Facilitating Development: Evidence from a National-Level Experiment on Improving Bureaucratic Performance in Myanmar

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Abstract

Despite strong theoretical foundations, randomized evaluations demonstrate that subnational performance assessments (SPAs) have a mixed record in improving governance. We suggest that a key factor influencing this disappointing result has been the omission of facilitation—working with bureaucrats on how to use SPAs effectively and encouraging collaboration across government agencies. The argument is tested on a nationally-representative panel of townships in pre-coup Myanmar. Facilitation workshops were conducted in 20 randomly assigned townships, bringing together officials from multiple government agencies and introducing them to the results of the Myanmar Business Environment Survey (MBEI), a subnational performance assessment that scored a panel of 60 townships on 92 governance indicators. Results show that businesses in townships where officials attended facilitation workshops ranked their townships twice

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as high as the businesses in the control group. Variation in MBEI improvements was moderated by the degree of decentralization in bureaucratic agencies.[1]

[1]Ethics Statement: We received approval from the relevant University IRBs before conducting this research. We made sure to adhere to the highest levels of experimental ethics in the conduct of our experiment. Our only contribution to the intervention was the randomization of facilitation workshops that were previously planned, budgeted, and scheduled to begin under the management of our partner NGO.

1 Introduction

Inspired by the popularity of global performance indices (Kelley and Simmons 2021), subnational performance assessments (SPAs) have become widespread in development interventions (Kelley and Simmons 2019). By creating objective rankings and scorecards of subnational administration on levels of democracy, economic governance, transparency, and corruption control, SPAs aim to augment the theoretical benefits of administrative decentralization by inspiring constructive regional competition, enabling citizens and firms to hold leaders accountable, identifying best practices for policy diffusion, and informing flows of labor and capital to the most productive locations (World Bank 2019). Despite these lofty goals, rigorous evaluations of SPA interventions have provided mixed results. Many experiments have failed to deliver clear cut evidence of the benefits of SPAs on their stated objectives (Dunning et al. 2019)—including, most importantly, sustained improvements in governance of the evaluated bureaucratic actors (Lieberman, Posner and Tsai 2014). The failure of SPAs to consistently improve bureaucratic performance has considerable implications for citizens' welfare, as bureaucrats, not politicians, are the primary actors with which citizens interface with their government (Pepinsky, Pierskalla and Sacks 2017).

In this paper, we suggest that there are two important reasons for SPAs' lack of success: (i) the dominance of unidirectional, hands-off delivery, and (ii) the targeting of the rankings primarily to subnational constituents and voters. There are both theoretical and methodological reasons for these choices in existing work. Theoretically, 80% of the randomized trials we reviewed focus on voters, rather than politicians and bureaucrats, because they aim to test how SPAs enhance accountability and therefore seek to observe whether citizens use the new information in bottom-up sanctioning of politicians (Banerjee et al. 2011; Buntaine et al. 2018; Collins 2021; Kendall, Nannicini and Trebbi 2015; Dunning et al. 2019). Methodologically, researchers fear the inadvertent introduction of additional treatment effects beyond the new information. Therefore, nearly 60% of randomized trials have opted to disseminate SPA results in easy to read scorecards or infographics in a unidirectional manner through short reports, websites, smart phone applications, videos, or public presentations (Adida et al. 2020; Arias et al. 2018; Boas and Hidalgo 2019; Platas and

Raffler 2019). While these logics make sense, they are at odds with a well-established literature on organizational learning in public administration and management, which has demonstrated that information provision is ineffective when the actors lack "absorptive capacity," defined as the ability to understand the value of the new information, incorporate it into current practices, and manage continuous progression toward improving their performance. (Cohen and Levinthal 1990). Critically, unidirectional delivery to voters puts bottom-up pressure on politicians and bureaucrats to make changes, but does not necessarily equip bureaucrats with the specific information on best practices and benchmarks for responding to those demands. Even if metrics are shown to bureaucrats by voters or politicians, it does not guarantee that they understand or know how to use them. Public administration and management scholars therefore recommend that information dissemination take place through facilitation workshops that are led by substantive specialists, operate in a deliberative environment of key decision-makers, and aim to establish a consensus upon measurable indicators of progress (Berta et al. 2015; Harvey et al. 2002). In this project, we devise and test a developmental intervention that attempts to correct both of these gaps in the literature by targeting street-level bureaucrats directly with faciliation workshops on how best to employ SPAs in governance reform efforts.

Drawing upon a deep political economy literature on decentralization, we further argue that the benefits of facilitation workshops are not uniform, but rather are conditioned by the level of decision-making authority, local knowledge, and embeddedness of local bureaucrats (Bhavnani and Lee 2018; Wibbels 2006). Policy areas that feature more autonomous decisions have more embedded local bureaucrats. Therefore, facilitation is more likely to lead to positive benefits in areas where administrative decentralization is higher and subnational bureaucrats have greater authority to shape and implement policies (Rodden and Wibbels 2019; Bardhan 2002).

To test these theories, we cooperated with The Asia Foundation (TAF) office in Myanmar on a field experiment to employ facilitation workshops in dissemination of their Myanmar Business Environment Index (MBEI) in 20 randomly assigned townships. Myanmar's extremely low state capacity and poor record of economic governance make it an ideal place to test the efficacy of

the facilitation workshops. Emerging from nearly fifty years of military rule that had neglected civilian governance and had even prohibited social science study at universities, the new civilian government was forced to build a bureaucracy and regulatory state from scratch. Human capital levels were extremely low and, as late as 2020, many guiding regulations on businesses, taxes, and land, dated back to the British colonial administration (U 2021). Consequently, Myanmar performed poorly along key indicators of bureaucratic efficacy and governance at the time of the experiment—it ranked 202/210 on the World Bank's Government Effectiveness Ranking, 177/189 on the World Bank's Ease of Doing Business Index, and 134/144 on the World Economic Forum's Global Competitiveness Index. As a result, the facilitation workshops in our experiment were intended to alleviate the capacity and information deficits inherent in the bureaucracy that have frustrated economic governance improvements (Hendrix and Noland 2015; Prakash et al. 2013).

TAF's MBEI project combined survey data from 4,874 small and medium size enterprises (SMEs) with administrative and observational data to rank economic governance along ten subdimensions in all 14 Myanmar states and regions (S/Rs). The MBEI focused on indicators under the jurisdiction of bureaucrats and is therefore plausibly responsive to improved bureaucratic performance. The 2018 wave of the index collected data in 60 randomly drawn townships, the primary administrative level at which SMEs experience local governance in the form of applying for operating licenses, titling land, experiencing regulatory inspections, and accessing information on local infrastructure plans, zoning policies, and service fees (Malesky, Dulay and Keesecker 2019, pp. 30-31). Prior to the collection of data for the 2020 wave, TAF organized facilitation workshops to disseminate results of the 2018 MBEI to township leaders and bureaucrats. Due to time and budget constraints, it was not possible for TAF to reach all of the planned townships, so they cooperated with us to randomly select one third of the townships for the facilitation, which we describe in more detail below.

This approach allows us to use the results of the 2020 MBEI as the outcome variable in comparing the treated township with the 40 additional locations that were also included in the 2018 MBEI. Through their S/Rs, control townships had access to written copies of the 140-

page technical report, a brief pamphlet describing key indicators, and access to an online widget that allowed them to compare the 10 subindices to other townships in their S/R and Myanmar more generally. In short, the control townships had the type of detailed information that usually accompanies unidirectional delivery of SPA results. The treatment group, however, had the benefit of these tools combined with the intensive facilitation workshops.

The state-of-the-art facilitation workshops brought together bureaucrats across government departments, presented them with the MBEI results, allowed them to ask questions and deliberate, and made them prescribe actionable policy changes in the presence of and after discussing with bureaucrats from other departments. As such, the treatment went beyond unidirectional SPA provision and focused on internalizing and coordinating information across teams, leading to improved governance. In this sense, the facilitation workshops bundled together several potential theoretical mechanisms that might generate improved performance. Given the small number of treatment townships, this was necessary to ensure statistical power. However, evidence that the bundled package works is necessary before future work can disaggregate the mechanisms with separate tests.

Using a difference-in-differences (DiD) estimator, we analyze changes in the 100-point core MBEI index, created from 92 indicators across the 10 sub-dimensions that were collected exactly the same way in both the 2018 and 2020 waves. The survey data used in the core MBEI comes from a panel of 1,200 SMEs, which were interviewed in both waves, while observational data (such as whether local government offices had staff present or publicly posted license fees) was collected from enumerators, who visited the administrative offices in all 60 townships. Administrative data was collected from aggregate survey data, such as the 2019 census, and other handbooks.

In the most fully-specified model, we find that firms in control townships reported core MBEI improvements of about four points (equal to 0.63 standard deviations) on the 100-point index. However, firms in treatment townships reported governance improvements of nearly 8 points (equal to 1.26 standard deviations), indicating that facilitation workshops more than doubled the recorded reform achievements. This result is robust to several sensitivity tests, including: (1)

post-stratification survey weights; (2) use of a modified index (the weighted MBEI) that weights subindices by their impact on firm employment growth, a key development outcome; (3) final indices constructed from only survey and only administrative/observational data; and (4) the analysis of new indicators to rule out teaching-to-the-test.

To test the secondary argument that facilitation is augmented by decentralized decision-making authority and embeddedness, we take advantage of a unique feature of Myanmar's incomplete decentralization. At the time of the experiment in 2019, township level governance decisions were split between the highly centralized General Administrative Department (GAD) and the decentralized Development Affairs Office (DAO). The GAD officers rotated out of their township every three years and reported directly to the Ministry of Home Affairs (MoHA), a military controlled bureaucracy according to the 2008 Constitution. The GAD handled land management, local courts and policing, zoning, construction permits, and tax collection. By contrast, the DAO had a leadership council that was locally elected and was led by administrators drawn from the local population. DAOs provided local infrastructure and services, such as roads, street lighting, and garbage collection, issued operating licences for most SMEs, and conducted regulatory inspections.

In line with the decentralization hypothesis, we find a significant and positive relationship of facilitation workshops of about half a point (about 0.43 SDs) on a specialized index created from various indicators under the control of the DAO. We see no significant improvement on a parallel specialized GAD index, which includes indicators solely under the jurisdiction of the GAD.

Our findings, which show that facilitation workshops lead to the implementation of governance improving policies based on SPAs, but that the effects are moderated by the level of autonomy and embeddedness of local officials, contribute to important political economy work on the benefits of decentralization for economic development and in the use of SPAs by development practitioners to kickstart these benefits through information provision (Bardhan 2002; Rodden and Wibbels 2019).

2 Theoretical Framework

A well-informed, knowledgeable bureaucracy is a precondition for effective policy design and implementation. But real-world bureaucracies fall well-short of this ideal. For example, the principal agent relationships that underlie monitoring and enforcement within bureaucracies is muddled when there are too many agents, making monitoring too difficult (Hart and Latacz-Lohmann 2005), or when there are too many principals, leaving agents unsure to whom they are accountable (Gulzar and Pasquale 2017). Moreover, the organizational incoherence of bureaucracies limits information, monitoring, and accountability among the bureaucrats themselves (Bardhan 2002). The problems brought about by organizational complexity are exacerbated in weak and unprofessional bureaucracies. The opaque, non-meritocratic selection process of poorly-run bureaucracies, combined with an incoherent organizational structure without clearly defined roles, serves as a stark contrast to the Weberian ideal of professional, meritocratic bureaucracies exemplified by many Western democracies (Kaufmann, Kraay and Zoido 1999) and East Asian developmental states (Evans 2012; Ricks and Doner 2021).

When bureaucrats operate in subnational administrative units, SPAs and other transparency initiatives have been promoted as an ideal solution to bureaucracies' informational problems. In principle, these initiatives provide multiple benefits. First, they bestow bureaucrats with information, through actionable and targeted metrics, on local government performance, allowing them to tailor policy to better meet the needs of their constituents. Second, SPAs provide voters with the information they need to vote for high-performing politicians or vote out poor-performing ones, thus holding them (and the bureaucrats they monitor) accountable to the public they are meant to serve (Gottlieb 2016; Platas and Raffler 2019). Third, SPAs help promote competition between localities. Poor performing localities may lose labor and capital, as firms move to places that have better governance and investment environments. Finally, SPAs may lead to innovations on the part of the local government. By identifying the best performing localities, local governments now have models for best-practice that they can attempt to replicate (World Bank 2019).

However, a growing empirical literature has shown that SPAs and other transparency initiatives have not delivered on their promise. Table 1 categorizes twenty development studies that use randomized information interventions to test the impacts of SPAs.[2] We selected all randomized studies we could find from political science and economics, and categorize them along two dimensions: the main target of the SPA information (bureaucrats, politicians, and citizens), and the mode of SPA delivery, unidirectional through flyers, infographics scorecards, or videos, or possessing some facilitative elements, such as consultation, deliberation, feedback, or Q&A. There are two takeaways from the table. First, unidirectional delivery of SPAs does not seem to be effective for any actor, but especially for voters. Consider the cell under unidirectional delivery to citizens: only 25% of the 12 studies, most of which attempted to inform citizens about the performance of politicians, had significant direct effects on outcomes. If we then consider facilitative delivery to citizens (bottom right cell) we find that 57% of the studies achieve significant treatment effects. This is more than double the effectiveness of unidirectional delivery to citizens. This difference supports the findings of Dunning et al. (2019), who show through meta-analysis of six studies that unidirectional information treatments do not lead to increased political accountability. Moreover, consistent with our theory, studies where information dissemination has elements of facilitation seem to be more effective at eliciting significant direct effects.

Second, very few experiments use SPAs to change the behavior of bureaucrats. While only two studies directly test the effect of SPAs on bureaucrats (one study uses unidirectional delivery while the other uses facilitative delivery), both studies show significant effects of SPA delivery on bureaucrat performance. Small sample size notwithstanding, this suggests that targeting the SPAs to bureaucrats may maximize SPA effectiveness. Moreover, direct targeting of SPAs to bureaucrats remains greatly understudied, in spite of the fact that bureaucrats remain principally responsible for the implementation of the very policies that SPAs are meant to affect, and in general oversee performing the governance functions that map directly into how citizens view the performance and capacity of the state (Pepinsky, Pierskalla and Sacks 2017). Indeed, there is a growing consensus

[2] A detailed description of the 20 papers is available in Appendix Table A1. The raw count from each of the cells in the Table is 24. This is because some papers study multiple agents, for example voters and politicians, in the same article.

that bureaucratic performance is among the most important factors in determining state effectiveness (Bertrand et al. 2020; Best, Hjort and Szakonyi 2017). Furthermore, new work on bureaucrats in developing countries has shown that simple interventions such as information provision through text messages and fiscal and career incentives can improve bureaucratic behavior (Dustan, Maldonado and Hernandez-Agramonte 2018; Zarychta, Grillos and Andersson 2020). These results suggest that bureaucrats, especially those in low capacity governments, may want to do better, but face informational and capacity constraints that prevent them from doing so. As such, the direct targeting of SPAs to bureaucrats attempts to remedy exactly this problem. Existing work suggests that facilitative delivery of SPAs is more effective at improving outcomes than unidirectional delivery. However, this notion has not yet been subject to rigorous analysis.

To our knowledge, ours is the first project to experimentally test the facilitative delivery of SPAs directly to bureaucrats. The few studies that do effectively use SPAs to inform politicians or bureaucrats are animated by a principal-agent framework (Anderson et al. 2019; Humphreys and Weinstein 2012; Raffler 2020). SPAs presumably allow politicians to monitor bureaucratic performance and thus enhance their own political agendas. This extant literature has come a long way towards outlining the contours of when SPAs are effective in improving accountability and governance. We build off of this existing literature by designing an SPA that directly targets the informational problems facing bureaucrats through facilitative workshops to help them absorb the new information.

To aid in the design of facilitative SPA delivery to bureaucrats, we build on best practices from the public administration and management literatures about the use of performance indicators. The organizational learning literature, under-appreciated by political scientists and economists, offers insights into how to better craft effective transparency initiatives.[3] While many related definitions exist, organizational learning can be defined as the process of improving actions and outcomes within an organization through better knowledge and understanding (Fiol and Lyles 1985). Since SPAs typically present new information and new frameworks for thinking about organizational issues—for example, the use of quantitative measurement and performance scores

[3]Collins (2021) is a notable exception.

Table 1 Experiments using SPAs

Mode of SPA Delivery	Recepient of SPA: Bureaucrats	Politicians	Citizens
Unidirectional	Number: **1** Share w/ Significant Direct Effect: **100%**	Number: **1** Share w/ Significant Direct Effect: **100%**	Number: **12** Share w/ Significant Direct Effect: **25%**
Facilitative	Number: **1** Share w/ Significant Direct Effect: **100%**	Number: **2** Share w/ Significant Direct Effect: **50%**	Number: **7** Share w/ Significant Direct Effect: **57%**

allows for a more data-centric and results-based approach to policy-making—it is useful to consider how external information, such as an SPA, is introduced into organizations, and how this ultimately improves an organization's performance.

One way that organizational learning can lead to improving SPA delivery is by improving an organization's absorptive capacity—that is, the ability to recognize new knowledge, assimilate this knowledge, and apply it to high-quality decision-making and improved organizational performance (Butler and Ferlie 2020; Todorova and Durisin 2007). This concept maps neatly into the aspirations of SPAs and other subnational transparency initiatives, which aim to introduce new knowledge (the SPA itself) into the government, and ideally change the way governments work in that they now assimilate the SPA into their decision-making process. A process, activity, or routine that improves absorptive capacity includes the following elements: (1) identifying and recognizing the value of externally generated knowledge, (2) establishing externally-driven knowledge sharing processes, (3) facilitating assessment of current practices and introducing new ideas, (4) sharing embedded knowledge across the organization, (5) managing internal goal-setting, and (6) managing continuous progression towards these goals (Berta et al. 2015; Harvey et al. 2002; Kitson, Harvey and McCormack 1998). These conditions are among those highlighted by management and public administration scholars as the organizational prerequisites needed to turn new information into improved performance.

How does this work in practice? Facilitation workshops are the organizational embodiment of the conditions that support absorptive capacity. Facilitation is defined as individuals learning together in the context of a recognized need for improvement, usually led by a facilitator in pursuit of explicit performance goals. In short, they are workshops, led by experts, operating in a deliberative environment, with the end goal of coming up with mutually agreed upon, actionable policy, and thus improving observable outcomes (Berta et al. 2015; King, Feltey and Susel 1998).

It is critical to emphasize that facilitation is a bundled treatment; it combines several distinct mechanisms that may lead to improved bureaucratic performance. These other mechanisms are a by-product of organizational learning—but may be distinct from absorptive capacity. For example, facilitation workshops orient participants toward achieving shared goals and lateral monitoring. As participants have a clearer sense of who oversees specific indicators, and as they make public commitments towards improvements on them, bureaucrats are better able to effectively monitor each other. They better understand who is responsible for achieving specific quantitative performance metrics. Alternatively, the facilitation workshops may improve bureaucratic performance through norm diffusion and social pressure (Doshi, Kelley and Simmons 2019; Honig and Weaver 2019). In this scenario, the bureaucrats who demonstrate improved performance on the SPA do so because their peers coalesce on new professional norms, namely good performance on the SPA. Not performing well on indicators under their control would lead to reduced social status among their fellow bureaucrats.

In essence, although facilitation workshops in our RCT were designed to mirror the benefits of improved absorptive capacity, the mechanisms that link facilitation to improved bureaucratic performance potentially stretch beyond absorptive capacity, and may include the other mechanisms outlined above. Future work will need to tease out these mechanisms precisely. Ultimately, however, each of the mechanisms described above work along the same path toward improving bureaucratic performance. This leads to our first hypothesis:

H1: Townships in Myanmar that receive facilitation workshops will record greater improvement in governance than control townships, which only receive printed

reports of their MBEI scores.

The above hypothesis, however, assumes the use of facilitation in an idealized setting. Institutional architecture matters greatly for creating opportunities for facilitation to be successful. Unlike businesses or non-government organizations, bureaucracies still operate within larger government accountability structures, and variation in those structures plays a role in determining to what extent facilitation may impact governance outcomes. The literature on decentralization is particularly insightful in helping us understand the relationship between facilitation, accountability, and improved governance (Kosec and Mogues 2020). Indeed, the intimate conceptual linkages between decentralization and SPAs (operationalized by the facilitation workshops) highlight their synergistic relationship, since the purported benefits of SPAs mirror the theoretical benefits of decentralization—monitoring, accountability, competition, and tailoring (Wibbels 2006; Bardhan 2002).

Put directly, the degree of decentralization positively conditions the effectiveness of the facilitation workshops. This paper focuses on administrative decentralization—the redistribution of the power, resources, and authority to distribute public services away from the center and to "lower" levels of government (Green 2005). The depth of administrative decentralization theoretically moderates the impact of facilitation workshops on governance outcomes in two ways. First, high levels of decentralization supports more bottom-up learning. These bureaucrats are socially embedded, and hence are (1) more accountable to their local constituencies than their central government counterparts, and (2) possess local knowledge (and thus understand how to practically bring about policy change) that enhances the effectiveness of what they learn in the facilitation workshops (Bhavnani and Lee 2018; Bardhan 2002).

Furthermore, time-horizons between local and central officials may be inconsistent, and lead to policy delays under more centralized departments (Cox and McCubbins 2001). Delegated officials who have differing tenure clocks, because they are rotated out every few years, may be less willing than local officials who stay in a locality longer, to engage in policy whose benefits do not accrue in the short-term. Even if both central and local officials, who work in a locality, at-

tend facilitation workshops and are informed about what constitutes appropriate actionable policy, political incentives may still lead to misaligned preferences.

These arguments inform our second hypothesis:

H2: The positive relationship between facilitation workshops and governance will be greater among administrative units with higher levels of decentralization.

3 Myanmar Research Context, the MBEI Performance Assessment, and Facilitation Workshops

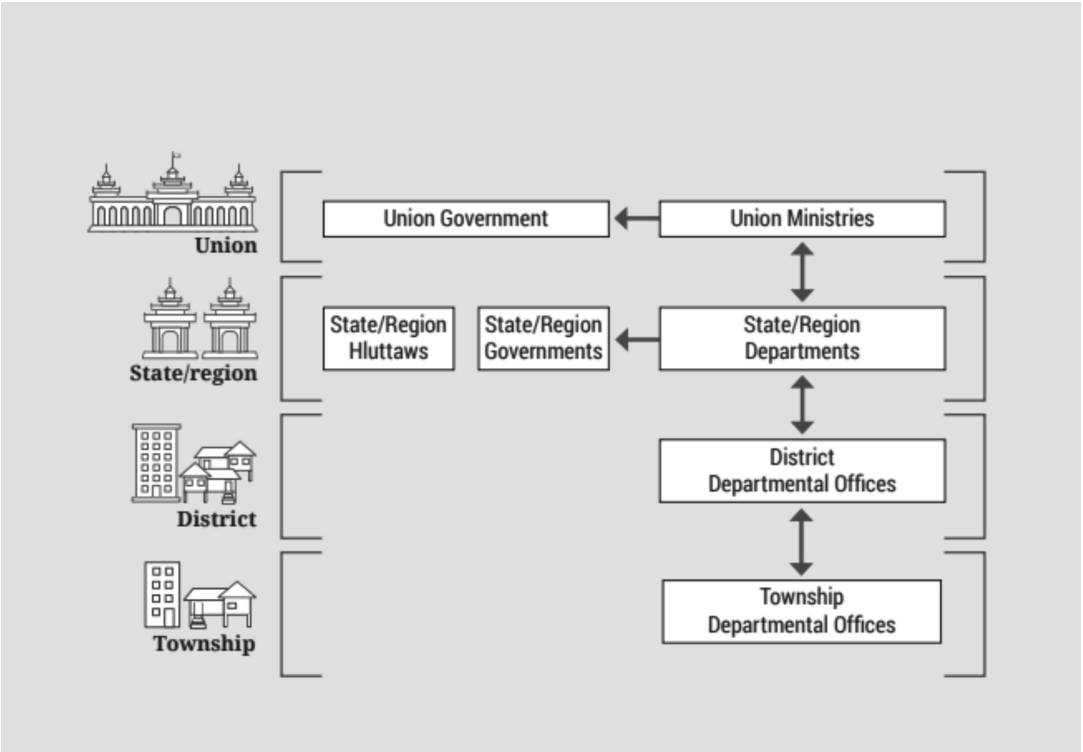
3.1 Myanmar's Local Public Administration

Our study focuses on a nationally representative sample of 60 townships throughout Myanmar before the military coup in February 2021. We focus on townships because township-level bureaucracies played the biggest role in local economic governance in the country, as most business-government interactions took place at this level before the coup (Bissinger 2019; Malesky, Dulay and Keesecker 2019). The multiple responsibilities of township governments included the granting of permissions and licenses, revenue collection, regulatory enforcement, and front line service provision. Indeed, businesses had very little contact with officials beyond their township and little expertise on the economic services that government provided (Arnold et al. 2015; Bissinger 2016). Multiple agencies that operated in each township were, at least in principle, responsible for distinct aspects of governance. The two most important departments, the General Administrative Department (GAD) and the Development Affairs Organization (DAO), will be discussed in greater detail below.

The 330 townships were embedded in Myanmar's 14 states and regions (henceforth S/R).[4] S/Rs were headed by a Chief Minister and a Cabinet of Ministers. S/Rs, in turn, were accountable

[4]This administrative hierarchy was part of, at the time, a larger push towards Myanmar's democratization (Bertrand, Pelletier and Thawnghmung 2020).

Figure 1 Administrative Hierarchy in Myanmar



Note: Figure taken from MBEI report (Malesky, Dulay and Keesecker 2019, p. 30). The central government of Myanmar, based in Naypyidaw, is known as the Union government. Subnational government begins at the S/R level. S/Rs are in turn comprised of districts, and each district is comprised of multiple townships. Bureaucrats at the township level are accountable to politicians at the S/R level, who in turn are generally (except for the DAO) directly accountable to Union level officials.

to the Union (national government), headed by the President and a bicameral legislative assembly. Township level bureaucrats reported directly to politicians at the S/R level.[5] Since township bureaucrats were accountable to politicians at the S/R, and hence faced relatively weaker monitoring mechanisms than if they were accountable to a politician at the township level, it is all the more important that township departments were able to coordinate with and monitor each other in the successful implementation of these policies. Figure 1 summarizes the discussion on the various levels of Myanmar governance.

While the political relationships across levels of government were reasonably common, the

[5]The district government was below the S/R and above the township. Its main role was coordination between S/Rs and townships, and served a minimal role in public service delivery. We therefore do not focus on districts in our research design.

administrative relationships between bureaucracies at these different levels was substantially more complex. The administrative relationship between township departments, S/Rs, and the Union may be understood as one of “incomplete decentralization" (Malesky, Dulay and Keesecker 2019). That is, some departments were fully devolved, others were delegated, while the rest were merely deconcentrated (Green 2005). Thus, while township departments directly engaged with firms, they also operated within a complex bureaucratic system of multiple principals and levels of authority within the township.

3.2 The General Administrative Department (GAD) and the Development Affairs Organization (DAO)

The two most relevant departments for township governance were the GAD and the DAO. These two subnational bureaucratic agencies differed in their specific tasks and responsibilities. Most importantly, they differed in their degree of administrative decentralization. The GAD was among the least decentralized departments, and the DAO was the most decentralized department. Decentralization experts would classify GAD as deconcentrated and DAO as devolved, respectively.

The GAD’s primary responsibilities related to land access and security, law and order, and the overall coordination across agencies. The GAD engaged in land management and was responsible for land grants and licenses for residential, commercial, and industrial purposes. The GAD was also in charge of law and order. Within the GAD townships, two sub-committees, the Security, Stability, and Tranquility, and Rule-of-Law Working Committee, coordinated local security needs. The GAD had also historically been responsible for national issues of law and order and peace. Finally, the GAD coordinated activities across administrative units (Saw and Arnold 2014).

The GAD was centralized in several ways. Township GADs were financed at both the Union and S/R level. This financing structure implied that township administrators were ultimately fiscally beholden to both the highest level of subnational government and the national government

itself. In other words, the GAD was significantly fiscally centralized as well (Nixon and Joelene 2014). Furthermore, while the majority of GAD personnel resided at the subnational level of S/Rs and townships, all the S/R and township level administrators were appointed by the Union-level MoHA (Saw and Arnold 2014). The MoHA deputy minister chaired a committee to approve all promotions for deputy director and above, while the GAD director general chaired a committee for everything below deputy director. Furthermore, all GAD officials served three-year appointments and were rotated to different S/Rs or townships under a predetermined rotation schedule (Saw and Arnold 2014).

The DAOs were tasked with a range of governance responsibilities that were directly relevant to business, including entry costs, post-entry regulation of businesses, and infrastructure. The DAOs issued operating licenses, including licenses for market vendors and roadside stalls, butchers, hotels, and restaurants. DAOs also conducted routine, regulatory inspections of businesses that had DAO-issued operating licenses to make sure they were abiding by the terms of the license. For 69% of businesses in the MBEI survey, the DAO's annually renewable operating license was the only business registration document they held. Finally, DAOs provided a broad range of local infrastructure, such as roads, sewers, garbage collection, water supply, and street lighting, which shaped the context in which businesses worked (Arnold et al. 2015). They were also responsible for general town planning, setting up road rules, and the demolition of informal buildings.

In stark contrast to the GAD, DAOs were relatively decentralized in terms of their fiscal, administrative, and personnel status. First, it was the only fully devolved department in Myanmar's public administration. Township DAOs raised 63% of their own funds at the township level from licenses and service fees, and were close to fiscally autonomous from the both the S/R, who made up the rest of their budget, and the Union. Township DAOs also featured significant administrative autonomy. They were given power over both the implementation and oversight of township policy. Unlike the GAD administrator, who decided on township policy while holding a position at the S/R level, the two main bodies of the DAO, the township DAO office, a street-level unit that executed policy, and the Township Development Affairs Committee (TDAC), which oversaw it, were both

organized at the township level. DAOs also featured greater downward accountability to citizens. In particular, members of the TDAC were elected to five year terms, coinciding with S/R elections. The popular election of TDAC representatives by citizens incentivized them to monitor and improve the performance of DAO bureaucrats. Having administrators from the township implied that these leaders were socially embedded (in contrast to rotating GAD administrators).

Table 2 summarizes the key differences between the GAD and the DAO in 2018. The decentralized bureaucratic structure of the DAO lent itself well to the benefits of SPAs discussed previously. The local embeddedness of its members, as well as its relatively straightforward political accountability channels of devolved governance, allowed for the greater flow of information, alignment of preferences, and monitoring that could enhance the effectiveness of transparency interventions.

Table 2 Differences in Authority between GAD and DAO

MBEI Subindex	**GAD (Centralized)**	**DAO (Decentralized)**
Tasks & Responsibilities	Land grants and licenses, security, law and order	Infrastructure, operating licenses, regulation of established businesses
Upward Accountability	GAD administrators accountable to Union and S/R	TDAC and DAO administrator accountable to S/R
Downward Accountability	Township GAD administrator appointed	TDAC elected by township citizens
Financing	GAD financed by Union	DAO independently financed
Personnel	GAD adminstrators rotate every three years	TDAC and DAO administrator from township

A potential concern with emphasizing the centralized versus decentralized nature of the GAD versus the DAO is that there may have been more differences between these agencies than solely institutional relationships to central authorities. The most serious concern for our experiment is personnel; particularly whether the DAO, as a new agency, was staffed with younger, less experienced bureaucrats, while the GAD, a longstanding organization, was staffed with more grizzled, military types, who were more loyal to union authorities and more conservative in their actions regardless of where they might work.

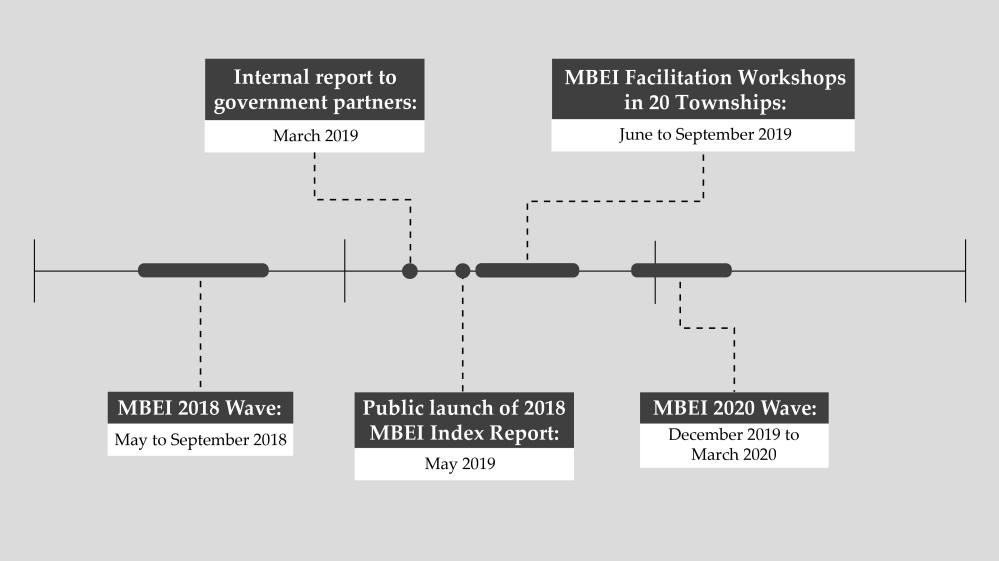
The historical accounts on the formation and evolution of these agencies, as well as more

recent research, suggest that this is not a concern. The DAO and GAD were quite similar in the composition and demographics of their personnel. Historically, DAOs were initially an offshoot of the GAD. In 1997, the township offices that were previously managed by the GAD were outsourced to the Department of Development Affairs by the Ministry of Border Affairs. In 2011, as Myanmar prepared for its quasi-democratic transition under President Thein Sein, the Department of Development Affairs was renamed the Development Affairs Office and control over its operations was completely removed from the central Union government and assigned to the S/R governments (Arnold et al. 2015; Winter and Thin 2016). The legislation creating the organizational shift required GAD to staff the DAOs upon their creation, so the vast majority of DAO staff were, in fact, former GAD members that were just shuffled over to the new bureaucracy (Mathew 2018). Indeed, Aung Sun Su Kyi's NLD party initially distrusted the DAOs for exactly this reason. Mathew (2018) writes that newly elected NLD leaders at the local level registered eleven initial reservations towards the DAOs when they learned they would need to work with them on local implementation: "Having been in the crosshairs of the same GAD members just a few years ago, the NLD leaders found it hard to let their guard down easily."

On the other hand, the GAD was undergoing substantive reforms as well, including training sessions to make sure the bureaucrats had the basic skills necessary to do their job well, greater consultation with GAD staff members by S/R and Union governments, and a stated emphasis on the GADs important role in reform (Saw and Arnold 2014). Thus, while the reach of the Union government and the military was still strong, the GAD featured elements of reform-mindedness at the time of our project. Mathew (2018) notes the experience of U Aye Ko, a GAD administrator who created Myankhon, a smart a smart phone application (app) that made tax collections more transparent reduced collection times from two to six months. Consequently, while both the GAD and the DAO had carryover elements from the old military regime, reform-minded individuals and reformist programs were also taking root in both at the time of our experiment.

3.3 Subnational Performance Assessment: The Myanmar Business Environment Index

Figure 2 Timeline of MBEI Rounds and Facilitation Workshop

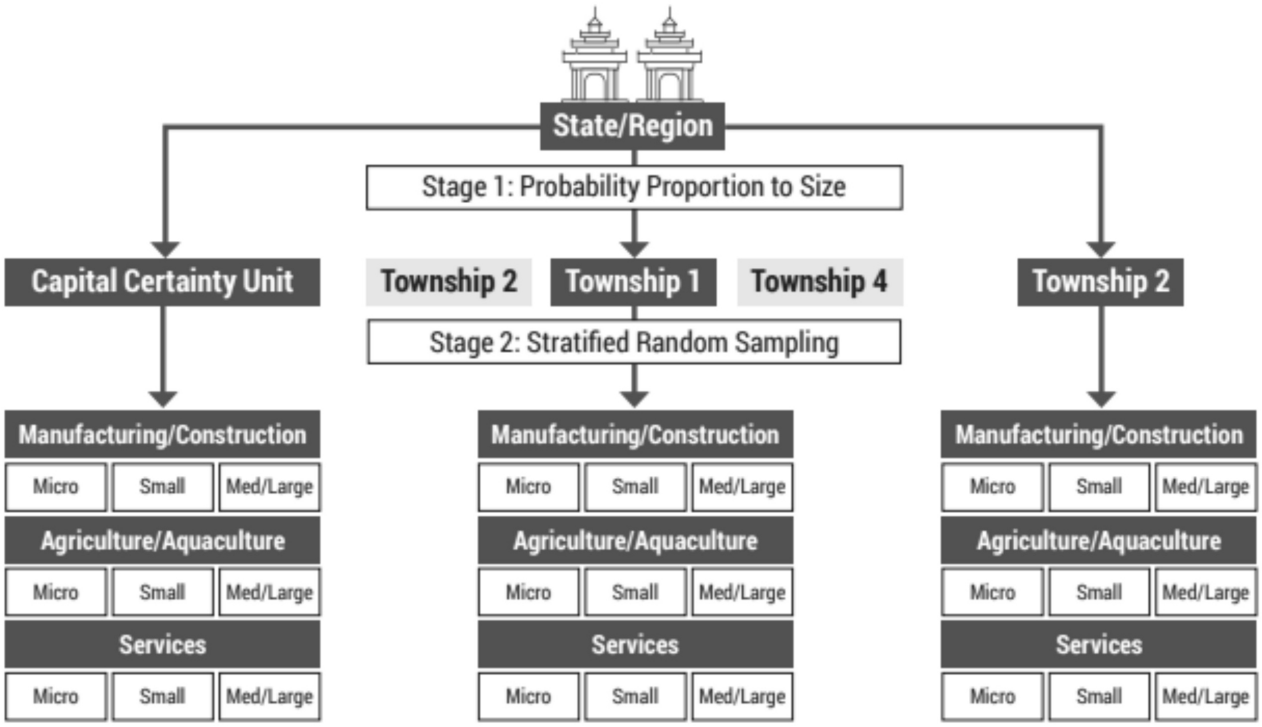


In 2018, TAF, in cooperation with the Myanmar Ministry of Commerce, launched the Myanmar Business Environment Index (MBEI), designed to provide local government officials with a tool that allowed them to target reforms for improving economic governance and business performance. The first round, administered between May and September 2018, of the MBEI surveyed 4,874 firms across a range of firm sizes and types of industry. TAF implemented a two-stage sampling design that ensured representativeness at the township level. Townships within each state were selected using probability proportion to size (PPS) sampling. After which, firms were sampled using stratified selection based on sector and size. Figure 3 displays this two-stage process. A second round of the survey was conducted from December 2019 to March 2020,[6] of which a subset of 1,200 firms from the 2018 sample were randomly sampled and surveyed again. These 1,200 firms constitute the nationally and subnationally representative panel dataset of business firms that

[6]To maximize reform times, townships that were selected first for facilitation workshops were also surveyed first in the 2020 wave.

we use for this study.[7] Figure 2 displays the timeline of both MBEI rounds and the facilitation workshops graphically.

Figure 3 Two-Staged Sampling Design



Note: Townships were selected in 2018 using a two-stage sampling design, which first selected townships within S/Rs using probability proportion to size, and then selected firms within townships using stratified random sampling based on sector and size.

The MBEI is based on three types of data: (1) perceptions-based survey data (2) observational data collected by research teams 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 2009 and 2019 census (MOLIP 2019) and government handbooks. The main index is divided into 10 subindices, each representing a particular aspect of economic governance. Each township (and also each state/region and the country as a whole) may score between a 1 and 10 on any of the 10 subindices.

[7] See (Malesky, Dulay and Peltovuori 2020, p. 134-148) for methodological details.

Each subindex is constructed from indicators that substantively capture a particular concept of economic governance along a given subindex. A total of 92 different indicators comprise the core MBEI. Furthermore, each subindex has a combination of survey data and either observational or administrative data.[8] To give a precise example, consider subindex 1 on Entry Costs. An example of a survey indicator is a respondent's recollection of how long it took them to get a DAO operating license. The greater the number of days, the worse the performance on the index. An example of observational data is whether a standard application for an operational license was easily available when the research team visited the DAO office.

3.4 Township Facilitation Workshops on MBEI Outcomes

Building off of insights from the extant literature, TAF conducted facilitation workshops with local bureaucrats between the two waves of the surveys. The workshops took place between June 2019 and September 2019. Townships receiving facilitation workshops later than others were also surveyed later to maximize the amount of time for local officials to make reforms. On average each township had between four and ten months between the public launch of the MBEI report and data collection, and about six months between their facilitation workshop and data collection. While these time frames are quite narrow, they afforded time for policy and regulatory changes on many of the indicators. Officials had plenty of time to post legal normative documents and fee schedules, speed up operating license and land title delivery, and coordinate and reduce regulatory inspections. Local infrastructure repair and maintenance, such as traffic light and local road enhancements, were also possible.

The facilitation workshop brought together bureaucrats from different local agencies (including the GAD, DAO, and various Union ministries) from both the S/R and township levels. The workshops were facilitated by Myanmar economists working for TAF (Peltovuori 2019*b*). Depending on the time commitments of local leaders, workshops were either half day or full sessions. The workshops' goals were threefold: (1) to introduce government officials and business leaders to

[8]The full list of indexes and indicators is provided in Appendix Figure B1.

the MBEI index and its main findings, in particular their township scores, which areas they did well in, and which areas they needed to improve on, (2) for the research team to receive feedback from the government officials on the construction of the survey, and (3) to facilitate a coordinated strategy to improve local economic governance, with an eye towards implementation (Peltovuori 2019*a*).

The workshop's structure leveraged several insights from the facilitation literature. First, the facilitation workshops included preconditions that the literature has shown to improve absorptive capacity, such as opportunities for brainstorming, the time and space for informal, cross-functional teamwork, the integration of external subject matter experts (via TAF field team), and cross-organizational coordination. Second, the facilitation workshops included township bureaucratic staff, including DAO and GAD staff, who were present in all twenty workshops. Third, the attendees of the facilitation workshops engaged in back-and-forth deliberations on the issues raised by the MBEI, allowing them to leverage their domains of expertise to come up with tangible, workable solutions. Finally, the attendees vowed to improve local governance with formal public commitments, an accountability mechanism that aims to reduce ex-post shirking (Hinthartha and Wakema Township Report p.1-2, Paung Township Report p.1-2). Further details on the facilitation workshops are available in Appendix D.

It is important to note that the treatment combines several potential mechanisms by which facilitation workshops improve bureaucratic performance, including information provision via the SPA, the lecturing by TAFs external experts, and the lateral monitoring that comes with the different government agencies working together in such a public setting. We intentionally choose to implement this bundled treatment. Facilitation workshops were conducted to mirror their use in the real world, and in a manner that allows different parts of the workshops to interact and reinforce one another. At this stage in the research program, it is not known whether the bundled package of facilitation workshops is greater than the sum of its parts. That is, are there greater benefits from including information provision and lateral monitoring together, or from separating them? Consequently, we seek to test the viability of facilitation workshops as the complete package

of attributes. Once this ground work is laid, future research can disentangle the mechanisms to see which feature of a facilitation workshop is most effective, and whether the attributes work better combined or in isolation. We also choose a bundled treatment for practical reasons. Budget and time considerations meant that TAF teams only had resources and time to prepare and travel to 20 townships throughout the large and difficult terrain of the Myanmar countryside. With only 20 townships, we did not have sufficient statistical power for a disaggregated design.

In addition, our design only compares locations with facilitation workshops, constructed around an SPA, to those that received a unidirectional SPA. The quantity of interest therefore is the impact of facilitation over and above the direct information provision in the SPA. Our experiment, however, does not include a group of townships that received facilitation workshops but not the SPA. This was also done for practical and empirical reasons. First, our facilitation workshops were specifically designed to use the SPA as a way to instruct bureaucrats on governance issues that businesses faced. A facilitation workshop with such a data source to elucidate abstract concepts, such as transparency and property rights, would have been extremely confusing for recipients. Second, power again played a critical role. A factorial design that randomized both SPA delivery and facilitation would have required four treatment groups, which would not have permitted enough power to uncover significant effects (Muralidharan, Romero and Wüthrich 2019). It is certainly a reasonable question to ask whether it is possible to do facilitation without an SPA as an organizing tool and information delivery mechanism, but that was beyond the scope of our research project, as our primary objective was to learn how to make SPAs work better.

4 Research Design

4.1 Treatment Variable: Random Assignment of Facilitation Workshops

The treatment variable is whether the township had a facilitation workshop or not. Twenty townships from the 60 townships in the 2018 wave of the MBEI were randomly assigned to receive

facilitation workshops in a two-step process. First, coarsened exact matching (CEM) based on township GDP per capita (ln), average literacy, night time luminosity, population density, and 2018 MBEI response rate was used to create 20 matched groups of three structurally similar townships across S/Rs (Blackwell et al. 2009). Second, simple randomization was used to select one of the matched townships in each group. Unselected townships served as controls to identify the counterfactual condition of having a facilitation workshop.[9]

To mirror what is provided in traditional SPAs, all S/R leaderships received written copies of the 140 page technical report to share with township leaders, a brief pamphlet on key indicators, and access to an online widget that allowed them to compare the 10 subindices to other townships in their S/R and Myanmar more generally.[10] The treatment group, however, had the benefit of the reports combined with the intensive facilitation workshops.

Figure 4 displays a map showing whether a township was treated (had a facilitation workshop), served as a control township, or was not surveyed as part of the MBEI. Three of the selected townships were the capital township of their S/R. Because these townships potentially had unique relationships with the S/R leadership, we control for their presence in our econometric analysis below.[11]

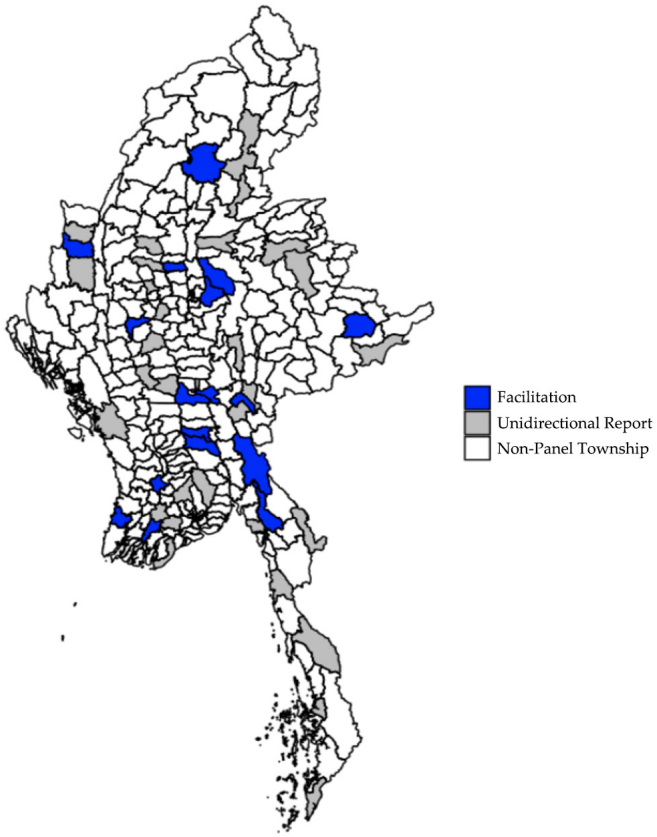
Townships, where workshops were held, are coded as 1, while townships that did not have a facilitation workshop were coded as 0. In the firm-level analysis, which serves as the core set of specifications, firms within treated townships are coded as 1.

[9] We did not submit a pre-analysis plan (PAP) for this study because this project was part of a pilot for a larger field experiment that was meant to be conducted nationwide in 2022. The military coup in February 2021 ended this project, so the pilot analysis unfortunately serves as the final test of our theory.

[10] https://asiafoundation.org/2020/12/09/hows-business-we-have-a-benchmark-for-that/

[11] 99.95% of MBEI 2020 respondents were not aware of the workshop at all. Three firms were invited by townships governments to attend in two locations. It is unlikely that their participation impacted scores, however. The number of townships with firms was small, and the firms were well-connected and likely to have already rated their township highly in 2018. Consequently, their inclusion biases the impact of the intervention downward.

Figure 4 Map of Treatment and Control Townships



Note: Townships that received the facilitation workshops are in dark blue. Control townships that received only the unidirectional report are in gray. Unshaded townships were not sampled.

4.2 Dependent Variable: The Myanmar Business Environment Index

The dependent variable for this study is the firms' scores of townships on the total MBEI in the first round in 2018 and second round in 2020. Each score can range from 0 to 100, with 100 being the highest possible score and 0 the lowest. Recall that the facilitation workshops took place in 2019. We are thus able to examine changes in the MBEI score over time attributable to these workshops. We analyze the 100-point core MBEI index, which is created from 92 indicators across the 10 sub-dimensions that were collected exactly the same way in both the 2018 and 2020 waves. The survey data used in the core MBEI comes only from a panel of 1,200 SMEs, which were interviewed in both waves, while observational data was collected from enumerators, which visited the administrative offices in all 60 townships.

4.3 Balance in Covariates

We ensure that our randomization led to a well-balanced sample between treated and control firms prior to the facilitation workshops. Appendix Table E1 presents the balance table of the average differences between firms that received the facilitation workshops, and those that did not, across the relevant outcome and demographic variables. The data reports information from the first round of the MBEI in 2018, prior to the treatment in 2019. Overall, the facilitation and non-facilitation groups are balanced on 20 out of 24 variables, leading us to believe that both groups are also likely balanced on unobservable characteristics. Importantly, both groups are also balanced on vote share for the civilian NLD, attenuating concerns that differences in the facilitation workshop are driven by underlying political differences (Jap and Ziegfeld 2020).

4.4 Model Specification

The main specification to estimate the causal effect of the workshops on MBEI scores is a difference-in-difference analysis (DiD) using the 1,200 panel firms within the 20 treatment and 40 control

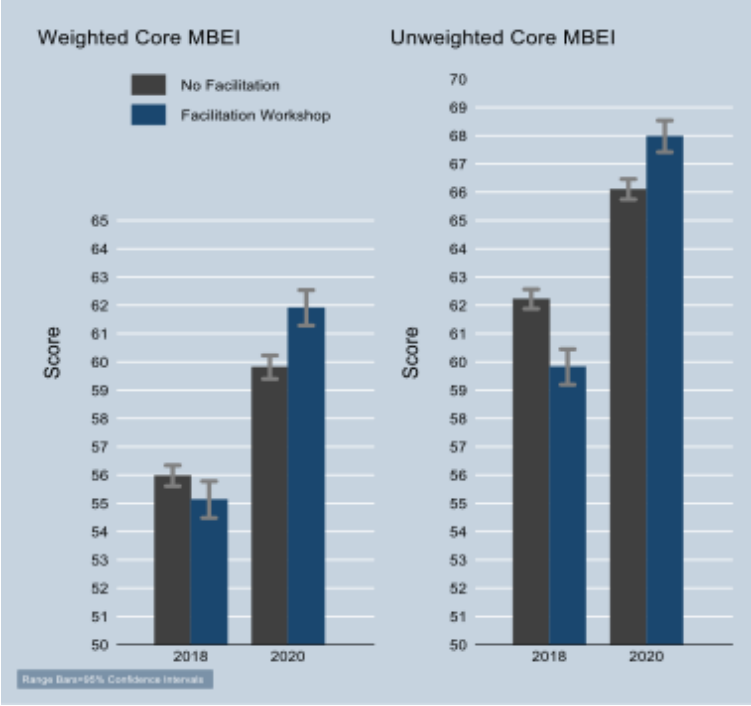
townships using ordinary least squares (OLS). The model takes the following form.

$$MBEI_{ijt} = \beta_0 + \beta_1 Time_t + \beta_2 Workshop_j + \beta_3 Time_t * Workshop_j + X_j + X_{jt} + \gamma_{jt} + \epsilon_{ijt}$$

$MBEI_{ijt}$ is the unweighted MBEI score for firm i in township j at time t (either 2018 or 2020), $Time_t$ is a dummy variable that takes the value of zero for the 2018 wave and 1 for the 2020 wave. We use the unweighted score to avoid any bias imposed by the subdimensional weighting. Its coefficient provides the change in the control group over time. $Workshop_j$ is a dummy variable equal to 1 for townships that had a facilitation workshop, 0 otherwise. β_2, therefore, tells us the pre-treatment difference in governance between treatment and control townships. β_3, the coefficient on $Time_t * Workshop_j$, is the DiD estimator, which provides the improvement in MBEI scores over and above the improvement in control locations. Our argument suggests that if workshops had a positive effect on governance, then $\beta_3 > 0$.

To increase efficiency and address potential confounding at the township level, two pre-treatment and time invariant controls of whether the location is the capital of its S/R and the surface area of locality (X_j) and two time-variant township controls of lagged township literacy GDP per capita (X_{jt}), are included. γ are S/R fixed effects, and ϵ_{ijt} is a term capturing the residual. In line with best practices, we cluster standard errors at the level of treatment, the township. In our analysis below, the first four models employ inverse probability and post-stratification survey weighting, which includes a finite population correction (FPC), due to the PPS sampling of townships, in addition to clustered standard errors at the township level. In the second four models, we drop the survey weights and only cluster standard errors at the township level.

Figure 5 Change in Overall Core MBEI Scores Between Facilitation and Non-Facilitation Groups



5 Empirical Results

Figure 5 highlights the simple difference-in-means between townships with facilitation workshops and those without. It displays the impact of the workshop by contrasting the overall MBEI score reported by firms in treated townships that had a workshop and firms in control townships that did not. It also displays the results for both the weighted and unweighted MBEI. In 2018—prior to the workshops—the soon-to-be-treated firms in fact rated their township one point lower than the control firms on the overall index. After the workshops the treated firms rated their township three points higher. This main result remains unchanged whether we consider the weighted or unweighted MBEI.

A more rigorous difference-in-differences (DiD) analysis is displayed in Table 3. Columns (1) to (4) employ survey weights with clustered standard errors, the primary sampling unit and main

interface for business interactions with the state, while Columns (5) to (8) cluster standard errors at the township level, but do not include survey adjustments to address differences in probability of respondent selection or deviations from population aggregates. Column (1) presents a basic regression of the full unweighted core MBEI on the treatment variable. Next, we include control variables to address potential confounding. Column (2) includes state fixed effects. Column (3) includes township literacy rates, the pre-treatment natural log of GDP per capita, and the townships surface area in kilometers. Column (4) runs the same regression as Column (3) after dropping all the capital cities in the states/regions.

In the fully-specified Model 3, the coefficient on time demonstrates that firms in control townships reported core MBEI improvements of about four points (equal to 0.63 standard deviations) on the 100-point index. However, consistent with our argument, firms in treatment townships reported governance improvements of nearly 8 points (equal to 1.26 standard deviations), indicating that facilitation workshops nearly doubled the recorded reform achievements. Such a finding is especially impressive when we consider that the bureaucrats had less than a year to implement their reforms after the workshop.

The treatment remains positive and highly significant (all $p<0.001$) across all four weighted specifications, and the magnitude of the treatment remains robust to the inclusion of the controls, lending further credibility to the randomization procedure. Columns (5) to (8) with only clustered standard errors also remain highly significant and robust.

A particular concern is that the results may be driven by the lack of weighting certain subindices over others in obtaining the MBEI score, as core MBEI subindices are weighted to labor growth in the township. We therefore re-estimate our main specification, this time with the weighted total MBEI as the dependent variable. The results are displayed in Appendix Table E2. All 8 Columns in the Table mirror Columns (1) to (8) in Table 3. The results further corroborate the argument. All models show that the workshops are associated with large, positive, and robust increases in the MBEI score. A second concern with the results thus far is that these improvements may be driven solely by either the survey data or the observational/administrative data. If the

Table 3 Facilitation Generates Sizable Improvements on Unweighted Core MBEI Index

	Survey Weights				Township Cluster Standard Errors			
	Baseline	State FE	Controls	No Capital	Baseline	State FE	Controls	No Capital
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Time	4.022***	4.012***	3.996***	3.529***	4.856***	4.853***	4.771***	4.752***
	(0.562)	(0.342)	(0.348)	(0.505)	(0.749)	(0.752)	(0.758)	(1.104)
Facilitation Workshop	-2.399**	-1.863*	-1.994**	-2.524**	-1.913*	-1.746ˆ	-1.676ˆ	-1.657ˆ
	(0.684)	(0.720)	(0.714)	(0.806)	(0.814)	(0.914)	(0.902)	(0.942)
Time*Workshop	4.035***	4.090***	4.053***	3.959***	3.239*	3.247*	3.211*	2.463ˆ
	(0.912)	(0.592)	(0.576)	(0.768)	(1.243)	(1.247)	(1.245)	(1.343)
Capital==1		0.994*	0.688			0.849ˆ	0.398	
		(0.408)	(0.437)			(0.478)	(0.529)	
State Fixed Effects	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Township Control Variables	No	No	Yes	Yes	No	No	Yes	Yes
Constant	62.220***	62.215***	55.571***	52.562***	61.533***	61.168***	51.834***	48.720***
	(0.329)	(0.575)	(4.303)	(4.578)	(0.419)	(0.465)	(4.958)	(5.095)
Observations	2,383	2,383	2,383	1,495	2,400	2,400	2,400	1,512
R-squared	0.205	0.277	0.280	0.306	0.229	0.293	0.299	0.319
RMSE	.	.	.	.	5.551	5.333	5.314	5.322

Note: OLS with standard errors in parentheses (*** p<0.001, ** p<0.01, * p<0.05, p̂<0.1). All models cluster standard errors at the township level. Models 1-4 use inverse probability and post-stratification weights. Models 3, 4, 7 and 8 control for township literacy rate, GDP per capita (ln), and surface area in kilometers for townships in 2018 and 2020.

results are driven solely by survey responses, then the improvements along given subindices may be the result of perception or social desirability biases of respondents. If the results are solely from hard data, they may be an artifact of biases of the research team or the potential measurement of government data. We therefore estimate similar results using only survey data from 1,200 firms or the administrative/observational data from the 60 townships. Appendix Table E3 displays the results, which are similar to our main results and thus assuage these concerns.

Another concern with the analysis is that while the treatment is at the township level, the analysis is done at the firm level. To remedy concerns we conduct the analysis at the township level. The results are displayed in Appendix Table E4. As usual, the dependent variable is the core MBEI. The substantive impact of the workshops remains intact. Treated townships improve their scores by 1.5 to 2 points as a result of the facilitation workshop. The results, however, are under-powered because of the small sample size of 60 townships. Nevertheless, we believe that this result supports our main findings.[12]

A final concern is that the facilitation workshops may lead to a phenomenon called "teaching to the test" (Dewatripont, Jewitt and Tirole 1999; Dixit 2002). Put simply, bureaucrats underinvest in, or provide sub-optimal effort and attention to, parts of their job that are not explicitly measured and assessed. In the case of the facilitation workshops, bureaucrats who attend the workshops may overly focus on the core MBEI indicators and neglect other aspects of bureaucratic performance. This may lead to worse overall governance if metrics on the core MBEI improve, but to the detriment of other performance outcomes. To examine if teaching to the test occurs, we run a cross-sectional regression of whether a firm was in a township that had facilitation on the new 2020 MBEI indicators that were included only in 2020, and hence were not in the original 2018 MBEI. Since these new indicators were not in the 2018 MBEI, they were not analyzed during the facilitation workshops. If teaching to the test is present, then we should see that facilitation is not positively related with the new 2020 indicators. The results are displayed in Appendix Table E5. We find that facilitation led to improvements in the newly added indicators as well. Most impor-

[12] Appendix Figure E1 presents a positive relationship between share of townships in the S/R receiving the facilitation workshop and % change in MBEI.

tantly, the fully-specified Columns (3) and (7) are significant. For robustness, we also conduct the analysis at the township level, and by using only the observational and administrative indicators. The results in Appendix Table E6 further confirm that there was no teaching to the test.[13]

Overall, our results suggest that workshops, which provide both information on which reforms best improve economic outcomes, as well as a venue for bureaucrats to coordinate their reform agenda, can lead to large and immediate improvements in overall bureaucratic performance. These results in turn suggest that facilitation workshops may substantially enhance the effectiveness of SPAs, even in contexts where accountability channels are muddled and perhaps especially when administrative responsibilities are not clearly delineated.

5.1 The Moderating Effect of Decentralization

In this subsection, we explore the mechanism that moderates our main result. We posit that the degree of decentralization is positively associated with improvements in the MBEI. Thus, townships will improve their performance along dimensions where local bureaucrats have greater autonomy over the final policies implemented at the township level.

Analyzing decentralization policy by studying geographic variance in decentralization is not possible. De jure decentralization policy has been uniform across Myanmar's S/Rs and townships (Ninh and Arnold 2016). Certainly, de facto decentralization differs across geographical units (Bertrand, Pelletier and Thawnghmung 2020), but an objective measure to test spatial variation does not currently exist. However, variance in the level of decentralization authorized to agencies operating within the same geographical units offers a useful empirical test of our theory. MBEI results should be driven by the indicators that are under the jurisdiction of the decentralized DAO, whereas we should not expect higher scores for indicators under the jurisdiction of the GAD. We

[13]This test is rendered less effective if bureaucrats are able to anticipate the questions in the 2020 MBEI. This was most likely not the case. The discussions for the new indicators did incorporate some comments from the bureaucrats, but rarely did these comments lead directly to a new indicator. Workshops comments with respect to the new indicators were generic and needed to be operationalized by the TAF team. Moreover, members of the TAF team as well as representatives from the DaNa facility were also responsible for generating new indicators based on their experiences overseeing the workshop.

therefore create two 10-point specialized indexes, one for the DAO and the other for the GAD using the same methodology used to create the MBEI—including min/max re-scaling to a 1-10 point score and the averaging over each of the two sets of indicators.[14] Each index contains indicators that are clearly under the jurisdiction of the DAO and GAD, respectively. An example of an indicator under the DAO index is "Number of days for operating license at DAO." An example of an indicator under the GAD index is "Share of GAD documents with information publicly posted."

Our decentralization argument holds that we should see a larger improvement for the DAO index than for the GAD index. The results in Table 4 show statistically significant improvements of about half a point for the DAO index (about 0.43 SDs). Furthermore, we find no significant improvement for these firms along the GAD index. Indeed, the coefficient on the difference-in-difference term is negative. The difference between the DiD estimators for DAO and GAD is about 0.721 points, which is statistically significant at the 0.05 level. See Appendix Table F1 for a direct test using a triple interaction with the specialized indices as the outcome variable. The stark differences between the DAO and GAD indexes thus confirms our decentralization hypothesis.[15]

One important concern is that the differences across subindexes are not being driven by decentralization, but rather differences in the nature of the task the indicator covers. To separate facilitation from the nature of the task, we apply the same triple difference analysis to several matched indicators at both the firm level (from the survey) and the township level (from observational data), in Appendix Table F1. These include favoritism to connected firms, public posting of information, staff helpfulness, and share of required documents posted. We find that the change in favoritism by DAO declined 8 percentage points faster than that for GAD, which is statistically significant at the 0.05 level. The other indicators are in the hypothesized direction. The DAO demonstrates greater improvements than the GAD in information posted, helpfulness, and share of documents—however, these are not significant individually.[16]

[14]The specific indicators used to construct the specialized indexes are available in Appendix Table B1.

[15]We also conduct the full suite of additional robustness tests applied to the main analysis above in Appendix F.

[16]We also run the results by subindex in Appendix Table E7. Seven out of the ten subindexes are significant. Two of three that are not significant, the Land Access and Law and Order subindexes, are both under the primary jurisdiction of the GAD.

Table 4 Facilitation Only Effective in Decentralized Agencies

	Development Affairs Organization Index				General Administrative Department Index			
	Baseline	State FE	Controls	No Capital	Baseline	State FE	Controls	No Capital
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Time	0.272**	0.337**	0.313**	0.362^	0.599***	0.558***	0.555***	0.324^
	(0.083)	(0.101)	(0.100)	(0.199)	(0.082)	(0.082)	(0.077)	(0.184)
Facilitation Workshop	-0.202	-0.179	-0.148	0.030	0.237	0.185	0.098	-0.127
	(0.239)	(0.208)	(0.212)	(0.231)	(0.158)	(0.128)	(0.126)	(0.207)
Time*Workshop	0.517^	0.475*	0.439*	0.315	-0.134	-0.151	-0.155	-0.008
	(0.257)	(0.211)	(0.210)	(0.198)	(0.220)	(0.177)	(0.180)	(0.242)
Capital==1		0.048	0.084			0.150	-0.026	
		(0.097)	(0.121)			(0.102)	(0.111)	
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Township Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	6.024***	5.261***	6.248***	6.504***	6.347***	6.749***	2.908*	4.036***
	(0.072)	(0.126)	(1.255)	(1.290)	(0.068)	(0.174)	(1.281)	(1.018)
Observations	2,350	2,350	2,350	1,488	2,383	2,383	2,383	1,495
R-Squared	0.059	0.132	0.139	0.176	0.069	0.125	0.142	0.156

Note: OLS with standard errors in parentheses (*** p<0.001, ** p<0.01, * p<0.05, p̂<0.1). All models use inverse probability and post-stratification weights, and standard errors clustered at the township level. Models 3, 4, 7 and 8 control for township literacy rate, GDP per capita (ln), and surface area in kilometers for townships in 2018 and 2020.

6 Conclusion

Despite solid theoretical foundations, randomized experiments testing the efficacy of SPAs have been disappointing. The growing body of literature on development interventions suggests two important explanatory trends: (1) unidirectional delivery of SPAs to their targeted actor (voter, politician or bureaucrat) is less effective than facilitative delivery, and (2) directly delivering SPAs to bureaucrats is more effective than delivering SPAs to voters.

To empirically address the validity of these trends, we conducted a randomized experiment where dissemination of a nationwide SPA was delivered through carefully designed facilitation workshops that worked directly with bureaucrats in Myanmar townships, the unit primarily responsible for business government interactions in the country, including licensing, land distribution, regulation, local infrastructure provision, and law and order. In 2019, twenty out of sixty townships were randomly selected to receive a facilitation workshop that gathered together officials from all township agencies to describe the results of the MBEI, a comprehensive index that ranked localities on ten important dimensions of local economic governance. The facilitation workshops were led by substantive experts, who trained officials on how to read and understand their rankings on all ten subindices and 92 indicators, offered opportunities for deliberation and feedback, worked to generate agreement on concrete policy solutions for problems that were identified, and set measurable goals for improvement. We find that while firm ratings of governance improved generally in the country by four points (0.63 SD) on the one hundred-point MBEI between 2018 and 2020, bureaucrats receiving facilitation workshops recorded double the improvement of nearly eight points (1.26 SD). Aggregating to the average governance observed within the 60 townships, as we do in Appendix E4, we find a similar, but less pronounced trajectory. The control townships demonstrate that governance improved about 5.7 points on average between the studies, however, townships with facilitation workshops improved by 8.9 points. To put this number in perspective, Pyinmana township in the capital of Naypyidaw experienced exactly an 8.9-point improvement, which was the 16th largest in the country and moved the township from a rank of 53/60 in 2018 to 31/60 in 2020.

Further analysis reveals that the improvements were concentrated in policy portfolios that were controlled by the DAO, the most decentralized township-level agency. These included reductions in regulatory burdens and inspections and local infrastructure, such as lighting and local roads. By contrast, governance dimensions controlled by the heavily centralized GAD offices did not demonstrate any significant improvements. These findings reveal that facilitation is conditioned by decentralization, as local officials are more embedded in local populations, possess greater local knowledge, are more accountable to citizens through direct elections, and have greater ability to coordinate among different units to deliver effective results.

Future work can build on our paper by studying which features of facilitation are most effective in improving bureaucratic performance, and in which contexts. For example, it is possible that the main driver behind why facilitation workshops improve bureaucratic performance may be the lectures by TAFs experts, or it may be the Q&A session where bureaucrats truly internalize the SPA and find it credible, or it may be either or both in conjunction with bureaucrats across agencies speaking to each other. The bundled treatment in our study cannot get at these intricacies, and more work is needed in order to determine the optimal design of a facilitation workshop.

Furthermore, a promising line of future work can consider how the concept of "mission drivenness"—the dedication/intrinsic motivation of bureaucrats to perform their job well—interacts with facilitative SPA delivery and formal institutional structures to maximize bureaucratic performance. For example, work on mission drivenness emphasizes how institutional characteristics, such a sense of purpose or and a sense of pride in the mission's history and accomplishments, motivate bureaucrats to provide good governance (Goodsell 2010; Tendler et al. 1997). Are these sorts of organizations, then, those that respond especially well to facilitation workshops? On the one hand, if facilitation workshops improve performance primarily through absorptive capacity, one might argue that this is the case. On the other hand, if the workshops improve performance primarily through social pressure, then facilitation workshops may be of only of marginal value to mission driven agencies (since positive norms of good governance are already present). Future work should attempt to unpack these relationships.

Our project benefited from several propitious features that should be considered as scope conditions as future work for facilitation. The index was well-resourced and advised by international experts, which were perceived by policy-makers as aiding objectivity. Local-language newspapers covered the launch of the 2018 index, spreading its message to stakeholders. Relatedly, the newspapers conveyed buy-in and approval from local economic experts that gave the MBEI legitimacy in local policy discussion and acceptance among township actors.

Perhaps the most critical scope condition, however, for assessing the generalization of our findings regarding facilitation and SPAs is whether these programs are welcomed by central authorities. It is important to acknowledge that we write this paper in the wake of Myanmar's tragic military coup, which occurred only three months after the public launch of the 2020 MBEI Index. As analysts have noted, governance and service delivery improvements played a critical role in the popularity of the overthrown National League for Democracy (NLD) government, whose landslide 2021 electoral victory precipitated the military overthrow. Most citizens were grateful for the changes in their welfare brought by the civilian government after sixty years of military rule (U 2021). While it is difficult to demonstrate a causal relationship with our experiment, it is clear in our data that higher township MBEI scores were correlated with greater support for the NLD in the 2021 election. Our own experience was that NLD Ministers of Commerce, Labor, and Finance were highly supportive of the MBEI effort, sponsoring the program, providing permission letters for conducting the survey, and gathering in Nyaypidaw for the release of the results. The letters enabled the workshops, ensuring that we did not have a single township decline the workshop. At the time of the coup, they were engaged with our research team on central policy lessons from the MBEI survey. The newly installed military junta has not expressed interest in using SPAs for governance improvements.

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