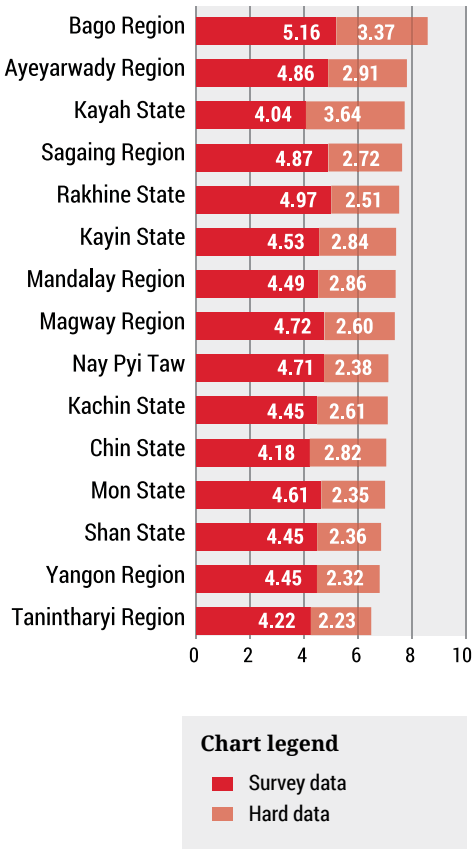
Businesses in Myanmar incur regulatory and administrative costs continuously as long as they are in operation. Renewing licenses, obtaining forms and supporting documentation, complying with regulations, undergoing inspections, and updating business practices are necessary to maintain business standards. These obligations, while important, can often be arbitrary and impose significant burdens on businesses.

Myanmar is ranked 129 out of 190 countries in the World Bank's (2020) Paying Taxes indicator. This implies that the process of dealing with administrative requirements (in this case taxes) is cumbersome, time-consuming, and inefficient. Procedures include regulatory inspections to monitor labor safety, fire certification, and environmental compliance. They also include interacting with administrative offices to pay taxes, renew licenses, and obtain construction permits for factory expansions. This subindex combines survey data on firm perceptions of government efficiency with observational data from our field team on the helpfulness of government staff and other qualities relating to the efficiency of government offices.

**Firms trust the regulatory authority of government, but believe that government agencies are not operating efficiently and at high capacity.** In the median S/R, 98.1% of firms agree that government agencies are technically competent, and 83.9% of firms in the median S/R believe that inspections help businesses comply with regulations. However, agencies perform worse on measures of bureaucratic capacity. For instance, only 58% of firms say that they do not need to make many trips to obtain stamps and signatures. In the median S/R, the average OSS was observed to have just 3.08 desks staffed with active personnel, out of potentially more than 10. The clear policy implication is that governments can substantially improve post-entry regulation by improving the performance of their offices.

**Bago Region does best on this subindex, while Tanintharyi State does worst (figure 4.3).** The variation in scores for all S/Rs and indicators reflects significant differences in both the survey data on firm perceptions and experiences and the observational ratings of agency performance by our field team. For example, our field team noted that in many S/Rs of the township GADs have helpful staff, whereas the field team also noted that only about one third of the township GADs in Tanintharyi have helpful staff. There are also differences within indicators and across states and regions. For example, in Kayah, more than 91% of firms say it takes several trips to get stamps and signatures, which is costly and time-consuming for these firms. But in Bago, only 23% of firms make this complaint. On the positive side, most firms in the country believe the paperwork for regulatory procedures is simple, ranging from 56% in the minimum S/R to over 90% in the maximum.

FIGURE 4.3
**State and Region Rankings on Post-entry Regulation, Subindex 3**




## Core indicators collected in the 2018 and 2020 MBEIs

The post-entry regulatory costs subindex contains eleven core indicators that were measured both in 2018 and 2020.

### 1. Number of inspection visits for businesses (#)

This indicator counts the number of times a business was inspected by regulators. The more visits, the lower the score on post-entry regulation; the fewer visits, the higher the score. The interpretation of this indicator is worth considering. On the one hand, many inspections may imply that inspectors are diligent and the business is being examined thoroughly. On the other hand, one inspection in which all the regulations are checked is enough, so too many inspections implies time wasted both by the inspector, who could be inspecting other businesses, and by the firm, which cannot do business while the inspection is ongoing. We use the latter interpretation for this variable. A final interpretation will be to find an optimal number of examinations and build a measure around this, but without any clear theoretical justification we forego this type of measure for now. This indicator therefore suggests that the longer the examination time, the more burdensome post-entry regulation. The logic goes beyond the wasted time and energy of both inspector and firm. This measure also speaks to the inability of agencies to enforce best practices among their inspectors.

### 2. Inspections help business comply with regulations (% agree)

This indicator measures the share of firms in each S/R that believe that inspections help businesses comply with regulations. The greater the share of firms that believe this, the higher the score on subindex 3. This measure speaks to two concepts. Most obviously, it speaks to trust in the local government. Greater trust in local government means firms will, on the margin, be more willing to comply with formalization and renewal requirements and less likely to operate illegally. This measure is also a proxy for the actual quality of inspections. Firms that found inspections valuable are more likely to agree with this statement. Inspections that help with compliance ensure that firms follow the law and regulation is done properly, protecting workers, consumers, society, and the environment.

### 3. Firms spend less than 10% of their time on bureaucratic procedures (%)

The amount of time spent understanding and complying with regulations is directly related to the costs of running a business and is therefore a useful indicator of regulatory and administrative costs. The more time the owner or manager spends understanding and complying with regulations, the less time they have to manage other issues related to running the business, such as lowering costs, refining the product, or improving marketing, for example. This, in turn, may lead to lower profits (Amin 2009). The costs referred to here are therefore mostly opportunity costs: understanding and complying with regulations takes away from time spent on income-generating business activities.

### 4. Government officials process paperwork effectively (% agree)

This indicator measures the share of firms in each S/R that believe that government officials are effective. More-effective officials are associated with lower regulatory and administrative costs. To the extent that perceptions of effectiveness are close to actual effectiveness, agreement with this statement implies that government officials are less likely to demand bribes and more likely to deal with firms in a timely and predictable manner, lowering overall costs to the firm. The perception of effectiveness can itself affect costs, since the perception that government officials are ineffective may dissuade firm owners from making investments in regulatory compliance (Afonso et al. 2005).

### 5. Government officials are friendly (% agree)

This indicator measures the share of firms per S/R that believe that government officials are friendly. The higher the share, the higher the score on this subindex. The lower the share, the lower the score. Friendly and approachable government officials put applicants at ease. Firm representatives will be more willing to ask questions, leading to fewer misunderstandings. As a result, they will have a clearer sense of procedures and protocols. This measure may also be a proxy for competence and the general satisfaction that the firm felt in their dealings with the government.

### 6. Doesn't take many trips to get stamps and signatures (% agree)

This indicator measures the share of firms that say it doesn't take many trips to get stamps and signatures. The more visits a firm makes to government offices to deal with regulatory procedures, the more time is spent away from income-generating activities. Making multiple trips to complete procedures eats into funds and other business resources (World Bank 2018). The need for multiple trips may cause the firm owner some uncertainty as to whether the issue in question can be resolved in a timely manner. This indicator is consistent with the National Land Use Policy (2016), which states that "land transfer fees and stamp duties shall be fair, equitable, and appropriate, and the procedures related to the collection and payment of revenue shall be clear, effective, and transparent."

### 7. Paperwork is simple (% agree)

This indicator measures the share of firms in each S/R that say regulatory and administrative paperwork is simple. If paperwork is simple, regulatory and administrative costs are lower. There is less wasted time and less need to hire consultants or lawyers for assistance. Simplified paperwork can reduce costs for various reasons. Simple paperwork can reduce the time spent understanding and complying with regulations (see indicator number 3 above). Simple paperwork means both the firm and the bureaucracy are likely to make fewer mistakes, which saves the firm time and money (World Bank 2018). While the list of required documents was not described in the survey data, required forms and submission procedures are explicitly specified on the DICA website and in the Investment Law.

### 8. Fees are listed publicly (% agree)

This indicator measures the share of firms in each S/R that say regulatory and compliance fees are publicly listed at the relevant government agencies. Publicly listed fees substantially reduce both uncertainty about regulatory procedures and the time spent on compliance. Publicly listed fees also lead to fewer mistakes by the firm and the bureaucracy, further reducing costs and wasted resources (Knight 2012).

### 9. GAD staff are helpful (%)

This observational indicator measures the average helpfulness of the staff at township GAD offices. Helpfulness was assessed by whether staff were present, willing, and able to answer questions related to GAD services. The indicator is a binary measure equal to 1

if the enumerator agreed that the GAD staff were helpful, and 0 if not. The state or region score is the average score for the surveyed offices, which may also be expressed as the percentage of surveyed offices in that S/R that the field team designated as helpful. Helpful staff imply greater transparency, because they more readily share information with the public. Helpful staff provide documents more readily and process them faster, which implies that post-registration tasks are easier to accomplish, saving firms time and money.

### 10. One-stop-shop desks with personnel in attendance (count)

This indicator measures the average number of OSS desks per township that have personnel in attendance. This indicator begins with a list of potential desks—such as the DAO desk, the police department desk, and the fire department desk—and then counts how many of those desks were staffed at the time of the observational visit. Desks with personnel in attendance make registration much easier and less cumbersome. If firm owners go to the OSS and the desk is unstaffed, their time is wasted. This measure also speaks to the efficiency and capacity of the OSS. If the desks aren't staffed, it is fair to assume that the capacity of the OSS is lacking.

### 11. One-stop shop exists in a township (%)

This indicator measures the share of townships in each S/R that have an OSS that is open to customers during regular business hours. The greater the percentage of surveyed townships that have a working OSS, the higher the S/R scores on this subindex. In some townships that had an OSS, it had not been open to customers for several months. An OSS is supposed to streamline the process of licensing and renewal. The presence of more working OSSs thus implies that there are more places where businesses can go, making formalization and registration substantially easier.

## New indicators added in the 2020 MBEI

Seven new indicators were added to subindex 3 in 2020 to better capture firms' experience with business post-entry procedures. They are as follows.

### 12. Regulatory fees are made easily ascertainable by government disclosures (%)

This indicator measures the share of firms in each S/R that say the government readily discloses fee schedules by means such as posters, leaflets, websites, official gazettes, etc. When a firm can simply look up the correct payments, it is easier to register and renew documents. When fees are not published, firms may incur excess travel costs visiting an agency first to ascertain and then to pay fees. If the firm needs to make several visits, this compounds these costs. Moreover, lack of transparency about formal fees provides opportunities for malfeasance and corruption.

### 13. Time taken to examine and inspect the business (minutes)

This measure is related to the core indicator of number of inspections. Using minutes both serves as a check on the above measure and gives extra precision by measuring the duration of each inspection. For instance, a firm may only receive one inspection, but it may take an extraordinarily long time, which is as burdensome as multiple inspections.

### 14. Government agencies are technically competent (%)

This indicator measures the share of firms within each township that believe that government agencies are technically competent. This measure is important because it tracks the legitimacy of regulatory inspections. When firms shut down operations to accommodate inspectors and comply with regulatory procedures, do they do so in the belief the that it will actually improve protections for individuals and society. When firms do not believe an inspector is competent, they doubt whether these inspections are worth the cost of compliance. Firms believing that government agencies are technically competent is positively correlated with the actual competence of these agencies, and serves as a proxy for governmental capacity. Indirectly, if firms think government agencies are incompetent, they may believe that the agencies will not catch them if they break the rules, and look for ways to circumvent the agencies altogether.

### 15. Number of inspections disrupts business operations (%)

This indicator measures the percentage of surveyed firms in each S/R that say the number of inspections is burdensome to their business operations. This indicator has both direct and indirect applications. It directly measures how disruptive inspections are perceived to be, whether due to bribery, harassment, or

incompetence on the part of the inspector. Indirectly, it suggests the potential for conflict between inspectors and firm owners, because firms may be less cooperative with inspectors whose visits are perceived as disruptive. This is detrimental to the productivity of both the inspectors and the firm.

### 16. Number of documents required to renew DAO business operating license (#)

### 17. Number of documents required to renew GAD Land Grant (#)

These observational indicators measure, in each S/R, the average number of supporting documents required by township GAD and DAO offices to renew the GAD Land Grant and the DAO business operating license. Supporting documents include application forms and letters of support from the DAO and the DALMS. The indicator is scored from 0 to 5, with the scores indicating the number of documents required. The more documents that are required, the costlier and more cumbersome the process, and the more difficult the access to land will be.

### 18. DAO staff are helpful (%)

This observational indicator measures the average helpfulness, for each S/R, of staff members at township DAO offices. Field teams assigned a binary score of either 0, "not helpful," or 1, "helpful," depending on whether staff were present, willing, and able to answer questions about DAO services. The S/R score is the average score of all the surveyed townships, which corresponds to the percentage of townships with helpful DAO staff. Helpful staff imply greater transparency, because they more readily share information with the public. Helpful staff also imply that bureaucratic tasks are easier to accomplish, saving firms both time and money.

TABLE 4.3

## Comparison of Post-entry Regulation Subindex, 2018–2020

| Core Indicators Collected in the 2018 and 2020 MBEIs | | | | | |
|---|---|---|---|---|---|
| Indicator | Source | S/R Measure | Dataset | | |
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| Post-entry regulation subindex | (Survey*.6)+ (Hard*.4) | Min<br>Median<br>Max<br>Correlation with previous year | 5.04<br>6.20<br>7.27 | 5.17<br>6.80<br>8.87<br>0.15 | 6.45<br>7.32<br>8.53<br>0.72 |
| Survey indicators | Scaled survey data | Min<br>Median<br>Max<br>Correlation with previous year | 3.34<br>4.17<br>4.61 | 3.25<br>4.25<br>4.98<br>0.28 | 4.04<br>4.53<br>5.16<br>0.86 |
| Hard indicators | Scaled hard data | Min<br>Median<br>Max<br>Correlation with previous year | 0.61<br>2.05<br>2.67 | 1.16<br>2.52<br>3.89<br>0.29 | 2.23<br>2.61<br>3.64<br>0.73 |
| 1. Number of inspection visits for businesses (#) | MBEI survey question: Q72 | Min<br>Median<br>Max<br>Correlation with previous year | 1.72<br>2.70<br>4.47 | 1.37<br>1.93<br>3.70<br>0.08 | 1.02<br>1.78<br>2.65<br>0.66 |
| 2. Inspections help business comply with regulations (% agree) | MBEI survey question: A_Q77_1 | Min<br>Median<br>Max<br>Correlation with previous year | 58.0%<br>83.2%<br>89.7% | 64.3%<br>80.7%<br>96.7%<br>0.36 | 48.5%<br>83.9%<br>95.1%<br>0.75 |

| | | | | | |
|---|---|---|---|---|---|
| 3. Firms spend less than 10% of their time on bureaucratic procedures (%) | MBEI survey question: Q69 | Min<br>Median<br>Max<br>Correlation with previous year | 76.7%<br>95.1%<br>98.9% | 49.5%<br>89.5%<br>100.0%<br>0.04 | 72.3%<br>90.7%<br>99.6%<br>0.84 |
| 4. Government officials process paperwork effectively (% agree) | MBEI survey question: T_Q71_1 | Min<br>Median<br>Max<br>Correlation with previous year | 47.0%<br>79.9%<br>88.2% | 28.8%<br>64.8%<br>89.1%<br>0.24 | 46.5%<br>67.9%<br>84.6%<br>0.83 |
| 5. Government officials are friendly (% agree) | MBEI survey question: _Q71_2 | Min<br>Median<br>Max<br>Correlation with previous year | 52.8%<br>72.0%<br>81.5% | 45.1%<br>76.5%<br>96.7%<br>0.51 | 62.4%<br>76.9%<br>93.0%<br>0.69 |
| 6. Doesn't take many trips to get stamps and signatures (% agree) | MBEI survey question: T_Q71_3 | Min<br>Median<br>Max<br>Correlation with previous year | 32.1%<br>63.7%<br>80.9% | 0.0%<br>64.7%<br>73.8%<br>-0.08 | 8.4%<br>60.1%<br>79.2%<br>0.94 |
| 7. Paperwork is simple (% agree) | MBEI survey question: T_Q71_4 | Min<br>Median<br>Max<br>Correlation with previous year | 51.2%<br>71.2%<br>83.5% | 38.4%<br>71.1%<br>100.0%<br>0.06 | 55.5%<br>71.7%<br>90.3%<br>0.83 |
| 8. Fees are listed publicly (% agree) | MBEI survey question: T_Q71_5 | Min<br>Median<br>Max<br>Correlation with previous year | 18.0%<br>50.9%<br>74.6% | 27.9%<br>73.0%<br>86.5%<br>0.45 | 39.6%<br>68.0%<br>79.9%<br>0.94 |
| 9. GAD staff are helpful (%) | Observational data question: GAD Z5 | Min<br>Median<br>Max<br>Correlation with previous year | 20.4%<br>50.0%<br>100.0% | 7.7%<br>73.3%<br>100.0%<br>0.16 | 12.4%<br>66.7%<br>100.0%<br>0.96 |
| 10. One-stop-shop desks with personnel in attendance (#) | Observational data question: OSS Z7 | Min<br>Median<br>Max<br>Correlation with previous year | 0.00<br>0.71<br>1.0 | 0.16<br>3.45<br>10.00<br>0.52 | 0.19<br>3.08<br>9.41 |
| 11. One-stop shop for regulatory procedures exists in a township (%) | Observational data question: OSS I5 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>70.8%<br>100.0% | 27.7%<br>100.0%<br>100.0%<br>0.60 | 33.4%<br>100.0%<br>100.0%<br>0.97 |

**New Indicators Added in the 2020 MBEI**

| Indicator | Source | S/R Measure | Dataset | | |
|---|---|---|---|---|---|
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| 12. Regulatory fees are made easily ascertainable by government disclosures (%) | MBEI survey question: T_Q71_6 | Min<br>Median<br>Max<br>Correlation with previous year | | | 44.5%<br>70.6%<br>81.0% |
| 13. Time taken to examine and inspect the business (minutes) | MBEI survey question: Q80 | Min<br>Median<br>Max<br>Correlation with previous year | | | 16.81<br>22.31<br>34.29 |

| | | | | | |
|---|---|---|---|---|---|
| 14. Government agencies are technically competent (%) | MBEI survey question: Q81 | Min<br>Median<br>Max<br>Correlation with previous year | | | 83.2%<br>98.1%<br>100.0% |
| 15. Number of inspections disrupts business operations (%) | MBEI survey question: Q74 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.0%<br>1.0%<br>3.6% |
| 16. Number of documents required to renew DAO business operating license (#) | Observational data question: DAO B5 | Min<br>Median<br>Max<br>Correlation with previous year | | | 1.00<br>3.30<br>4.86 |
| 17. Number of documents required to renew GAD Land Grant (#) | Observational data question: GAD B5 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.00<br>5.18<br>6.07 |
| 18. DAO staff are helpful (%) | Observational data question: GAD Z5 | Min<br>Median<br>Max<br>Correlation with previous year | | | 37.8%<br>80.5%<br>100.0% |

# 4.4. Informal charges

Businesses benefit from less corruption—the use of public office for private gain. Scholars distinguish between petty corruption and grand corruption (Ackerman 1978, Lederman et al. 2005). Petty corruption consists primarily of the small bribes and informal fees exacted from individuals as they go about their normal activities. It also occurs when businesses must pay informal fees, above and beyond legally stipulated service fees, to facilitate regulatory compliance or receive public services. Grand corruption takes place at the highest levels of national and local governments and consists of activities that are not directly observed by average citizens, although they certainly have an impact on the general welfare. Grand corruption commonly includes such activities as (1) accepting kickbacks for issuing government procurement contracts (e.g., for construction, equipment, or technical services), (2) taking bribes for policies that favor particular economic actors, and (3) allocating limited resources (e.g., natural resources, telecommunications spectrum, export or production quotas,or high-ranking offices) on a nonmarket basis to benefit family, friends, or those with close relationships to the policymakers.

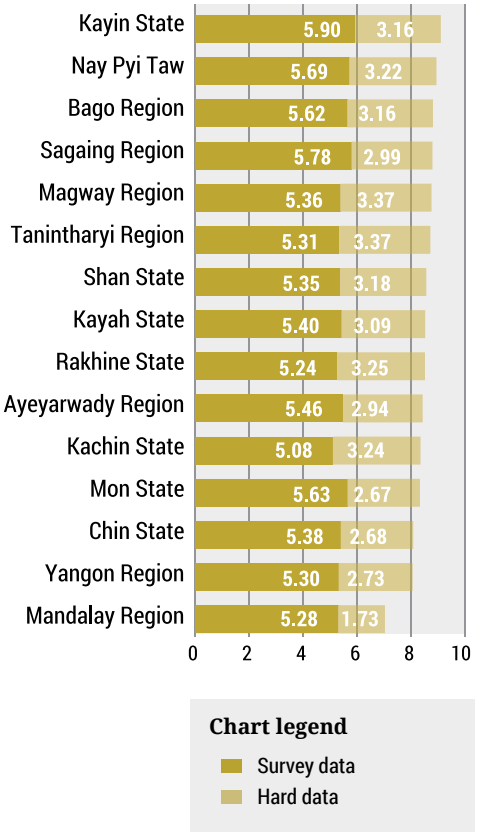
**Informal charges present a serious challenge for businesses and one that the Myanmar government has recognized as an important priority.** They raise the cost of doing business, degrade public services when less effective providers are improperly awarded contracts, and create costly policy uncertainty (Olken and Pande 2012). On one level, informal charges have been recognized as a burden in Myanmar, and the government has made them a reform priority. The country is currently ranked 130 out of 183 countries in Transparency International's *Corruption Perceptions Index 2019.* By contrast, however, the World Bank enterprise survey reported that informal charges were not a significant obstacle for firms in Myanmar (World Bank 2016), and characterized them as low and relatively infrequent. After talking with firms individually and in focus groups, we were skeptical of that analysis and asked numerous survey questions related to informal charges. Of course, given Myanmar's long history of military control and favoritism toward military-backed businesses, it is important to note that survey respondents may have hesitated to speak freely. For this reason, we chose vernacular such as "gifts" for small bribes in hope of reducing underreporting.

**Our findings generally confirm the World Bank's assessment that for many businesses informal charges are small and infrequent.** In the median S/R, nearly 80% of firms claimed that they did not need to pay bribes, and 99% claimed that bribe payments were less than 2% of sales revenue. The one outlier in this area is Magway Region, where about 25% of firms said that they had to pay more than 2% of sales revenue in bribes. Only 2.4% of firms in the median S/R paid a bribe during regulatory inspections. In the worst S/R, only 9.2% of firms paid a bribe during regulatory inspections. As we showed in section 5 of chapter 2, these low numbers are confirmed by shielded-response questions that protect firms' anonymity, allowing them to answer honestly. Figure 4.4 ranks S/Rs by their scores in subindex 4, the experience and perception of informal charges. Kayin State is the least corrupt according to both survey and administrative data, and Nay Pyi Taw and Bago are not far behind. At the bottom of the list, Yangon and Mandalay report the highest levels of informal charges.

**Interestingly, firms' personal experiences are at odds with their perceptions of the overall prevalence of bribery in society.** While very few firms have paid bribes themselves, many more say that bribes are common. They believe that bribery is more common than it actually is, despite their own experience. Every surveyed business in Kachin believes that gifts of cash are essential to win a procurement contract. Even in Shan State, which scores lowest on this measure, nearly half of respondents (42%) believe that paying money is essential. Furthermore, in every S/R, at least half of all firms believe that firms in their line of business have to make informal payment for quick service deliveries (this ranges from a low of 50.7% in Kachin State to a high of 97% in Kayin State). These results suggest that firms overestimate the prevalence of both petty bribery and macro-corruption.

FIGURE 4.4

**Figure 4.4: State and Region Rankings on Informal Charges, Subindex 4**




## Core indicators collected in the 2018 and 2020 MBEIs

### 1. Firms have to make gifts in the form of money (% disagree)

This straightforward indicator of the presence and frequency of bribery and corruption is used in the World Bank Enterprise Surveys and in subnational business environment indices in other locations. When asked about informal charges businesses may try to avoid answering the question rather than admitting that paying informal charges is common. This can lead to an underestimation of the level of corruption. To avoid this nonresponse bias, we count nonresponses (i.e., "don't know" or "refuse to answer") as having paid a bribe. We then count the number of firms that definitively stated that they did not pay a bribe, and subtract those that paid or skipped the question. Given the reticense of firms to disclose bribes, it is usually very difficult to find data that speaks to these issues. A measure such as this one—which captures either the experiences of owners and managers paying a bribe or their perceptions of the prevalence of bribery and corruption in their line of work—allows us to quantify this important aspect of governance. Making a gift in the form of money is clearly not a legitimate, formal process for starting a business, and it diminishes the resources available for the firm's operations (Shleifer and Vishny 1993).

### 2. Firms paying less than 2% of sales revenue in bribes (%)

This indicator measures the percentage of respondent firms in each S/R that did not pay

bribes exceeding 2% of sales revenue. The implications for the business are straightforward: if the firm has to pay a substantial amount of its revenue in bribes, it loses resources needed for other parts of the business, such as rent or marketing. If the ratio of bribes to revenue becomes exorbitant, the firm may become unprofitable and have to cease operations (Bardhan 1997). This measure differs from the previous measure (which captures the incidence of informal charges) by quantifying the intensity and scale of corrupt activities in the state. To put this in perspective, Aterido et al. (2009) using the same exact question for 56,000 firms in 90 countries, found average bribe payments of 1.5% of sales (SD=4.2). In Vietnam, a similar question found that the mean bribe payment in the country is 2.99% of annual revenue (Malesky et al. 2020).

### 3. I usually know the amount of the bribe in advance (% agree)

This indicator measures the proportion of firms in each S/R that know the amount that they will have to pay in bribes. While informal charges are problematic in their own right, knowing the expected amount is better than not knowing. It allows the firm to better manage its expenses. Some analysts have suggested that knowing the bribe amount allows firms to treat it like a tax in their long-term planning. When the amounts to be paid in bribes are unknown, firms have more trouble planning and making the long-term investments (Campos et. al. 1999, Malesky and Samphantharak 2008).

### 4. Gifts in the form of money increase the speed of service delivery (% agree)

This is a measure of predictability, essentially asking whether firms get what they expect when they pay bribes. The more firms agree with this statement, the better their score on the informal charges index, as it indicates that bribes are more predictable and actually serve a productive purpose in overcoming regulatory obstacles.

### 5. Making a gift in the form of money is essential to win a procurement bid (% agree)

This indicator measures the share of firms in each S/R that agree with the statement that bribery is necessary to improve the chances of winning a procurement bid. Agreement implies that firms perceive bribery as an important contributor to "getting things done." Perceptions of corruption and bribery may drive actual corruption and bribery; perceptions of the presence of bribery and corruption are good indicators of the actual level of bribery and corruption, which is the core concept we are trying to measure (Beck and Maher 1986).

### 6. Made a gift or extra payment during an inspection (% agree)

This indicator measures the share of firms in each S/R that provided a gift or extra payment during inspections. This is a very direct measure of the prevalence of informal charges (although caveats for underreporting still remain). The significance of this measure is obvious. First, bribery is illegal. Second, as stated previously, bribes are a misallocation of resources from productive activity to paying off inspectors, lowering a firm's efficiency, reducing profits, and diminishing their trust in government.

### 7. Inspections create opportunities for regulators to make money through gifts (% agree)

This indicator measures the share of firms for each S/R that believe that inspections generate opportunities for regulators to make money through presents. The more firms believe this the lower the score of the S/R on informal charges. There are several issues if firms believe that inspectors have malicious intentions when inspecting their firms. First, they are less like to cooperate and be honest with regulators. This means that even honest regulators cannot do their job properly if they are assumed to be corrupt. This further implies that regulatory assessments may be less accurate, potentially putting customers at risk. Furthermore, this measure speaks to trust in regulatory agencies, and suggests that firms that agree to this statement are potentially less willing to engage with the government on matters of regulation, further undermining the government's ability to act on its responsibilities.

### 8. Complaints per 10,000 citizens (#, 2019)

This indicator measures the average number of corruption cases per firm filed with the Anti-corruption Commission in each township in the S/R. We standardize by the size of the population, generating a number of complaints per 10,000 citizens. The more corruption cases per firm, the more corruption and bribery in the state or region. This measure assumes that the more corruption complaints there are in an area, the more corrupt the area actually is. This assumption may not always be true: more corruption complaints may imply that the local people are less hesitant to make complaints to the ACC and that there is a more open atmosphere for talk about corruption issues. However, we find that this hard measure is strongly, positively associated with survey measures of corruption.

## New indicators added in the 2020 MBEI

### 9. Need to make a gift or pay money to get loan (%)

This indicator measures the share of firms in each S/R that believe you need to make a gift or pay money to get a loan. This indicator is similar to other "gift or money" indicators. If a large proportion of firms agree with this statement, this implies diminished resources for legitimate business operations, a lack of trust in government, and corrupt bureaucrats. Furthermore, making a gift or paying money for loans raises the cost of the loan and suggests inefficiencies in state lending agencies.

TABLE 4.4

## Comparison of Informal Charges Subindex, 2018–2020

| Core Indicators Collected in the 2018 and 2020 MBEIs | | | | | |
|---|---|---|---|---|---|
| Indicator | Source | S/R Measure | Dataset | | |
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| Informal charges subindex | (Survey*.6)+ (Hard*.4) | Min | 7.60 | 8.00 | 7.01 |
| | | Median | 8.48 | 8.63 | 8.49 |
| | | Max | 9.34 | 9.21 | 9.07 |
| | | Correlation with previous year | | 0.28 | 0.87 |
| Survey indicators | Scaled survey data | Min | 4.62 | 5.13 | 5.08 |
| | | Median | 5.32 | 5.34 | 5.38 |
| | | Max | 5.53 | 5.85 | 5.90 |
| | | Correlation with previous year | | -0.04 | 0.85 |
| Hard indicators | Scaled hard data | Min | 2.75 | 2.77 | 1.73 |
| | | Median | 3.25 | 3.29 | 3.16 |
| | | Max | 3.86 | 3.45 | 3.37 |
| | | Correlation with previous year | | 0.42 | 0.91 |

| | | | | | |
|---|---|---|---|---|---|
| 1. Firms have to make gifts in the form of money (% disagree) | MBEI survey question: Q82 | Min<br>Median<br>Max<br>Correlation with previous year | 60.4%<br>78.5%<br>84.7% | 71.3%<br>87.6%<br>97.7%<br>-0.17 | 39.7%<br>79.3%<br>100.0%<br>0.14 |
| 2. Firms paying less than 2% of sales revenue in bribes (%) | MBEI survey question: Q83 | Min<br>Median<br>Max<br>Correlation with previous year | 62.0%<br>87.6%<br>100.0% | 71.5%<br>96.1%<br>100.0%<br>-0.19 | 74.8%<br>98.9%<br>99.8%<br>0.87 |
| 3. I usually know the amount of the bribe in advance (% agree) | MBEI survey question:Q84 | Min<br>Median<br>Max<br>Correlation with previous year | 19.9%<br>54.8%<br>94.7% | 0.0%<br>38.6%<br>100.0%<br>-0.39 | 15.8%<br>50.3%<br>76.3%<br>0.54 |
| 4.Gifts in the form of money increase the speed of service delivery (% agree) | MBEI survey question:Q85 | Min<br>Median<br>Max<br>Correlation with previous year | 68.4%<br>84.9%<br>93.2% | 56.5%<br>81.6%<br>99.2%<br>-0.44 | 50.7%<br>77.9%<br>96.6%<br>0.75 |
| 5. Making a gift in the form of money is essential to win a procurement bid (% agree) | MBEI survey question:Q90 | Min<br>Median<br>Max<br>Correlation with previous year | 52.1%<br>100.0%<br>100.0% | 15.6%<br>100.0%<br>100.0%<br>-0.03 | 42.2%<br>94.2%<br>100.0%<br>0.17 |
| 6. Made a gift or extra payment during an inspection (% agree) | MBEI survey question:t_Q78 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>4.1%<br>14.2% | 0.0%<br>2.8%<br>13.6%<br>0.36 | 0.7%<br>2.4%<br>9.2%<br>0.78 |
| 7. Inspections create opportunities for regulators to make money through gifts (% agree) | MBEI survey question: A_Q77_4 | Min<br>Median<br>Max<br>Correlation with previousyear | 0.0%<br>5.4%<br>16.9% | 0.0%<br>1.8%<br>6.3%<br>0.63 | 0.1%<br>2.2%<br>8.6%<br>0.83 |
| 8. Complaints per 10,000 citizens (2019) | Administrative data from Anticorruption Commission | Min<br>Median<br>Max<br>Correlation with previous year | 0.46<br>2.62<br>4.69 | 2.00<br>2.44<br>4.55<br>0.64 | 1.91<br>2.34<br>5.00<br>0.95 |

**New Indicators Added in the 2020 MBEI**

| Indicator | Source | S/R Measure | Dataset | | |
|---|---|---|---|---|---|
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| 9. Need to make a gift or pay money to get loan (% agree) | MBEI survey question: q110_8_wy1 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.0%<br>8.1%<br>24.7% |

# 4.5. Infrastructure

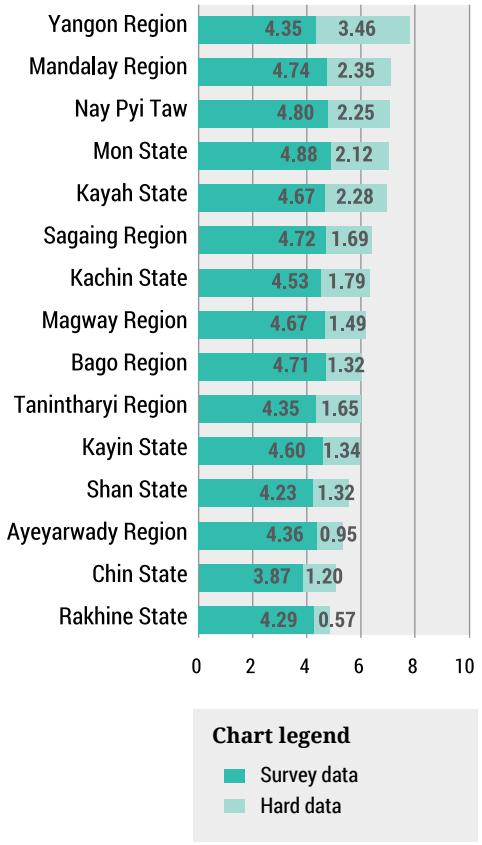
Businesses cannot operate effectively if they do not have stable electricity, roads that can easily take them to suppliers or customers, or the internet to gather information important to their business and inform their customers. Transportation infrastructure includes roads, bridges, airports, deepwater ports, and the like. High-quality infrastructure improves business productivity by limiting shipping and transaction costs, reducing the space needed for warehousing by facilitating just-in-time management, and lessening the risk of damaged and spoiled products (Démurger 2001, Fedderke et al. 2006). Connectivity also matters. Poor linkages between highways, rail, and ports can prolong shipping times and possibly damage goods. Telecommunication infrastructure, including adequate phone coverage and internet bandwidth, continues to gain importance, helping businesses connect with suppliers and customers, expand potential markets, engage new partners, and acquire new skills and technology (Roller and Waverman 2001). Commodity producers in emerging markets now regularly use technology to stay abreast of rapid changes in pricing and weather that affect the bottom line.

Myanmar faces significant infrastructure challenges. According to the Asian Development Bank, Myanmar's infrastructure gap, the amount of money required to meet the country's needs by 2030, is US$120 billion.[24] For example, the World Bank's *Doing Business Report 2020* ranks Myanmar at 148 out of 190 countries (around the 25th percentile) in access to electricity, a good measure of infrastructure capacity.

**Infrastructure quality remains a concern for many businesses in Myanmar, although it varies by the type of infrastructure considered.** In particular, improvements in physical infrastructure, which require major construction, are still desirable. Only 64.1% of firms in the median region, Yangon, believe that road quality is good or very good. This drops to just 31.4% in Rakhine. On the other hand, there is generally better performance in electricity and internet service. More than half of all firms in each S/R believe that internet quality is good.[25] In the median region of Magway, 79.3% of firms say that internet quality is good, and 76.5% say that electrical power is good.

**Within specific indicators, access to basic infrastructure varies substantially across S/Rs.** The share of households with access to water during the dry season ranges from an extreme low of 17% in Rakhine to 81% in Kachin. The average time between registering for a public home meter and receiving electrical service ranges from 30 days in Tanintharyi State to 102 days in Kayin State. Figure 4.5 shows the aggregate ranking of infrastructure quality across the states and regions. Unsurprisingly, the urban centers of Yangon and Mandalay have the highest scores in both survey and hard data. Rakhine and Chin State, however, score poorly on a wide range of infrastructure and public services.

FIGURE 4.5
**State and Region Rankings on Infrastructure, Subindex 5**




## Core indicators collected in the 2018 and 2020 MBEIs

The infrastructure subindex contains thirteen core indicators that were measured in both 2018 and 2020.

### 1. Hours out of service of telephone and other telecommunication services last month (#)

The number of hours lost due to poor communication and information technology is a good indicator of infrastructure quality. IT and telecommunications services are proxies for the quality of service provision in the state. Hours lost may imply that adequate infrastructure for the provision of these services (e.g., telephone lines that are not easily destroyed) is not yet in place. Losing hours of telephone, fax, and internet service directly affects a firm, since it can lose revenues from its inability to communicate its plans and decisions to suppliers, consumers, employees, and regulators (Démurgur 2001).

### 2. Hours of power outage last month (#)

This indicator measures the hours of power outages in the past month in each S/R. The more hours without power, the lower the score on infrastructure. Power outages prevent the firm from operating, leading to economic losses. Furthermore, if the number of power outages is too high, there will be too much instability in the firm's regular operating hours and production processes.

### 3. Number of days in a year that roads are blocked by flooding, mud, or poor road conditions (#)

The number of days a road is blocked serves as a measure of both existing infrastructure quality and the S/R government's capacity to deal with infrastructure-related issues. In addition to being a proxy for the infrastructure needed to prevent landslides, this measure also indicates how effective the state is when it comes to dealing with infrastructure problems: more days means that the state is less effective, fewer days means it is more effective. For example, if the state can remove mud or flood debris quickly, this achievement suggests that the state may have the resources and know-how to deal with various sorts of unforeseen disasters (e.g., typhoons) that may affect the state infrastructure (Calderón and Servén 2004).

### 4. Firm was damaged by an unexpected power outage or unstable power supply (% agree)

This indicator measures the share of firms that were damaged because of an unexpected power outage or unstable power supply. This indicator is straightforward. Firms lose money during power outages because they cannot operate. Power that is unstable can damage machines or lower their output, stymies internet use, and can make customers unhappy, even if businesses can still operate. Both outcomes tangibly affect the firm's performance. This indicator therefore measures the government's capacity to provide basic inputs.

### 5. Number of power outages experienced last month (#)

This indicator measures the average number of power outages per firm in the last month in each S/R. It is very similar to the indicator above—power outages prevent the firm from operating, leading to economic losses. Furthermore, if the number of power outages is too high, there will be too much instability for a firm to keep regular operating hours.

### 6. Time between registering for and receiving electrical service (aggregate, # days)

This indicator measures the average time in days between the average firm registering for and receiving electricity service. The shorter the time between registration and access, the higher the infrastructure score. The longer the time, the lower the score. A significant lag between registration and access hurts businesses by preventing them from operating. Practically all firms need electricity to operate. If they do not have electricity, they may simply be losing money from fixed costs such as rent without being able to make profits. Furthermore, uncertainty over when access will begin prevents businesses from planning ahead. If the firm without electricity is a supplier, other firms downstream will also suffer losses.

The survey question changed between the 2018 and 2020 waves. In 2018, we only asked about the duration of access for all types of electricity users. In 2020, however, we asked another question, which told us what type of meter the business used, in order to better understand the payment and regulatory regime in question 152. We considered four different types of meters. Twelve percent of MBEI respondents have private home meters, 49% use public home meters, 7% use private business meters, and 33% use public business meters. Home meters have a capacity up to 30 kW and business meters above it. Public meters are provided by government suppliers and private meters by other suppliers.

To create the panel indicator, we simply use

the aggregate answers to question 49. However, for the new MBEI index, we generate separate duration measures for all of the different types of meters. We list these below in indicators 16 through 19.

### 7. Urban roads are good or very good (%)

This indicator describes the share of firms in each S/R that think the quality of urban roads in their township or city is good. This is a straightforward and useful measure of infrastructure quality. Roads can affect business performance in several ways. Well-functioning roads lower the cost of transporting goods from where they are created to the markets where they are sold. Roads may also be a proxy for the government's ability to provide public goods that are necessary for the functioning of businesses (Fan and Chan-Kang 2005, Gosh 2002).

### 8. Telephones are good or very good (%)

This indicator represents the share of firms in each S/R that think telephone service in their area is good. Similar to road quality, this is a straightforward and useful measure of infrastructure quality. A functioning telephone system facilitates information flow between the firm and its suppliers, customers, employees, and regulators. Poor information flow between these groups and the firm leads to inefficiencies from miscommunication (e.g., in ordering materials from a supplier) or capacity limitations (e.g., a firm cannot adapt quickly to changing circumstances by informing employees that they need to work overtime) (Démurgur 2001). This indicator is also explicitly linked to existing laws, as telephone service providers must meet a performance standard set by the Telecommunication Law (2013).

### 9. Electricity is good or very good (%)

This indicator represents the share of firms in each S/R that think electricity service in their area is good. Electricity is fundamental for most businesses. Without electricity, a business may not even be able to operate, resulting in lost resources and revenues. Even when electricity is provided, unannounced blackouts hurt firms in a similar fashion. Firms lose potential revenues since they cannot adjust to blackouts that they cannot predict (Shiu and Lam 2004).

### 10. Internet is good or very good (%)

The share of firms responding that internet quality is good is a sound indicator of infrastructure quality. Internet quality can be a proxy for the quality of service provision generally or for concentration in the internet service market, where poor service may indicate the existence of a monopoly or duopoly. Poor internet quality affects firms directly, since the internet is a means by which firms gather information and communicate with suppliers and customers. Poor internet therefore implies inefficiencies and the potential loss of revenue and profits (Calderón and Servén 2004).

### 11. Water quality is good or very good (%)

This indicator measures the share of firms that say water quality is good or very good. Water quality is very important for almost all firms. Sophisticated manufacturers use water for cooling and directly in production processes. Workers in both manufacturing and services need to wash their hands when they work with equipment or deal with clients. Water is necessary for basic cleaning of machines and materials. This measure also serves as a proxy for the government's ability to provide physical public infrastructure.

### 12. Hospital/clinic quality is good or very good (%)

This indicator measures the share of firms that say hospital/clinic quality is good or very good. Hospitals and clinics are a direct indicator of physical infrastructure, and they are a public good that should be at least partially provided by the government. Hence, this measure suggests the quality of a given S/R's physical infrastructure. As we are learning with Covid-19, public health matters for maintaining the quality, stability, and productivity of the workforce. Access to inexpensive and reliable healthcare is critical for maintaining human capital.

### 13. Mobile phones per capita (%)

This administrative indicator, which is collected at the township level, measures the average share of the population with a mobile phone for each of the 15 S/Rs. Most firms need phones to communicate with suppliers and customers. Because mobile phones rely on other infrastructure—the electrical system, for example—this indicator also measures the quality of the physical infrastructure that the state provides. There is a slight difference in this indicator between survey waves. In the 2018 MBEI the survey did not differentiate

between mobile and landline users, whereas in 2020 we recorded only mobile users. As most telephone usage in Myanmar employs mobile phones, the difference between the two waves is slight. In fact, even excluding landlines in the 2020 indicator, phone penetration has grown from 46% to 90% in the median S/R.

## New indicators added in the 2020 MBEI

**Eleven** new indicators were added to the infrastructure subindex in 2020 to better capture firms' experience with infrastructure. They are as follows.

### 14. Number of the last five outages that were announced in advance (#)

This indicator measures the number of times township authorities informed firms in advance about impending power outages. The more advanced warnings of power outages are, the higher the score on the infrastructure subindex, as this indicator measures the ability of the government to mitigate infrastructure shortcomings. Blackouts and brownouts happen in developing countries, especially when energy sources are limited or uncertain. When firms are surprised by outages, however, they do not have the time to take precautions to prevent damage, waste, and spoiled goods. If localities adopt rolling outages to save money during the dry season, it is critical that local firms receive a schedule in advance, so they can allocate resources, structure work schedules, and protect their products and production processes.

### 15. Rural roads are good or very good (%)

This indicator measures the share of firms in each S/R that say the quality of rural roads is either good or very good. This indicator is very similar to the indicator on road quality, but is aimed more at businesses outside of city centers. Roads can affect business performance in several ways. Good roads reduce transport costs to market. Road quality is also a proxy for the government's ability to provide the public goods that businesses rely on (Fan and Chan-Kang 2005, Gosh 2002). High-quality rural roads connect businesses to markets outside of their local area, which implies that they can sell to more people. Rural firms can reach customers and suppliers in the city, and urban firms can reach rural customers and suppliers.

### 16. Time between registering for and receiving electrical service (private home meter, days)

### 17. Time between registering for and receiving electrical service (public home meter, days)

### 18. Time between registering for and receiving electrical service (private business meter, days)

### 19. Time between registering for and receiving electrical service (public business meter, days)

These four indicators measure the time in days between registering for electrical service and actually receiving this service, for businesses with a private home meter, a public home meter, a private business meter, or a public business meter. Home meters provide a capacity up to 30 kW and business meters above 30 kW. Public meters are provided by government suppliers and private meters by non-government suppliers. These four indicators provide a disaggregated and more actionable measure than indicator 6 alone. The shorter the time between registration and access, the higher the infrastructure score. Practically all firms need electricity to operate effectively. A significant lag between registration and access hurts businesses by preventing them from operating. They may lose money from fixed costs while waiting for electrical service. Like unannounced blackouts or brownouts, uncertain starting dates for electrical service prevent businesses from planning ahead. This also has downstream effects on other businesses that rely on the firm without electricity.

### 20. Households with access to water during dry season (%)

This administrative, meaning published by government agency, indicator measures the number of households with access to water during the dry season. It is analogous to the water-quality question, but it measures baseline access (access or no access) rather than quality. Access to water is a basic infrastructure need. This measure therefore identifies areas with extremely poor infrastructure. Household access to water may be a proxy for firm access as well. Conceptually, a lack of access to water means that the S/R and the township are failing to provide the most basic of public services. Water access is also of great practical importance to all businesses. Health-related businesses need clean water for handwashing and sanitation. Manufacturing firms need water to clean their equipment. All firms need potable water for drinking.

### 21. Individuals aged 15 and above who used the internet in the last seven days (%)

This administrative hard data indicator measures, for each S/R, the share of individuals aged 15 and above who used the internet in the last seven days. The higher the score on this indicator, the higher the infrastructure score. This indicator provides an objective measure of internet access and goes beyond internet quality. Lack of access exacerbates the problems of slow internet. At worst, too many people without access will lead to major productivity losses, as information that can be simply and clearly tracked and communicated to customers and vendors by text, chat, or email must now travel much more slowly.

### 22. Railroad density (km/km2)
### 23. Road density, weighted by road type (km/km2)

These two administrative hard data indicators calculate the density of roads and railroads as the distance they cover in kilometers divided by the area of the township in square kilometers. Roads are weighted by type (major roads earn a higher score than minor or small roads). The greater the road density, the higher the township scores on infrastructure. Roads are public goods that benefit many citizens simultaneously and to which access cannot be easily restricted. This sort of public good is exactly the type of infrastructure that governments should provide, especially since private-sector firms will not find it profitable to build major roads without government support or some sort of public partnership. Roads and railroads benefit firm development in many ways. They shorten the time to market. The more viable transport options there are for businesses to choose from the lower the cost of connecting to airports and ports for export. Roads make it easier for customers to go to a firm and make purchases. Finally, the presence of roads and railroads may encourage new businesses to build near existing firms with which they have potential synergies, so roads and railroads support business creation.

### 24. Share of households with a public or community electrical grid (%)

This administrative hard data indicator measures the share of households in the S/R with access to either a public or a community electrical grid. This indicator speaks to two things that affect businesses. First, access to a reliable electrical grid means access to electricity, and electricity is obviously necessary for the functioning of any business in manufacturing or services. Second, this indicator is a proxy for the government's ability to provide basic infrastructure to its residents.

TABLE 4.5

## Comparison of Infrastructure Subindex, 2018–2020

| Core Indicators Collected in the 2018 and 2020 MBEIs | | | | | |
|---|---|---|---|---|---|
| Indicator | Source | S/R Measure | Dataset | | |
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| Infrastructure subindex | (Survey*.6)+ (Hard*.4) | Min<br>Median<br>Max<br>Correlation with previous year | 4.85<br>5.47<br>6.09 | 5.88<br>7.26<br>8.53<br>0.63 | 4.86<br>6.15<br>7.81<br>0.96 |
| Survey indicators | Scaled survey data | Min<br>Median<br>Max<br>Correlation with previous year | 3.55<br>3.94<br>4.56 | 3.86<br>4.57<br>4.96<br>0.55 | 3.87<br>4.60<br>4.88<br>0.88 |
| Hard indicators | Scaled hard data | Min<br>Median<br>Max<br>Correlation with previous year | 1.06<br>1.46<br>1.90 | 1.45<br>2.61<br>4.00<br>0.60 | 0.57<br>1.65<br>3.46<br>0.92 |
| 1. Hours out of service of telephone and other telecommunication services last month (#) | MBEI survey question: Q56 | Min<br>Median<br>Max<br>Correlation with previous year | 2.21<br>10.98<br>45.28 | 2.62<br>12.89<br>23.03<br>0.55 | 3.49<br>9.30<br>26.08<br>0.61 |
| 2. Hours of power outage last month (#) | MBEI survey question: Q50 | Min<br>Median<br>Max<br>Correlation with previous year | 10.44<br>29.73<br>84.73 | 8.56<br>16.73<br>23.33<br>0.55 | 8.66<br>15.73<br>28.06<br>0.77 |
| 3. Number of days in a year that roads are blocked by flooding, mud, or poor road conditions (#) | MBEI survey question:Q47 | Min<br>Median<br>Max<br>Correlation with previous year | 2.25<br>14.25<br>50.23 | 0.78<br>2.82<br>10.10<br>0.34 | 0.54<br>2.42<br>6.32<br>0.81 |
| 4. Firm was damaged by an unexpected power outage or unstable power supply (% agree) | MBEI survey question:Q54 | Min<br>Median<br>Max<br>Correlation with previous year | 32.5%<br>48.6%<br>70.9% | 14.0%<br>37.2%<br>63.4%<br>.07 | 15.5%<br>31.4%<br>47.9%<br>0.69 |
| 5. Number of power outages experienced last month (#) | MBEI survey question:Q51 | Min<br>Median<br>Max<br>Correlation with previous year | 1.71<br>7.31<br>21.68 | 3.77<br>6.47<br>14.70<br>0.31 | 3.58<br>6.50<br>12.72<br>0.91 |
| 6. Time between registering for and receiving electrical service (aggregate, # days) (Only used in Core Index) | MBEI survey question:Q49 | Min<br>Median<br>Max<br>Correlation with previous year | 18.49<br>45.47<br>81.11 | 18.40<br>50.85<br>98.00<br>-0.10 | 29.50<br>55.40<br>89.67<br>0.67 |

| | | | | | |
|---|---|---|---|---|---|
| 7. Urban roads are good or very good (%) | MBEI survey question: _Q46_1 | Min<br>Median<br>Max<br>Correlation with previous year | 10.7%<br>50.1%<br>89.1% | 24.2%<br>64.4%<br>90.6%<br>0.59 | 31.5%<br>64.1%<br>82.3%<br>0.96 |
| 8. Telephones are good or very good (%) | MBEI survey question: _Q46_3 | Min<br>Median<br>Max<br>Correlation with previous year | 39.3%<br>68.9%<br>83.7% | 54.1%<br>81.7%<br>90.6%<br>0.40 | 66.2%<br>83.5%<br>94.8%<br>0.70 |
| 9. Electricity is good or very good (%) | MBEI survey question: _Q46_4 | Min<br>Median<br>Max<br>Correlation with previous year | 32.9%<br>53.1%<br>80.9% | 26.9%<br>76.8%<br>88.9%<br>0.48 | 43.3%<br>76.5%<br>87.8%<br>0.93 |
| 10. Internet is good or very good (%) | MBEI survey question: _Q46_7 | Min<br>Median<br>Max<br>Correlation with previous year | 38.8%<br>56.7%<br>79.4% | 33.0%<br>79.4%<br>93.3%<br>0.65 | 56.1%<br>79.3%<br>91.3%<br>0.77 |
| 11. Water quality is good or very good (%) | MBEI survey question: _Q46_5 | Min<br>Median<br>Max<br>Correlation with previous year | 32.7%<br>63.7%<br>81.0% | 19.3%<br>72.4%<br>87.3%<br>0.58 | 21.3%<br>67.4%<br>87.1%<br>0.94 |
| 12. Hospital/clinic quality is good or very good (%) | MBEI survey question: _Q46_10 | Min<br>Median<br>Max<br>Correlation with previous year | 9.8%<br>41.9%<br>58.7% | 31.8%<br>50.9%<br>74.4%<br>0.44 | 31.0%<br>50.9%<br>76.2%<br>0.75 |
| 13. Mobile phones per capita (%) | Administrative data from CSO Statistical Yearbook 2019 | Min<br>Median<br>Max<br>Correlation with previous year | 28.57<br>44.86<br>74.60 | 46.0%<br>90.0%<br>143.0%<br>0.64 | 46.0%<br>90.0%<br>143.0%<br>1.00 |

**New Indicators Added in the 2020 MBEI**

| Indicator | Source | S/R Measure | Dataset | | |
|---|---|---|---|---|---|
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| 14. Number of the last five outages that were announced in advance (#) | MBEI survey question: Q52 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.10<br>1.11<br>2.26 |
| 15. Rural roads are good or very good (%) | MBEI survey question: _Q46_2 | Min<br>Median<br>Max<br>Correlation with previous year | | | 28.2%<br>53.6%<br>82.4% |

| | | | | | |
|---|---|---|---|---|---|
| 16. Time between registering for and receiving electrical service (private home meter, days) | MBEI survey question: 49 if Q152==1 | Min<br>Median<br>Max<br>Correlation with previous year | | | 8.03<br>40.50<br>95.92 |
| 17. Time between registering for and receiving electrical service (public home meter, days) | MBEI survey question: 49 if Q152==2 | Min<br>Median<br>Max<br>Correlation with previous year | | | 29.82<br>40.71<br>101.56 |
| 18. Time between registering for and receiving electrical service (private business meter, days) | MBEI survey question: 49 if Q152==3 | Min<br>Median<br>Max<br>Correlation with previous year | | | 12.83<br>43.48<br>186.00 |
| 19. Time between registering for and receiving electrical service (public business meter, days) | MBEI survey question: 49 if Q152==4 | Min<br>Median<br>Max<br>Correlation with previous year | | | 13.13<br>60.68<br>138.17 |
| 20. Households with access to water during dry season (%) | Administrative data from Myanmar Living Conditions Survey 2017 | Min<br>Median<br>Max<br>Correlation with previous year | | | 17.2%<br>60.9%<br>81.4% |
| 21. Individuals aged 15 and above who used the internet in the last seven days (%) | Administrative data from Myanmar Living Conditions Survey 2017 | Min<br>Median<br>Max<br>Correlation with previous year | | | 14.8%<br>21.3%<br>42.0% |
| 22. Railroad density(km rail/land area) | Administrative data estimated by MBEI based on GAD township data | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.00<br>0.05<br>0.65 |
| 23. Road density, weighted by road type. | Administrative data from TDI | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.39<br>1.41<br>10.01 |
| 24. Share of households with a public or community electrical grid (%) | Administrative data from Myanmar Living Conditions Survey 2017 | Min<br>Median<br>Max<br>Correlation with previous year | | | 19.5%<br>43.1%<br>81.0% |

# 4.6. Transparency

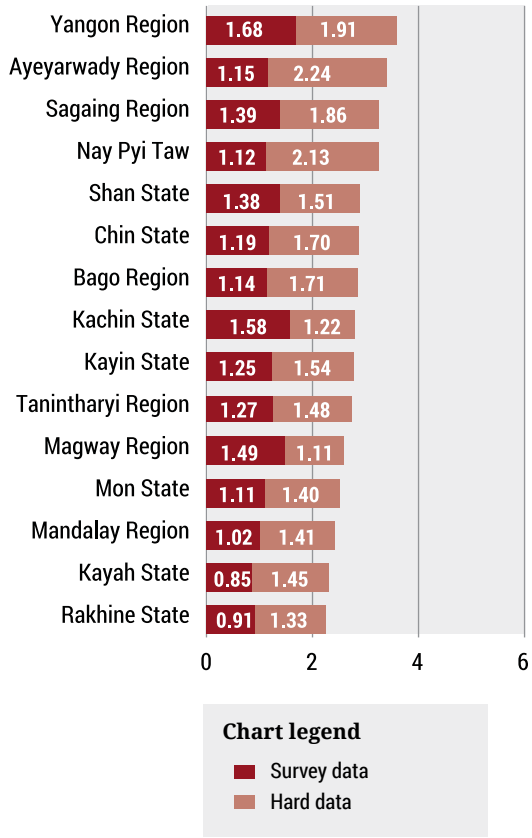
Businesses benefit from transparency and access to information. Businesses need access to local budgets, land-use and infrastructure plans, and legal documents required to run their businesses. Transparency has enormous benefits in reducing the risk and uncertainty for investors, allowing them to engage in long-term planning, predict legal and macroeconomic changes that may affect their business, and reduce adjustment costs and the need for self-insurance (Aizenmen and Marion 1993). Transparency has important direct and indirect effects on investors' decisions to expand their operations (Drabek and Payne 2002). Information on land-use and S/R planning may be legally available to all, but accessing that information can often be problematic. This can have a detrimental effect on the growth of the private sector, because firms cannot take advantage of S/R initiatives. When changes in the legal regime are not readily ascertainable, a firm may operate successfully for several years, only to find itself on the wrong side of the law simply out of ignorance. In most cases, such ignorance will cost the firm little, but there is always the potential for unscrupulous officials to exploit asymmetric information about the legal code to their advantage. Conversely, a firm may be eligible for savings, investment opportunities, or tax refunds but never take advantage of them because it is unaware of these benefits (Malesky et al. 2015).

Lack of transparency can also affect investment through its impact on predictability, or the ability of firms to forecast and thus build prospective developments into their business plans (Hollyer et al. 2011). Laws and regulations may or may not be implemented in a manner that allows for such planning. With transparency, firms can understand the decisions that are made and how they will be implemented, making them better able to determine the direction and risk of long-term strategies and make informed investment decisions (Gelos and Wei 2005). Transparency can also affect investment indirectly by preventing the inequitable use of resources. Consider state and regional planning. If only a few insiders know the location of future infrastructure projects and industrial zones, these insiders can profit by buying up the land ahead of time, while other investors must rely on broad conjectures based on small bits of information.

Transparency is an issue of interest to policymakers and has generated a fair amount of attention in Myanmar. For example, the Myanmar Centre for Responsible Business publishes annual reports on the transparency of local corporations. Our analysis focuses on an equally important issue: how transparent are local governments to SMEs.

**Transparency is still uniformly poor across Myanmar's S/Rs, as shown in figure 4.6.** For example, just 18.5% of firms in Magway Region, the best performing S/R on the measure, have access to plans for public investments such as airports and highway projects. In Kayah State, not even 1% of all firms have access to these plans. The lack of transparency in government documents is not confined to large-scale construction projects. Only 6.9% of firms in Rakhine, the

FIGURE 4.6
**State and Region Rankings on Transparency, Subindex 6**



median state, have access to the state budget. In Magway, the most transparent region on the measure, only 19.3% of firms have access to these documents. This is especially troubling, since these documents can be made easily available through online portals or physical libraries in township agencies. It is also possible that these documents are available, but firms just do not know about it. Making sure firms know that information is already available is also a form of transparency that policymakers must address. This is critically important, as unequal information breeds unequal access to services. For instance, The Asia Foundation's Covid-19 report found that 67% of business respondents were unaware of government support services that might have helped them continue operations and maintain employment levels during the pandemic (Asia Foundation 2020b).

**Fieldwork by our research team confirms the general lack of transparency in other dimensions relevant to firms.** For example, the relevant documents needed at DALMS are seldom readily provided. On average, only 22% of relevant DALMS documents can be obtained in Mon, the median S/R. This suggests that readily available examples of relevant documents are practically nonexistent in the majority of township DALMS offices. An alternative way of getting information would be to go online. All S/Rs except for Rakhine have working business information websites, yet most S/Rs post very little information on their official websites. Our research team scored each S/R on the transparency of their websites; the highest score was 15 out of 55. Most S/Rs did poorly. Only three—Yangon, Chin, and Bago—scored above 10. There is a silver lining. Policymakers could improve scores substantially by making relevant documents available online and making sure firms were informed.

### Core indicators

The *transparency subindex* contains fourteen Core Indicators, collected in the 2018 and 2020 MBEIs.

**1. Accessibility of state or region's budget (%)**

**2. Accessibility of Union laws (%)**

**3. Accessibility of implementing documents and regulations of Union ministries (%)**

**4. Accessibility of state/region laws and regulations (%)**

**5. Accessibility of new infrastructure plans (%)**

**6. Accessibility of public investment plans such as hydropower projects, airports, and highways (%)**

**7. Accessibility of land-use allocation plans and maps (%)**

**8. Accessibility of planning documents for the development of state/region industries and sectors (%)**

**9. Accessibility of forms for completing regulatory procedures (%)**

These nine indicators each measure the proportion of firms in each S/R that say it is easy to obtain some kind of local document or information. The nine indicators include S/R budgets, township budgets, Union laws and regulations, and public investment plans. Access to these planning and legal documents is a direct measure of the state's transparency—that is, the willingness and ability to disclose and disseminate public information. The more a state is willing to grant access to documents, the more transparent it is. A government's transparency may benefit firms because access to state documents means that firms are better able to plan their long-term investments, reducing their downstream risk (Broz 2002, Gelos and Wei 2005, Knight 2012, Stasavage 2003). Transparency of documentation is explicitly required under a number of legal provisions. For example, the Union Budget Law requires that both federal and S/R governments publish budgets annually in a way that is easily accessible to citizens.

**10. Predictability of changes in laws and regulations at the Union level (%)**

**11. Predictability of changes in regulations at the S/R level (%)**

**12. Predictability of implementation rules at the S/R level (%)**

These three indicators measure the predictability of changes to laws and regulations and their implementation at various levels of government. This predictability is a useful proxy for transparency. In more-transparent states, not only are state documents read-

ily provided, but government plans are clear to constituents. Such clarity is beneficial to firms, because they can plan their operations to conform to the expected new laws and regulations. If changes to laws and regulations are unpredictable, firms may unexpectedly find themselves in violation and have to expend time and resources adjusting. This process of adjustment is usually costlier than timely advance planning (Gelos and Wei 2005, Hollyer et al. 2011, Malesky et al. 2015).

### 13. Share of GAD documents with information publicly posted (%)

### 14. Share of DAO documents with information publicly posted (%)

These two indicators measure, for each township, the share of a basket of GAD or DAO services or protocols on which information is available publicly or upon request. For example, the preselected services and protocols for the GAD include guideline booklets and operating hours. For the DAO they include examples of licenses and sample letters. The S/R's score is the average score for all of the surveyed townships within that state or region. The indicator is a percentage value that goes from 0 to 1, with 1 corresponding to extensive information provided and 0 corresponding to no information provided. The extent to which information is publicly posted speaks directly to the transparency of these government offices.

## New indicators added in the 2020 MBEI

Five new indicators were added to the transparency subindex in 2020 to better capture firms' experience with business entry procedures. They are as follows.

### 15. Share of DAO documents with examples provided (%)

### 16. Share of DALMS documents with examples provided (%)

These two indicators measure, for each township, the share of a preselected list of DAO or DALMS forms and required documents (e.g., application forms, support letters from other government offices) for which examples were provided. The extent to which examples are provided speaks directly to the transparency of these government offices.

### 17. Share of DALMS documents with information publicly posted (%)

This observational indicator measures, for each township, the share of a preselected list of DALMS documents (e.g., Form 7) and procedures (e.g., changing a land title) for which information is available publicly or upon request. The S/R score is the average of all township scores within that state or region. This indicator is very similar to the indicators 13 and 14 above. The extent to which information is publicly posted speaks directly to the transparency of these government offices.

### 18. Ease of acquiring information on DAO schedule of fees (score of 1–3)

This observational indicator measures the ease with which DAO fee schedules can be ascertained. The S/R score is the average score of all surveyed townships in the S/R. The more easily available this information is, the higher the score on this indicator; the less easily available, the lower the score. This is a straightforward indicator of transparency. It should be easy for the DAO to make public its schedule of fees. Without that information, firm owners may have to return to the DAO office more than once simply to pay for required documents, wasting time and money. Businesses at the margin could suffer substantial losses with even small delays. And lack of information on fee schedules creates opportunities for malfeasance and informal charges by local officials.

### 19. Transparency survey score for government websites (possible range: 0 to 15)

This indicator measures the transparency and usability of township and S/R websites. It is scored from 0—not at all transparent, useful, or informative—to 15—very transparent, useful, and informative. The scores were determined by assessing websites on a number of criteria. These include whether particular information is available, such as township-level GAD profiles or S/R economic reports, and subjective assessments of characteristics of the website like user-friendliness. The assessment also included a measurement of website traffic to determine how much the website was being used. The score for each township combined an assessment of the S/R website (with a maximum score of 44) and an assessment of the township DAO, GAD, or planning office website or Facebook page (maximum 11 points). The maximum possible score was 55 points,

but actual scores ranged from 0 to 15. Informative and easy-to-use websites can be very beneficial for transparency, because businesspeople can potentially learn everything they need to know about licensing, registration, or the state of the economy without leaving their offices. This saves the time and expense of in-person visits and reduces the costs of searching for information.

TABLE 4.6

## Comparison of Transparency Subindex, 2018–2020

| Core Indicators Collected in the 2018 and 2020 MBEIs | | | | | |
|---|---|---|---|---|---|
| Indicator | Source | S/R Measure | Dataset | | |
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| Transparency subindex | (Survey*.6)+ (Hard*.4) | Min<br>Median<br>Max<br>Correlation with previous year | 1.06<br>1.44<br>2.13 | 1.70<br>2.12<br>3.37<br>0.21 | 2.24<br>2.80<br>3.58<br>0.73 |
| Survey indicators | Scaled survey data | Min<br>Median<br>Max<br>Correlation with previous year | 0.66<br>0.94<br>1.53 | 0.75<br>1.34<br>1.89<br>0.01 | 0.85<br>1.19<br>1.68<br>0.84 |
| Hard indicators | Scaled hard data | Min<br>Median<br>Max<br>Correlation with previous year | 0.40<br>0.40<br>1.17 | 0.66<br>0.86<br>2.02<br>-0.17 | 1.11<br>1.51<br>2.24<br>0.65 |
| 1. Accessibility of state or region's budget (%) | MBEI survey question: T_Q112_1 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>3.1%<br>9.3% | 0.0%<br>4.4%<br>27.1%<br>0.05 | 1.8%<br>6.9%<br>19.3%<br>0.80 |
| 2. Accessibility of Union laws (%) | MBEI survey question: T_Q112_2 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>5.1%<br>32.3% | 0.0%<br>20.4%<br>44.9%<br>0.01 | 5.0%<br>18.8%<br>39.2%<br>0.83 |
| 3. Accessibility of implementing documents and regulations of Union ministries (%) | MBEI survey question: T_Q112_3 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>1.4%<br>6.8% | 0.0%<br>8.1%<br>26.7%<br>0.00 | 1.6%<br>9.1%<br>18.3%<br>0.66 |
| 4. Accessibility of state/region laws and regulations (%) | MBEI survey question: T_Q112_4 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>0.6%<br>5.5% | 0.0%<br>19.0%<br>41.7%<br>0.27 | 5.1%<br>14.5%<br>33.4%<br>0.89 |
| 5. Accessibility of new infrastructure plans (%) | MBEI survey question: T_Q112_5 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>0.4%<br>8.6% | 0.0%<br>14.1%<br>28.7%<br>0.03 | 5.5%<br>11.0%<br>20.2%<br>0.60 |

| | | | | | |
|---|---|---|---|---|---|
| 6. Accessibility of public investment plans such as hydropower projects, airports, and highways (%) | MBEI survey question: T_Q112_6 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>3.2%<br>9.0% | 0.0%<br>8.6%<br>24.6%<br>-0.42 | 0.7%<br>7.5%<br>18.5%<br>0.62 |
| 7. Accessibility of land-use allocation plans and maps (%) | MBEI survey question: T_Q112_7 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>6.9%<br>13.6% | 0.0%<br>12.0%<br>26.5%<br>-0.04 | 4.5%<br>10.6%<br>19.8%<br>0.74 |
| 8. Accessibility of planning documents for the development of state/region industries and sectors (%) | MBEI survey question: T_Q112_8 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>1.3%<br>8.3% | 0.0%<br>10.1%<br>19.5%<br>0.07 | 2.7%<br>8.3%<br>16.1%<br>0.55 |
| 9. Accessibility of forms for completing regulatory procedures (%) | MBEI survey question: T_Q112_9 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>14.5%<br>46.1% | 6.7%<br>29.9%<br>51.6%<br>0.21 | 6.2%<br>20.4%<br>51.5%<br>0.89 |
| 10. Predictability of changes in laws and regulations at the Union level (%) | MBEI survey question: T_Q113_1 | Min<br>Median<br>Max<br>Correlation with previous year | 1.9%<br>6.2%<br>18.0% | 0.0%<br>7.3%<br>20.8%<br>0.06 | 1.5%<br>5.5%<br>32.2%<br>0.71 |
| 11. Predictability of changes in regulations at the S/R level (%) | MBEI survey question: T_Q113_2 | Min<br>Median<br>Max<br>Correlation with previous year | 2.6%<br>11.3%<br>30.1% | 0.0%<br>6.9%<br>18.8%<br>0.30 | 1.0%<br>6.3%<br>31.2%<br>0.64 |
| 12. Predictability of implementation rules at the S/R level (%) | MBEI survey question: T_Q113_3 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>11.2%<br>30.1% | 0.0%<br>7.3%<br>25.9%<br>-0.11 | 3.1%<br>6.5%<br>31.6%<br>0.70 |
| 13. Share of GAD documents with information publicly posted(%) | Observational data question: GAD D1 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>0.0%<br>17.4% | 6.7%<br>12.0%<br>56%<br>-0.14 | 6.2%<br>13.4%<br>51.30%<br>0.98 |
| 14. Share of DAO documents with information publicly posted(%) | Observational data question: DAO D1 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>0.0%<br>21.6% | 6.7%<br>9.3%<br>38.3%<br>-0.06 | 6.2%<br>8.9%<br>35.6%<br>0.98 |

| New Indicators Added to the 2020 MBEI | | | | | |
|---|---|---|---|---|---|
| Indicator | Source | S/R Measure | Dataset | | |
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| 15. Share of DAO documents with examples provided | Observational data question: DAO A4 | Min<br>Median<br>Max<br>Correlation with previous year | | | 2.6%<br>21.9%<br>79.9% |
| 16. Share of DALMS documents with examples provided | Observational data question: DALMS A4 | Min<br>Median<br>Max<br>Correlation with previous year | | | 12.1%<br>21.6%<br>87.5% |
| 17. Share of DALMS documents with information publicly posted | Observational data question: DALMS D1 | Min<br>Median<br>Max<br>Correlation with previous year | | | 13.6%<br>46.3%<br>86.5% |
| 18. Ease of acquiring information on DAO schedule of fees (score of 1–3) | Observational data question: DAO C1, C2, C3 | Min<br>Median<br>Max<br>Correlation with previous year | | | 1.10<br>2.01<br>2.99 |
| 19. Transparency survey score for government websites (possible range: 0 to 15) | Observational datav | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.06<br>4.48<br>13.4 |

# 4.7. Favoritism in policy

**Businesses benefit when government ensures a level playing field and a fair competitive environment.** Bias in favor of large or politically connected businesses undermines the benefits for consumers of meritocratic economic competition. Competition lowers the price of goods and services, benefiting consumers. On the other hand, competition policy bias introduces favoritism towards certain firms for nonmarket reasons such as personal connections. Favored firms may therefore be less efficient, produce inferior goods, and set higher prices than competitive businesses. This hurts consumers and is an impediment to growth and poverty reduction. Governments should ensure that there is no bias towards large or connected firms. This means, for example, ensuring that government contracts go to the firm with the best proposal, not the firm that has contacts in the government. This also means strictly implementing antitrust laws such as Myanmar's 2015 Competition Law.

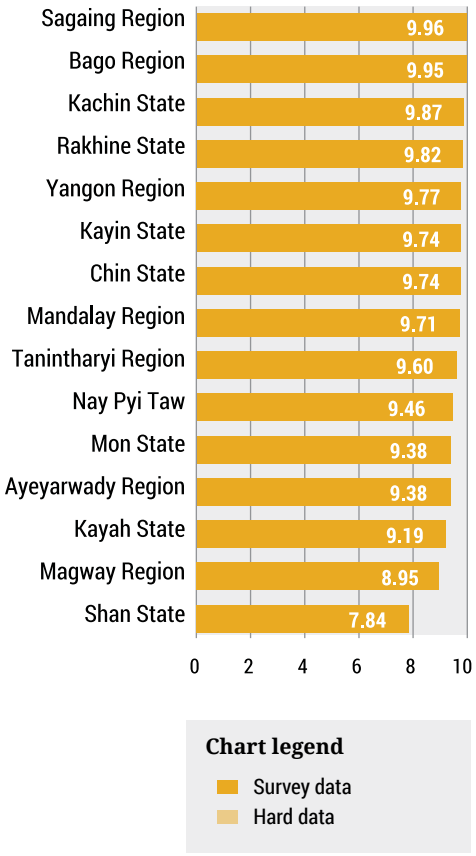
**When left unchecked, favoritism by government bureaucrats distorts markets, hurts productive firms to the benefit of less productive firms, and ultimately hurts Myanmar's economy.** International organizations are keenly aware of the importance of a level playing field for business and have quantified competitive distortions in many countries. Myanmar does especially poorly on these measures. For example, the country ranks 176 out of 190 in protecting minority investors, according to the World Bank's *Doing Business 2020* report. Our analysis focuses on Myanmar's states and regions, examining which do

better and which do worse. We also consider various aspects of competition policy bias to determine the dimensions in which favoritism takes place. In Myanmar, the key concerns are the special benefits that companies with political connections to local policymakers receive in terms of access to land and government procurement benefits. Many of these businesses, often conglomerates, are headed by former officials and military leaders. According to some analysts, they have been able to use their connections to capture policymaking and entrench themselves in oligopolistic economic positions (Ford et al. 2016).

**The 2020 MBEI reveals that businesses believe favoritism towards connected firms is not widespread, although some variation exists depending on the type of bias.** Note that for this index we only use survey indicators, since there are no appropriate hard indicators available. In the median S/R, 91% of businesses believe that local authorities exhibit no bias in favor of businesses with connections. In the median S/R, only about 4% of the firms claim that favoritism exists in loan and land access. Shan State exhibits the highest favoritism in loans and land access with 27% of firms answering bias favors connected firms.

**Sagaing and Bago have the highest score in this subindex, as seen in figure 4.7.** They score 9.96 and 9.95 respectively, while Shan State scores last with only 7.84. Sagaing displays consistently good performance in all measures.

FIGURE 4.7
**State and Region Rankings on Favoritism, Subindex 7**




## Core indicators collected in the 2018 and 2020 MBEIs

The *favoritism subindex* contains seven core indicators that were measured both in 2018 and 2020.

### 1. No Favoritism by local authorities towards businesses with strong connections (%)

This indicator measures the share of firms in each S/R that disagree with the claim that the favoritism of local authorities toward well-connected businesses affects the firm's business operations. This would be a clear indicator of anticompetitive bias in favor big business. If local authorities favor a particular rice mill, for example, they may inadvertently worsen the business environment for other operators through difficulties in administration and access to land and capital. If favoritism is extremely severe, it may drive healthy businesses out of the market. This can result in limited competition and consequently goods of higher price and lower quality, ultimately hurting not just consumers, but other businesses—in this example, candy producers who rely on the rice mill for intermediate products (Stigler 1957, Hellman et al. 1999).

### 2. Favoritism in land access (%)

### 3. Favoritism in loan access (%)

### 4. Favoritism in mineral exploitation licenses (%)

Favoritism toward well-connected firms in terms of specialized inputs—land access and access to loans—may have substantial negative effects on competition. The favored firms for land or loan access are often selected not on merit, but because the firm owners are connected to local politicians (Claessens et al.

2008). Since merit is not the ultimate selection criteriaon, the products of politically connected, favored firms may be inferior, hurting consumers. There are also indirect effects on the market structure of industries where certain firms are favored. A well-connected firm may end up controlling the market, leading to monopolies and lower quality, more expensive goods. Restraints in business competition are specifically described and outlawed by the Competition Law (2015).

### 5. Favoritism in simpler administrative procedures (%)

Privileges and favoritism that lead to less-exacting administrative procedures are not only a direct measure of bias but also hurt firms that are not similarly privileged. Firms that are not connected, and hence must face more cumbersome and time-consuming administrative procedures, are at a disadvantage. Their time and effort, and potentially their resources, are disproportionately spent on administrative processes, leading potentially to lower profits and creating an uneven playing field where favored firms can spend more time on income-generating activities (Fisman 2001, Li et al. 2008).

### 6. Favoritism in state agency contracts (%)

Privileges and favoritism in procurement are a direct measure of competition policy bias and directly affect the market structure of an industry (Hellman et al. 1999, Stigler 1957). If more-favored firms more easily obtain state contracts, then these contracts may be awarded to less efficient and less innovative firms at the expense of unconnected yet more efficient and profitable firms. This affects the overall quality of an industry and ultimately affects consumer welfare.

### 7. Favoritism in information access (%)

If more-connected and privileged firms get preferred access to information, such firms may gain an unfair market advantage, even though they are not necessarily the most efficient and profitable firms. This may result in lower quality output in the market and the perpetuation of inefficient, rent-seeking firms at the expense of more innovative, scalable ones (Fisman 2001, Xu et al. 2013).

## New indicators added in the 2020 MBEI

One new indicator was added to the favoritism subindex in 2020 to better capture firms' experience with favoritism.

### 8. Other privileges and favoritism (%)

This indicator measures the share of firms that believe that well-connected businesses are favored or privileged in ways other than those mentioned above. The higher the share of firms that agree with this statement, the lower the subindex score. This indicator is included as a catch-all for types of privileges that may be unique to certain businesses and are not included in the above categories. The conceptual interpretation is the same. First, this implies a misallocation of resources away from potentially productive firms towards rent-seeking ones. Second, firms' time and effort are diverted from productive activity and directed toward overcoming the bias against them. Third, this hurts consumers, since they are denied the output of firms that might otherwise produce better products, and instead must purchase from connected but lower-quality firms.

TABLE 4.7

## Comparison of Favoritism Subindex, 2018–2020

| Core Indicators Collected in the 2018 and 2020 MBEIs | | | | | |
|---|---|---|---|---|---|
| Indicator | Source | S/R Measure | Dataset | | |
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| Favoritism subindex | (Survey*.6)+ (Hard*.4) | Min<br>Median<br>Max<br>Correlation with previous year | 7.88<br>9.14<br>9.69 | 8.44<br>9.50<br>9.99<br>-0.16 | 7.84<br>9.71<br>9.96<br>0.82 |
| Survey indicators | Scaled survey data | Min<br>Median<br>Max<br>Correlation with previous year | 7.88<br>9.14<br>9.69 | 8.44<br>9.50<br>9.99<br>-0.16 | 7.84<br>9.71<br>9.96<br>0.82 |
| 1. No Favoritism by local authorities towards businesses with strong connections (%) | MBEI survey question: Q142 | Min<br>Median<br>Max<br>Correlation with previous year | 45.4%<br>74.4%<br>91.4% | 75.3%<br>89.4%<br>99.2%<br>-0.17 | 54.3%<br>90.6%<br>98.2%<br>0.77 |
| 2. Favoritism in land access (%) | MBEI survey question: T_Q143_1 | Min<br>Median<br>Max<br>Correlation with previous year | 3.0%<br>16.9%<br>33.9% | 0.0%<br>5.5%<br>18.7%<br>0.12 | 0.3%<br>4.1%<br>27.3%<br>0.62 |
| 3. Favoritism in loan access (%) | MBEI survey question: T_Q143_2 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>10.5%<br>27.7% | 0.0%<br>8.3%<br>17.6%<br>-0.60 | 0.4%<br>3.9%<br>27.4%<br>0.72 |
| 4. Favoritism in mineral exploitation license (%) | MBEI survey question: T_Q143_3 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>1.4%<br>9.0% | 0.0%<br>0.5%<br>14.1%<br>-0.05 | 0.0%<br>1.1%<br>25.0%<br>0.84 |
| 5. Favoritism in simpler administrative procedures (%) | MBEI survey question: T_Q143_4 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>4.2%<br>21.5% | 0.0%<br>5.5%<br>19.2%<br>-0.11 | 0.3%<br>3.3%<br>28.4%<br>0.87 |
| 6. Favoritism in state agency contracts (%) | MBEI survey question: T_Q143_5 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>2.6%<br>29.5% | 0.0%<br>0.5%<br>15.9%<br>-0.09 | 0.0%<br>1.6%<br>26.7%<br>0.85 |
| 7. Favoritism in information access (%) | MBEI survey question: T_Q143_6 | Min<br>Median<br>Max<br>Correlation with previous year | 0.4%<br>3.4%<br>13.3% | 0.0%<br>3.7%<br>15.8%<br>0.05 | 0.0%<br>2.5%<br>26.5%<br>0.84 |
| **New Indicators Added in the 2020 MBEI** | | | | | |
| Indicator | Source | S/R Measure | Dataset | | |
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| 8. Other privileges and favoritism (%) | MBEI Survey Ques-tionsurvey question: T_Q143_7 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.0%<br>0.0%<br>11.1% |

# 4.8. Environmental Compliance

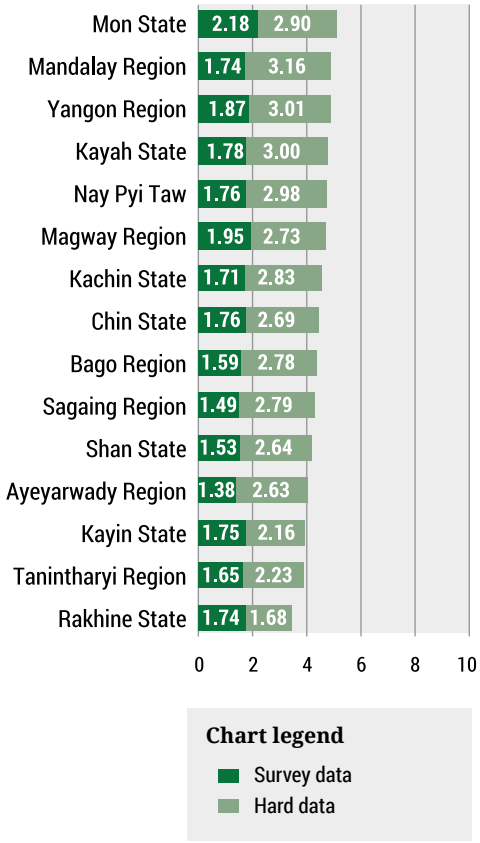
**Businesses benefit when environmental quality is suitable for their commercial activities.** This is especially true for businesses that rely on a clean, pollution-free environment for their products and services, such as firms in agriculture, food processing, and tourism. Complying with environmental regulations is essential for both businesses and citizens. Poor environmental quality affects the health of a firm's workers, leading to lower productivity at work. Some businesses are likely to enact environmentally damaging policies if left to their own devices. Local governments must therefore ensure that firms comply with the regulatory conditions established in the law.

**Myanmar faces significant challenges relating to environmental compliance.** An Asian Development Bank Report notes that "the lack of a comprehensive and coordinated environmental framework, enabling institutional and legal structures, expertise, and greater capacity for natural resource management and funding" are among the country's outstanding challenges (Raitzer et al. 2015).

**Firms believe that pollution does not affect their business, yet also note that the current environmental situation is mediocre and that state support for environmental compliance is meager.** Only 6% of all firms in the country (5% in the median S/R) believe that pollution has a significantly negative effect on the firm's business prospects. However, they are not as optimistic about overall environmental quality. In the median S/R, only 57% of all firms believe that environmental quality is good. Tanintharyi performs worst on this indicator. Over 70% of all firms in that region believe that environmental quality is not good. Firms also believe that state support for green production and clean resources is lacking. In not a single S/R do more than 50% of businesses believe that the government performs inspections to protect the environment. In none of the S/Rs do even 30% of businesses believe that the government supports water-saving activities.

**Mon State scores the highest on this subindex, while Rakhine scores lowest.** Rakhine State scores poorly on all measured indicators. It has only 0.17 garbage trucks per 10,000 people, whereas the median S/R has 0.41. Garbage trucks are proxies for the government's capacity to manage waste and pollution within its borders. Only 11.5% of Rakhine respondents believe that local authorities take timely action to deal with pollution, the lowest percentage out of all the S/Rs. On the other end of the scale is Mon State, where 94.4% of firms believe that local authorities take timely action to deal with pollution. Mon State also tops all S/Rs, with 30.4% of firms claiming that the state provides sufficient support for water-pollution reduction (although even this number is not high by absolute standards).

FIGURE 4.8
**State and Region Rankings on Environmental Compliance, Subindex 8**




## Core indicators collected in the 2018 and 2020 MBEIs

The *environmental quality subindex* contains seven core indicators that were measured in both 2018 and 2020.

### 1. Pollution has a slight or no negative effect on the firm's business prospects (%)

This indicator measures the share of firms in each S/R that say that pollution has only slight or no negative effect on the firm's business. Polluted environments can affect businesses in many ways, such as making laborers sick or less productive, putting off potential investors, and affecting various inputs to production such as labor and capital (Klassen and McLaughlin 1996).

### 2. Overall environmental quality is good (%)

This indicator measures the share of firms in each S/R that believe that the state has good overall environmental quality. Good environmental quality matters for society broadly, and it has implications for firm profits (Dasgupta et al. 2002). Poor environmental quality reduces citizens' quality of life and can damage their health. Firms may contribute to pollution if they are not regulated by the government. Environmental quality is explicitly addressed in Myanmar's EIA Procedures (2015) and Environmental Conservation Law (2012).

### 3. Local authorities take timely action to deal with pollution (%)

This variable measures the share of firms in each S/R that say the authorities took timely action in instances where pollution was present. This indicator is also a measure of the state's capacity to enforce regulations. This capacity has several implications for firms. For example, the state's ability to regulate a firm's excesses prevents abusive firms from employing strategies that damage other firms and the overall productivity and competitiveness of the market (Hawkins 1984). A state's ability to regulate pollution positively affects firm inputs such as labor productivity and makes the state itself more attractive to investors. The Environmental Conservation Law (2012), Chapter VII and Chapter IX, mandates the creation of an environmental monitoring system for exactly this purpose.

### 4. State support for saving water (%)

### 5. State support for waste recycling (%)

These two indicators measure the share of firms in each S/R that say the state provides support such as workforce training, informational campaigns, or tax policies for water saving and waste recycling. This measure provides a helpful indicator of the state's underlying capacity to regulate firms. The benefits of doing so have been mentioned above. Furthermore, water saving ultimately lowers firms' costs and increases their profits (Winter and May 2001). Finally, water saving and waste recycling improve overall environmental quality, which benefits the citizens of the state.

### 6. Purpose of government inspections is to protect society and the environment (% agree)

This indicator measures firms' beliefs about the sincerity of state regulation and the professionalism of inspectors by asking what they feel the main purpose of inspections is. As we have noted, many firms believe inspections are toothless or simply an excuse to extract bribes. This measure records whether firms believe local officials truly perform inspections to preserve the township environment.

### 7. Households with improved toilet sanitation (%)

This indicator measures the share of the population in each S/R with improved toilet sanitation. Improved sanitation speaks directly to the degree of pollution in the environment. The greater the share of the population with improved toilet sanitation, the greater the S/R's environmental compliance score.

## New indicators added in the 2020 MBEI

Five new indicators were added to the environmental quality subindex in 2020 to better capture firms' experience with environmental compliance. These include:

### 8. State support for reducing air pollution (%)

### 9. State support for reducing water pollution (%)

### 10. State support for saving electricity (%)

These three indicators measure the share of firms in each S/R that say the state provided additional support and encouragement for reducing air and water pollution and saving electricity. We defined support as "training the workforce, informational campaigns, or tax policies, for example, that encourage a firm to engage in more of the following activities." This measure provides a helpful indicator of the state's underlying capacity to regulate firms. Air and water pollution from a given firm negatively affects other firms, as when waste

from a plant travels downstream to damage fisheries, or when this polluted river smells bad, reducing local tourism. Reducing water pollution from one firm reduces these negative externalities for other firms. Saving electricity also benefits firms—directly, through lowered costs, and indirectly, by ensuring that electricity supplies are not overburdened.

### 11. Number of garbage trucks per 10,000 people (#)

This administrative indicator measures the number of garbage trucks per 10,000 people in each township. We take the average score of townships in the S/R to create the index. More trucks are better for environmental compliance. Fewer trucks result in a lower score on environmental compliance. The logic behind this indicator is simple. Pollution, as noted above, affects firm performance by damaging workers' health and putting off investors, and pollution from one firm affects other firms in the area. Garbage trucks reduce pollution by cleaning up garbage. More generally, this indicator measures the capacity of the local government to reduce a particular type of pollution.

### 12. Road transport carbon intensity of the economy

This administrative indicator provides a direct measure of environmental compliance in each township. Again, we take the average of all townships in the S/R to generate the index. Transport carbon intensity is an estimate of carbon dioxide emissions per GDP—kilograms of CO2 per thousand kyats. It is estimated based on township diesel and petroleum sales, which are converted to carbon dioxide emissions using the 2006 IPCC guidelines (Gómez et al., 2006). A township that has a well-planned and efficient "green" transport system including public transport would be expected to have lower carbon intensity than other townships. A township with energy-efficient vehicles would also have lower carbon intensity than a township with old vehicles. Higher levels of carbon intensity mean more global greenhouse gas emissions relative to the standard of living.

TABLE 4.8:
## Comparison of Environmental Compliance Subindex, 2018–2020

| Core Indicators Collected in the 2018 and 2020 MBEIs | | | | | |
|---|---|---|---|---|---|
| Indicator | Source | S/R Measure | Dataset | | |
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| Environmental compliance subindex | (Survey*.6)+ (Hard*.4) | Min<br>Median<br>Max<br>Correlation with previous year | 3.33<br>4.74<br>5.99 | 3.07<br>5.39<br>6.22<br>0.61 | 3.43<br>4.44<br>5.09<br>0.88 |
| Survey indicators | Scaled survey data | Min<br>Median<br>Max<br>Correlation with previous year | 1.50<br>1.73<br>2.28 | 1.68<br>1.97<br>2.60<br>0.13 | 1.38<br>1.74<br>2.18<br>0.65 |
| Hard indicators | Scaled hard data | Min<br>Median<br>Max<br>Correlation with previous year | 1.80<br>2.97<br>3.79 | 1.22<br>3.52<br>3.88<br>0.67 | 1.68<br>2.78<br>3.16<br>0.95 |
| 1. Pollution has a slight or no negative effect on the firm's business prospects (%) | MBEI survey question: Q116 | Min<br>Median<br>Max<br>Correlation with previous year | 68.2%<br>83.8%<br>96.0% | 78.1%<br>93.0%<br>100.0%<br>0.13 | 88.0%<br>95.3%<br>98.8%<br>0.75 |

| | | | | | |
|---|---|---|---|---|---|
| 2. Overall environmental quality is good (%) | MBEI survey question: Q114 | Min<br>Median<br>Max<br>Correlation with previous year | 19.1%<br>39.3%<br>81.1% | 24.9%<br>52.0%<br>76.1%<br>0.66 | 29.9%<br>56.7%<br>76.5%<br>0.84 |
| 3. Local authorities take timely action to deal with pollution (%) | MBEI survey question: Q118 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>42.1%<br>100.0% | 0.0%<br>51.9%<br>100.0%<br>0.07 | 11.5%<br>49.3%<br>94.8%<br>0.78 |
| 4. State support for saving water (%) | MBEI survey question: Q120_1 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>10.2%<br>37.0% | 1.6%<br>9.8%<br>49.1%<br>0.24 | 4.8%<br>11.6%<br>29.7%<br>0.81 |
| 5. State support for waste recycling (%) | MBEI survey question: Q120_2 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>6.9%<br>24.4% | 0.8%<br>17.7%<br>61.7%<br>0.18 | 5.6%<br>15.0%<br>57.9%<br>0.85 |
| 6. Purpose of government inspections is to protect society and the environment (%, agree) | MBEI survey question: Q77_3 | Min<br>Median<br>Max<br>Correlation with previous year | 14.8%<br>25.7%<br>44.9% | 12.0%<br>22.1%<br>47.3%<br>-0.15 | 11.3%<br>28.5%<br>46.7%<br>0.69 |
| 7. Households with improved toilet sanitation (%) | Administrative data: Census 2014 and Myanmar Living Conditions Survey 2017 | Min<br>Median<br>Max<br>Correlation with previous year | 61.8%<br>83.6%<br>96.3% | 52.4%<br>91.7%<br>98.0%<br>0.64 | 52.4%<br>91.7%<br>98.0%<br>1.00 |

**New Indicators Added in the 2020 MBEI**

| Indicator | Source | S/R Measure | Dataset | | |
|---|---|---|---|---|---|
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| 8. State support for reducing air pollution (%) | MBEI survey question: Q120_3 | Min<br>Median<br>Max<br>Correlation with previous year | | | 1.2%<br>8.2%<br>25.2% |
| 9. State support for reducing water pollution (%) | MBEI survey question: Q120_4 | Min<br>Median<br>Max<br>Correlation with previous year | | | 2.5%<br>10.4%<br>30.4% |
| 10. State support for saving electricity (%) | MBEI survey question: Q120_5 | Min<br>Median<br>Max<br>Correlation with previous year | | | 4.4%<br>15.1%<br>44.8% |
| 11. Number of garbage trucks per 10,000 people (#) | Administrative data based on GAD township data | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.16<br>0.41<br>1.21 |
| 12. Road transport carbon intensity of the economy | Administrative data estimated by MBEI based on GAD township data | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.02<br>0.35<br>1.4 |

# 4.9. Labor Recruitment

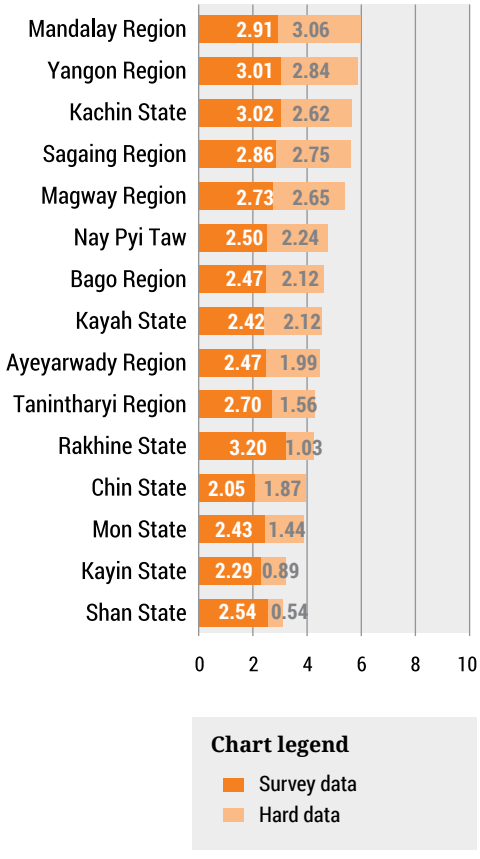
Businesses benefit from labor policies that provide for skills training and ease of recruitment. Having access to a skilled labor force can affect the cost of doing business and the quality of the firm's final product. Labor policies ultimately affect the quality of human capital of a firm; the higher the quality of workers, the more productive a firm will be. Mismatches in the labor market affect both workers and firm—workers end up in jobs that are not suitable for them, preventing them from maximizing their wages, and firms are less productive and have to spend more on training. Reasonable and efficient labor policies are therefore an important component of a healthy business environment. In their paper on Latin America, Acemoglu and Dell (2010) further find that about half of the within-country variation in GDP per capita is accounted for by education. They tie these income benefits to total factor productivity (TFP) growth among businesses.

**Competitive labor policies are an integral part of the functioning of an economy.** Ease of recruitment of workers and low costs of labor free up firms to engage in other profit-generating activities. A well-educated labor force further improves firm productivity. Myanmar is taking labor reforms seriously—for example, with the introduction of a minimum wage law (World Bank 2018). Our analysis below allows us to disaggregate which states and regions are doing best in terms of various labor policies along these lines. Labor recruitment is also among the most important subindices in the MBEI.

Myanmar did not formally and fully commit to a transition from central planning to a market economy until 2011. Yet, today it is among the world's fastest-growing economies, increasingly plugged into global supply chains in a variety of labor-intensive industries. However, Myanmar currently lacks the absorptive capacity, the requiste human capital and insfrastructure to make best use of the new investiment and to make sure global integration raises all boats (Keller 1996, Durham 2004). Domestic companies have trouble attracting the types of labor skills they need to produce goods and services that are attractive to foreign investors in the country. Workers with technical and managerial skills are increasingly hard to find.

**Mandalay Region scores the best on labor recruitment, while Shan State scores the worst.** A significant portion of this difference is due to the quality of human capital. Mandalay has the highest high school enrollment rate, at 59%, while Shan scores near the bottom, at 29%. There are also substantial differences within specific indicators. For example, successful job placements per 10,000 people by labor exchange offices, a measure of how well the government is matching job seekers with private-sector jobs, range from a low of five in Nay Pyi Taw to a high of 373 in Yangon. The amount of private-sector economic activity plays a part in these differences, but the efficiency and competence of the labor exchange offices doubtless matter as well. There are also large differences in firm perceptions of the quality of local labor. At the low end, only 11.6% of businesses in Chin believe that local

FIGURE 4.9
**State and Region Rankings on Labor Recruitment, Subindex 9**



labor is high quality. At the high end, 54.5% of firms in Kachin believe that local labor is high quality. It is clear that large differences in labor quality across the states and regions lead to differences in the ease of labor recruitment.

**It is difficult for businesses to recruit qualified workers, although there are differences depending on the type of employee.** For example, it is quite difficult to recruit technically capable employees. Even in Magway Region, the highest-performing state, only 47.2% of firms say that recruiting technicians is easy. In Mandalay, the median state, only 25.1% of firms say that recruiting technicians is easy. This further implies that in half of the S/Rs more than three-fourths of firms have difficulties recruiting technicians. Perhaps surprisingly, it seems easier on average to recruit for higher-skill jobs. Some 46.7% of firms in the median S/R find it easy to recruit accountants, whereas this number is 44.8% for supervisors. Note that these numbers, although better than those for recruiting technicians, still imply major difficulties in recruitment. A potential explanation may lie in the low levels of education in the population. While primary school enrollment is 94.9% in the median S/R, this number drops to just 41% high school enrollment in the median S/R.

## Core indicators collected in the 2018 and 2020 MBEIs

The *labor recruitment subindex* contains seven core indicators that were measured in both 2018 and 2020.

### 1. Ease of recruiting rank-and-file manual workers (%)

### 2. Ease of recruiting technicians (%)

### 3. Ease of recruiting accountants (%)

### 4. Ease of recruiting supervisors (%)

### 5. Ease of recruiting managers (%)

These five indicators show the percentage of firms in each S/R that say it is easy to recruit various types of employees: rank-and-file workers, technicians, accountants, supervisors, and managers. These measures have direct implications for firms and also speak to the underlying labor policies that the state has put in place. Difficulties in labor recruitment increase costs to the firm and decrease profits, and mismatches in the labor market between worker and firm lead to greater inefficiencies and lower profits for firms (Blanchflower et al. 1996, Ponte 2000). Difficult labor recruitment may imply that labor policies are creating market inefficiencies. For example, excessively stringent rules on hiring (quotas, age limits, strict terms on labor contracts) reduce the flexibility of firms to hire the best workers and hence further affect the firm's performance.

### 6. Primary school enrollment rate (%)

### 7. Middle school enrollment rate (%)[26]

These two indicators measure the share of the primary- and middle-school-aged populations in each S/R that are enrolled in primary and middle school, respectively. These indicators measure the quality of human capital in the state, to the extent that education is a proxy for human capital. The higher the percentage on both indicators, the better the state does in the labor recruitment subindex. These indicators treat education policy as a type of labor policy and measure the degree to which education policy leads to higher-quality human capital.

## New indicators added in the 2020 MBEI

Five new indicators were added to the labor recruitment subindex in 2020 to better capture firms' experience with labor recruitment. They are as follows.

### 8. Firm needs to train new employees (%)

This indicator measures the share of firms in each S/R that need to train new employees after hiring them. The greater the share of firms per S/R that must train employees, the lower the score on labor recruitment. The need to train employees is a proxy for the lack of sufficiently skilled workers. Ideally, a worker can come in and do their job at a satisfactory level. The need to spend extra time on training shows that new employees do not yet have enough skills to do their jobs. On-the-job training is a good thing; we are primarily concerned when the firm must spend on training as a substitute for poor general education. This can be addressed by better education and vocational training in the schools. A key issue faced by firms is that, after training, workers become attractive to other firms and are capable of leaving, creating a collective-action problem that requires government intervention to resolve.

### 9. Quality of local labor meets the firm's needs (%)

This indicator measures the share of firms in each S/R that say the quality of local labor meets the firm's needs. This is a straightforward measure of human capital and the ability of workers to perform the tasks that the firm requires. If workers are low quality or do not meet the firm's needs, then firms will need to spend time and money training these workers, taking resources from more productive activities. This also implies inefficiencies in the labor market, such that workers may end up being hired by firms where their skills are not a good fit. Government can alleviate this problem by using the labor exchange office to more efficiently match workers to jobs.

### 10. Number of days after hiring before employee can do the job (#)

This indicator measures, for each S/R, the average number of days after hiring before employees can satisfactorily perform their job. The more days it takes for an employee to be fit to work, the lower the score on this subindex. Low-skill employees drain the firm's resources, as the firm must expend substantial effort on training them. Furthermore, the quality of the output of these workers may not be very good, damaging the firm's reputation or forcing them to sell substandard products at lower prices. Like the previous measures, this also speaks to a misallocation problem, where workers are not hired by the firms where their skills are a good fit. The government can alleviate this problem through better use of the labor exchange office and through training programs specific to skills that are in high demand in the private sector.

### 11. High school enrollment rate (%)

This indicator measures the share of the high-school-age population in each S/R that is enrolled in high school. These indicators measure the quality of human capital in the state, to the extent that education is a proxy for human capital. The higher the percentage in this indicator, the better the state does in the labor recruitment subindex. This indicator treats education policy as a type of labor policy assuming that more education leads to higher-quality human capital.

### 12. Labor exchange office placements per 10,000 people (#)

This indicator measures the number of job placements in the private sector, per 10,000 people, by all the labor exchange offices in a township. The S/R score is the average of all township scores within the S/R. Labor exchange offices advertise job vacancies. Job seekers can register at the office, which is then meant to connect them with potential employers. These offices can also help resolve conflicts between employers and employees. This indicator thus measures directly the capacity of a government office to provide people with jobs, while also measuring indirectly (by assuming more placements implies a more competent labor exchange office) this office's capacity to settle disputes.

TABLE 4.9

## Comparison of Labor Recruitment Subindex, 2018–2020

| Core Indicators Collected in the 2018 and 2020 MBEIs | | | | | |
|---|---|---|---|---|---|
| Indicator | Source | S/R Measure | Dataset | | |
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| Labor recruitment subindex | (Survey*.6)+ (Hard*.4) | Min<br>Median<br>Max<br>Correlation with previous year | 4.29<br>5.22<br>6.13 | 5.62<br>6.23<br>7.16<br>0.36 | 3.07<br>4.54<br>5.97<br>0.66 |
| Survey indicators | Scaled survey data | Min<br>Median<br>Max<br>Correlation with previous year | 1.50<br>2.30<br>3.28 | 2.20<br>2.87<br>3.71<br>0.18 | 2.05<br>2.54<br>3.20<br>0.36 |
| Hard indicators | Scaled hard data | Min<br>Median<br>Max<br>Correlation with previous year | 2.18<br>2.92<br>3.43 | 2.80<br>3.58<br>3.97<br>0.59 | 0.54<br>2.12<br>3.06<br>0.98 |

| | | | | | |
|---|---|---|---|---|---|
| 1. Ease of recruiting rank-and-file manual workers (%) | MBEI survey question: _Q60_1 | Min<br>Median<br>Max<br>Correlation with previous year | 22.9%<br>37.4%<br>53.4% | 29.8%<br>43.0%<br>60.9%<br>0.51 | 29.6%<br>48.0%<br>55.3%<br>0.75 |
| 2. Ease of recruiting technicians (%) | MBEI survey question: _Q60_2 | Min<br>Median<br>Max<br>Correlation with previous year | 5.2%<br>20.3%<br>34.6% | 0.0%<br>26.9%<br>49.4%<br>-0.17 | 6.8%<br>25.1%<br>47.2%<br>0.60 |
| 3. Ease of recruiting accountants (%) | MBEI survey question: _Q60_3 | Min<br>Median<br>Max<br>Correlation with previous year | 17.1%<br>38.3%<br>62.1% | 30.1%<br>47.8%<br>77.8%<br>0.05 | 26.9%<br>46.7%<br>68.6%<br>0.50 |
| 4. Ease of recruiting supervisors (%) | MBEI survey question: _Q60_4 | Min<br>Median<br>Max<br>Correlation with previous year | 14.7%<br>32.3%<br>57.2% | 0.0%<br>44.8%<br>61.5%<br>-0.17 | 21.3%<br>44.8%<br>61.0%<br>0.73 |
| 5. Ease of recruiting managers (%) | MBEI survey question: _Q60_5 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>29.9%<br>52.3% | 0.0%<br>40.4%<br>51.9%<br>0.43 | 19.8%<br>41.3%<br>54.2%<br>0.46 |
| 6. Primary school enrollment rate (%) | Administrative data: Myanmar Living Conditions Survey 2017 | Min<br>Median<br>Max<br>Correlation with previous year | 76.2%<br>89.7%<br>95.1% | 86.0%<br>94.9%<br>98.1%<br>0.60 | 86.0%<br>94.9%<br>98.1%<br>1.00 |
| 7. Middle school enrollment rate (%) | Administrative data: Myanmar Living Conditions Survey 2017 | Min<br>Median<br>Max<br>Correlation with previous year | 41.6%<br>53.4%<br>73.1% | 51.6%<br>72.7%<br>86.3%<br>0.53 | 51.6%<br>72.7%<br>86.3%<br>1.00 |

**New Indicators Added in the 2020 MBEI**

| Indicator | Source | S/R Measure | Dataset | | |
|---|---|---|---|---|---|
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| 8. Firm needs to train new employees (%) | MBEI survey question: Q61 | Min<br>Median<br>Max<br>Correlation with previous year | | | 35.1%<br>62.7%<br>87.1% |
| 9. Quality of local labor meets the firm's needs (%) | MBEI survey question: Q65 | Min<br>Median<br>Max<br>Correlation with previous year | | | 11.6%<br>27.8%<br>54.5% |
| 10. Number of days after hiring before employee can do the job (#) | MBEI survey question: Q62 | Min<br>Median<br>Max<br>Correlation with previous year | | | 29.47<br>49.12<br>91.28 |
| 11. High school enrollment rate (%) | Administrative data: Myanmar Living Conditions Survey 2017 | Min<br>Median<br>Max<br>Correlation with previous year | | | 27.3%<br>41.0%<br>59.1% |
| 12. Labor exchange office placements per 10,000 people (#) | Administrative data: Department of Labor Relations | Min<br>Median<br>Max<br>Correlation with previous year | | | 4.77<br>29.54<br>373.07 |

# 4.10. Law and Order

Businesses benefit from a system of legally enforceable contracts and institutions to fairly enforce them. An independent legal system that allows small businesses and minority shareholders to defend their rights is essential for business growth (Djankov et al. 2008). Without the ability to uphold contracts, businesses must depend on social enforcement, relying on family, friends, and local notables to shame vendors who refuse to deliver or customers who fail to pay. This limits potential business partners to those in a firm's immediate social network. Only with a fair system of legal enforcement will firms be willing to do business outside of their social network, allowing for greater expansion and growth. The literature on the law-and-finance nexus has shown that credit markets also function better when there are better legal protections (Levine 1999). Because contracting institutions require independent courts, which are rarely decentralized, subnational differences in this factor are actually quite rare in the developing world.

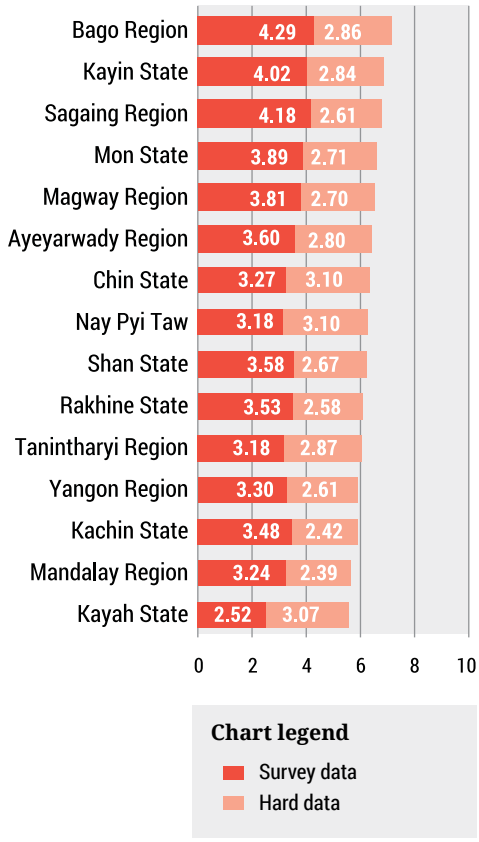
**Businesses operate best in a context where laws and regulations allow the enforcement of contracts and the protection of basic property rights.** Law and order are prerequisites for businesses to maximize their earnings. Even more importantly, contract enforcement permits transactions beyond a business's network of family and friends. As Myanmar's private sector grows, these transactions will increase, and social enforcement will become more and more difficult.

In Myanmar, businesses face substantial challenges in regard to law and order. The country ranks 187 out of 190 countries in the World Bank's *Doing Business 2020* indicator on contract enforcement. In survey data, most businesses claim they do not trust the court system and try to avoid it if possible, even when they have serious disputes with clients and business partners.

**The firm-level indicators for law and order show mixed results.** Most firms believe that government officials are above the law. Not even half of businesses in any of the S/Rs believe that they can appeal to a higher government office for resolution. Fewer than half of the firms in any of the S/Rs believe that government officials will discipline offending staff. The government does seem to be doing a better job at enforcing contracts. Some 75.8% of firms in the median S/R believe that the legal system will uphold property rights and contracts, and 73% of all firms believe that provincial legal aid agencies support businesses when disputes arise. Unfortunately, the government does not do a good job of protecting businesses from physical harm and damage. In only one S/R, Bago, did at least half of the businesses (51.2%) say that the security situation is good. The median S/R scores poorly on this measure, at only 20.6%. This implies that firms find the security situation extremely unstable.

**Bago Region does best on law and order, while Kayah State does worst.** These differences are partly driven by the security situation. As noted above, more than half of Bago respondents say that the security situation

FIGURE 4.9
**State and Region Rankings on Labor Recruitment, Subindex 9**



is good. In Kayah, only 9.6% believe that they are physically secure. In Bago, there are only 1.25 crimes per 100,00 citizens. In Kayah, this number is slightly higher at 1.48. There are also significant differences among the states/regions within indicators. For example, only 20.8% of firms in Kayah State believe that judgements of the court are fair. Kayin State does much better, with 79.0% of firms saying that the courts make fair decisions.

## Core indicators collected in the 2018 and 2020 MBEIs

The *law and order* subindex contains twelve core indicators that were measured in both 2018 and 2020.

### 1. If an official breaks the law, I can appeal to a higher level for resolution (%)

This indicator measures the share of firms in each S/R that believe that if a state official breaks the law, the firm can usually appeal to a higher authority for resolution. This measure has implications both for firms and for the state's capacity to uphold law and order. If a firm believes that it can seek resolution from the state when violations are committed by government officials, those officials may be less likely to commit those violations, for fear of losing their jobs or being reprimanded by their superiors. This belief may imply that the state is responsive to violations of law and order, allowing firms to operate in a safe, predictable environment. A peaceful and law-abiding environment benefits the firm through many channels (Demirguc-Kunt and Maksimovic 1998). For example, states that have low levels of law and order are less attractive to investors (Busse and Hefeker 2007). Law and order also prevents potentially lawbreaking firms from gaining an unfair advantage in the market. A legal mechanism to punish law-breaking officials is included in the Anticorruption Law (2013), which states: "If any Political Post Holder is convicted for committing bribery, he/she shall be punished with imprisonment for a term of not more than 15 years and with a fine."

### 2. When violations of the law are discovered, officials will discipline the offending staff (%)

This indicator measures the share of firms in each S/R that believe that if an S/R official breaks the law, the offending staff member is usually disciplined. This measure works similarly to the measure above, with implications for both firm performance and state capacity to uphold law and order (Busse and Hefeker 2007, Demirguc-Kunt and Maksimovic 1998).

### 3. Legal system will uphold property rights and contracts (% agree)

This indicator measures the share of firms in each S/R that believe that the S/R legal system usually upholds property rights and contracts. The upholding of property rights and contracts has important implications for firm performance, investment, and ultimately economic development. Without secure property rights and contracting, firms cannot be sure that their investments will bear fruit (De Soto 2000, Demsetz 1974). If the state expropriates their property or a supplier cheats them out of a contract, then the investment will cost them without any return. Firms that are uncertain may refrain from making these investments in the first place. Without firm investment, the overall productivity of the industry will suffer, perhaps leading to fewer jobs and lower growth.

### 4. Business disputes are heard by courts at all levels in the state or region (% agree)

### 5. Court hears/resolves economic cases quickly in the state or region (% agree)

### 6. Court enforces economic cases quickly in the state or region (% agree)

### 7. State or region legal aid agencies support businesses when disputes arise (% agree)

### 8. Judgements by the court are fair (% agree)

These five indicators all speak to the fairness and efficiency of the courts and their effect on business performance. Agreement on these indicators raises the score on law and order, while disagreement lowers the score on law and order. Efficient and unbiased courts are necessary for business development for many reasons. Consider business disputes. If disputes are not heard by the courts, business contracts lose their value—without contract enforcement, malicious parties can simply do as they please. If cases are heard and enforced quickly, this saves businesses the legal costs that come with business disputes. Legal aid agencies that support businesses help level the playing field, making sure that the law applies equally to all businesses and does not favor those with more money and connections. Fair judges serve the same pur-

pose, ensuring that moneyed and connected interests cannot subvert the law.

### 9. The security situation is good (% agree)

This indicator measures the share of firms in each S/R that think the security situation in the S/R is good. If the state's security situation is good, firms will feel that their property and assets are more secure (e.g., less likely to be vandalized or stolen), which allows them to spend less on security and invest more in their business, knowing that their physical investments will be safe, at least from physical threat. Increased security ultimately leads to improved firm performance (Gaviria 2002, Schnatterly 2003).

### 10. Victim of crime last year (%)

This indicator measures the share of firms in each S/R that experienced a crime in the past year. This is a direct measure of law and order, since physical violence and property crimes are basic and observable types of crime. The state's inability to deter such crimes implies that it lacks the basic infrastructure for law and order and that it may also be weak in other, less visible dimensions—for example, corruption (Gaviria 2002, Schnatterly 2003).

### 11. Reported to the local police (%)

This indicator measures the share of firms being a victim of a crime in the past year in each S/R that reported the crime to the local police. The more crimes reported to the police, the higher the score on law and order, and the fewer crimes reported, the lower the score. More reports to the police are good for law and order, and provide a proxy for police capacity to deal with crime. The more likely it is that police will resolve reported crimes, the more likely businesses are to make the effort to report them. This indicator thus speaks to the negative effects of crime on business growth—lower investment, potential destruction of property, and the lack of physical safety for workers.

### 12. Total number of selected crimes per 10,000 citizens per year (#, 2018)

This indicator measures the incidence of certain crimes such as robbery, murder, and kidnapping  per 100,00 people for each S/R. More crime per capita leads to a lower score on law and order, while less crime per capita gives a higher score. This indicator is a direct measure of the security situation in the state. Crime deters investment by compromising the physical safety of a firm's employees and by reducing the entrepreneur's expected return on investment. The expected return on investment is reduced because crimes diminish an area's attractiveness for business, reducing consumer demand and increasing the odds that the investment will be stolen or destroyed, which makes the investment less attractive in the first place.

## New indicators added in the 2020 MBEI

Three new indicators were added to the law and order subindex in 2020 to better capture firms' experience with business entry procedures. They are as follows.

### 13. Number of judges per 10,000 citizens (#, 2018)

This indicator measures, for each S/R, the number of court judges per 10,000 citizens. More judges lead to a higher score on law and order, while fewer judges lead to a lower score. Judges uphold and enforce the laws of the country. This indicator posits that more judges means greater capacity to deal with legal conflicts and a higher level of law enforcement overall, leading to greater law and order. This matters to businesses in several ways. If firm owners know that there are judges to adjudicate disputes, they are more likely to enter into formal legal arrangements. A lack of judges to enforce contracts and hear disputes diminishes the value of the contract as a deterrent to malfeasance. Without enough judges, legal disputes will drag on for longer periods of time, increasing a firm's legal expenses and contributing to uncertainty over the future of the business, deterring long-term investment.

### 14. Number of riots and protests per 10,000 citizens (#, 2014-2017)

This indicator measures, for each township, the number of riots and protests per 10,000 citizens over a four year period. The S/R score is the average of all the township scores within that S/R. More riots and protests lead to a lower score on law and order, while fewer riots and protests lead to a higher score. While well-organized, peaceful protests can be constructive forms of public expression, riots and violent protests are disruptive to business. Riots may destroy infrastructure and threaten the physical well-being of business owners and employees. Riots and protests that are related to business issues can also lead to conflict between firm owners and workers.

### 15. Number of armed clashes per 10,000 citizens per year (#, 2018)

This indicator measures, for each township, the number of armed clashes per 10,000 citizens. The S/R score is the average score of all the township scores within the S/R. It is important to note that this only includes townships covered by the MBEI. The most conflict-affected townships were not included in the MBEI and were thus also excluded from these S/R averages. More armed clashes lead to a lower score on law and order, while fewer armed clashes lead to a higher score.

Armed clashes are clearly anathema to law and order. In many ways, armed clashes are similar to riots and protests in their deleterious effects, but potentially much worse. Armed clashes can lead to significant degradation of a firm's physical infrastructure and threaten the health, and even the lives, of business owners and workers. Armed clashes can also create uncertainty over property rights. This uncertainty, and the general lowering of business expectations because of these clashes, will discourage investment by existing businesses and deter others from even starting.

TABLE 4.10

## Comparison of Law and Order Subindex, 2018–2020

| Core Indicators Collected in the 2018 and 2020 MBEIs | | | | | |
|---|---|---|---|---|---|
| Indicator | Source | S/R Measure | Dataset | | |
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| Law and order subindex | (Survey*.6)+ (Hard*.4) | Min<br>Median<br>Max<br>Correlation with previous year | 7.32<br>7.49<br>8.43 | 6.07<br>7.52<br>8.76<br>0.50 | 5.59<br>6.28<br>7.15<br>0.84 |
| Survey indicators | Scaled survey data | Min<br>Median<br>Max<br>Correlation with previous year | 3.43<br>3.72<br>4.48 | 2.22<br>3.63<br>4.88<br>0.52 | 2.52<br>3.53<br>4.29<br>0.93 |
| Hard indicators | Scaled hard data | Min<br>Median<br>Max<br>Correlation with previous year | 3.48<br>3.94<br>4.00 | 3.70<br>3.85<br>3.96<br>0.22 | 2.39<br>2.71<br>3.10<br>0.08 |
| 1. If official breaks the law, I can appeal to a higher level for resolution (%) | MBEI survey question: Q86 | Min<br>Median<br>Max<br>Correlation with previous year | 11.0%<br>51.1%<br>65.9% | 6.3%<br>27.1%<br>52.1%<br>0.04 | 9.1%<br>25.0%<br>47.6%<br>0.88 |
| 2. When violations of the law are discovered, officials will discipline the offending staff (%) | MBEI survey question:Q87 | Min<br>Median<br>Max<br>Correlation with previous year | 13.5%<br>44.1%<br>65.7% | 3.5%<br>19.2%<br>86.7%<br>0.23 | 5.4%<br>17.8%<br>49.2%<br>0.81 |
| 3. Legal system will uphold property rights and contracts (% agree) | MBEI survey question: Q124 | Min<br>Median<br>Max<br>Correlation with previous year | 46.6%<br>71.2%<br>90.6% | 64.9%<br>78.6%<br>94.3%<br>0.16 | 61.5%<br>75.8%<br>87.8%<br>0.90 |
| 4. Business disputes are heard by courts at all levels in the state or region (% agree) | MBEI survey question: _Q128_1 | Min<br>Median<br>Max<br>Correlation with previous year | 58.7%<br>84.1%<br>95.2% | 33.1%<br>77.0%<br>98.5%<br>0.37 | 42.5%<br>75.1%<br>88.4%<br>0.76 |

| | | | | | |
|---|---|---|---|---|---|
| 5. Court hears/resolves economic cases quickly in the state or region (% agree) | MBEI survey question: _Q128_2 | Min<br>Median<br>Max<br>Correlation with previous year | 39.0%<br>56.6%<br>86.6% | 15.6%<br>49.4%<br>81.0%<br>0.21 | 30.4%<br>54.6%<br>73.9%<br>0.90 |
| 6. Court enforces economic cases quickly in the state or region (% agree) | MBEI survey question: _Q128_3 | Min<br>Median<br>Max<br>Correlation with previous year | 40.3%<br>74.2%<br>93.0% | 16.1%<br>50.9%<br>77.4%<br>0.28 | 23.2%<br>55.6%<br>66.5%<br>0.91 |
| 7. State or region legal aid agencies support businesses when disputes arise (% agree) | MBEI survey question: _Q128_4 | Min<br>Median<br>Max<br>Correlation with previous year | 51.5%<br>76.6%<br>91.9% | 10.4%<br>72.7%<br>100.0%<br>0.15 | 25.1%<br>73.0%<br>87.5%<br>0.88 |
| 8. Judgements by the court are fair (% agree) | MBEI survey question: _Q128_6 | Min<br>Median<br>Max<br>Correlation with previous year | 37.9%<br>66.0%<br>86.3% | 15.6%<br>53.0%<br>93.6%<br>0.58 | 20.8%<br>52.6%<br>79.0%<br>0.89 |
| 9. The security situation is good (% agree) | MBEI survey question: Q129 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>38.8%<br>81.0% | 2.1%<br>28.4%<br>46.8%<br>-0.25 | 5.1%<br>20.6%<br>51.2%<br>0.93 |
| 10. Victim of crime last year (%) | MBEI survey question: Q130 | Min<br>Median<br>Max<br>Correlation with previous year | 5.6%<br>11.6%<br>21.2% | 0.1%<br>5.8%<br>17.3%<br>0.14 | 1.9%<br>7.9%<br>15.3%<br>0.39 |
| 11. Reported to the local police (%) | MBEI survey question: Q130_2 | Min<br>Median<br>Max<br>Correlation with previous year | 0.0%<br>50.0%<br>84.0% | 0.0%<br>29.9%<br>100.0%<br>0.28 | 20.2%<br>42.2%<br>65.3%<br>0.41 |
| 12. Total number of selected crimes per 10,000 citizens per year (2018) | Administrative data: Census 2014, CSO Statistical Yearbook 2019 | Min<br>Median<br>Max<br>Correlation with previous year | 0.00<br>0.50<br>8.81 | 0.41<br>1.48<br>2.97<br>0.19 | 0.44<br>1.48<br>2.95<br>1.00 |

**New Indicators Added in the 2020 MBEI**

| Indicator | Source | S/R Measure | Dataset | | |
|---|---|---|---|---|---|
| | | | Panel 2018 | Panel 2020 | Cross 2020 |
| 13. Number of judges per 10,000 citizens (2018) | Administrative data from CSO Statistical Yearbook 2019 | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.12<br>0.24<br>1.41 |
| 14. Number of riots and protests per 10,000 citizens (2014-2017) | Administrative data from TDI | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.00<br>0.20<br>0.83 |
| 15. Number of armed clashes per 10,000 citizens per year (2018) | Administrative data from TDI | Min<br>Median<br>Max<br>Correlation with previous year | | | 0.00<br>0.02<br>0.43 |

5

# Economic Governance in the States and Regions

**The MBEI is designed to help the Myanmar government identify opportunities to promote private business growth by improving local economic governance.** In particular, the MBEI can provide subnational governments with a better understanding of local economic governance in specific states and regions. Although most businesses interact with government at the township level, legal, administrative, and policy decision-making generally resides at higher levels of government. While much of this is centralized within Myanmar's Union government, recent efforts to decentralize are creating an opening for S/R governments to participate in improving the local business environment. The MBEI supports this effort by providing information that state and region governments can use to improve administration or formulate new policies. This chapter explores how S/R governments can use the MBEI as a diagnostic tool to assess the strengths and weaknesses of economic governance.

## 5.1. Diagnostic tools

**The MBEI can be used to generate a unique economic governance profile for each of Myanmar's 14 states and regions and Nay Pyi Taw.** The MBEI's state and region diagnostics should be immediately useful to S/R governments contemplating administrative and policy changes. The insights offered by this analysis can point policymakers toward areas in need of improvement, as well as areas of economic governance to monitor or maintain already strong performance. To highlight specific reform areas for each S/R, we highlight their strengths and weaknesses in the analysis below.

**The starburst charts represent a state or region's performance on the various subindex scores simultaneously, allowing us to quickly identify strengths and weaknesses.** Each of the ten corners (axes) represents a subindex (see figure 5.1). For example, the axis for entry costs is the first clockwise directly north of center. The score the S/R can achieve in each of the subindices is represented by the ten concentric circles. Each circle represents a whole number score. The first circle from the center corresponds to a score of one, the second circle from the center corresponds to a score of two, and so on. The state or region's score on each subindex can be identified by how far its ray extends from the centre.

**When reading a starburst chart, the longer the ray of each subindex, the better the overall score.** For example, consider the entry-cost measure for a model S/R below (figure 5.1). The blue ray extends from the centre until the entry-cost ray is between the 8th and 9th circle (the exact score is 8.61). The closer to the edge of the starburst chart the ray extends, the higher the state or region's score on this subindex. Conversely, the closer this

intersection is to the center of the chart, the lower (and the closer to 0) the state or region score on this subindex. The maximum score is a 10, when the ray intersects with the edge of the largest circle, and the minimum score is 0, when there is no ray extending from the center. Each S/R receives a score between 0 and 10 on all of the subindices.

**Strengths and weaknesses are the areas of economic governance where a state or region is strong or weak.** Specifically, a state or region's strengths are the subindices where the score (represented by the colored rays in figure 5.1) is significantly higher than the median S/R (represented by the black line). The model S/R in figure 5.1, for instance, outperforms the median S/R on entry costs, informal charges, and law and order. We consider these to be strengths of that S/R. By contrast, the colored ray is significantly below the black line in labor recruitment and the environment. These are weaknesses that the S/R should prioritize in future reform efforts.

**Improving and declining trends are areas where an S/R's score appears to be rising or falling, respectively, over time.** Scores that are improving over time represent opportunities for growth, even if the S/R currently does not perform well in those areas. They indicate areas where S/R policies are improving and can be built upon. Subindices that show a decline represent threats, because if the trend continues, they are likely to damage economic governance and therefore business vitality in the region. Potential dangers or threats are subindices where policy appears to be unsuccessful or poorly implemented. Figure 5.2 illustrates how we identify improving and falling subindices. We code subindices as improving when the colored ray, representing the Core MBEI in 2020, is significantly longer than the solid black line, representing the Core MBEI in 2018. We code subindices as falling when the 2020 score is lower.

**We can see that Myanmar has experienced sizable improvements in post-entry regulation, infrastructure, transparency, and labor recruitment.** These upward trends are opportunities for the country as a whole. In figure 5.2, we see threats in the much smaller changes and stagnation in median scores in the other indices. The threats that are identified in the model graph are consistent with our panel analysis in chapter 2. Below we extend this analysis for all of Myanmar's S/Rs.

## How to Read a Starburst Chart

The starburst chart allows each state or region to visualize its score on all ten MBEI subindices simultaneously. Each of the ten axes in the starburst chart represents one MBEI subindex. Within each subindex a state/region receives an MBEI score of 1 to 10, which is denoted by the length of the ray on that axis. The further the ray extends outward from the center the stronger the state/region's score on that subindex, and a ray which extends the full distance indicates a score of 10. For each subindex, a black line indicates the median score of all states/regions on that aspect of economic governance. Interpreting a state or region's starburst chart involves observing the length of each of the ten rays and its position relative to the median for that subindex. A ray that extends beyond the median is above average (greater than half of all other states and regions) on that particular subindex, and one that is below the median is below average.

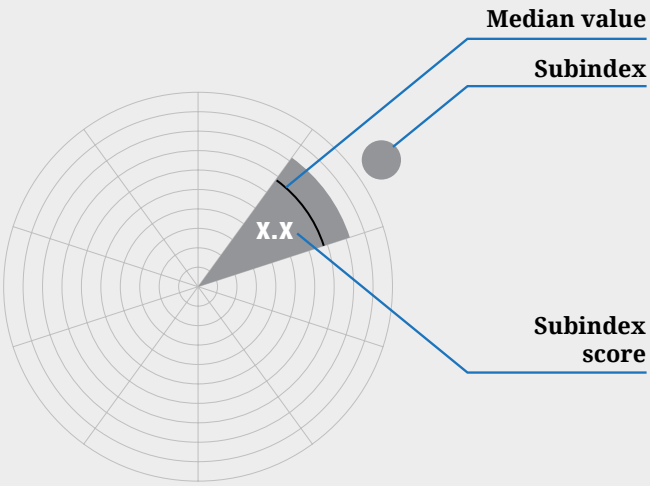


FIGURE 5.1

## Model starburst chart to identify strengths and weaknesses.

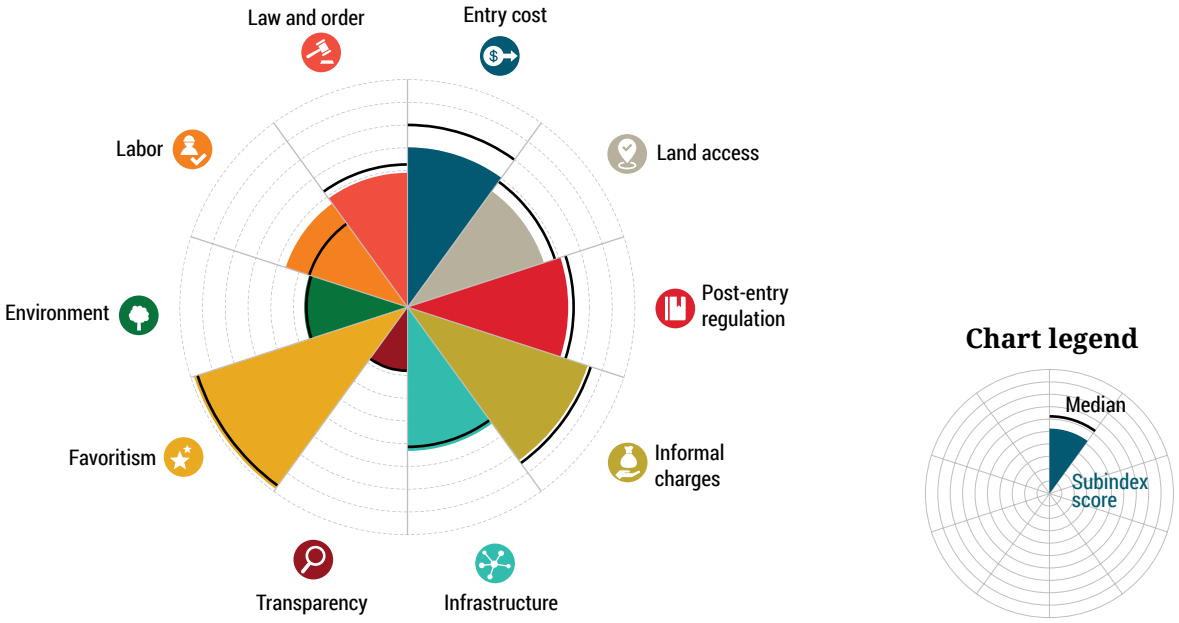
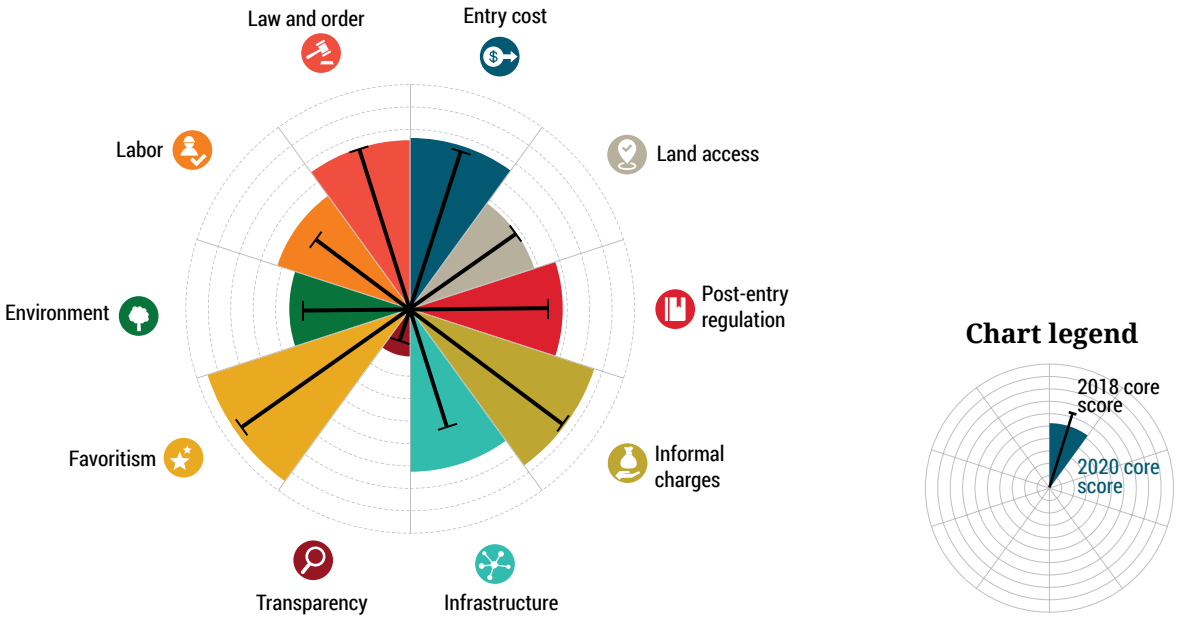



FIGURE 5.2

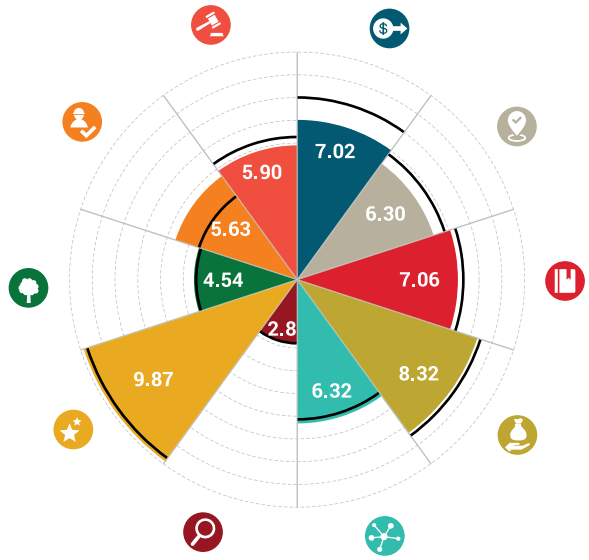
## National level starburst chart to identify areas that have improved on core MBEI



# 5.2. State and region diagnostics

## Diagnostic of Kachin State

### 2020 MBEI versus Median




### Core MBEI over Time

## Summary

**ABOVE MEDIAN**

- Infrastructure
- Labor recruitment
- Environment
- Favoritism

**BELOW MEDIAN**

- Entry costs
- Land access
- Post-entry regulation
- Informal charges
- Law and order

**IMPROVING**

- Land access
- Post-entry regulation
- Infrastructure
- Environment
- Labor recruitment
- Favoritism

**FALLING**

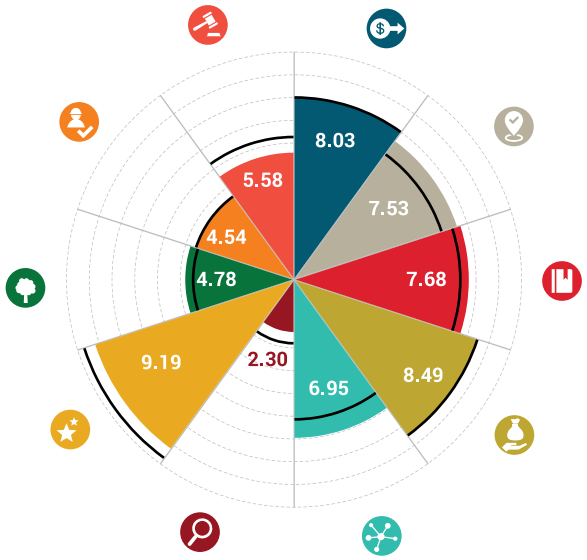
- Entry costs
- Informal charges
- Law and order

**NO CHANGE**

- Transparency

# Diagnostic of Kayah State

## 2020 MBEI versus Median




## Core MBEI over Time

## Summary

**ABOVE MEDIAN**

- Land access
- Post-entry regulation
- Infrastructure
- Environment

**BELOW MEDIAN**

- Law and order
- Transparency
- Favoritism

**IMPROVING**

- Land access
- Infrastructure
- Transparency
- Labor recruitment

**FALLING**

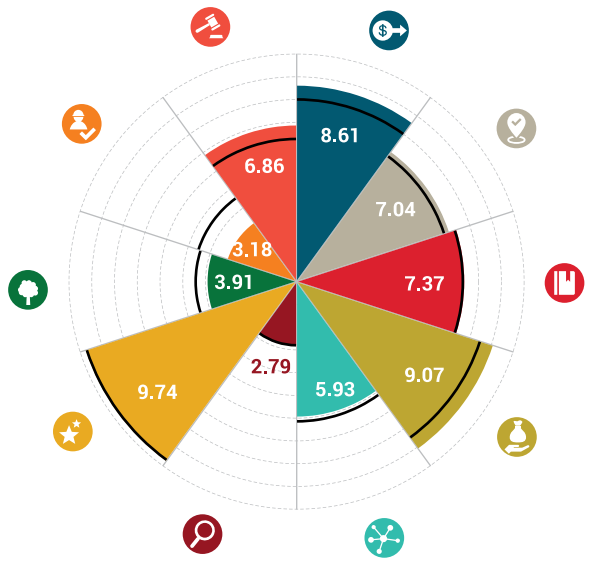
- Law and order
- Informal charges
- Favoritism

**NO CHANGE**

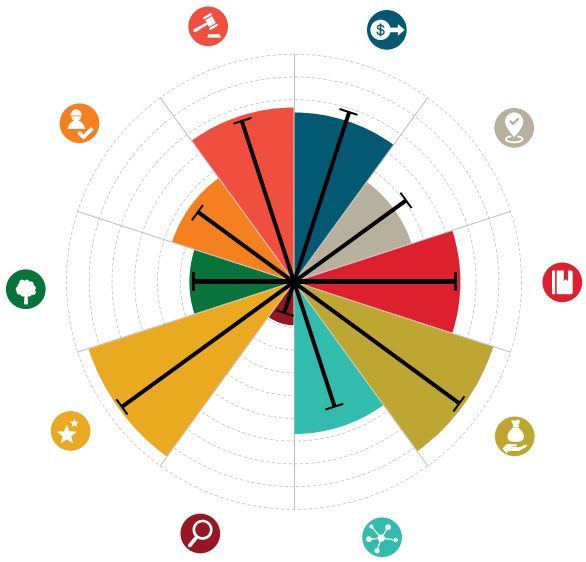
- Environment
- Entry costs
- Post-entry regulation

# Diagnostic of Kayin State

## 2020 MBEI versus Median




## Core MBEI over Time



## Summary

**ABOVE MEDIAN**

- Entry costs
- Informal charges
- Law and order

**BELOW MEDIAN**

- Environment
- Labor recruitment

**IMPROVING**

- Infrastructure
- Labor recruitment
- Favoritism
- Transparency

**FALLING**

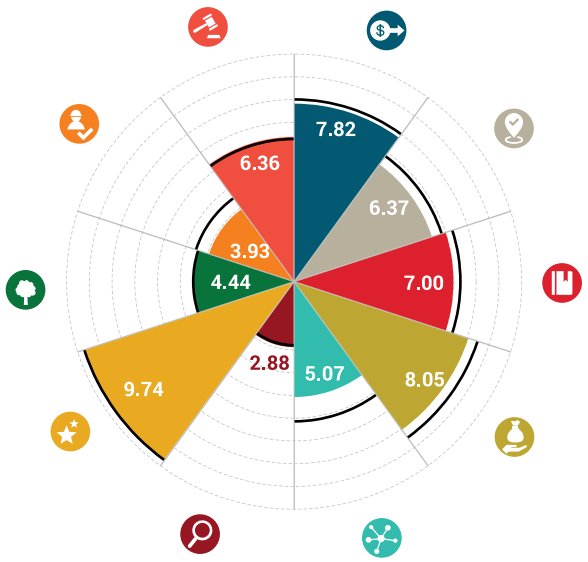
- Entry costs
- Land access

**NO CHANGE**

- Post-entry regulation
- Informal charges
- Environment
- Law and order

# Diagnostic of Chin State

## 2020 MBEI versus Median




## Core MBEI over Time

## Summary

**ABOVE MEDIAN**

- Transparency
- Favoritism
- Law and order

**BELOW MEDIAN**

- Land access
- Post-entry regulation
- Informal charges
- Infrastructure
- Labor recruitment

**IMPROVING**

- Entry costs
- Land access
- Informal charges
- Infrastructure
- Transparency
- Labor recruitment
- Favoritism

**FALLING**

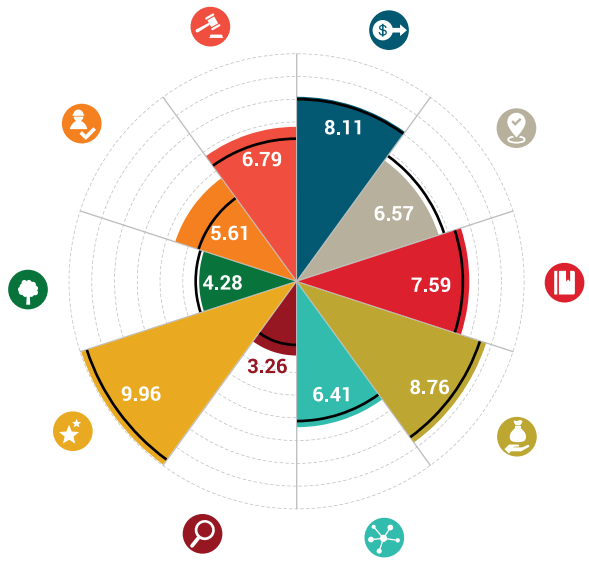
- Post-entry regulation
- Environment
- Law and order

**NO CHANGE**

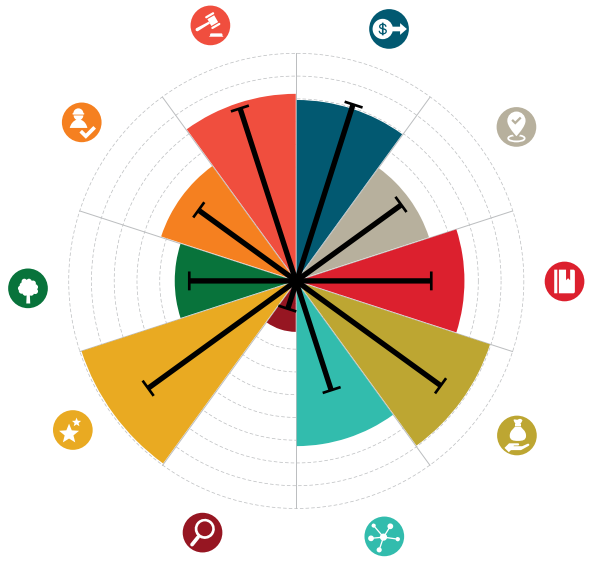
None

# Diagnostic of Sagaing Region

## 2020 MBEI versus Median




## Core MBEI over Time



## Summary

**ABOVE MEDIAN**

- Post-entry regulation
- Informal charges
- Infrastructure
- Transparency
- Labor
- Law & order
- Favoritism

**BELOW MEDIAN**

- Land access

**IMPROVING**

- Land access
- Post-entry regulation
- Informal charges
- Infrastructure
- Transparency
- Favoritism
- Environment
- Labor recruitment

**FALLING**

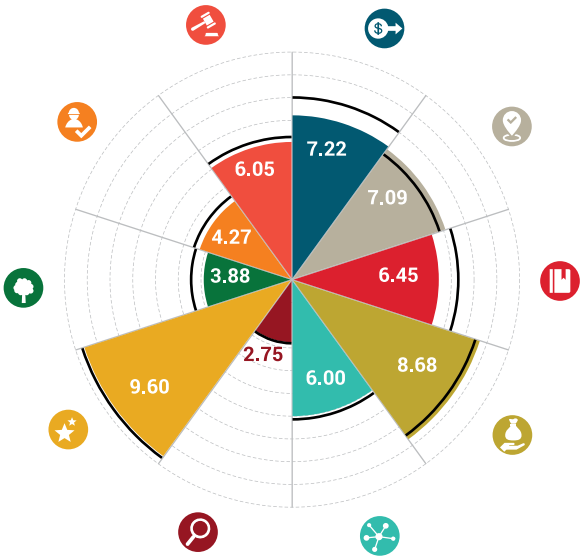
None

**NO CHANGE**

- Entry costs
- Law and order

# Diagnostic of Tanintharyi Region

## 2020 MBEI versus Median




## Core MBEI over Time

## Summary

**ABOVE MEDIAN**

- Land access
- Informal charges

**BELOW MEDIAN**

- Entry costs
- Post-entry regulation
- Environment
- Labor
- Law and order

**IMPROVING**

- Post-entry regulation
- Infrastructure
- Transparency
- Labor recruitment

**FALLING**

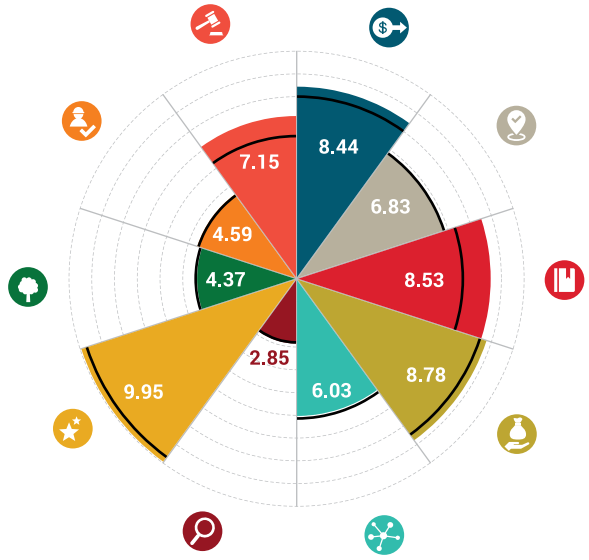
- Entry costs
- Land access
- Informal charges
- Environment
- Law and order

**NO CHANGE**

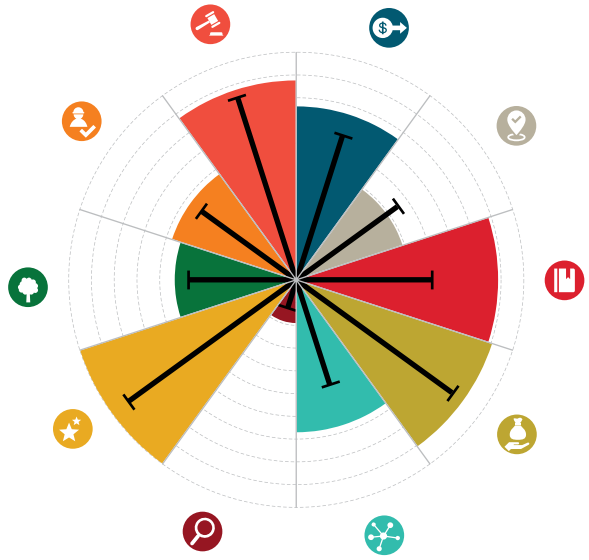
- Favoritism

# Diagnostic of Bago Region

## 2020 MBEI versus Median




## Core MBEI over Time



## Summary

**ABOVE MEDIAN**

- Entry costs
- Post-entry regulation
- Informal charges
- Favoritism
- Law and order

**BELOW MEDIAN**

None

**IMPROVING**

- Entry costs
- Post-entry regulation
- Informal charges
- Infrastructure
- Transparency
- Favoritism
- Environment
- Labor recruitment
- Law and order

**FALLING**

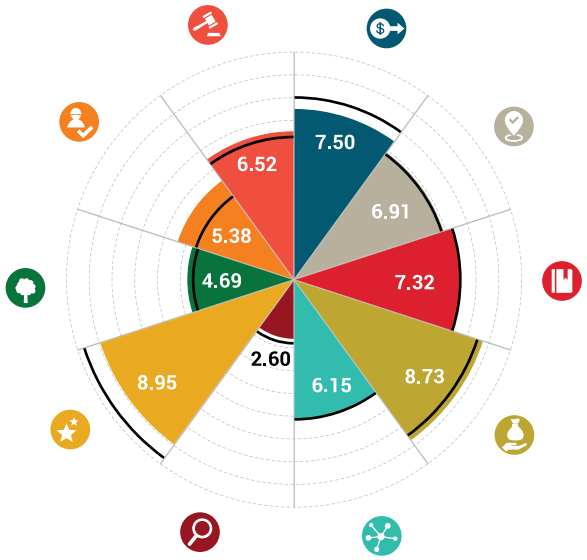
- Land access

**NO CHANGE**

None

# Diagnostic of Magway Region

## 2020 MBEI versus Median




## Core MBEI over Time

## Summary

**ABOVE MEDIAN**

- Environment
- Labor
- Law and order

**BELOW MEDIAN**

- Entry costs
- Favoritism

**IMPROVING**

- Infrastructure
- Transparency
- Environment
- Labor recruitment

**FALLING**

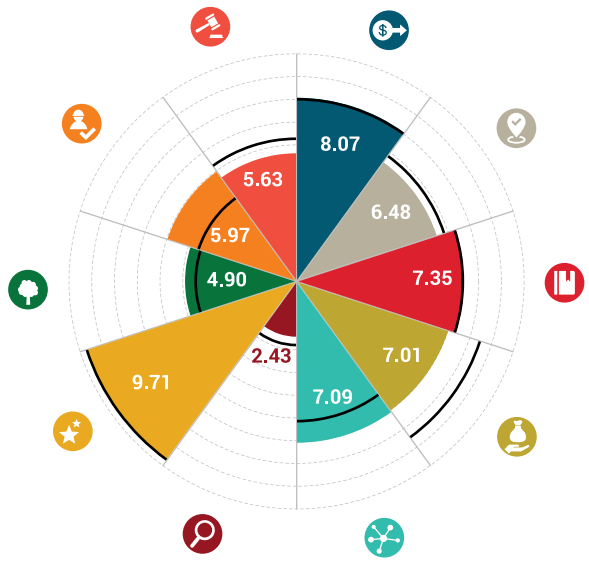
- Entry costs

**NO CHANGE**

- Land access
- Post-entry regulation
- Informal charges
- Favoritism
- Law and order

# Diagnostic of Mandalay Region

## 2020 MBEI versus Median




## Core MBEI over Time

## Summary

**ABOVE MEDIAN**

- Infrastructure
- Environment
- Labor

**BELOW MEDIAN**

- Land access
- Informal charges
- Transparency
- Law and order

**IMPROVING**

- Entry costs
- Land access
- Post-entry regulation
- Infrastructure
- Transparency
- Environment
- Labor recruitment
- Favoritism

**FALLING**

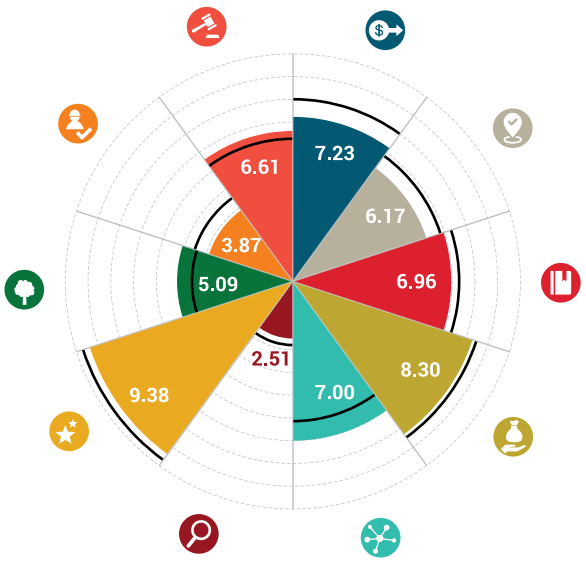
- Law and order

**NO CHANGE**

- Informal charges

# Diagnostic of Mon State

## 2020 MBEI versus Median




## Core MBEI over Time

## Summary

**ABOVE MEDIAN**

- Infrastructure
- Environment
- Law and order

**BELOW MEDIAN**

- Entry costs
- Land access
- Post-entry regulation
- Transparency
- Favoritism
- Labor recruitment

**IMPROVING**

- Infrastructure
- Transparency
- Environment

**FALLING**

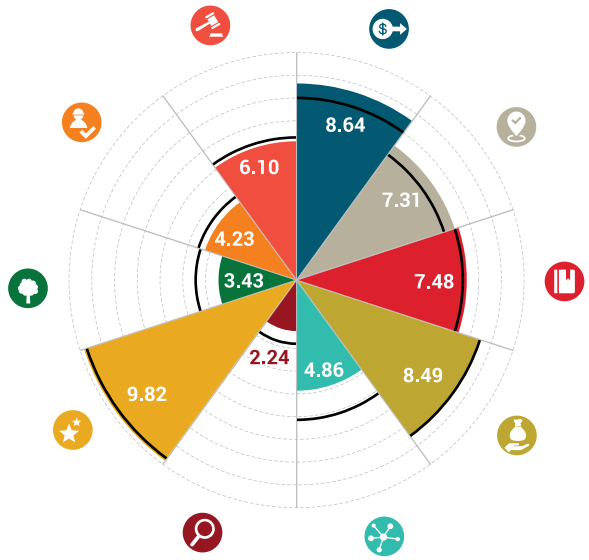
- Land access
- Post-entry regulation
- Favoritism

**NO CHANGE**

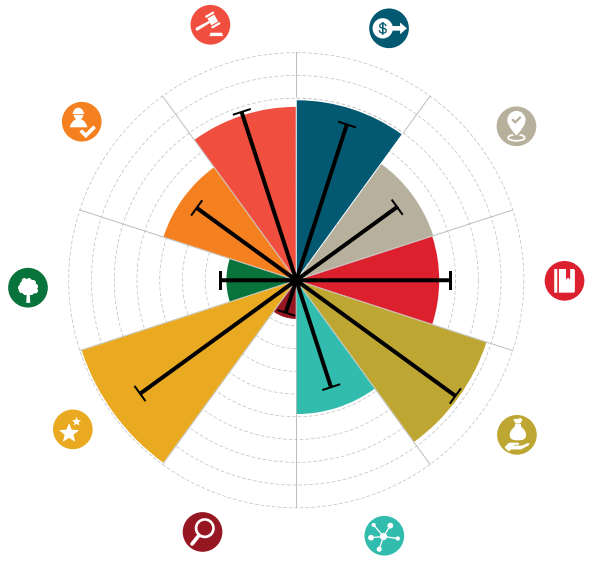
- Entry costs
- Informal charges
- Law and order
- Labor recruitment

# Diagnostic of Rakhine State

## 2020 MBEI versus Median




## Core MBEI over Time



## Summary

**ABOVE MEDIAN**

- Entry costs
- Land access

**BELOW MEDIAN**

- Infrastructure
- Transparency
- Environment
- Labor recruitment

**IMPROVING**

- Entry costs
- Land access
- Infrastructure
- Favoritism
- Labor recruitment

**FALLING**

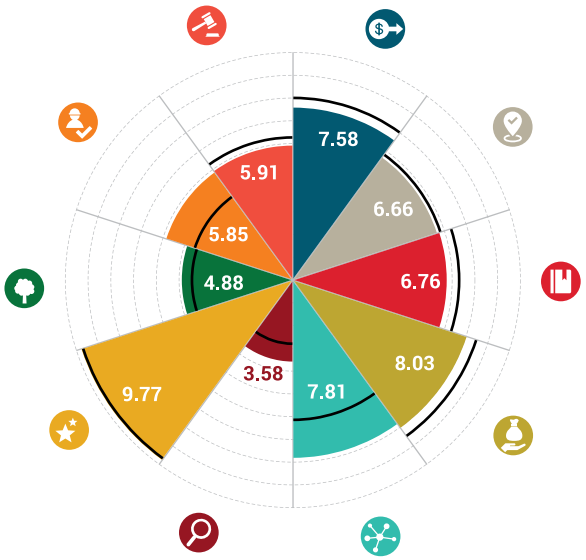
- Post-entry regulation
- Environment

**NO CHANGE**

- Informal charges
- Transparency
- Law and order

# Diagnostic of Yangon Region

## 2020 MBEI versus Median




## Core MBEI over Time

## Summary

**ABOVE MEDIAN**

- Infrastructure
- Labor recruitment
- Transparency
- Environment

**BELOW MEDIAN**

- Entry costs
- Post-entry regulation
- Law and order
- Informal charges

**IMPROVING**

- Entry costs
- Post-entry regulation
- Informal charges
- Infrastructure
- Transparency
- Favoritism
- Environment
- Labor recruitment

**FALLING**

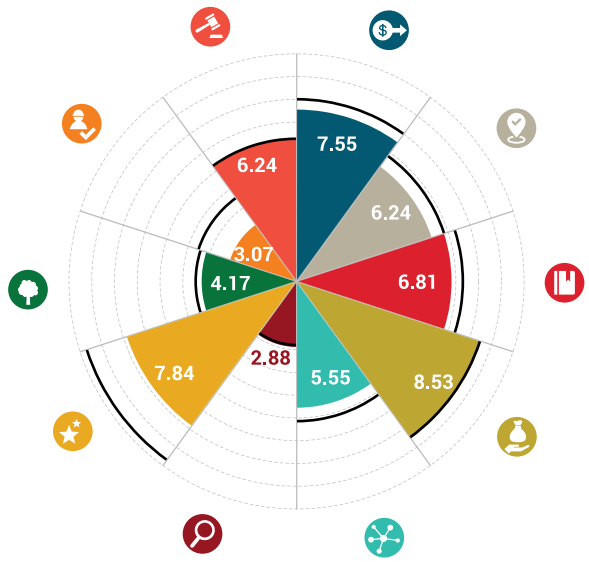
None

**NO CHANGE**

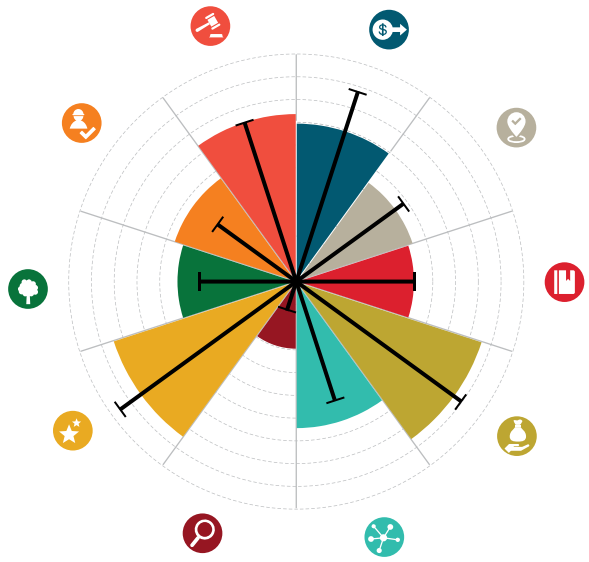
- Land access
- Law and order

# Diagnostic of Shan State

## 2020 MBEI versus Median




## Core MBEI over Time



## Summary

**ABOVE MEDIAN**

None

**BELOW MEDIAN**

- Entry costs
- Land access
- Post-entry regulation
- Infrastructure
- Favoritism
- Environment
- Labor recruitment

**IMPROVING**

- Infrastructure
- Transparency
- Environment
- Labor recruitment

**FALLING**

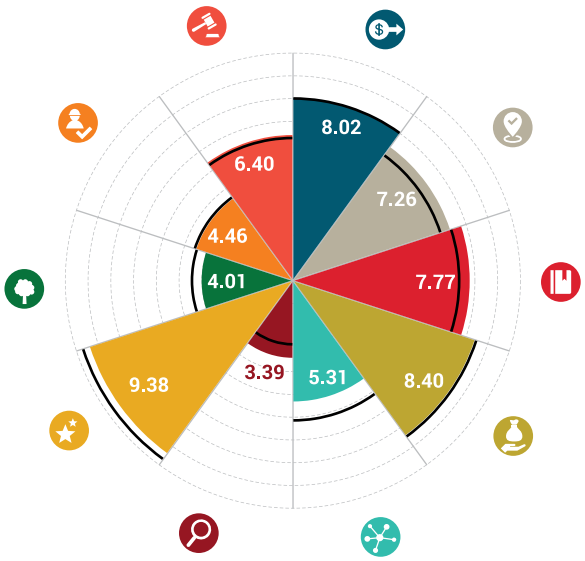
- Entry costs
- Land access
- Informal charges
- Favoritism

**NO CHANGE**

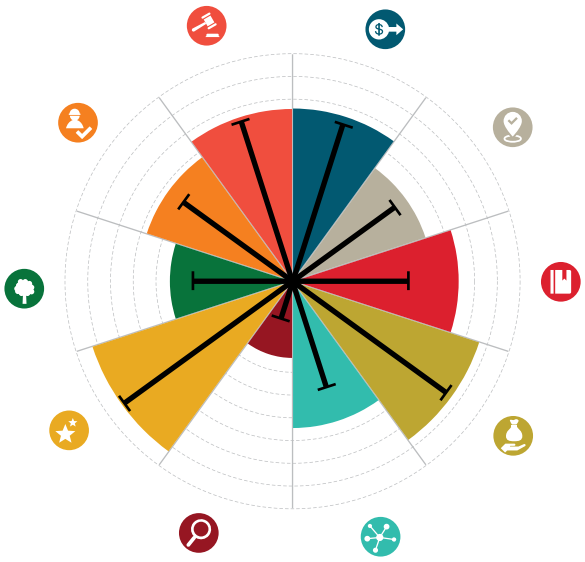
- Post-entry regulation
- Law and order

# Diagnostic of Ayeyarwady Region

## 2020 MBEI versus Median




## Core MBEI over Time



## Summary

**ABOVE MEDIAN**

- Land access
- Post-entry regulation
- Transparency

**BELOW MEDIAN**

- Infrastructure
- Environment
- Favoritism

**IMPROVING**

- Entry costs
- Land access
- Post-entry regulation
- Informal charges
- Infrastructure
- Transparency
- Environment
- Labor recruitment

**FALLING**

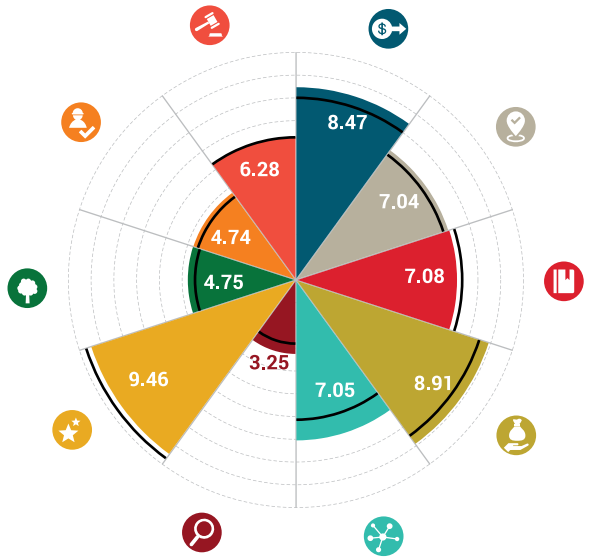
None

**NO CHANGE**

- Favoritism
- Law and order

# Diagnostic of Nay Pyi Taw

## 2020 MBEI versus Median




## Core MBEI over Time

## Summary

**ABOVE MEDIAN**

- Entry costs
- Informal charges
- Infrastructure
- Transparency
- Environment

**BELOW MEDIAN**

- Favoritism

**IMPROVING**

- Entry costs
- Post-entry regulation
- Informal charges
- Infrastructure
- Environment
- Labor recruitment
- Favoritism

**FALLING**

- Law and order

**NO CHANGE**

- Land access
- Transparency

# 6

# Methodology

To construct each year's index, the MBEI team used a three-step process that we refer to as the "three *C*s." These include: (1) collection of data, (2) construction of subindices, and (3) calibration and weighting of the final index.

## 6.1. Collection

Three general types of data are employed to construct the subindices: survey, observational, and administrative. We refer to observational and administrative indicators as "hard data," because they do not depend upon the subjective assessments of firms. Hard data is used to address perception and anchoring biases in responses (King et al. 2004). After all, many SMEs may not know enough about other locations to rate their own state or region on a five-point scale. Hard data is also used to account for the impact of structural endowments and calibrate the final index scores to the relative importance of the subindices vis à vis the business environment.

### 6.1.1. Observational and administrative data

Hard data for the MBEI was collected through desk research and engagement with government from November 2019 to March 2020. Sources of hard data in the MBEI included the 2019 Myanmar Census, relevant national ministries, local offices of the GAD, and observational data of local government operations collected directly by The Asia Foundation field research team.

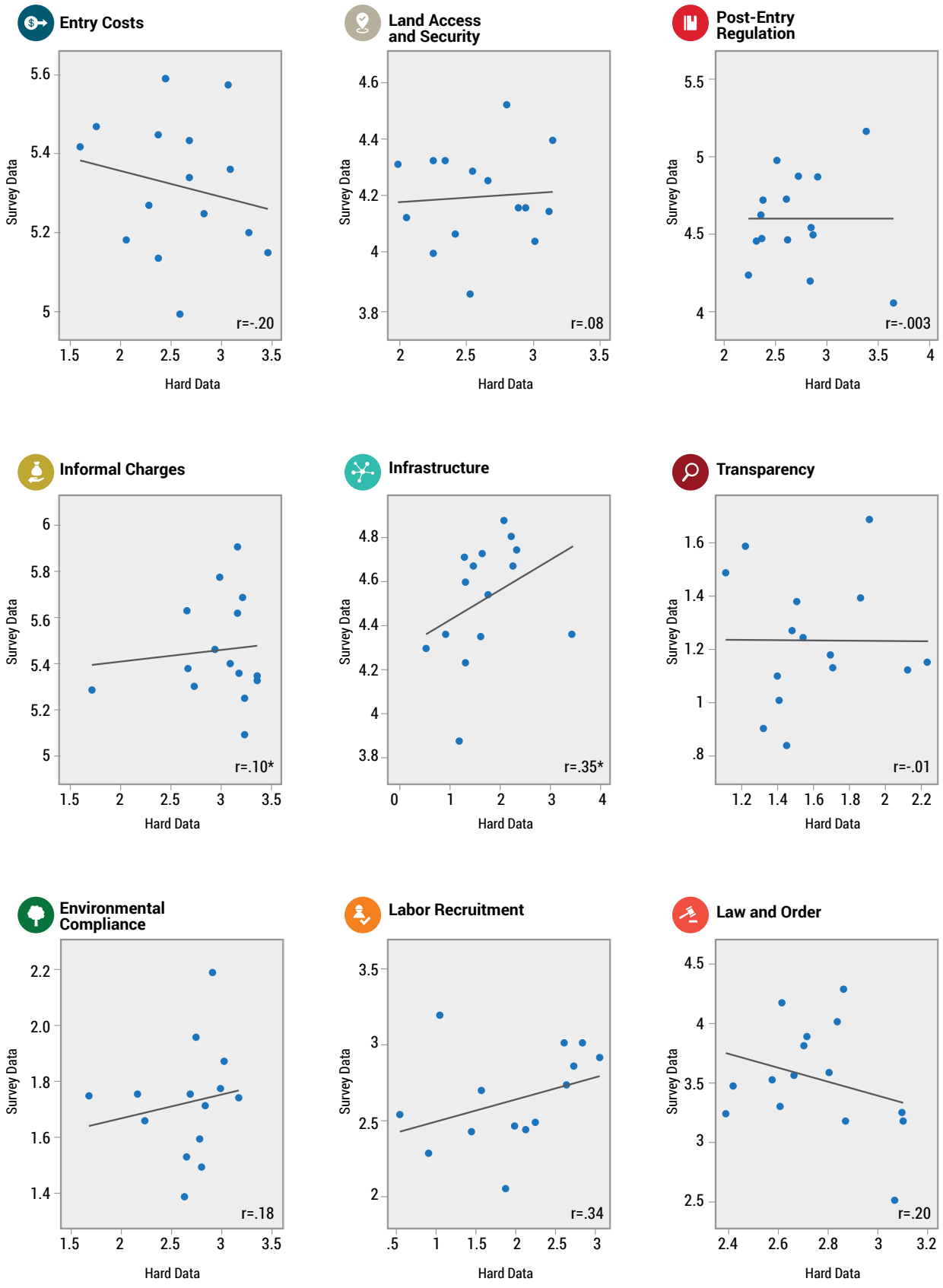
A unique innovation of the MBEI compared to previous subnational indices is the addition of observational data. To collect this, researchers visited local administrative offices, ranking these agencies on a number of criteria including the public posting of vital information, the helpfulness of staff, and the availability of information upon request. Visits were paid to GAD, DAO, DALMs, and OSS offices

This hard data is used in the MBEI in two important ways. The first is what is known as *anchoring bias*, which occurs when a surveyed firm is asked to evaluate the local business environment but has no basis for comparison with other regions of the country because its operations are strictly local (King et al. 2004). For example, a firm in Mon State may feel that local registration procedures are fairly efficient, but an objective observer with broader knowledge of procedures across Myanmar may assess them differently. Because the hard data is not subject to perception bias, it can be used to correct for such anchoring problems in survey responses.

Figure 6.1 illustrates the relationship between the aggregate hard and soft indicators for each subindex in the MBEI. In most cases the correlation is positive, and in the case of indicators regarding infrastructure and labor recruitment, quite strongly so. In a few subindices, the relationship is negative, which indicates that survey data in that subindex may have been influenced by anchoring bias, when respondents may understand scales differently (King et al. 2004), and perception

FIGURE 6.1

## Correlation between Soft and Hard Data in MBEI



bias, when respondents interprete the same objective situation differently (Pronin et al. 2002, Cruces 2013), in some localities.

Second, hard data is used to account for structural endowments, or aspects of the business environment that are out of the control of government in the short run. These local endowments—such as proximity to Yangon's large market, local market size, and readily available human capital—contribute to economic growth but are hard to change within the tenure of a particular leader. For example, literacy rates in Yangon may reflect the quality of the local labor force, but it is unlikely to change dramatically in the near term through local government action. Similarly, the proximity of firms in Muse to the Chinese market influences growth, but it is not determined by local economic governance, nor is it likely to change. The MBEI controls for the impact of these factors by incorporating additional data on human capital and market proximity from non-survey sources

### 6.1.2. Nationwide business survey.

"Soft" or perceptions data for the MBEI was collected using a nationwide survey of businesses. In many ways, this survey is the signature contribution of MBEI. The survey instrument reflected the key issues covered by the subindices, and incorporated input from discussions with businesses and policymakers. As we noted above, almost all questions focused on business interactions with township officials.

The survey instrument comprised twelve modules that were organized by topic, with a final set of control questions included to assess the circumstances of the interview. The first module collected basic information on the respondent firms, while the content of subsequent modules corresponds to various subindices. For example, the module related to business entry costs asked about the time in days required to register a business and the procedures involved. By design, roughly 20% of questions on the MBEI were virtually identical to EGIs in other countries (based on Vietnam's Provincial Competitiveness Index or the World Bank Enterprise Survey), allowing comparison across countries. In addition to straightforward inquiries of all respondent firms, the MBEI instrument incorporated some novelties, such as list experiments to shield respondents answering sensitive questions (Malesky 2015).

The research team subjected the MBEI survey instrument to a thorough Burmese translation. The survey was also tested and refined through focus group discussions with businesses and piloting on a subset of the eventual survey sample. Translation of the survey into Burmese began with an initial translation, after which a third party translated the Burmese-language survey back into English to detect discrepancies in meaning. The results were then used to make further corrections to the Burmese version.[27] Both versions were then reviewed and corrected as necessary by staff of The Asia Foundation and the DaNa Facility.

In October 2019, the MBEI survey was also piloted among 30 firms in two townships, in Yangon (South Dagon) and Ayeyarwaddy (Phyarpon), to test the content of the survey instrument, observational data collection, and anticipated field operations. This led to considerable shortening of the survey instrument to accommodate busy business owners and to clarify concepts. The final MBEI survey required approximately one to two hours to complete.

### 6.1.3. Sampling frame

A critical change in the 2020 MBEI methodology was the use of a new sampling frame for the 4,405 newly sampled firms. All surveys that employ probability sampling rely on a high-quality sampling frame covering the population of interest. We were fortunate this year to have access to the Central Statistical Organization's Statistical Business Register, which records every firm in the country that holds a current operating license from a township Development Affairs Office or City Development Council, but also includes large numbers of firms with registration certificates from the Directorate of Investment and Company Administration or the Directorate of Industrial Supervision and Inspection.[28] The database currently includes 227,904 firms, with contact information and industrial-sector coding using the four-digit Myanmar Standard Industrial Classification (MSIC).

The MBEI research team first requested lists of businesses for the 67 townships that were included in the 2018 MBEI report. We also requested aggregate data on the number of businesses in the remaining townships in the fourteen Myanmar S/Rs and Nay Pyi Taw. From the aggregate township data, we used probability-proportional-to-size (PPS) sampling to select fourteen additional town-

ships in Rakhine, Yangon, Bago, Tanintharyi, and northern, eastern, and southern Shan State. Over the course of the survey, as some townships were dropped due to security concerns or smaller than expected sample sizes, we requested additional township lists from Kayah, Rakhine, Shan and Tanintharyi. Ultimately, this left us with a firm-level sampling frame of 100,396 firms in 85 townships, which we used for stratified random sampling of 4,405 firms.

In addition to the firms sampled from the CSO, we also included responses from 1,200 firms sampled from the original 67 townships in the 2018 MBEI survey. The sampling frame for the panel firms was the 4,876 MBEI respondents in the 2018 MBEI wave. The 2018 MBEI sample was itself drawn from a sample frame supplied by the Ministry of Labor, Immigration, and Population, which included 60,000 firms from their 2016 labor inspection database. These 1,200 firms were used to select a panel dataset of firms that answered the survey both years and offer a unique perspective for assessing change over time

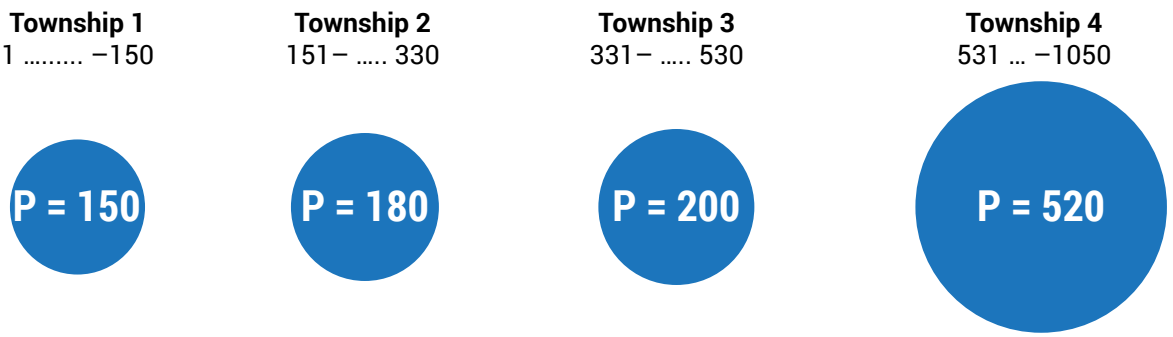
The advantages of the CSO data included considerably better nationwide coverage than the alternatives and availability within the time frame of the first-round MBEI. However, there were some disadvantages. A large number of missing or incomplete addresses appeared to need updating. Many firms listed in the dataset did not exist or had not been in operation for many years. This weakness increased our noncontact and nonresponse rates and is a potential source of error in the analysis. We discuss this in more detail below.

### 6.1.4. Random sampling procedure

Once the sample frames were selected, we then moved forward to our sampling design. In constructing the 2018 MBEI methodology, the research team faced a significant challenge. The MBEI project goals called for a sampling strategy that would yield representative results at the national, state and region, and township levels, allowing for the aggregation or disaggregation of data as necessary for their policy research. This challenge was compounded by the fact that the MBEI would have many relatively unsophisticated respondents. Sufficient literacy and understanding of complex governance topics could not be taken for granted, nor could the availability of telephone numbers or even fixed postal addresses, if the project really sought to measure governance as it was experienced by the average business in many rural and underdeveloped localities. As a result, the MBEI survey needed to be administered in person to help respondents understand complex topics, requiring many interviewers and much logistical coordination.

Because of these complexities at the design stage in 2018, the research team knew they would have to use a multistage strategy, one that was representative but that limited the travel of field interviewers to reasonable levels. In situations where researchers are faced with a multilevel research problem that involves a small number of first-tier sampling units (i.e., townships) but needs to maintain representativeness at the population level (i.e., state and region), the recommended approach of statisticians is probability-proportional-to-size (PPS) sampling. In PPS, a researcher weights

FIGURE 6.2:
**Demonstration of Probability Proportion to Size (PPS) Sampling**



each of the sampling units by the size of the population. The easiest way to think about this is as a weighted lottery, where each firm in an S/R is given a lottery ticket. Thus, a township with 10,000 firms has 10 times the probability of selection (winning the lottery) as a township with 1,000 people. A township with a population of 100,000 has 100 times the probability of selection.

Figure 6.2 illustrates how the weighted lottery was carried out. Suppose the state that the researcher is working in has four townships with a total firm population size (P) of 1,050. The travel and fieldwork budget only allows for research teams to visit two townships, but these should be randomly selected and broadly representative of the state. First, the researchers allocate to the first district "tickets" 1 to 150, the second township tickets 51 to 330, the third township 331 to 530, and the fourth township 531 to 1050. Next, they select a random number between 1 and P/2 = 525 and count through the tickets by multiples of 526.

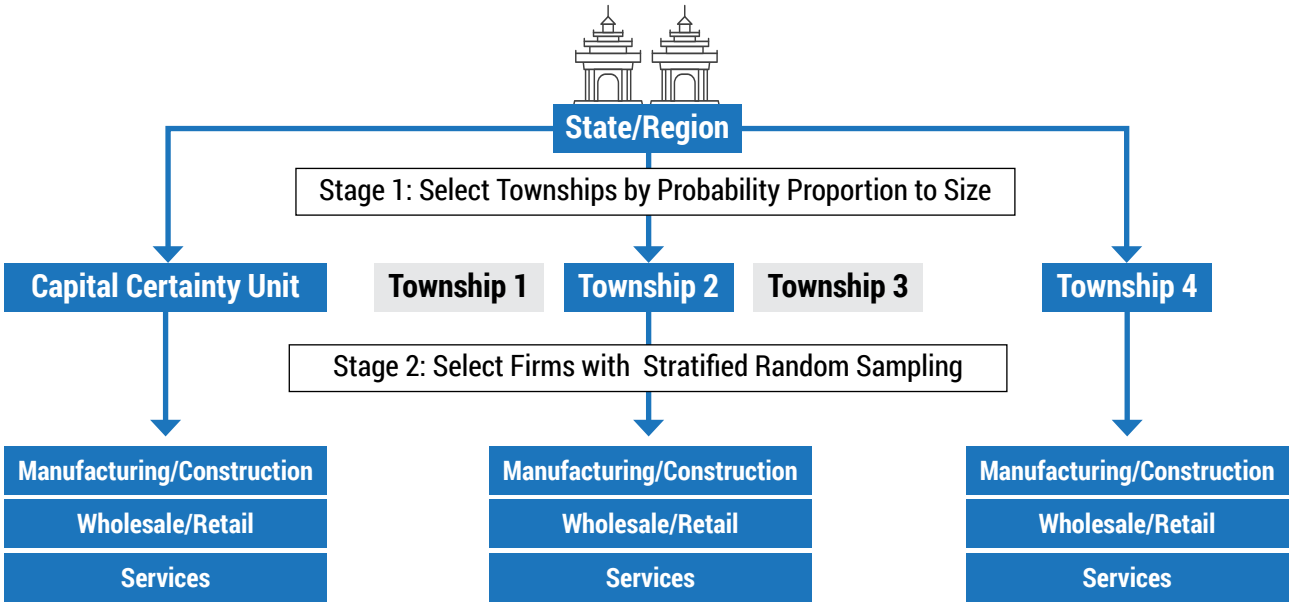
If the random number selected was 200, for example, the researchers would draw tickets 200 and 725, held by townships 2 and 4. Notice that the most populous township is easily selected by this procedure.

PPS therefore allows for randomness in selection, which is more likely to lead to representativeness, but has the obvious result that more populous townships are more likely to be selected. While some might consider this a bias, it is exactly the bias the research team wanted. It is important to remember that the MBEI is measuring firms' experience with public administration and public service provision. It makes sense that researchers would want to know about the administration and services that affect that greatest number of businesses in a state or region. PPS also has the significant benefit of reducing field costs for research teams, because interviewers do not have to be sent to many far flung localities to do only one or two interviews. Efforts can be concentrated in the selected regions.

Within each S/R, the capital-city township was automatically selected as a "certainty unit," while several additional townships were selected randomly with PPS sampling. The certainty unit was required because many important procedures and services only take place within capital townships of the state.

In analyzing the data, we use inverse probability weights to address the fact that the certainty units were not randomly sampled. The number of additional townships varied by the number of townships in the state or region and the number of total businesses in the state. We also employ post-stratifi-

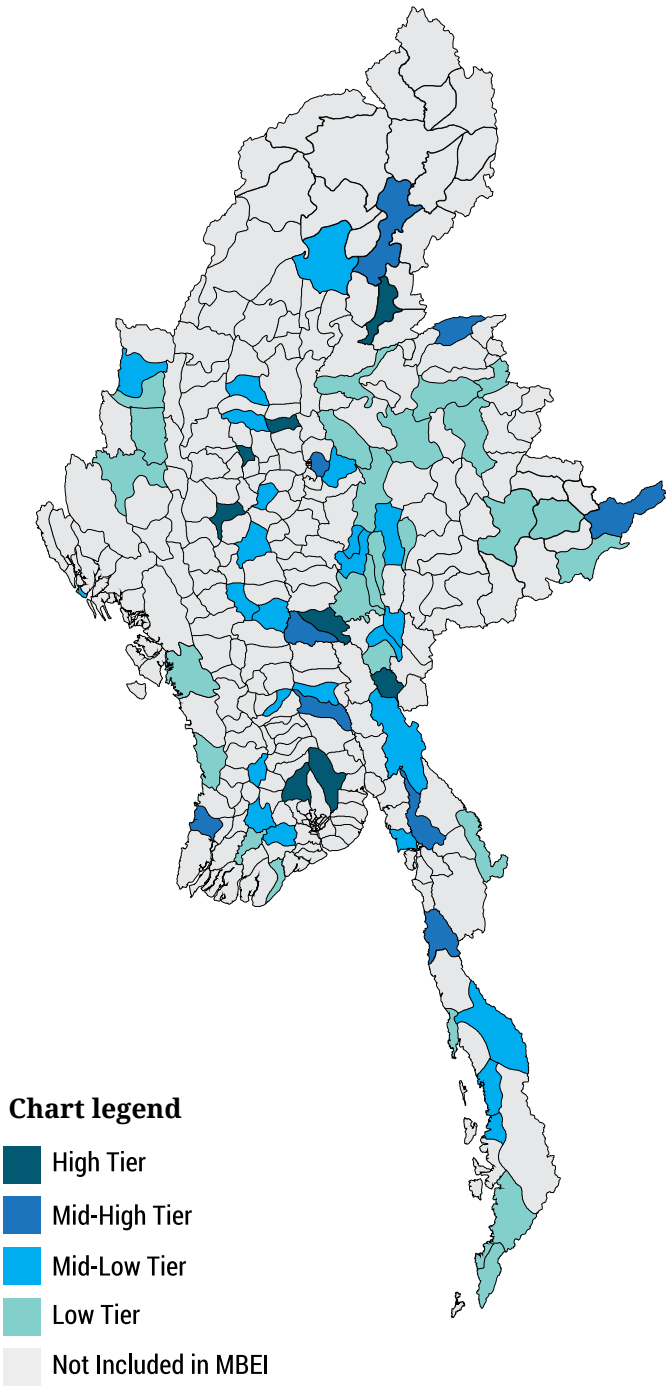
FIGURE 6.3
**Two-Stage MBEI Sampling Strategy**



cation weights to correct for nonresponse differences across provinces and to make sure the sample tightly mirrors the underlying population.[29]

Following this logic, the research team selected a two-stage sampling procedure, shown in figure 6.3, below, for both the 4,405 new firms and the 1,200 panel firms. First, townships within the 15 states and regions were selected using PPS. The research design provides accurate population estimates at the township level as well as at the state and region level. Second, a stratified random sample (SRS) of firms was selected from each chosen township using categories based on sector (service, wholesale/retail, manufacturing/construction) as reported in the CSO sample frame. Among the benefits of stratified sampling are improved population estimates and reduced sampling error, while drawbacks include the maintenance of strata in the face of a poor or incomplete sampling frame. Figure 6.3 illustrates the full MBEI selection strategy from S/R down to township, while figure 6.4 provides a map of sampled townships in the country.

FIGURE 6.4
**Map of Sampled Townships Classified by MBEI Tier**




The appeal of this two-stage design is threefold. On the one hand, it allows the MBEI to detect variation at the township level, where local economic governance is often implemented, as we do in our analysis of the relationship between governance and welfare in chapter 2. This can also help in identifying better-performing townships throughout Myanmar and highlighting the practices that make them so. On the other hand, the sampling design also allows the MBEI to report findings at the state and region level by aggregating township-level findings. This provides a more compelling narrative to government and stakeholders and more viable opportunities to advocate for improved local economic governance in Myanmar. A further benefit of the two-stage procedure is that it is more affordable and logistically feasible than a simple random selection, as it increases the likelihood of choosing the most economically relevant location. At the same time, the selection process is still random, providing the most efficient and unbiased estimates of the population.

A drawback of this design is that it does not guarantee a perfect geographic distribution of the townships selected for the survey, and may also omit large subpopulations of interest (e.g., ethnic minorities, persons affected by conflict).

In addition, to the random sample, the MBEI team engaged in some screening of respondents in the field. First, to ensure that respondents in our sample had some experience interacting with government officials, the research team focused on firms with at

least four employees, including a minimum of one paid employee, in addition to the owner. While the CSO frame did not include a code for formality, which would have been ideal, screening out micro-enterprises increased the probability of identifying formal operations. All firms with less than four employees were dropped from the sample of new MBEI firms. Some micro firms were retained in the panel analysis, however, to maintain consistency over time. Firms were also removed if their actual business did not match the industry code under which they were registered, or if the owner's name was different from the registered owner.

### 6.1.5. Sample size

Pending final cleaning and processing, the MBEI survey data consists of approximately 5,605 firms from 85 townships across all of Myanmar's fourteen states and regions and Nay Pyi Taw. This data was collected from November 2019 to March 2020 through a massive, nationwide field operation that sought to locate more than 30,000 firms—or nearly 13.6% of all private Myanmar businesses identified in the CSO data.

The target sample size for the MBEI was calculated based on the number of townships and firms necessary to produce reliable estimates,[30] which was updated as fieldwork proceeded.[31] Because of the sampling procedure, the total number of firms sampled was determined by sample-size calculations in each sample township, as small township populations require smaller samples. Initial estimates of the necessary sample size for the MBEI were based on population size, expected variance in answers, and nonresponse measures from 2018, while final sample sizes reflect common challenges in survey data collection as well as findings about the actual size and nature of the business population in Myanmar.

Table 6.1 lists the townships selected in each state and region, the target sample for both the new firms and panel, and the final sample of firms included for each primary sampling unit. In addition, we provide data on three items for both the new and panel firms:

1. **Target Rate:** The share of the target number that we achieved in each township after subtracting firms with less than four employees. We achieved 100% of our target for most S/Rs through replacement, and 84% for targets in the originally selected townships. However, in some townships we were not able to fulfill the full quota, and met S/R targets by adding new townships. Targeting was more difficult for panel firms, because we could only replace a firm with a firm that had been surveyed in the 2018 MBEI. In this case, we supplemented by over-sampling from other townships in the same S/R.

2. **Contact Rate:** The unadjusted share of firms with at least four employees, who were identified and ultimately were surveyed. The key reasons for nonresponse were that the business was closed, had moved to another township, was in a different sector from the sampling frame, only existed on paper as a "ghost firm," had an incorrect or duplicate address, had a new owner, was difficult to reach due to safety or transportation, had an owner who could not be contacted, did not have any paid employees, or was a nonprofit run by a nongovernment actor. The national, unadjusted contact rate was 18% for new firms and 46% for the panel firms. The higher contact rate for panel firms was achieved because we had much more accurate contact information and GPS coordinates from the previous survey.

3 **Refusal Rates:** This lists the share of firms that were successfully contacted, had the correct owner present, and met all of our screening criteria, but refused to participate in the survey. National refusal rates were only 43% for successfully contacted new firms and 35% for the panel.

According to the literature on strategy and policy, 30% is a reasonable refusal rate for surveys of busy firm managers and directors. Once we were able to overcome the difficulties of identifying firms that met our strict criteria, the vast majority of firms agreed to participate.

Importantly, 87% percent of new responses were filled out by the CEO or general director for the new firms, while 76% of panel owners answered directly. If the owner was not available, the next highest ranked manager answered the survey in 9% of the new firms and 16% of panel firms. The fact that the top decision-makers answered the survey guarantees a high degree of accuracy and knowledge about the specific questions asked in the survey.

TABLE 6.1

## Final Sample Size and Nonresponse Rate, by Township

| State/region township | New MBEI firms from CSO sample frame | | | | | Panel firms from 2018 MBEI sample frame | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Target | MBEI sample | Target rate | Contact rate | Refusal rate | Target | MBEI sample | Target rate | Contact rate | Refusal rate |
| Kachin State | 210 | 210 | 100% | 30% | 15% | 66 | 66 | 100% | 72% | 13% |
| Myitkyina | 108 | 108 | 100% | 33% | 16% | 40 | 40 | 100% | 74% | 15% |
| Mohnyin | 51 | 51 | 100% | 40% | 0% | 13 | 13 | 100% | 93% | 0% |
| Bhamo | 51 | 51 | 100% | 21% | 24% | 13 | 13 | 100% | 54% | 19% |
| Kayah State | 198 | 171 | 86% | 14% | 39% | 41 | 41 | 100% | 42% | 48% |
| Demoso | 53 | 19 | 36% | 17% | 53% | 2 | 2 | 100% | 100% | 0% |
| Hpruso | 0 | 0 | - | 0% | 100% | 2 | 2 | 100% | 100% | 0% |
| Loikaw | 145 | 145 | 100% | 14% | 36% | 37 | 37 | 100% | 40% | 51% |
| Hpasawgn | | 7 | - | 18% | 22% | 0 | 0 | - | - | - |
| Kayin State | 205 | 205 | 100% | 23% | 23% | 58 | 55 | 95% | 66% | 18% |
| Hpa-an | 99 | 99 | 100% | 24% | 30% | 19 | 19 | 100% | 76% | 17% |
| Hpapun | 11 | 11 | 100% | 24% | 15% | 14 | 11 | 79% | 48% | 35% |
| Myawaddy | 95 | 95 | 100% | 22% | 14% | 25 | 25 | 100% | 71% | 7% |
| Chin State | 193 | 162 | 84% | 25% | 16% | 42 | 30 | 71% | 71% | 14% |
| Tedim | 28 | 28 | 100% | 78% | 0% | 7 | 5 | 71% | 71% | 17% |
| Matupi | 45 | 47 | 104% | 32% | 25% | 0 | 0 | - | - | - |
| Hakha | 72 | 74 | 103% | 21% | 11% | 20 | 17 | 85% | 85% | 6% |
| Falam | 48 | 13 | 27% | 11% | 35% | 15 | 8 | 53% | 53% | 27% |
| Sagaing Region | 468 | 445 | 95% | 26% | 43% | 116 | 116 | 100% | 52% | 36% |
| Taze | 98 | 36 | 37% | 18% | 60% | 12 | 12 | 100% | 50% | 33% |
| Tabayin | 92 | 47 | 51% | 18% | 25% | 1 | 1 | 100% | 13% | 75% |
| Monywa | 141 | 181 | 128% | 30% | 48% | 48 | 48 | 100% | 57% | 37% |
| Shwebo | 137 | 181 | 132% | 29% | 35% | 55 | 55 | 100% | 51% | 34% |
| Thanintharyi Region | 289 | 131 | 45% | 4% | 40% | 72 | 49 | 68% | 40% | 29% |
| Launglon | 34 | 14 | 41% | 33% | 42% | 0 | 0 | | | - |
| Dawei | 55 | 40 | 73% | 11% | 34% | 38 | 27 | 71% | 50% | 16% |
| Bokpyin | 34 | 17 | 50% | 53% | 29% | 0 | 0 | | | - |
| Kawthoung | 50 | 31 | 62% | 9% | 48% | 32 | 20 | 63% | 31% | 43% |
| Myeik | 116 | 22 | 19% | 1% | 41% | 2 | 2 | 100% | 50% | 0% |
| Palaw | | 7 | - | 7% | 42% | 0 | 0 | - | - | - |
| Bago Region | 584 | 567 | 97% | 34% | 33% | 59 | 59 | 100% | 50% | 37% |
| Phyu | 92 | 75 | 82% | 33% | 41% | 17 | 17 | 100% | 39% | 51% |
| Oktwin | 23 | 23 | 100% | 20% | 50% | 14 | 14 | 100% | 61% | 13% |
| Bago | 119 | 119 | 100% | 35% | 35% | 28 | 28 | 100% | 54% | 33% |
| Paung-de | 76 | 76 | 100% | 35% | 34% | 0 | 0 | - | - | - |
| Magway Region | 211 | 211 | 100% | 33% | 31% | 53 | 53 | 100% | 61% | 13% |
| Taungdwingyi | 63 | 63 | 100% | 45% | 6% | 3 | 3 | 100% | 100% | 0% |
| Magway | 85 | 85 | 100% | 31% | 40% | 25 | 25 | 100% | 52% | 14% |
| Pakokku | 63 | 63 | 100% | 29% | 36% | 25 | 25 | 100% | 69% | 14% |
| Mandalay Region | 474 | 474 | 100% | 19% | 59% | 118 | 118 | 100% | 50% | 43% |
| Chanayethazan | 94 | 94 | 100% | 13% | 76% | 0 | 0 | - | - | - |
| Myingyan | 53 | 53 | 100% | 29% | 12% | 27 | 27 | 100% | 66% | 29% |
| Kyaukpadaung | 51 | 51 | 100% | 46% | 7% | 7 | 7 | 100% | 64% | 36% |
| Chanmyathazi | 89 | 89 | 100% | 16% | 61% | 49 | 49 | 100% | 44% | 48% |
| Patheingyi | 50 | 50 | 100% | 29% | 43% | 0 | 0 | - | - | - |
| Pyinoolwin | 51 | 51 | 100% | 20% | 59% | 35 | 35 | 100% | 47% | 45% |
| Mahaaungmyay | 86 | 86 | 100% | 16% | 58% | 0 | 0 | - | - | - |
| Mon State | 299 | 299 | 100% | 31% | 35% | 75 | 71 | 95% | 56% | 20% |
| Mawlamyine | 158 | 158 | 100% | 28% | 34% | 43 | 43 | 100% | 49% | 26% |
| Paung | 101 | 101 | 100% | 31% | 38% | 22 | 22 | 100% | 73% | 4% |
| Ye | 40 | 40 | 100% | 45% | 29% | 10 | 6 | 60% | 60% | 25% |
| Rakhine State | 671 | 436 | 65% | 37% | 28% | 73 | 49 | 67% | 66% | 13% |
| Sittwe | 148 | 156 | 105% | 32% | 45% | 27 | 27 | 100% | 52% | 21% |

| State/region township | New MBEI firms from CSO sample frame | | | | | Panel firms from 2018 MBEI sample frame | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Target | MBEI sample | Target rate | Contact rate | Refusal rate | Target | MBEI sample | Target rate | Contact rate | Refusal rate |
| Kyaukktaw | 0 | 0 | - | - | - | 6 | 0 | 0% | - | - |
| Toungup | 136 | 90 | 66% | 33% | 17% | 22 | 22 | 100% | 100% | 0% |
| Mrauk-U | 0 | 0 | - | - | - | 18 | 0 | 0% | - | - |
| Gwa | 349 | 38 | 11% | 30% | 14% | 0 | 0 | - | - | - |
| Yangon Region | 476 | 476 | 100% | 15% | 50% | 127 | 133 | 105% | 65% | 20% |
| Latha | 37 | 37 | 100% | 15% | 58% | 10 | 11 | 110% | 85% | 0% |
| Lanmadaw | 36 | 36 | 100% | 12% | 65% | 9 | 9 | 100% | 69% | 10% |
| Pazundaung | 37 | 37 | 100% | 16% | 40% | 13 | 15 | 115% | 71% | 6% |
| Hlaingtharya | 50 | 50 | 100% | 14% | 55% | 18 | 20 | 111% | 53% | 41% |
| Yankin | 27 | 27 | 100% | 19% | 33% | 0 | 0 | - | - | - |
| Dagon Myohit (Siekkan) | 27 | 27 | 100% | 15% | 40% | 16 | 16 | 100% | 46% | 33% |
| Mayangone | 50 | 50 | 100% | 12% | 49% | 16 | 17 | 106% | 94% | 0% |
| Bahan | 37 | 37 | 100% | 13% | 63% | 15 | 15 | 100% | 63% | 21% |
| North Okkalapa | 50 | 50 | 100% | 20% | 41% | 14 | 14 | 100% | 78% | 18% |
| Taikkyi | 27 | 27 | 100% | 23% | 31% | 7 | 6 | 86% | 50% | 14% |
| Dagon Myothit (South) | 71 | 71 | 100% | 16% | 42% | 9 | 10 | 111% | 77% | 17% |
| Ahlone | 27 | 27 | 100% | 14% | 58% | 0 | 0 | - | - | - |
| Shan State | 862 | 540 | 63% | 9% | 54% | 227 | 213 | 94% | 29% | 54% |
| Mongmit | 56 | 17 | 30% | 10% | 67% | 47 | 25 | 53% | 42% | 44% |
| Kengtung | 72 | 8 | 11% | 2% | 88% | 7 | 10 | 143% | 29% | 63% |
| Mongyawng | 48 | 1 | 2% | 2% | 80% | 0 | 0 | - | - | - |
| Nawnhkio | 62 | 40 | 65% | 6% | 55% | 1 | 34 | 3400% | 54% | 21% |
| Kunlong | 7 | 8 | 114% | 35% | 11% | 0 | 0 | - | - | - |
| Loilen | 81 | 15 | 19% | 6% | 66% | 0 | 0 | - | - | - |
| Tachileik | 62 | 62 | 100% | 16% | 56% | 63 | 15 | 24% | 42% | 48% |
| Mongkhet | 0 | 0 | - | 0% | - | 0 | 0 | - | - | - |
| Muse | 84 | 2 | 2% | 0% | 93% | 0 | 0 | - | 0% | 100% |
| Tangyan | 9 | 9 | 100% | 5% | 10% | 15 | 15 | 100% | 34% | 61% |
| Hsipaw | 58 | 21 | 36% | 9% | 46% | 0 | 0 | - | - | - |
| Mongping | 53 | 1 | 2% | 1% | 75% | 0 | 0 | - | - | - |
| Lashio | 61 | 66 | 108% | 11% | 58% | 65 | 77 | 118% | 18% | 65% |
| Taunggyi | 90 | 91 | 101% | 14% | 60% | 21 | 34 | 162% | 58% | 37% |
| Hopang | 7 | 7 | 100% | 26% | 30% | 0 | 0 | - | - | - |
| Kutkai | 56 | 0 | 0% | 0% | - | 0 | 0 | - | - | - |
| Pindaya | 53 | 12 | 23% | 8% | 50% | 0 | 0 | - | - | - |
| Pinlaung | 3 | 3 | 100% | 4% | 73% | 0 | 0 | - | - | - |
| Hopong | | 27 | - | 34% | 25% | 0 | 0 | - | - | - |
| Kalaw | | 48 | - | 10% | 57% | 0 | 0 | - | - | - |
| Lawksawk | | 50 | - | 27% | 22% | 0 | 0 | - | - | - |
| Nyaungshwe | | 52 | - | 33% | 15% | 0 | 0 | - | - | - |
| Theinni | 0 | 0 | . | | | 8 | 3 | 38% | 38% | 50% |
| Ayeyarwady Region | 212 | 212 | 100% | 30% | 13% | 54 | 54 | 100% | 63% | 11% |
| Pyapon | 33 | 33 | 100% | 28% | 6% | 9 | 9 | 100% | 53% | 0% |
| Ma U-bin | 32 | 32 | 100% | 26% | 10% | 7 | 7 | 100% | 50% | 13% |
| Wakema | 32 | 32 | 100% | 33% | 16% | 8 | 8 | 100% | 67% | 0% |
| Hinthada | 42 | 42 | 100% | 25% | 15% | 10 | 10 | 100% | 83% | 9% |
| Pantanaw | 30 | 30 | 100% | 37% | 12% | 8 | 8 | 100% | 67% | 20% |
| Pathein | 43 | 43 | 100% | 35% | 16% | 12 | 12 | 100% | 63% | 20% |
| Nay Pyi Taw | 282 | 293 | 104% | 19% | 12% | 70 | 93 | 133% | 37% | 32% |
| Lewe | 102 | 103 | 101% | 21% | 10% | 24 | 26 | 108% | 46% | 19% |
| Pyinmana | 112 | 156 | 139% | 19% | 11% | 18 | 48 | 267% | 31% | 39% |
| Poke Ba Thi Ri | 68 | 34 | 50% | 15% | 9% | 28 | 19 | 68% | 49% | 24% |
| **TOTAL** | | | **84%** | **18%** | **43%** | | | **96%** | **46%** | **35%** |

# 6.2. Construction of the Subindices

### 6.2.1. Rescaling of indicators

An important strength of the MBEI is that it compares economic governance against best practices already experienced in Myanmar, not against some idealized standard. For this reason, each indicator is standardized to a 10-point scale, whereby the best and worst recorded scores among all respondents are awarded the values of 10 and 1 respectively, and the other respondents' assessments are rescaled to fit somewhere along the scale between these two scores.

In the equation below, r represents the index for each respondent; min and max represent the lowest and highest respective scores given in the survey. If a high value represents negative governance, we simply subtract the rescaled indicator score from 11 to reverse the scale. In a few cases, outliers, scores over three standard deviations from the mean were re-coded to less dispersed minimum and maximum values.

$$Indicator\ Score = 9 * \left( \frac{Score_r - Score_{min}}{Score_{max} - Score_{min}} \right) + 1$$

The MBEI team calculates individual rescaled values, subindices, and MBEI scores for each individual firm answering the survey.[32] Creating individual governance indices at the respondent level has the benefit of allowing us to calculate inequality in governance within every township and S/R. It also permits reaggregation, whereby we can analyze governance scores for particular economic sectors, genders of owner, types of enterprise, or sizes of firm.[33]

### 6.2.2. Creating subindices

Using the existing literature on the business environment as a guide, as well as incorporating discussion by policy makers and economic analysts on Myanmar, indicators are grouped into the ten subindices discussed above. Considerable effort was made to ensure that these subindices corresponded with previous research on the obstacles to private-sector entry and growth in Myanmar. (See chapter 3 for a full discussion of the selection of each indicator.)

Once the indicators are standardized, a weighted average of all indicators is taken to create the subindex at the respondent level. Weighted averages are employed to better incorporate hard data when we have it. To limit perception biases, survey data received a weighting of 60%, and hard data always received 40% of the weight in the subindices where it was employed.

# 6.3. Calibration of the final MBEI

A simple summation of the ten subindices yields an unweighted index with a possible maximum of 100 points. While this is clearly the easiest and simplest method of calculating the final MBEI, it is inappropriate as a policy tool for the simple reason that some subindices are more important than others in explaining private-sector development. Hence, it is important to reweight subindices based on their actual contributions to economic welfare. To do so, the research team used multivariate regression analysis to determine how each of the subindices influenced the key economic performance variables that researchers and practitioners in Myanmar have deemed the most important gauges of private-sector development. In particular, we looked at the relationship between the MBEI and average business confidence in local leaders, performance of the business in the past year, and willingness of the business to expand its operations.

**Weights are applied in order to incorporate the relative contribution of each subindex to key economic outcomes.** Econometric procedures were used to control for the influence of structural variables by using them as control variables—including historical wealth, measured by lag GDP per capita; market size, measured by population density; geographic spread, measured by surface area; and unique

features of particular industries (two-digit sector fixed effects). In essence, we learn which subindices provide businesses with incentives to increase the size of their projects and create jobs. We favor this outcome variable, because the ultimate goal of local officials is to enhance the economic welfare of their populace.

Full regression results can be found in table 6.2. Model 12 in the table is used to generate the weights by regressing employment growth on all subindices at the same time.[34] Results, however, are consistent if we regress labor on each subindex separately.

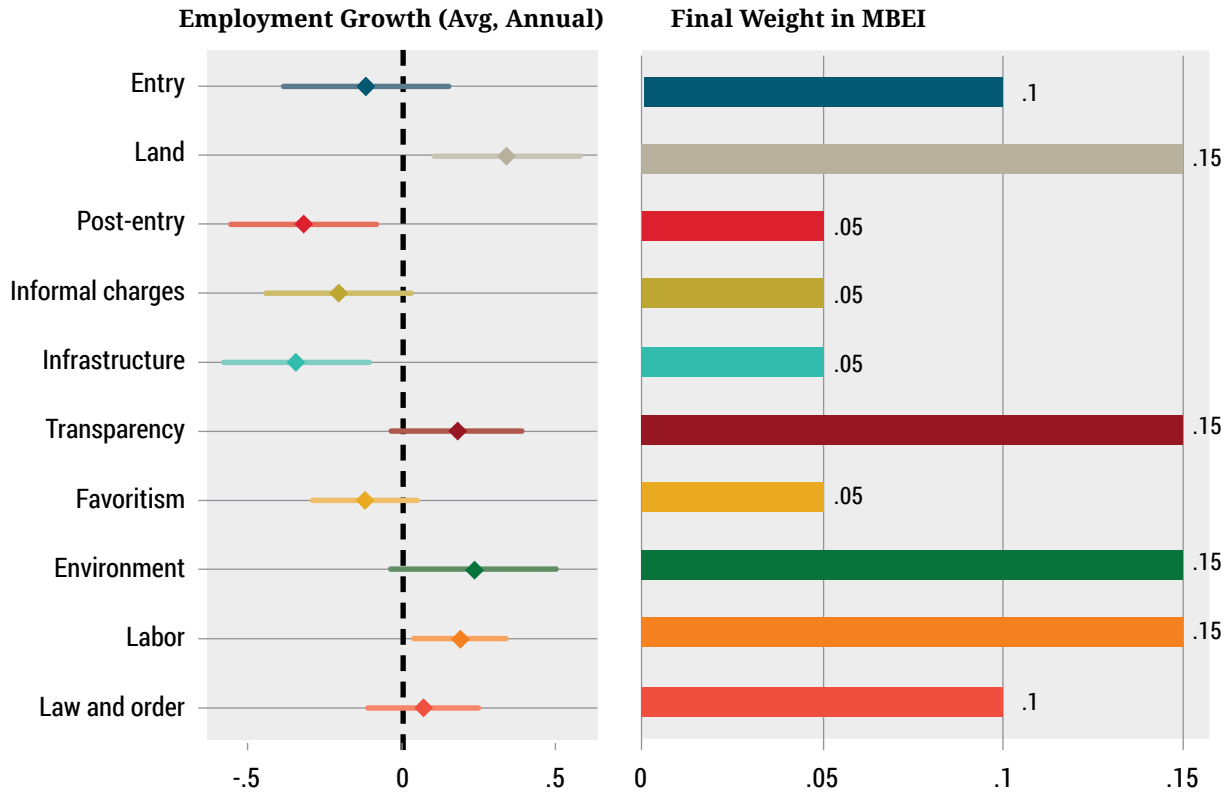
The left panel of figure 6.5 provides a graphical representation of the linear regression, where average annual labor growth was regressed on the ten subindices and the structural control variables. The diamond indicates a regression coefficient, or the statistical relationship between the index and labor growth. For instance, the coefficient on transparency (subindex 6) is 0.177, which means that a one-point improvement in the subindex is associated with 0.177 percentage points of labor growth per year since the establishment of the firm.

When the diamond is to the right of the zero line, it indicates a positive correlation between the subindex and labor growth. A diamond to the left indicates a negative effect. The range bars represent 95% confidence intervals, indicating the range of possible regression coefficients that would be possible with repeated firm samples from the underlying population. When the line intersects the zero line, we say that the estimate is not statistically significant, meaning that we cannot be sure in repeated samples that the effect is distinguishable from zero. Lines that do not overlap are statistically significant, implying that we can feel confident that the observed relationship will be found in alternative samples.

**Regression modeling is used to generate weights for the 10 subindices.** Regression

FIGURE 6.5

**Relationship between Subindices and Labor Growth (Linear Regression Model)**




Range Bars=95% CIs; Regressions control for firm age, population density (1000s), surface area (1000 lm) GDP per capita (ln, lag1), labor size at

TABLE 6.2

## Regression Results to Create Weights

| Dependent Variable=Average Annual Employment Growth | Un-weighted | Sub-Index 1 | Sub-Index 2 | Sub-Index 3 | Sub-Index 4 | Sub-Index 5 | Sub-Index 6 | Sub-Index 7 | Sub-Index 8 | Sub-Index 9 | Sub-Index 10 | Weight Creation | Weighted MBEI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
| Unweighted Index | -0.015 | | | | | | | | | | | | |
| | (0.029) | | | | | | | | | | | | |
| Weighted MBEI | | | | | | | | | | | | | 0.046^ |
| | | | | | | | | | | | | | (0.027) |
| Entry Costs | | -0.239 | | | | | | | | | | -0.113 | |
| | | (0.171) | | | | | | | | | | (0.163) | |
| Land Access | | | 0.303* | | | | | | | | | 0.343* | |
| | | | (0.149) | | | | | | | | | (0.147) | |
| Post-Entry Regulation | | | | -0.296* | | | | | | | | -0.328* | |
| | | | | (0.134) | | | | | | | | (0.144) | |
| Informal Charges | | | | | -0.289* | | | | | | | -0.224 | |
| | | | | | (0.138) | | | | | | | (0.147) | |
| Infrastructure | | | | | | -0.242^ | | | | | | -0.338* | |
| | | | | | | (0.134) | | | | | | (0.145) | |
| Transparency | | | | | | | 0.245^ | | | | | 0.177 | |
| | | | | | | | (0.133) | | | | | (0.130) | |
| Favoritism | | | | | | | | -0.168 | | | | -0.136 | |
| | | | | | | | | (0.105) | | | | (0.106) | |
| Environment | | | | | | | | | 0.269^ | | | 0.219 | |
| | | | | | | | | | (0.147) | | | (0.163) | |
| Labor Recruitment | | | | | | | | | | 0.177^ | | 0.199* | |
| | | | | | | | | | | (0.090) | | (0.093) | |
| Law and Order | | | | | | | | | | | -0.005 | 0.075 | |
| | | | | | | | | | | | (0.098) | (0.112) | |
| Employment at Origin (ln) | -5.080*** | -5.093*** | -5.099*** | -5.101*** | -5.093*** | -4.987*** | -5.084*** | -5.088*** | -5.079*** | -5.092*** | -5.078*** | -5.176*** | -5.081*** |
| | (0.379) | (0.382) | (0.378) | (0.381) | (0.379) | (0.395) | (0.379) | (0.379) | (0.378) | (0.379) | (0.379) | (0.379) | (0.379) |
| Firm Age | -0.212*** | -0.212*** | -0.213*** | -0.211*** | -0.212*** | | -0.211*** | -0.212*** | -0.212*** | -0.212*** | -0.212*** | -0.214*** | -0.212*** |
| | (0.014) | (0.014) | (0.014) | (0.014) | (0.014) | | (0.014) | (0.014) | (0.014) | (0.014) | (0.014) | (0.014) | (0.014) |
| GDP per capita (ln, lag) | 0.477* | 0.439* | 0.453* | 0.472* | 0.467* | 0.372 | 0.411^ | 0.473* | 0.473* | 0.390^ | 0.464* | 0.402^ | 0.417^ |
| | (0.218) | (0.218) | (0.219) | (0.217) | (0.219) | (0.234) | (0.212) | (0.220) | (0.220) | (0.224) | (0.218) | (0.226) | (0.214) |
| Population Density (1000s) | 0.109*** | 0.105*** | 0.114*** | 0.102*** | 0.094*** | 0.129*** | 0.106*** | 0.110*** | 0.103*** | 0.103*** | 0.109*** | 0.102*** | 0.108*** |
| | (0.026) | (0.026) | (0.027) | (0.026) | (0.027) | (0.032) | (0.026) | (0.026) | (0.026) | (0.027) | (0.027) | (0.029) | (0.027) |
| Surface Area (1000s km) | 0.195* | 0.181^ | 0.214* | 0.192^ | 0.200* | 0.214* | 0.191^ | 0.196* | 0.232* | 0.220* | 0.202* | 0.166^ | 0.226* |
| | (0.095) | (0.096) | (0.096) | (0.096) | (0.095) | (0.102) | (0.095) | (0.092) | (0.097) | (0.096) | (0.096) | (0.094) | (0.098) |
| Sector Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Constant | 7.551* | 8.943* | 4.992 | 8.930** | 9.120** | 5.592^ | 6.843* | 8.408** | 5.536^ | 7.001* | 6.843* | 11.298** | 4.803 |
| | (3.457) | (3.439) | (3.169) | (3.063) | (3.198) | (3.123) | (2.972) | (3.056) | (3.155) | (2.976) | (3.095) | (3.924) | (3.354) |
| Observations | 5,605 | 5,605 | 5,605 | 5,605 | 5,605 | 5,605 | 5,605 | 5,605 | 5,605 | 5,605 | 5,605 | 5,605 | 5,605 |
| R-squared | 0.313 | 0.313 | 0.314 | 0.314 | 0.314 | 0.242 | 0.314 | 0.314 | 0.314 | 0.313 | 0.313 | 0.320 | 0.313 |

Linear model with survey weights and broad sector fixed effects. Standard errors in parentheses (*** p<0.001, ** p<0.01, * p<0.05, ^ p<0.1)

outcomes were then rounded to deliver basic classes of weights, shown in the final column of table 6.2 and the right panel of figure 6.5. Subindices that have significant and positive relationships with employment growth—land access (subindex 2), transparency (subindex 6), environmental compliance (subindex 8), and labor recruitment (subindex 9)—are placed in the highest weight class of 15%. Subindices that are negatively associated with private-sector development outcomes—post-entry regulation (subindex 3), informal charges (subindex 4), infrastructure (subindex 5), and favoritism in policy (subindex 7) —are placed in the lowest weight class of 5%. The medium weight class of 10% is reserved for those with positive but statistically insignificant relationships with employment growth. This includes entry costs (subindex 1) and law and order (subindex 10).

The success of the weighting scheme can be found by comparing the relationship between the unweighted index and labor growth in Model 1 and the weighted index in Model 13 of table 6.2. Notice how the coefficient size increases from -.015 to .046, and statistical significance increases.[35] This is because the weighted MBEI is more strongly correlated with firm-level employment growth.

However, figure 6.6 illustrates that weighting is not very interventionist in terms of altering the rankings. The correlation between unweighted and weighted indices for both the S/R and township MBEI is over .96 and highly statistically significant, indicating that overall rankings would be quite similar even without weights.

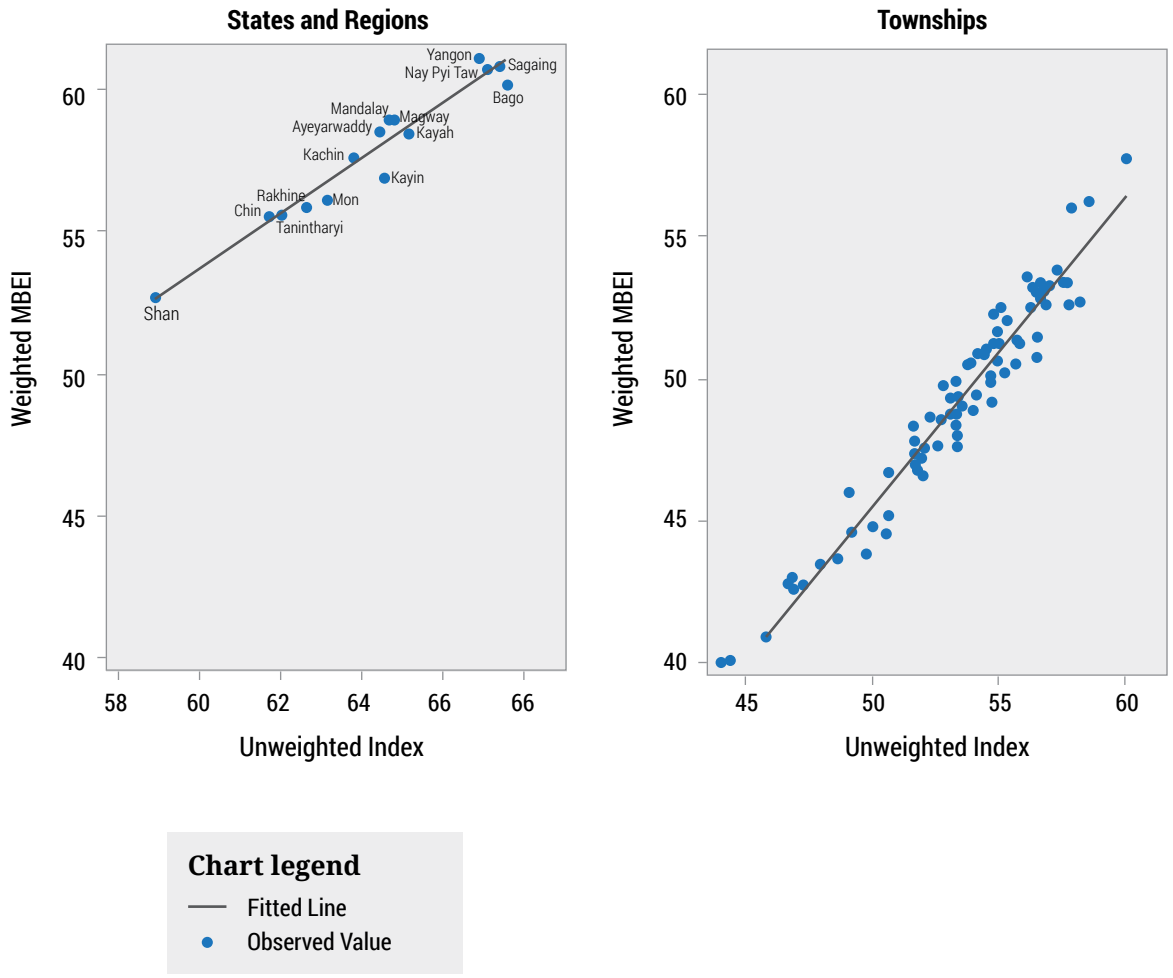
TABLE 6.3

## Description of Subindex Dimensions and Weighting Approach

| Subindex | Core indicators | New indicators | Dimensions (weight within subindex) | Weight in MBEI (%) |
|---|---|---|---|---|
| Entry costs | 7 | 10 | Survey data (60%)<br>Admin. and obs. data (40%) | 10 |
| Land access and security | 6 | 13 | Survey data (60%)<br>Admin. and obs. data (40%) | 15 |
| Post-entry regulation | 11 | 7 | Survey data (60%)<br>Admin. and obs. data (40%) | 5 |
| Informal charges | 8 | 1 | Survey data (60%)<br>Admin. and obs. data (40%) | 5 |
| Infrastructure | 13 | 11 | Survey data (60%)<br>Admin. and obs. data (40%) | 5 |
| Transparency | 14 | 5 | Survey data (60%)<br>Admin. and obs. data (40%) | 15 |
| Favoritism in policy | 7 | 1 | Survey data (100%) | 5 |
| Environmental compliance | 7 | 5 | Survey data (60%)<br>Admin. and obs. data (40%) | 15 |
| Labor recruitment | 7 | 5 | Survey data (60%)<br>Admin. and obs. data (40%) | 15 |
| Law and order | 12 | 3 | Survey data (60%)<br>Admin. and obs. data (40%) | 10 |

FIGURE 6.6

## Relationship between Weighted and Unweighted MBEI



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# Endnotes

1. In this report, we often refer to this as the 2018 wave to highlight the time period when data was collected.
2. Government Resolution 19-2018/NQ-CP, dated 15/5/2018, "Continued implementation of key tasks and solutions to improve business environment and national competitiveness in 2018 and following years," and Government Resolution 35/NQ-CP, dated 16/5/2016, on business support and development towards 2020.
3. For an excellent review of this literature see Le et al. 2016.
4. For a deeper discussion of each of these issues see Edmund Malesky's chapter "Decentralization and Business Performance," in *Decentralized Governance and Accountability,* edited by Jonathan Rodden and Erik Wibbels, 144–177. Cambridge University Press.
5. In doing so, we remove the influence of structural variables by using them as control variables, including historical wealth (measured by lag GDP per capita), market size (measured by population density), geographic spread (measured by surface area), and unique features of particular industries (two-digit sector fixed effects).
6. These measures also have the largest standard deviations (SDs), a common measure of variance used by statistical researchers, because, assuming a standard normal distribution, 68.2% percent of observations are located within one SD of the mean. The bigger the SD, the greater the distance from the mean one has to measure to reach 68.2% of observations. The SDs of labor recruitment (0.92), and infrastructure (0.83) are all close to 1 point on the index.
7. Transparency (SD=.39), land access (SD=.42), environmental compliance (SD=.46), and informal charges (SD=.49).
8. Nine townships with less than 10 total firms were dropped in the calculation of final scores.
9. Calculated using an analysis of variance (ANOVA) of the 5,605 firm-level MBEI scores using STATA's loneway command.
10. We use night light data and take the natural log to address non-normality in the distribution.
11. Note that 2018 data comes from the 2014 census and includes land lines as well as mobile.
12. The question wording in 2020 was slightly more inclusive and could have yielded more yes answers.
13. Measurement of primary school enrollment changed between surveys from share of the whole population in the 2014 Census to share of the school-age population in the 2017 Myanmar Living Conditions Survey.
14. Measurement of middle school enrollment changed between surveys from share of the whole population in 2014 Census to share of the school-age population in the 2017 Myanmar Living Conditions Survey.
15. Known as MyCo for Myanmar Companies Online (https://www.myco.dica.gov.mm/index.aspx)
16. In 2018, firms were asked about a generic land title. In 2020, the question was made more precise to apply to Land Grants for urban spaces and Form 7 for rural spaces.
17. Interestingly, the median S/R shows a moderate increase in law and order scores over time. The discrepancy results from high levels of variation on subindex 10 among townships within S/Rs.
18. Malesky, Edmund, Dimitar Gueorguiev, and Nathan Jensen (2015).), "Monopoly Money: Foreign Investment and Bribery in Vietnam, A Survey Experiment," *American Journal of Political Science* 59(2): 419–439.
19. Imputing 0 for those who did not state a price does not substantively change the results.
20. Businesses in townships under a CDC were asked if they hold a CDC business license. Correspondingly businesses in other townships were asked if they hold a DAO operating license. Over 98% of those responding to the CDC question said they have the license (99% of new businesses and 96% of panel businesses) and about 97% of those responding to the DAO question said they have the license (98% of new businesses and 92% of panel businesses).
21. As discussed further below, this may be because of difficulty in distinguishing between food services and food processing among small firms.
22. For legal justification of our coding, please see *Guidance on Land Issues in Myanmar* (UN-Habitat et al. 2019).
23. According to the 1953 Land Nationalization Act, Article 39, to change a parcel from "agricultural land" into "nonagricultural land" one must get permission from the State/Region Peace and Development Council.

24. http://www.myanmarinfrastructuresummit.com/
25. While the internet was shut down for security reasons in parts of Rakhine and Chin State last year, these events do not affect our calculations, as our sampled townships in those S/Rs were not included in the shutdown.
26. Measurement of primary and middle school enrollment changed between surveys from the share of the whole population in the 2014 Census, which measured completion rate, to the share of the school-age population in the 2017 Myanmar Living Conditions Survey, which measures enrollment. While they are different measures, they are correlated closely enough to use the original measure in the panel.
27. In the original iteration of the survey, in 2018, the research team conducted focus group discussions and conducted in-depth interviews with businesses in Yangon and Mandalay Regions, including groups of businesses owned by women and ethnic minorities. These were organized to test for sensitivity with respect to firm size, gender, and ethnicity and led to revisions in terminology and structure of the instrument to most accurately collect data from these subgroups.
28. See Thien et al. 2019 for details of the Business Registry.
29. Survey weights are included in the dataset. Please let researchers know if you want to analyze them in more detail or use them in your own work. They can provide advice on how to construct and analyze them.
30. Assuming 95% confidence intervals and a 3% margin of error around estimates.
31. For example, several townships in Shan and Rakhine State were dropped from the sample due to security concerns for the field team, while other townships were added to account for nonresponse or smaller-than-expected business populations.
32. The panel represents the 2018 and 2020 max/min for both years.
33. It also makes it easier to catch cheating by looking at deviations in provincial scores across respondents.
34. Model numbers can be found at the top of each column in table 6.2.
35. Models can be found at the top of the columns in table 6.2.

The Asia Foundation

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