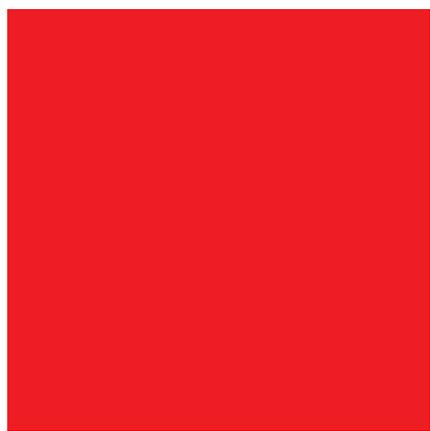
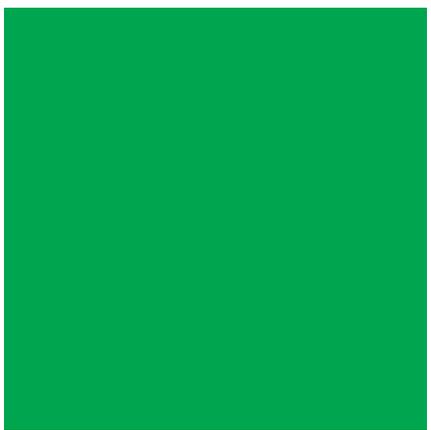


Subnational Public Expenditure Review 2019

Fostering Decentralization in Myanmar



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ACRONYMS

ADB	Asian Development Bank	ICT	Information and Communications Technologies
AMEX	Amortization Expenditures	IFRD	Intergovernmental Fiscal Relations Division
AO	Administrative Offices	IGC	International Growth Center
API	Application Program Interface	IRD	Internal Revenue Department
BE	Budget Estimates	JICA	Japan International Cooperation Agency
BRT	Bus Rapid Transit	LiDAR	Light Detection and Ranging
CAPEX	Capital Investment Expenditures	LMIC	Low and Middle-Income Countries
CCSB	Civil Services Selection Board	LTO	Large Taxpayer Office
CD	Cleansing Department	M&D	Ministries and Departments
CDC	City Development Committee	MCD	Mandalay Cleansing Department
CDF	Constituency Development Fund	MCDC	Mandalay City Development Committee
CII	Commercial/Institutional/ Industrial Sector	MDI	Multidimensional Deprivation Index
CIT	Corporate Income Tax	MLFRD	Ministry Livestock, Fisheries and Rural Development
CNG	Compressed Natural Gas	MOC	Ministry of Construction
DAO	Development Affairs Organization	MOEE	Ministry of Electricity and Energy
DGRA	Digital Government Readiness Assessment	MOHA	Ministry of Home Affairs
DOH	Department of Highways	MONREC	Ministry of Natural Resources and Environmental Conservation
EAO	Ethnic Armed Organizations	MOPF	Ministry of Planning and Finance
EAP	East Asia Pacific	MoUG	Ministry of Union Government
ECD	Environmental Conservation Department	MP	Member of Parliament
FMIS	Financial Information Management System	MMK	Myanmar Kyat
FOI	Freedom of Information	MoTC	Ministry of Transport and Communications
G2B	Government to Business	MRG	Mandalay Region Government
G2C	Government to Citizen	MSDI	Municipal Spatial Data Infrastructure
G2G	Government to Government	MTFF	Medium-Term Fiscal Framework
GAD	General Administration Department	MTO	Medium Taxpayer Office
GDP	Gross Domestic Product	NCA	National Ceasefire Agreement
GRM	Grievance Redress Mechanism		
HR	Human Resources		

NLD	National League for Democracy	TAF	The Asia Foundation
NSDI	National Spatial Data Infrastructure	TDAC	Township Development Affairs Committees
NTDP	National Transport Development Plan	TDC	Township Development Committee
NWMSAP	National Waste Management Strategy and Action Plan	TPD	Ton per day
ODA	Overseas Development Assistance	TPY	Ton per year
ODRA	Open Data Readiness Assessment	UAV	Unmanned Aerial Vehicle (or “Flycam/drone”)
OPEX	Operational Expenditures	UCSB	Union Civil Service Board
OSR	Own Source Revenues	UFC	Union Financial Commission
PA	Provisional Actual	USD	United States Dollar
PAM	Public Asset Management	USDP	Union Solidarity and Development Party
PAPRD	Project Reporting and Progress Reporting Department	YBPC	Yangon Bus Public Company
PCCD	Pollution Control and Cleansing Department	YBS	Yangon Bus System
PCD	Pollution Control Division	YCDC	Yangon City Development Committee
PEFA	Public Expenditure and Financial Accountability	YRG	Yangon Region Government
PER	Public Expenditure Review	YRTA	Yangon Regional Transport Authority
PFM	Public Financial Management	YPCCD	Yangon Pollution Control and Cleansing Department
PIM	Public Investment Management	YUPT	Yangon Urban Public Transport Company
PPP	Private Public Partnership	YUTRA	Urban Transport Plan of the Greater Yangon
RAI	Rural Access Index	WDR	World Development Report
RI	Renaissance Institute	W/VTAs	Ward and Village Tract Administrators
RTI	Right to Information		
SAA	Self-Administered Areas		
SEE	State Economic Enterprises		
SLORC	State Law and Order Restoration Council		
SME	Small & Medium Scale Enterprises		
SNG	Subnational Government		
SPDC	State Peace and Development Council		
SSG	Shan State Government		
SWM	Solid Waste Management		
TA	Township Administrator		
TA	Temporary Actual (with respect to budget figures)		

EXECUTIVE SUMMARY

Myanmar’s decentralization of governance, financing and service delivery is taking place against a particularly challenging backdrop. Myanmar is a country with considerable geographic and social diversity and a history of isolation, conflict and underdevelopment. Decades of civil conflict and tight military rule have marked Myanmar’s political, social and economic life since its independence from British rule in 1948, and left a host of historical institutional legacies including underrepresentation of women, civil service norms that prioritize compliance over performance, bureaucratic silos and weak public investment management, that still impact the country today. Political and economic transitions, begun in 2011, have promoted growth and improved welfare outcomes, though the benefits have not been equally shared with all groups or geographic areas. There remain extreme variations in the provision and quality of public infrastructure and services, reflected in large disparities per capita income and human development outcomes. These inequalities are widening, economic growth is spatially concentrated in the growth poles of Yangon and Mandalay, while rural and remote areas, such as those on the Shan plateau, are isolated from the centers of growth.

The newly formed state and region governments are critical for Myanmar’s transition, though their role is shaped by a hesitant approach to decentralization. The establishment of fourteen new subnational political units (seven states and seven regions) marks an important structural break from Myanmar’s previously centralized and unitary administrative structure. Following long-standing demands for more local autonomy, the new subnational governance institutions are creating space for new forms of political contest, particularly relevant in ethnic states, and are helping to nudge greater pluralism, inclusion and accountability in government. This includes the potential to be more responsive to local community needs and preferences for services and infrastructure and to improve the targeting of public expenditure to address horizontal inequities between locations and groups that will support equitable and conflict-sensitive socio-economic development. However, the de jure authority of state and region governments is highly circumscribed – the 2008 Constitution assigns only a narrow set of expenditure and financing responsibilities to the subnational level, with most subnational functions in fact shared with (and thus subordinate to) the union. Municipal governance stands apart as being solely under the jurisdiction of subnational governments.

The Myanmar subnational PER examines Myanmar’s nascent subnational institutions, focusing on governance, union-local administrative and fiscal relations and service delivery from a local perspective. The aim is to identify pragmatic and practicable policy options for incrementally strengthening the institutional capacity and inclusiveness of subnational governments within the confines of the current constitution. While political debate on the future shape of a federal Myanmar continues, reforming local governance institutions, within the considerable space available in the current constitution, as suggested throughout the PER, is an important way to support “federalism from below”, promoting a more sustainable, inclusive and accountable system of governance and fiscal management that better reflects Myanmar’s considerable social and economic heterogeneity.

International experience shows that there is no one perfect federal model. Even in mature federations, reform is a drawn-out process of trial and error rooted in historical experience, current context, and learning from doing. The relationship between entities under a federal union are shaped by the underlying legal framework and also by practice and norms of intergovernmental cooperation. Debate will continue to happen, ideally informed by experience and evidence to chart the next stage of reform. The PER aims to contribute to this debate, and to promote experimentation and practice within the space provided by the constitution.

Data availability ultimately mediates the scale and scope of the analysis. While weaknesses in government information systems in Myanmar are well documented, the challenge of accessing data at the subnational levels is particularly acute. The geographic focus is on Yangon Region Government (YRG), and Mandalay Region Government (MRG), which play a major role in Myanmar's political, social and economic dynamics, and Shan State Government (SSG) which preside over an area that lags the rest of the country on formal economic performance and faces critical challenges related to infrastructure shortages and conflict. Also examined are the major cities of Yangon and Mandalay and the related service delivery challenges of urban transport and solid waste management.

Subnational governments are overcoming severe limits on their authority to play an ever-greater role in administration of public finances and delivery of services within the Constitution, though challenges remain

The policy and architecture of subnational governance in Myanmar are predictably influenced by modern history and political evolution. From the initial 1948-62 Constitution through to 2019, via the fully centralizing detour of the 1974 constitution, Myanmar's subnational architecture has nearly – though not fully – come full circle. An initial federacy at independence included three ethnic states, although with powers largely centralized in the union government. It was almost immediately undermined as the hopes of the ethnic minorities for higher degrees of autonomy collided with fears of national disintegration. Thus, the seeds for an extended period of violent civil conflict and centralized military rule were also sown. Following five decades of military rule, the codification of a new formal *de jure* subnational level of government in the 2008 Constitution was primarily a tool to relieve center-periphery tensions that were once again building. The seven states and seven regions create more political space for ethnic and local representation, but are structured in a way that ensured the center retains considerable formal authority. This reflects a common trait observed in fragile, conflict-affected states where central governments are reluctant to relinquish power.

The assignment of powers granted to the subnational level falls well short of the powers initially granted to states at independence and is narrow relative to other countries in the region. Unlike the first decade and a half of independence, the union government fully controls security, education and health. Civil service management is also highly centralized at the union with subnational governments having no dedicated permanent bureaucracy. This stands in contrast to many federal jurisdictions where the appointment, posting, transfer, promotion, evaluation and training of staff are assigned, in one way or another, to the subnational level. Most *de facto* powers also remain concentrated at the union through an interlocking web of political, administrative and financial provisions. In particular, the chief minister, head of the executive office of each state and region, is appointed by, and accountable to, the union president. Most subnational jurisdictions exist in parallel with the union and spending assignments are mostly shared. Moreover, as is the case at the union, the military also has a constitutionally mandated role in subnational governance.

The Union Financial Commission is a key institution in mediating center-subnational fiscal relations. The Financial Commission scrutinizes subnational budgets to ensure harmonization with the union budget, such that a single draft of the national budget can be tabled in the Union-level *Pyidaungsu Hluttaw*. This provides the union with a *de facto* fiscal veto over subnational expenditures. Importantly, this veto power extends to municipal expenditures – nominally the only devolved power of subnational governments – given that municipal budgets are completely embedded within subnational budgets. The Financial Commission also approves the size and distribution of the main intergovernmental transfer, the general-purpose grant transfer, which is the primary pillar of financing in most states and regions.

The coordination and oversight capabilities of subnational governments are severely constrained by ambiguities over mandates and blurred accountabilities of civil servants. The concurrent assignment of administrative and financing responsibilities gives rise to a general lack of clarity over the specific functions of state and region governments. This fuels perceptions that states and regions are located within a hierarchical structure, with the president at its apex rather than being autonomous political entities responsible for developing and implementing policies in their own right. The channels of communication with the subnational executive are un-systematized and informal. The limited authority over civil servants' discharging subnational budgets conspires to blur accountabilities. Staff are either jointly accountable to both the relevant state/region minister as well as the union minister (as in the case of departments carrying out subnational-level functions, pursuant to Schedule Two of the constitution) or are solely accountable to their union minister (in the case of departments carrying out union functions, pursuant to Schedule One).

The General Administration Department (GAD) provides an important example of the constrained oversight of the subnational political executive over key aspects of subnational governance. The GAD is a ubiquitous presence throughout Myanmar's subnational governance apparatus, managing the country's hierarchical and geographically defined administrative units (state/region, district, township, and village). GAD also plays a key role in coordinating, convening, and monitoring local government activities around the country, though the township-level coordination role is not underpinned by any formal reporting or evaluation system and administrative information of line ministries can be siloed. The Constitution also allocates the role of the Executive Secretary of the state/region government and management of the office of the respective Chief Minister, to the head of GAD office in that state/region; the Executive Secretary is a cabinet position. Despite the centrality of GAD to subnational governance, state/region governments have no authority located in legislation over the GAD, which remains formally part of, and accountable to, its union ministry. This remains the case, even with the recent reforms shifting GAD from military to civilian control.

Accordingly, the standard "finance following functions" maxim for decentralization appears to be flipped in Myanmar. As most subnational authority is held concurrently with the union and spending assignments are mostly shared, the allocation of funds to the subnational level has, in effect, preceded devolution of exclusive functions and responsibility over personnel. As such, subnational governments often function more like deconcentrated administrative units of the union than a separate level of government: instead of finances and functionaries following the assignment of functions, in Myanmar functions are tentatively and unsystematically following the allocation of finance.

An important exception to the constrained authority of subnational governments is that states and regions have sole jurisdiction over municipal services in Myanmar's urban areas. This includes the largest cities of Yangon and Mandalay as well as smaller cities. States and regions are also responsible for recruitment of staff in cities, even if new staff are subject to some union government civil service rules and regulations. However, despite being largely autonomous in their day-to-day functioning, even city governments are not politically or financially autonomous, and the union is able to exert considerable political and financial influence. Nonetheless, the assignment of municipal affairs to subnational governments provides states and regions with authority over a critical area of local governance and service delivery.

Importantly, rather than simply being instruments of greater political inclusion, the influence and autonomy of subnational governments over public finance and administration is growing slowly and steadily. Subnational governments have an increasing weight in public finances and have generally grown more autonomous under NLD leadership at the national level. A signal achievement of the Yangon Region Government was the 2018 *Yangon City Development Law*, with profound implications for participative oversight of municipal governance; though, in general, subnational parliaments have grown more

assertive in holding the executive to account are playing an increasing role in coordination. Tentative steps have been taken to make subnational governments more gender-inclusive, transparent and accountable. However, much of this growth comes from a particularly low baseline.

There are clear pathways for further strengthening the role of the subnational level. Several enabling provisions of the constitution and other legislation allow the union government to assign roles to subnational governments. There are numerous examples of delegating union responsibility to subnational governments through legislation and administrative orders, though shifts so far have been small and piecemeal. The constitution also mandates the subnational governments to “inspect, supervise and coordinate” the functions of all union ministries in their jurisdiction, but this provision has not been substantively tested. Surveys show popular support for states and regions playing a greater role in service delivery; although public opinion has not crystalized on power sharing between levels of government.

To strengthen the institutions of subnational governance, the PER proposes:

Recommendation	Description
Energize subnational coordination and oversight by formalizing the current informal arrangements of HR management into a matrix structure with soft reporting lines.	The government may want to consider: <ul style="list-style-type: none"> involving relevant members of subnational executive in the posting and performance evaluation of senior civil servants at the subnational level (the chief minister for the GAD state secretary, and relevant subnational ministers for state/region-level director positions for Schedule Two departments). providing GAD township administrators with a formal evaluation role for the performance of counterpart township department officials. The resultant matrix reporting structure would formalize the flow of information (e.g. information on performance, financing and staffing), from union ministries to subnational ministers, promoting more democratic accountability, increased oversight and supporting the implementation functions of the subnational executive.
Establish information-sharing and performance review protocols to enable better oversight of subnational governments	Information by union government institutions is shared vertically upwards with the subnational political leadership, which is often left out of the oversight loop. Establishing information-sharing protocols and regular performance reviews can help actualize the political intent and constitutional mandate of subnational governments.
Delegate day-to-day HR functions to the subnational level while preserving the policy-setting functions of union government.	Control over a limited set of HR functions could be localized, including: transfers within the same state/region; initiation and conclusion of disciplinary and performance evaluation processes; granting of performance awards; identification of technical specifications; and recruitment and placement of non-gazetted staff.
Strengthen downward accountability of municipal governance by increasing the authority and visibility of the democratically elected members of the YCDC executive committee.	Assign supervisory responsibilities over solid waste management to the newly created deputy mayor; this would align authority and accountability over a central service delivery function in cities and shift from the present situation in which most authority is concentrated in the unelected mayor position.
Strengthen subnational civil service capacity and inclusion	Increase flexibility for recruiting necessary technical skills, focusing specifically on ways to improve the participation of women in the civil service and in politics more generally at the subnational level, and utilizing local low-skilled labour in remote areas.
Create a subnational governance forum that meets regularly.	This has the potential to improve the flow of information and innovation between state and region governments. The secretariat may be hosted by one major state or region government or by the Ministry of Union Government

Subnational governments are playing an increasing role in the allocation of capital budgets, increasing the importance of effective public investment management.

The subnational share of total government spending has risen strongly, as a result of union transfers, since the inception of state and region budgets. The rate of growth has moderated in recent years. Total expenditure across Myanmar's seven states and seven regions nearly tripled between 2012/13 and 2016/17 FY, rising from 864 billion Kyat to 2,445 billion Kyat. This translates to an increase in subnational spending from 1.7 to 3.1 percent of Myanmar GDP during that period. Much of this growth occurred in the early years, between 2012 and 2015 reflecting the broader policy push towards decentralization of spending and budgets. Since 2015, subnational spending has plateaued, in line with the shift to a more rules-based approach to intergovernmental fiscal transfers, which is linked to the medium-term fiscal framework (MTFF), and fiscal constraints at the union level. Transfers account for a substantial share of the union budget (estimated to be around 9 percent in 2018/19), on par with the share that is spent on education and larger than spending on health and agriculture. Overall, the level of total expenditures at the subnational level remains small. For example, in 2016/17, per capita spending in Yangon was around 65,000 Kyat (USD \$43), approximately 43,000 Kyat in Shan (USD \$29) and 37,000 Kyat in Mandalay (USD \$25).

There has been a general rebalancing of a rising capital budget toward the subnational level. At all levels of government in Myanmar there has been a strong focus on capital deepening and improvements to physical infrastructure given decades of underinvestment in public infrastructure, this underinvestment seriously impaired production capacity in the economy and restricted access to basic services. An increasing share of this capital expenditure is being shifted to subnational governments. The total value of capital expenditure, shaped by the subnational executive and approved by their respective legislatures, increased nearly five-fold between 2012/13 and 2016/17, rising from 280 million kyat to 1.4 trillion, or from 6 to 26 percent of total capital spending. The capital budget has increased appreciably as a share of total spending in each of Yangon Region, Mandalay Region and Shan State.

Subnational governments are therefore playing a key role in promoting inclusive growth in Myanmar. Capital expenditure is key to supporting Myanmar's drivers of future growth in urban areas, as well as ensuring that the benefits of growth are balanced by overcoming key public infrastructure deficits in rural areas, such as electricity, water and road access. As noted in the 2017 PER, however, the potentially high marginal product of capital spending is dependent on the geographic and sectoral composition of investment being aligned with its highest economic and social value (allocative efficiency); it also needs strong public investment management systems and processes to support productive efficiency.

Within the limited available fiscal space, the union government, supplemented by the subnational government balances investment in growth areas with the need for investments that promote greater inclusion in more deprived areas. The largest share of capital investments across both tiers of government are directed toward Yangon Region. Yangon Region accounted for around 24 percent of capital spending budgeted at the union and subnational level in the 2018/19 budget. Collectively, across the two levels of government, the level of budgeted capital expenditure on per capita basis in Yangon Region (197,000 Kyat) is more than twice as large as in Mandalay and Shan (96,000 and 90,000 Kyat respectively). In part, this reflects the larger fiscal capacity of Yangon to generate revenue and fund capital expenditure from its own budget as well as the union's general prioritization of the region's high growth potential.

Prima facie, the administrative classifications of capital budgets across both tiers of government suggest that investments are well calibrated to the relative needs of different locations. In Yangon and Mandalay regions, the investment focus of the union on transport projects is consistent with buttressing

urban growth, it also complements the broad investment focus of the respective region governments on urban roads and water projects. In Shan State, investments of both levels of government address critical infrastructure shortages in roads and electricity.

Comprehensive assessment of allocative efficiency of spending using available data is problematic, however, as early evidence suggests that capital spending may not be efficient. Ministry level budgets and even information on the number and size of individual projects are not sufficient to close this analytical gap. Critical data gaps include budget classification issues of the capital budget; spatial location and impact of projects; the lack of a digital register of capital projects with singular identifying codes. There is a disconnect between multi-year plans and annual budgeting at the subnational level. Over the past few years, greater emphasis has been given to moving the central annual planning process towards townships, with calls for proposals in early stages of the budget cycle. However, planning is still shaped by the legacies of a command economy, and subnational budgets are not prepared with a medium-term focus on fiscal sustainability and future spending obligations. Challenges in public investment managements are present throughout the investment cycle. There are issues with project selection, appraisal and a lack of prioritization in capital spending; this is reflected by the low average value of projects and the proliferation in the number of projects. Cost overruns and underspending are also evident. Data limitations present a gap for understanding comparative allocative efficiencies between the two levels of government and for the broader discussion on the effectiveness of fiscal decentralization.

There is no evidence that subnational capital expenditure is targeted toward disadvantaged townships in Shan State. Preliminary evidence from the 2018/19 Shan State budget suggests that subnational capital budgets are evenly distributed on a per capita basis across townships. This appears to substantiate anecdotal evidence that budgets are spread thin according to the population to ensure that most townships get at least some local investment. The absence of a strong linkage between spending and disadvantaged townships also holds for the union capital budget; though a large share of all planned capital spending by the union in Shan State in 2018/19 is concentrated in large-scale energy investments in three townships. There is limited penetration of both levels of government in mixed-authority areas in Sha State, such as the Wa Self-Administered Division.

The share of recurrent expenditure has declined, despite nominal increases. Salaries, other labor costs, and maintenance are generally the largest economic categories of subnational recurrent spending. Expenditure on wages may be higher than is listed in government budgets (owing to the widespread use of non-permanent staff and attempts to circumvent budgetary norms) which may pose a challenge for fiscal sustainability and institutional development. A detailed analysis of the sustainability of labor costs and sustainability of maintenance commitments in subnational governments is warranted. Rising labor costs have the potential to crimp the fiscal space available for development spending at the subnational level. Furthermore, the lack of growth in maintenance commitments raises questions about allocative efficiency. The relatively high percentage of subnational (and city) budgets allocated to capital expenditure may be unsustainable because the growing stock of capital assets may not be easily maintained or operationalized from the recurrent budget.

Questions around inclusive spending in the context of Myanmar's governance structures extend beyond technical efficiencies; it is important to complement data availability with community input. This should reflect attempts to address gaps in data (due to quality or availability) as well as contextual factors. The latter is especially true in areas of mixed-authority, for example, where services can be provided by the Myanmar and Shan Governments as well as by Armed Ethnic Organizations. Accountable and inclusive government will require citizen participation, it will also require context-specific approaches to public investments and service delivery, in some areas this may need to be conflict-sensitive. Significant and unequal changes in economic and welfare growth can generate grievances and instability, and these possible tensions must be acknowledged.

Identification of barriers will involve incorporating participatory policies, with a focus on the process, and not necessarily the type of investment. There are no clear-cut solutions (especially for investments in conflict-affected areas), given the fundamental differences in contexts across Myanmar. International experience provides some guiding principles that could be incorporated into investment principles to facilitate peace. The actual implementation mechanisms may depend on a specific area of investment. However, the core principle should be to bring community members together to break barriers.

To strengthen and sustain inclusive growth through improved subnational spending, the PER proposes:

Recommendation	Description
Standardize and enforce consistent budget classifications.	<p>Short to medium-term: Develop a detailed manual for budget classifications, consistent with budget classification and accounting reforms at the central level (efforts to move towards use of IPSAS standards), including emphasis on technical capacity of subnational staff.</p> <p>Medium-term: Put in place the information technology systems and proceed to analyze large amounts of data generated by subnational units. This will enable improved understanding of how expenditures are being distributed and will help assess the fiscal sustainability of spending.</p>
Implement a digital register of capital projects with singular identifying codes.	<p>Create a framework that assigns capital projects – big and small – with a consistent, but unique, ID code. This would increase the efficiency of project databases, improve overall capacity for monitoring and evaluating the capital budget, permit managers to review timely information on individual projects and enable aggregated and disaggregated analysis of project portfolios. This could utilize smartphone technology which has already been piloted at the central Ministry of Planning and Finance.</p> <p>This would facilitate early steps toward strengthening subnational public investment management while providing time for the project database to mature and to incorporate design changes before being integrated into more sophisticated information systems (FMIS).</p>
Enhance the targeting efficiency of union and state/region expenditures within states and regions, to better link spending with needs	Faced with small budgets and difficult decisions, investments tend to be evenly spread across the state without explicit consideration of objective needs. Within this limited available fiscal space, subnational governments could still spend more effectively by strengthening the targeting of resource allocation. Subnational governments could frame a policy to guide township-level targeting of subnational budgets through a more systematic use of objective welfare metrics, for example through use of data like the Multidimensional Deprivation Index (MDI).
Set township-level budget ceilings and announce this early in the budget process, at least at sectoral level.	There is considerable variance between the ‘bottom-up’ investment estimates of states and regions and the ‘top down’ estimates of the ministries. Consequently, an unrealistic list of proposals tends to be generated, putting significant strain on an already weak prioritization and appraisal process. A policy of township-level targeting can also help ease within-township planning and prioritization by forming a township-level budget envelope and communicating it early in the planning cycle.
Develop and adopt a participatory and (where needed) conflict-sensitive expenditure prioritization program.	<p>These should consider the following:</p> <ul style="list-style-type: none"> • Empowerment: provide a menu of credible options for projects and let community members help decide which projects to implement • Inclusion/Participation: all activities should proactively include marginalized and vulnerable groups, particularly those excluded from development programs in the past • Trust/GRM: projects must have a transparent grievance redress mechanism to ensure citizens that they can provide feedback, make complaints, and rely on fair protocols for solving disputes over planning, or other elements in the budget cycle, e.g., execution, implementation, tendering etc.).

The need to balance investments in urban growth and inclusion can be enhanced with a well calibrated fiscal transfer system that incentivizes own-source revenue collection in urban areas.

The increase in subnational share of total government spending is underpinned by significant increases in subnational financing. Total available resources at the subnational level have increased three-fold in nominal terms since 2012/13; growing by 24 percent, on average each year over the five years to 2017-18. Over the same timeframe, subnational financing has risen as a share of national GDP, from 1.7 percent in 2012-13 to 2.9 percent in 2017/18.

Fiscal transfers, in particular the unconditional general-purpose grant, are key to overcoming the vertical fiscal imbalances between levels of government as well playing an important role in redressing horizontal fiscal imbalances. Most states and regions depend heavily on fiscal transfers from the union to finance their budget. The exceptions are Yangon and Mandalay Regions, which rely on shared tax revenues and own-source revenues. Since 2015/16 there have been three primary mechanisms through which resources are transferred between tiers of government: (i) general purpose grants, (ii) tax sharing and (iii) a Constituency Development Fund. Prior to this, transfers were made through a patchwork of smaller piecemeal transfers. Of these, the general-purpose grant is clearly the most important, accounting for 87 percent of all transferred funds to states and regions in 2017/18. Intergovernmental transfers increased from around 3 percent of the union budget to around 9 percent between 2012/13 and 2017/18, with the share broadly constant over the past four years. Transfers are skewed in favor of states over regions, and this skew has grown in the past five years as the growth in transfers to states has outpaced growth to regions. In aggregate, states received more than twice the level of transfers, per capita, than regions in 2017/18 (56,276 Kyat compared with 26,551 Kyat).

The considerable redesign of the intergovernmental transfer system, which began in 2012/13 has improved the transparency, predictability and efficacy of transfers. Importantly, the previous deficit-based approach to financing (i.e. covering for excess expenditure over revenue in states and regions) was replaced as part of the broader World Bank-supported Medium-Term Fiscal Framework (MTFF) reforms for a rules-based approach for determining allocations for states and regions. An overall ceiling was introduced along with a formula to guide the share of allocations between states and regions. The formula attempts to equalize receipts based on six equally weighted variables related to development needs and fiscal constraints. There are no performance- or conditional-based transfers in Myanmar. Any introduction of such transfers would need further analysis.

There are still a number of shortcomings in the operation of the transfer system. The administration of transfers is fragmented across the Budget Department and Internal Revenue Department (IRD). While there is some operational cohesion between the administrative units, this fragmentation results in ad hoc changes and in-year variations to the general-purpose grant; it exacerbates weak forecasts, and that undermines the predictability and transparency of transfers.

The growth in general-purpose grant transfers has decelerated. Ultimately, the basis for determining the overall grant amount in the union budget is discretionary. The grant transfer amounts each year are determined as part of the annual budget preparation process. Consequently, the size of the transfer pool has been impacted by union fiscal constraints since 2013/14, especially due to disappointing income tax collections. The concerted effort to prioritize transfers has meant that the union transferred more resources to states and regions in 2017/18 than it spent on agriculture and health, and almost as much as the union spent on education.

The general-purpose grant formula has only marginally impacted horizontal equity. The formula is only applied to the marginal increases in the divisible pool after ensuring that states and regions receive at least as much in transfers as the previous fiscal year. The limited application of a formula-based approach means that only approximately 6 percent of the general-purpose grant divisible pool has been allocated via the formula.

Intergovernmental tax sharing based on derivation is inherently pro-cyclical and is a key mechanism for reinvesting in the sources of growth. Four union taxes collected by the Internal Revenue Department (IRD) are shared with states/regions based on the location of collection: individual income tax; commercial tax; special commodity (goods) tax; and stamp duty. Reflecting its position as an industrial and commercial hub in Myanmar, Yangon Region accounts for the lion's share of shared tax revenue; 56 percent in 2017/18. This was as high as 87 percent in 2016/17, though has fallen as a result of adjustments to the derivation rules.

More generally, the transfer system does not incentivize own-source revenue (OSR) collection. The general-purpose transfer allocations only marginally link with OSR collections via the formula. For instance, states and regions have no say in setting the tax base, the tax rate or in administering the shared tax handles that could be devolved. There are no options for piggybacking, and revenue sharing is designed in a manner that limits autonomy and incentives of states and regions to tax reforms.

Yangon Region, and to a lesser extent, Mandalay Region, exhibit stronger growth in OSR than the rest of the country. OSR accounted for 70 percent of total financing in Yangon and close to 54 percent of total financing in Mandalay in 2017/18. Yangon is the only state or region in Myanmar where the growth in OSR has outstripped the growth in transfers between 2012/13 and 2017/18. Most of this reflects growth in recurrent tax and non-tax revenues. Yangon and Mandalay Regions also stand apart in their use of capital income and financial revenue.

OSR in states and regions are small and inefficient. OSR growth has been limited, except for Yangon and Mandalay. States and regions enjoy limited tax autonomy, save for property and wheel taxes. Collection is fragmented across a range of tax handles, and distortionary, with state and region governments reliant on a range of fees and non-tax handles. Urban areas are presently not capturing land values effectively; property taxes in particular are currently operating well below potential in most cities, especially in Yangon, driven by inordinately low collections among ordinary residential properties.

Strengthening the fiscal transfer and equalization system while incentivizing more own revenues will be key to improving subnational resources and equity. A series of policy options can help address the abovementioned challenges. The PER examines the impact of stylized policy scenarios to inform such policy deliberations. Modeling of one such policy scenario suggests that the additional revenues YCDC could generate from a new land development charge would represent an additional 60 percent boost on total property tax revenue. While modest policy changes on property tax rates for the richest townships in Yangon would boost total property tax collection by 43 percent. Another scenario considers an option to authorize states and regions to add a percentage on top of the tax rates from the immobile bases (e.g. commercial tax on restaurants); often referred to as a piggyback tax. A one percent increase in the tax rate on restaurants in Yangon which are assessed by the regional directorate of IRD, for example, would generate an additional \$1.2 million above baseline. The modelling of policy scenarios with respect to the general-purpose transfers suggest the need for gradual reform, moving towards greater use of the transfer formula and a discussion about the size of the divisible pool based on a vertical imbalance analysis.

To strengthen the subnational finance system in Myanmar to better facilitate the government’s dual focus on investing in urban growth and supporting inclusion the PER proposes:

Recommendation	Description
Promote equity	<p>Short term: gradually increase the share of the divisible pool allocated by the formula (from the current low level of 6 percent). Initiate a process to update the formula in consultation with states and regions.</p> <p>Medium term: create a forum between the union, and states and regions to regularly discuss the size and basis for the divisible pool and the allocation of formulas.</p>
Incentivize collection and enhance subnational revenue autonomy in the growth poles of Yangon and Mandalay Regions	<p>Short term: authorize states and regions to add a percentage on top of the tax rates from the immobile bases to be fully passed on to them.</p> <p>Medium term: for taxes with immobile base, devolve the right to expand tax base to states/ regions in addition to the rate-setting, and provide incentives to share benefits of increased compliance.</p> <p>Long Term: gradually devolve tax administration for taxes with immobile base.</p>
Improve OSR collection	<p>Short term: rationalize the number of non-tax revenues that can be collected by states and regions.</p> <p>Short to medium term: institute policy changes, especially in terms of valuation and coverage, to increase property tax collections.</p> <p>Long Term: introduce development charge as a form of land value capture.</p>
Improve operations of intergovernmental financing	<p>Short term: create inter-departmental group between the Budget Department and the Internal Revenue Department and ensure consolidated communication on overall transfer envelope to states and regions.</p> <p>Short to medium term: create a balancing fund to guarantee a certain transfer amount to states and regions at the start of the fiscal year.</p>
Avoid direct subnational borrowing in the short to medium term.	<p>Direct borrowing by the subnational government is currently not feasible in Myanmar given limited debt management capacity and lack of credit-worthiness of subnational borrowing entities. Government debt markets are nascent, with the first union treasury bonds only issued in 2016 and long tenor debt instruments still absent. As highlighted in the Myanmar PER 2017, debt management capacity is at an early stage in Myanmar; a modern debt management office was only established in 2015. Such functionality is absent at the subnational level, which raises the risk of unsustainable borrowing and inefficient management of cost-risk trade-offs for borrowing.</p>

Solid waste management is an oft-overlooked essential urban service that is presently neither financially nor environmentally sustainable

Solid Waste Management (SWM) is entirely within the mandate of the subnational governments, via municipal authorities. It is also a key function for which the public hold municipal authorities accountable. Low and middle-income countries commonly struggle with inadequate SWM systems. Myanmar is no exception, with existing SWM systems unable to effectively deal with the rising quantities of waste and its changing composition.

Myanmar's urban areas are producing an increasing amount of waste however, the size and scope of current waste collection services are only able to cover a fraction of the urban population. In Yangon, an estimated quantity of 2,217 tons of waste are collected per day, or 809,000 tons per year and in Mandalay 1,000 tons per day or 365,000 tons per year. Urban residents are estimated to produce 0.8kg of waste per person per day. Using current resources, the waste collection coverage rate is projected to be between 59 and 79 percent in Yangon and around 80 percent in Mandalay, which means that a considerable quantity of waste is not collected.

In most cities, SWM is a full public service and costs are kept low. The average unit costs are kept low, largely due to incomplete coverage and lack of environmental protections. In Taunggyi, the capital of Shan State, solid waste collection was a fully public service until 2015 when the city began to outsource most collections. The estimated costs of SWM in Myanmar are considerably lower than international benchmarks. Rather than being a measure of technical efficiency, the low costs reflect gaps in service provision and a lack of environmental protections such as daily compaction and covering landfill gas collection, leachate treatment or general environmental monitoring.

Even with these low costs, fee revenue is insufficient to cover operating costs, and this jeopardizes future capital expenditure. In Myanmar's largest cities, the primary mechanism for financing SWM is fee revenue collected from households and businesses. Fees are small and range between MMK 3,600 (\$2.4) and MMK 7,200 (\$4.8) per household per year in Yangon. There is also limited revenue being generated from dumping at landfills. The result is an operating deficit in SWM to the tune of 6.7 billion Kyat (\$4.5 million), around 50 percent of operational expenditure. Municipalities must therefore substantially co-finance SWM activities from their OSR. At present, they already spend a sizeable share of their budget on SWM (13-15 percent in Yangon and Mandalay) implying that OSR collections are a key determinant of the available fiscal space for SWM.

Organizational and accounting arrangements remain weak. There is, for example, no separate cost accounting system that could readily produce information separated into key activities of solid waste management: (i) collection & transport, including costs of containers/bins; (ii) treatment including separation, recovery, composting and landfilling/disposal of waste; and (iii) public spaces/street cleaning. In YCDC, all costs are included in a single department, and in MCDC, costs are split across departments.

Four broad issues stand out from the analysis: (i) Myanmar's urban areas are producing an increasing amounts of waste; (ii) the size and scope of current waste collection services can only cover a fraction of the urban population; (iii) municipalities already spend a large part of their budget on SWM, despite incomplete coverage of waste collection services and inadequate environmental protection; (iv) even with relatively low costs, specifically for waste disposal, fee revenue is insufficient to sustain the current level of services and would be even less when capital expenditures that are required for proper waste disposal would be considered. Consequently, the fiscal space for SWM depends on municipal OSR.

To strengthen solid waste management in urban areas, the PER proposes:

Recommendation	Description
<p>Improve cost recovery. The current low level of revenue is not enough to cover operational costs and the capital investments required for expanding waste collection to 100% with environmentally compliant waste disposal or treatment.</p>	<p>Short term: increase revenues by increasing waste fees for households; cross-subsidize with a commercial/institutional waste fee; improve billing systems to improve financial sustainability of operations.</p> <p>Medium-term: increase coverage for household waste fee collection by increasing waste collection to 100% in large cities, thereby increasing satisfaction with waste services and improving bill collection efficiency.</p>
<p>Reorganize the cleaning departments and strengthen cost accounting for allocation of expenditures to different waste activities (establish the cost per ton for waste management services as per international municipal practice).</p>	<p>Short/medium term: establish cost centers for the different solid waste management functions. This needs to be done in a transparent manner to be able to assess the operational costs per ton of the different waste management services; compare costs and take action to increase cost-efficiency. Reorganize cleansing departments into business units according to different waste activities: (i) collection/transport, (ii) street cleaning, (iii) landfilling; and (iv) other activities. Capacity in the cleansing department would also need to be improved as part of the organization.</p>
<p>Narrow the waste collection coverage gap by (i) expanding the scale and scope of SWM activities, (ii) complementing waste management with demand management through banning unnecessary plastics and public and increasing education on waste reduction.</p>	<p>Short/medium term: increase waste collection services to 100 percent for the large cities; identify polluting cities that discharge most plastics into the waterways; develop plastic policies to reduce and reuse material and encourage the development and use of other material.</p> <p>Short term: substantially increase public awareness and education on waste reduction; stop littering and properly fund awareness campaigns by including education/outreach/public participation in the waste fee.</p>
<p>Reduce open dumping practices that cause multiple environmental and health issues. Develop sustainable regional sanitary landfills.</p>	<p>Short/medium term: establish a gate fee at landfills to raise funding for sanitary landfills.</p> <p>Medium/long-term: rehabilitate where possible and otherwise close old dumpsites; build environmentally compliant landfills; long term: achieve more advanced waste treatment, and increased waste revenues.</p>
<p>Strengthen legislation and regulations</p>	<p>This could relate to privatization of waste collection and disposal; as current legislation, capacity and regulations for successful waste management are lacking. At the same time, the current situation and lack of experienced businesses in Myanmar do not offer attractive financial or legal conditions for private investment in waste management.</p> <p>Create a specific definition of “Municipal Solid Waste” in the legislation to distinguish the types of wastes to be collected by municipalities as part of regular waste collection services and categories of waste that require a separate payment</p>
<p>Improve waste information systems</p>	<p>Short/medium term: include the use of information and communications technology, such as GPS, in route planning.</p> <p>Modern technology and ICT can improve solid waste operations and track plastic leakage. The increase in waste collection coverage will require a combination of equipment and operational planning using modern technologies such as databases and GPS planning methodologies. An inventory of current households with housing type and commercial/institutional status is required to assess quantities of waste that need to be collected. Google maps and GPS planning methodology can track trucks on actual collection routes to optimize routing. Yangon has already started to track the waste collection fleet using GPS technology.</p>

Effective urban transport is essential for capitalizing on urban growth potential, although this requires effective coordination among Myanmar's different levels of government

Yangon and Mandalay are very different in terms of their demographic and transport demand characteristics. Yangon has managed to maintain a healthy demand for buses which accounts for around half of total trips. However, the number of private vehicles has been increasing rapidly, almost three times since 2010, and traffic congestion has emerged as an urgent challenge. In Mandalay, public transport is practically non-existent and motorcycles account for about 70 percent of transport modal share. Urban mobility challenges in both cities will only become more sophisticated and costlier, and addressing these challenges in a sustainable and efficient manner will increasingly require integrated policy solutions, stronger technical capacity and larger amounts of funding and financing.

Solutions for meeting demand for urban transport services will require development and implementation of multimodal and integrated mobility plans that cut across the mandated responsibilities of existing stakeholders. In Yangon, despite improvements since the establishment of the Yangon Region Transport Authority, urban transport service provision is still fragmented across different authorities at union, regional and city levels. In Mandalay, there is no public transport authority. The design of complex transport solutions, such as planned bus and rail rapid transit systems in Yangon, require infrastructure improvements and service restructuring, which are difficult to achieve in the current fragmented environment. Fragmented institutions also impede the implementation of organized traffic management, which will be an essential part of dealing with the inevitable increase in road congestion and road safety risks.

Public spending in urban transport is not enough to meet high demand for transport service delivery in Yangon and Mandalay. Spending on urban roads in the two regions is much lower than is required to build and maintain a road network capable of supporting sustainable urban development. At least a doubling of expenditure on roads to around 1.5 percent as a share of regional GDP is required in the short to medium term to avoid choking off economic growth. This will be particularly important for Yangon, where the road network is already under stress from growing congestion. In the longer term, further increases should be planned, consistent with institutional capacities to plan, implement and manage transport infrastructure assets.

Alongside increases in expenditure on urban transport, efficiency improvements will be required. Efficiency improvements alone will not close the significant gap in urban transport infrastructure and services but getting more outputs out of a given expenditure will nevertheless play an important part in making expenditure increases go further in delivering better outcomes to help cities become more productive and to improve mobility for the population.

Without reliable financing and funding sources, it is difficult for transport authorities to make effective development plans. The use of private-public partnerships (PPPs) may unlock financing for improving and expanding urban transport infrastructure, but PPPs must be treated with caution because they are still public projects and significant specialist skills are required to negotiate a good deal on behalf of the public sector. Both cities would benefit from preparation and implementation of resource mobilization and funding plans for their transport sectors. In addition to existing funding instruments, fuel excise tax could be considered as potential revenue sources for future significant investment demand.

To improve financing of urban transport and meet the growing mobility needs of populations of Yangon and Mandalay, the PER proposes:

Recommendation	Description
Integrate urban transport policy formulation and implementation	Address institutional fragmentation; complement and strengthen YRTA's regulatory roles in Yangon's public transport; establish an integrated urban transport authority in Mandalay to develop and implement urban mobility plans.
Increase public spending on urban transport, particularly in Yangon	Where the road network is already under stress from growing congestion, consider wider but prudent use of PPPs by setting up a process for monitoring explicit or implicit fiscal risks to the public sector. Focus on making efficiency improvements in spending at the same time.
Review resource mobilization plans for Yangon and Mandalay cities	consider new funding sources from the perspective of revenue level, financial and transport sustainability; assess existing funding instruments to match the levels with service demand and market conditions.
Address data limitations	Institute more systematic collection and collation of data on volume and quality of outputs from public expenditure on urban transport, as a starting point for stronger efficiency orientation.

Digital governance is a strategic enabler of good governance and an institutional reform in its own right

While lagging its regional peers, Myanmar's digital development is progressing rapidly. This development embraces better service delivery, decision making, and innovative engagements with local digital economy enterprises. Subnational governments in Myanmar are at a very nascent stage of their digital transformations. Paper-based processes are gradually giving way to computerized workflows in core administrative domains like public financial management, human resources, revenue mobilization and administrative services), though much data collection and recording are still done manual and are quite fragmented. Mandalay and Yangon have established a digital presence, most significantly using social media like Facebook for communication and feedback, though each city has a limited online service delivery presence. Geospatial information initiatives are largely restricted to urban levels. Mandalay has moved to introduce c-circuit television (CCTV) networks to address public security functions, making early forays into "Smart City" technology. With significant donor support, one local tech start-up has prepared an app for tax collection, although this is only in smaller towns, while a number of other pilot initiatives are in the works.

Going forward, expectations of a digital government are likely to be most pronounced, at least initially, in urban areas. Budget data indicates that MCDC, in particular, is increasingly prioritizing e-governance investments. The Mandalay City administration's planned investments in e-governance have increased from 300 million Kyat to more than 900 million Kyat between the 2017/18 and the six-months 2018 interim budget. This represents an increase from 0.4 to 1.2 percent of total spending, and includes a combination of hardware (e.g. computers), data centers, parking sensors and fee collection systems. In Yangon, e-governance investments were budgeted at 300 million Kyat, in 2018/19 (0.1 percent of the city administration's budget).

Further rapid developments could emerge over the short- and medium-term facilitated by rapid improvement in internet connectivity and mobile use. With a set of rapidly diffusing technologies for governance, states and regions can achieve quick gains and potentially even digital government strides in certain areas. Digital information can be captured from local sources (such as administrative systems,

smartphones or sensors), as well as global resources (such as satellite imagery feeds and processing). Digital land imagery, for instance, can give municipal authorities a granular bird’s eye view of their cities, which can facilitate planning, assess flood risk and provide the foundations for strengthening the property tax system, which will improve the accuracy of tax cadastral records as recently demonstrated in Mumbai, India. Location valuation maps could also quickly generate tax potential estimates.

A key constraint to digital initiatives, however, is the lack of institutional support at the subnational level. The absence of a dedicated bureaucracy means that digital government projects at the subnational level are presently being led by ministers and consultants. Similarly, at the city level, many digital government developments depend on dynamic individuals and private sector partners. There is no standalone government department or team available to develop and implement information and communication technology initiatives.

To strengthen locally rooted digital development in Myanmar, the PER proposes

Recommendation	Description
Programmatic Digital Government Applications Budgeting	Prepare and communicate annual digital government and “state of digital assets” report for sub-national leaderships.
Digital Skills, Public-Private Partnerships, and Fit for Context Technologies	Build selected modern digital capabilities, potentially by drawing in local universities and digital enterprises; engaging in peer-learning-by-doing in the region and beyond; promoting an enabling national legal framework; prototyping; and partnering across government and the private sector for impact.
Build and Implement Interoperability Frameworks	Think early about the practical roles, responsibilities and results of an integrated digital government architecture; leverage “for free” global spatial information feeds, such as satellite and other spatial data imagery; nurture feedback mechanisms; and use smartphone technology to create spatial registries of local assets.

Key policy messages from the executive summary are also addressed in detail in the policy notes prepared by the Renaissance Institute and World Bank PER team.

1 INTRODUCTION

A. Country context

1.1. Myanmar has considerable geographic and social diversity (Table 1.1). Oriented on a predominantly north-south axis, stretching from the Himalayas in the north to the Andaman Sea in the south, the geography of Myanmar features 1,200 miles of uninterrupted coastline, low-lying plains, major river systems in the middle of the country, and mountainous areas at its borders. Reflecting its location between cradles of civilization in both east and south Asia, and a recent history of colonization, there is considerable ethnic and religious diversity. Among its 53 million people, there are 135 officially recognized ethnic nationalities, although Bamar are the largest. A constellation of three cities, Yangon, Naypyidaw, and Mandalay – all capital cities at one time – run through the spine of the country, standing in stark contrast to the predominantly rural and remote character of much of the rest of the country.

Table 1.1: Geographical and socio-economic information

Variable	Value
Official Name	• Republic of the Union of Myanmar
Location and geography	• South-eastern Asia, bordering Thailand, Lao PDR, China, India, and Bangladesh. Broadly split into four agro-ecological zones: Coastal zone along the Isthmus of Kra in the southeast and west to the Bay of Bengal; Irrawaddy delta zone in the south, Mountainous zone in the north, northeast, and northwest; and dry zone in the center.
Area	• 673,022 km ²
Population (2014 Census)	• Total: 50,279,900 • Rural: 35,401,957 (70.4%) • Urban: 14,877,943 (29.6%)
Religion (2014 Census % of total estimate pop)	• Buddhist 87.9 • Christian 6.2 • Islam 4.3 • Animist 0.8 • Hindu 0.5 • Other religion 0.2 • No religion 0.1
Official languages	• Burmese (official language; Article 450, 2008 Constitution)
GDP per capita (2017; World Bank Development indicators)	• GDP per capita (constant; LCU) MMK 1,195,938 • GDP per capita, PPP (constant; 2011 international \$) 5,612 • GNI per capita, Atlas method (current; US\$) 1,210
Population, area and per capita GDP of smallest region (Yangon)	• Population (2014 Census) 7360703 • Area (km ²) 10,171.3 • GDP per capita (GDP current price 2017-18; MOPF) MMK 3,043,319 • (USD equivalent 1 USD = MMK 1,500) \$2,028
Population, area and per capita GDP of smallest state (Kayah)	• Population (2014 Census) 286,627 • Area (km ²) 11,731.1 • GDP per capita (GDP current price; 2017-18; MOPF) MMK 1,053,605 • (USD equivalent) \$702

Variable	Value
Per capita GDP (highest);	<ul style="list-style-type: none"> • Yangon Region • MMK 3,043,319 (2017-18; MOPF) • US \$ 2,028
Per capita GDP (lowest)	<ul style="list-style-type: none"> • Chin State • MMK 821,221 (2017-18; MOPF) • US \$547

- 1.2. **Despite an enviable strategic geography, Myanmar has a complex history of isolation, conflict, and underdevelopment.** Decades of civil conflict and tight military rule have marked Myanmar’s political, social and economic life since its independence from British rule in 1948, and continue to impact the country today. These conflicts have imposed considerable costs, in terms of lives and having diverted resources away from public services. The country was ruled by authoritarian military governments focused on the suppression of separatist movements between 1962 and 2011. These features have left the challenging legacy of a weakened social contract, top-down decision-making and a prevailing institutional ethos in the civil service that prioritizes compliance over public service. Despite the recent transition to a civilian government, the military remains intertwined in the nation’s political leadership.
- 1.3. **Myanmar’s political and economic transitions, which commenced in 2011, have promoted growth and improved welfare outcomes.** The first democratic elections in five decades were held in 2015. The transition from a planned to an open market economy brought about average annual growth rates of 7 percent and a decline in poverty rates from 38 percent in 2010 to 26 percent in 2015. The impact of these transitions has been felt by all sectors of society. For example, access to electricity has nearly doubled for Myanmar’s population, particularly in rural areas, albeit from a particularly low base, and mobile phone ownership rose from 4.8 percent in 2010 to 82 percent in 2017. The elimination of overt media censorship in 2011, coupled with the rapid expansion of smartphone ownership, has also led to an increasingly vibrant civil society and social media.
- 1.4. **However, these transitions have not benefited all groups or all geographic areas equally.** Per capita income differences across geographic regions in Myanmar are large, ranging from Kyat 3.0 million (ca. US\$1,986) in Yangon Region to Kyat 820,000 (US\$547) in Chin State.¹ Around 13 million people remain poor and an additional 6 million are barely above the poverty threshold.² There are extreme variations in terms of wealth, provision and quality of public services, human development outcomes, and other socioeconomic indicators. Economic growth is spatially unbalanced and concentrated in the growth poles of Yangon and Mandalay. Urban areas have seen faster growth in private expenditure than rural areas and a sharper decline in poverty in percentage point terms. Three-quarters of the rural population, in contrast, remain disconnected from the national electricity grid, and around two-thirds of rural residents lack access to all-weather roads.³
- 1.5. **Lingering armed conflicts and a complex political and economic system continually put pressure on fragile gains.** Myanmar has been more deeply affected by subnational conflict⁴ than any other country in Asia. In 2016, active or latent subnational conflicts affected more than one third of the country’s 330 townships and almost one quarter of the country’s population. These conflicts are predominantly concentrated in the country’s periphery, which is home to most of its many ethnic minorities. Conflict-afflicted areas generally perform poorly on all major measures of well-being. In certain areas, such as

1 Throughout this PER the exchange rate of USD 1 = 1,500 Kyat is used.

2 World Bank. (2017). An analysis of poverty in Myanmar: Part one - trends between 2004/05 and 2015 (Vol. 2) (English). Washington, D.C.: World Bank Group.

3 Asian Development Bank (2016) Myanmar Transport Sector Policy Note Rural Roads and Access. Manila, Philippines

4 Armed conflict over control of a subnational territory within a sovereign state.

the Wa Self-Administered Division, the Myanmar Government has a limited presence, and Ethnic Armed Organizations (EAOs) are the primary authority, while in other areas governance is mixed, with the government and EAOs vying for influence over local populations by raising revenues, building roads, training teachers, and administering local justice (The Asia Foundation, 2017).⁵

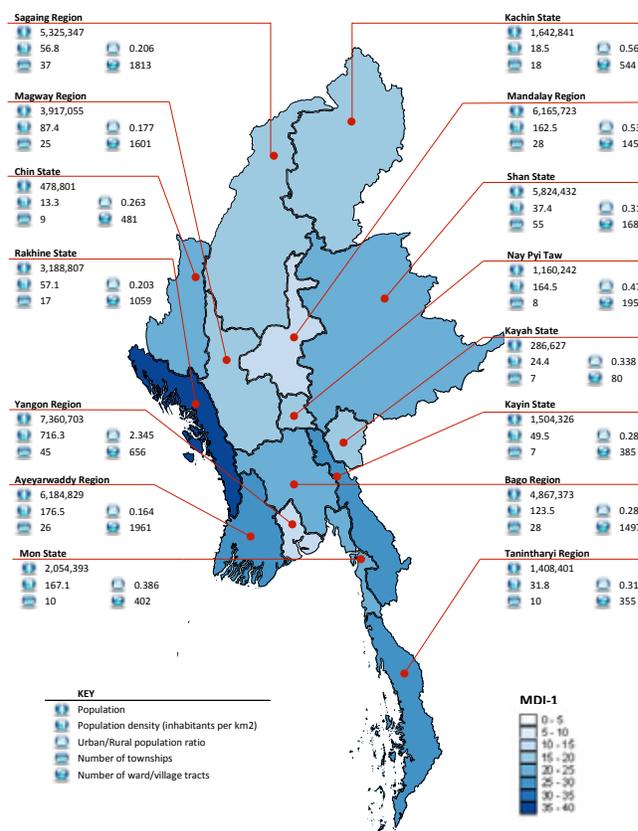
Subnational governance, finances, and delivery of services

1.6. **As part of the political transition, Myanmar’s 2008 Constitution⁶ established a new subnational tier of government (Table 1.2).** In a structural break from the previously centralized and unitary administrative structure, the Constitution established fourteen separate political units of equivalent status. These included seven ethnic “states”, named after the seven major non-Bamar ethnic nationalities and located in the periphery of the country, and seven ethnic-neutral (but majority Bamar) “regions” located near the major river systems in the middle of the country (Figure 1.1). Separately, the Constitution also created six self-administered zones/divisions within Sagaing Region and Shan State. One Union territory was also established, containing the capital Nay Pyi Taw and surrounding townships.

1.7. **The basic function of the new tier of government is to provide space for greater political pluralism.** Subnational tiers of government are widely considered to be important for enhanced service delivery performance because of the inherently shorter route of accountability towards beneficiaries. They are also important as nurseries of leadership and innovation and as forums for increased participation that can accommodate diverse political actors and views. While all these reasons are important in Myanmar, the need for enhanced pluralism is particularly salient given the long-standing challenges of civil wars waged by several minority ethnic groups.

1.8. **Structurally, states and regions are a conventional *de jure* subnational level of government created by the Constitution with a legislature and an executive arm and revenue-generating powers.** Partially elected unicameral legislatures (known as *Hluttaw*) are established in each state and region. The members of the subnational legislatures debate policy, performance, and budgets. The executive, led by an unelected Chief Minister and a Cabinet of state/region ministers, is assigned the right to promulgate laws for all or part of the region or state over specific matters prescribed in a positive list of eight sectors outlined in Schedule Two of the Constitution. Executive power extends to administrative matters over

Figure 1.1: Myanmar’s states and regions



5 The Asia Foundation (2017) The Contested Areas of Myanmar: Subnational Conflict, Aid, and Development, The Asia Foundation, Yangon, Myanmar
6 the country’s third since independence in 1948

Table 1.2: Subnational political indicators

Variable	Value
Constitution (year, form)	2008; Semi-democratic republic
Orders of Government	Union; States/Regions
Constitutional status of local government	Constitutionally recognized
Number and types of constituent units	<ul style="list-style-type: none"> • 14 states (7) and regions (7); plus (1 Union-administered territory (Nay Pyi Taw) and 6 self-administered territories • 74 Districts • 330 Townships • 16,753 Ward and village tracts
Union legislature	A semi-democratic republic with a semi-competitive multiparty system. Bi-cameral Union legislature comprising: a lower house <i>Pyithu Hluttaw</i> (People’s Assembly) consisting of 440 members, of which 330 are directly elected from each of the 330 townships through a first-past-the-post system, and 110 are appointed by the Myanmar Armed Forces; and an upper house <i>Amyotha Hluttaw</i> (Nationalities Assembly) consisting of 224 members, of whom 168 are directly elected (12 per state/region) and 56 are appointed by the Myanmar Armed Forces.
Subnational legislature	Each state and region has a partially-elected unicameral Hluttaw, comprised of: two directly elected members per township; representatives for “national races”; and appointed military representatives equal to one-quarter of the total seats. The Chief Minister is selected by the President.
Executive branch of the Union Government	State Councillor; President; Vice Presidents; Cabinet Ministers. Three important ministerial posts (border affairs, defense and home affairs) are held by serving military officers.
Executive branch of the State/Region governments	Chief Minister and cabinet ministers, the latter appointed by the Chief Minister and approved by state/region Hluttaw. Ethnic Affairs Ministers elected as “national race” representatives during Hluttaw elections. Minister of Security and Border Affairs is a serving military officer.

which the state or region Hluttaw has power to make laws. Though, outside of ‘municipal governance’ (listed as “Development matters” in the Constitution and commonly known as “Development Affairs”), there is no sector that is exclusively the administrative responsibility of the subnational level (Table 1.3). Schedule Five of the Constitution assigns states and regions an assortment of smaller tax and non-tax handles, the main sources of revenue are assigned to the Union (Table 1.4).

7 Arnold et al. (2015) reconcile the nomenclature used to describe Myanmar’s municipal governance.

8 Annex details the powers outlined in Schedules Two and Five of the Constitution.

Table 1.3: Summary of union and state/region government functions⁹

Public Service	Legislative responsibility
Central Banking	Union
Currency and coinage	Union
Foreign Affairs	Union
Defense	Union*
Border Affairs	Union*
Administration of justice, criminal law and property rights	Union
Police	Union*
Prisons	Union*
Fire brigade	Union*
General Administration	Union
Registration of births and deaths	Union
Census	Union
Postal service	Union
Shipping	Union
Airways	Union
Railways	Union
Health	Union
Education	Union
Social Welfare	Union
Roads and bridges	Union/subnational
Public transportation	Union/subnational
Water supply	Union/subnational
Electricity supply	Union/subnational
Agriculture forestry and fisheries	Union/subnational
Road transport	Union/subnational
Mining	Union/subnational
Municipal governance (Development matters)	Subnational

* Military responsibility, through its control over the ministries of Defence, Home Affairs and Border Affairs.

Source: Constitution of the Republic of the Union of Myanmar (2008), Schedules One and Two.

⁹ Most of the authority of subnational governments is concurrent with, and indeed often subordinate to, the authority of the union. This means that the de facto authority of states and regions is not always aligned with these de jure assignments (Chapter 2 provides more detail)

Table 1.4: Tax assignment to various orders of government

	Collection and administration (level of government)	Share in Revenue	
		Union	State / Region
Union taxes			
Personal income	IRD (Union)	95%	5%
Commercial	IRD (Union)	85%	15%
Special goods	IRD (Union)	85%	15%
Stamp duty	IRD (Union)	98%	2%
Customs duty	IRD (Union)		
State/Region taxes			
Excise	GAD (Union)		100%
Mineral	GAD (Union)		100%
Land	GAD (Union)		100%
Water and embankment	GAD (Union)		100%
Extraction of forest products	Department of Forestry (Union)		100%
Fisheries	Department of Fisheries (Union)		100%
Wheel	City Development Committees and Development Affairs Organizations (State/Region)*		100%
Property	City Development Committees and Development Affairs Organizations (State/Region)*		100%

*City Development Committees (CDCs) and Development Affairs Organizations (DAOs) are comparable in function to municipal offices.
Source: Constitution of the Republic of the Union of Myanmar (2008), Schedules One and Five.

- 1.9. The state and region governments are critical for Myanmar's triple transitions: from authoritarian military rule to democratic rule; from a closed economy to a more open one; and from internal conflict to peace. States and regions allow local political groups to contest power through democratic means (within limitations). Two rounds of elections, in 2010 and 2015 have been held so far, the latter recognized as fully democratic. Elections have also been held to elect some of the political leadership of the executive of the Yangon and Mandalay cities. State and region governments are also critical for delivery of services and public infrastructure, in Myanmar's expanding urban areas, and in rural and conflict-affected areas; and they are spending an increasing share of public resources¹⁰ mainly on addressing Myanmar's infrastructure deficits (see Chapter 3). States and regions are also critical for peace-building insofar as they help address long-standing demands for more local autonomy. Steps are also increasingly being taken to strengthen autonomy and authority within the tight confines of the Constitution; this, in turn, is helping facilitate greater democratic development and citizen participation (see Chapter 2).

¹⁰ Estimated at 13 percent in 2018/19.

B. Motivation and Framework

- 1.10. **This Public Expenditure Review (PER), focuses on analyzing Myanmar’s nascent subnational institutions, particularly governance, union-local administrative and fiscal relations, and service delivery from a local prism.** This is the third fiscal PER in the World Bank’s programmatic series in Myanmar. The first PER, completed in 2015, analyzed allocative efficiency among sectors and fiscal discipline at the Union level. It also included a chapter on the institutional architecture of the Union’s political, administrative and fiscal relationships with the subnational governments. The second PER, completed in 2017, focused on debt management, state-owned enterprises, investment management, and options for creating fiscal space at the Union level. Its original aim was to study capital expenditure in key states and regions, but insufficient time and resources precluded this.
- 1.11. **The overarching objective of this PER is to enhance the institutional capacity of subnational governments to manage revenues and expenditures.** To that end, the PER focuses on identifying the institutional constraints that inhibit effective subnational oversight and governance, and proposes reforms to subnational institutions and the architecture of intergovernmental fiscal and administrative relations. The PER provides empirical analysis and advice on the state of subnational public finance policies and systems, which includes a detailed review of the economic and functional composition of subnational expenditure, and the links across and within each jurisdiction where links have been identified (see below). Also examined are the various mechanisms through which expenditures are financed and whether the financing mix is aligned with incentives and calibrated to support drivers of growth; this addresses deprivation and growing inequality. A revenue model facilitates scenario analysis of mechanisms to strengthen the intergovernmental transfer system and to better capture land values in municipalities.
- 1.12. The following factors shape the framework of the PER:
- **The analysis focuses exclusively on three subnational governments of economic and political significance: Yangon Region Government (YRG), Mandalay Region Government (MRG), and Shan State Government (SSG).** Among Myanmar’s seven region governments, Yangon and Mandalay play an outsized role in its political, social and economic dynamics. Shan State stands out among the seven state governments for its location, size, and history of conflict. It is also arguably the most ethnically diverse area in the country, housing 33 of the 135 officially recognized ethnic groups; it is also the location of five out of the country’s six Constitutionally-designated self-administered areas. While it is inherently difficult to capture the vast diversity of Myanmar, the geographic focus of this PER provides enough range to provide some general lessons and solutions for most states and regions.
 - **The analysis also focuses on Yangon and Mandalay City Development Committees (YCDC and MCDC), the municipal authorities in Myanmar’s two largest cities.** Municipal governance is unique as a wholly devolved function of the subnational level. It is also critical to Myanmar’s ongoing development prospects. The brisk pace of urbanization is unlikely to abate, an additional 7.1 million of the current rural population are projected to relocate to cities by 2050. The stress of urbanization is starting to manifest itself in increased congestion, and pressures on provision of services, such as solid waste disposal, urban transport, affordable housing, pollution control, social cohesion and liveable urban environments. Accordingly, the 2017 World Bank PER notes that the cities of Yangon and Mandalay are poles of future growth, and as such should be a strategic focus of public finance.
 - **Myanmar has taken a hesitant approach to decentralization.** Analyses of decentralization are typically framed by the extent of authority that subnational governments have over the “Three F’s” of public administration: functions, funds, and functionaries. In Myanmar, the Constitution creates de jure political authority at the subnational level, but most functional responsibilities, including almost

all service delivery, all major sources of revenue and the civil service, remain centralized in the Union government and its line ministries. The narrow window of authority given to subnational governments is largely shared with (and, in effect, subordinate to) the Union. This is reflected in perceptions within the Union, that states and regions are located within a hierarchical structure, with the President at its apex rather than being autonomous political entities responsible for developing and implementing their own policies.

- **The PER focuses on three specific functions where subnational governments wield authority:** (i) the use of information and communications technologies (ICT); this is a strategic enabler of good governance and an institutional reform in its own right. ICT can promote modernization, bring a spatial lens to service delivery and improve local management and performance; (ii) solid waste management; this is an essential municipal function and the mechanism through which subnational governments are responsible for day-to-day service delivery; (iii) urban transport, although urban transport is jointly assigned to different levels of government, it is central to managing the challenges related to rapid urban growth, and is widely viewed as a municipal responsibility. It was also a central issue of debate during the recent municipal elections in YCDC.
- **The impact of local governance, expenditures, finances and the delivery of services on important dimensions of inclusion is analysed in this PER, especially in relation to women and the poor.** There is a particular focus on strengthening the participation of women in politics and the civil service. The recently developed Multidimensional Deprivation Index – a non-monetary measure of well-being based on Census information (see Section C below) – provides an opportunity to identify the extent of deprivation among the population in each state, region, and township. It permits an examination of whether current spending patterns are geographically targeted at the greatest need.
- **There is a focus on strengthening public administration as a way of aligning the different aspects of decentralization and enhancing accountability.** Administrative decentralization in Myanmar has, arguably, lagged behind both the political and fiscal dimensions. The lack of independent administrative units, described as ministers without ministries, and blurred lines of responsibility limits space for transparent political action; it also makes governments less able to respond to citizens' demands and citizens less likely to participate in the political process, all of which weakens accountability. Put simply, misalignments limit the “decision space” that is afforded to states and regions (Valley et al 2018). Stronger subnational administrative capacities that are well aligned with political and fiscal powers, therefore, are preconditions for state and region governments to be able to direct existing responsibilities; this is an important precursor to any future reforms that could enhance these responsibilities.
- **Intra-state conflict provides an important backdrop to the analysis but is not a focus.** The various forms of mixed governance in conflict-affected areas provide a challenge for subnational governance, particularly within states. The competing mix of authority limits the penetration of the state to varying degrees. Moreover, the National Ceasefire Agreement (NCA) commits all parties, including ethnic stakeholders and the military, to a political dialogue aimed explicitly at negotiating Myanmar's future democratic and federal system of government. That dialogue is ongoing.
- **There are acute data limitations at the subnational level.** Historically, the closed and secretive nature of Myanmar's public service meant that little emphasis was placed on transparency and accountability. Myanmar also has no Right to Information (RTI) or Freedom of Information (FOI) Laws that grant citizens the right to information on public bodies. Consequently, fiscal, human resource and service delivery performance information has seldom been shared outside of government. While voluntary transparency is improving, the largest gains are predominantly at the national level. Outside of piecemeal attempts, such as the publication of citizens' budgets and the Open Myanmar

Initiative database, no formal systems of information dissemination are yet in place for subnational economic and fiscal data. While subnational planning and budgeting departments were helpful and cooperative, a number of weaknesses in the information systems made accessing data a challenge. Box 1.1 provides more details on the data challenges encountered while undertaking this analysis.

Box 1.1: Data challenges in undertaking the PER

As has been noted previously (World Bank PER, 2015) weaknesses in government information systems create inefficiencies, inaccuracies and hamper the capacity to undertake evidence-based policy analysis on public finances and administration. These challenges are particularly acute at the subnational level. A highly decentralized approach to reporting involves more than five thousand spending units submitting expenditure accounts to budget departments on a monthly basis. The General Administration Department (GAD) also collects reams of administrative data. However, the information system remains predominately manual and paper-based. Most information is entered into computers for the purposes of preparing paper-based print-outs not for preparing digital databases. These print-outs, which are generally reported only in Burmese, are the primary mechanism through which information is shared within and outside of government. Consequently, much of the analysis for the PER was laboriously entered by hand from these print-outs into digital databases.

The information shared also tends to be highly aggregated and not always fit for purpose. Time series information is generally available for most subnational fiscal aggregates, though more granular information – such as the administrative, geographical and functional classification of government, and individual revenue handles – is not always available. This made it difficult to pinpoint particular spending items, such as IT-related investments and pension obligations. Shan State was a notable exception, where disaggregated expenditure information was available from administrative units.

As previously noted by Valley et al. (2018), the fragmentation of the information system across departments gives rise to inconsistencies across accounting classifications, time, geography and ministries, which means that the information available is not always suited to deeper analysis. Capital budgeting information, in particular, is ad hoc, inconsistent and varies between line departments. This adversely affects the preparation of budgets and limits the capacity to effectively and efficiently formulate policy, or coordinate and monitor government functions. The uniform countrywide system of budget accounting classification is also not fully consistent with modern classification structures, confounding attempts at international benchmarking.

Some data are not available, which made some analysis not possible. For example:

- A lack of project-based information, such as the size, and functional nature of executed capital projects prevented an in-depth insight into the implementation of capital investments at the subnational level.
- Outside of Shan State, it was not possible to analyze how funds are being allocated and spent by deconcentrated units at the township level.
- Detailed information on YCDC and MCDC finances was not available, which hampered both urban transport and solid waste management chapters, and necessitated computation of some fiscal outturns.
- Some of the information shared for the PER was limited to budget estimates, not realized outturns, which restricted the ability to evaluate allocative efficiency of spending and the accuracy of government forecasts.

- 1.13. **This PER draws on the most up-to-date data available, from both quantitative and qualitative sources, and from the Bank’s technical expertise.** The PER updates existing data on the public record and examines the 2018/19 budget estimates, where possible. It also draws on a range of spending, financing, and human resource information that has not previously been published. Supporting qualitative information has been gathered from extensive key informant interviews throughout the Government of Myanmar. Myanmar’s subnational governance institutions are placed in their broader historical context and benchmarked against other countries in the Southeast Asian region.
- 1.14. **The analysis extends, technically and geographically, the scope of previous and ongoing work on fiscal decentralization and subnational governance in Myanmar.** A number of organizations, notably The Asia Foundation (TAF) and Renaissance Institute (RI), have played a leading role in examining Myanmar’s subnational governance, and finance and service delivery. Nixon et al., (2013, 2015) provided much-needed baseline information on the new state and region structures (), other studies advised on the associated administrative framework (Saw and Arnold, 2014), and the role of newly decentralized Development Affairs Organizations (DAOs) in municipal governance (Arnold et al., 2015).¹¹ A 2018 update of TAF’s work has been a particularly important contribution inasmuch as it provides an contemporary perspective on how the new subnational structures are functioning (Batcheler et al., 2018). In partnership with the IGC, RI also examined intergovernmental fiscal relations specifically within the roads sector, focusing on the coherence of decentralized institutions and the mechanisms of the roads project selection (Valley et al., 2018).
- 1.15. **The analysis builds on the important contributions that have helped broaden the understanding of public financial management at the subnational level, with a specific geographic focus.** The geographical focus of TAF’s technical studies into subnational finance and service delivery has tended to be on Shan State, Ayeyarwady Region, and Tanintharyi Region. These three locations have been the focus of recent evaluations of: (i) states’ and regions’ public financial management (PFM) practices and intergovernmental fiscal relationships (Shotton et al., 2016); (ii) the PFM practices of smaller cities (Winter and Thin, 2016); and (iii) the actors involved in local economic governance and the mechanisms for own-source revenue collection (Bissinger, 2015). Within municipal areas, a systematic review of the urban property tax system, published by RI, focused on a narrow subset of state and region capitals including Yangon, Taunggyi, Hpa-An, Patheingyi and Bago (McDonald and Hein, 2017) while the City Life Survey examined, *inter alia*, attitudes to taxation in Yangon, Taunggyi and Hpa An (Owen and Htun, 2018).¹²
- 1.16. **This PER also has important links to the policy goals of Myanmar’s Sustainable Development Plan (MSDP).**¹³ The MSDP is an important touchstone of the Myanmar government’s proposed development strategy, distilling the country’s various existing sectors and thematic-level plans. The PER links with the MSDP via Goals 1 and 2, which focus on the political and economic dimensions that underpin the achievement of Union-wide peace and stability. Goal 1, in particular “recognizes the essential and reinforcing roles played by open, inclusive and well-governed institutions, adherence to the rule of law and respect for human rights, the adoption of inclusive and conflict-sensitive approaches to socio-economic development and services provision.” Goal 2 is focused on the economic dimensions that will contribute to sustained macroeconomic stability. This includes “mobilising all necessary sources of development finance, and strengthening public finance management (PFM)”.

11 Effort was also dedicated to providing broad roadmaps for reform and the key considerations therein (Lynn and Oye, 2014; Nixon and Jolene, 2014; Nixon et al., 2015; Dickenson-Jones et al., 2015; Minoletti, 2016a)

12 Owen J and Htun, H.M. (2018). “Attitudes towards taxation in Myanmar: Insights from Urban Citizens” The Asia Foundation, Yangon.

13 The MSDP is the most important expression of the government’s proposed development strategy and provides a coordinated and coherent whole-of-government distillation framework of the country’s various existing sector and thematic-level plans.

- 1.17. **Several aspects of subnational public administration are not examined in this PER. Not included, for instance, is the system of township-level governance and village-level governance.** Union-level activities within individual townships are also outside the scope of this analysis. Geographically-based generalized administration is also not a focus, except to the extent that it provides a potentially important link between the subnational governments and activities within their jurisdictions; This is particularly important given the reassignment of the General Administration Department (GAD) to civilian control. The focus on functionaries is predominantly on staff working in subnational departments of line ministries and city administrations.
- 1.18. **The thorny issues of federalism in Myanmar, a central element of negotiations in the ongoing peace process are also not within the scope of this study.** The analysis will focus on subnational governments exactly as they are within the current constitution, and will review the effectiveness of the relationship between the union and subnational governments through that lens. This framing aims to differentiate between inter-governmental constitutional limitations and what the states/regions/cities can already do given current financing and revenue assignment, and current legal authority. Issues to do with natural resource sharing are not part of this study, even though it is an important pillar of intergovernmental financing; this information is currently collected by the union. Also not included is an analysis of centralized services, such as health and education. International examples are used throughout the analysis to juxtapose Myanmar's current subnational architecture with global practice.
- 1.19. **Despite constitutional limitations, there are considerable opportunities for an ambitious reform of the subnational governance and fiscal architecture.** The PER intends to use this to support incremental reform. Political debate on the future shape of a federal Myanmar is ongoing, but strengthening local governance institutions, within the confines of the current Constitution, is an important means of supporting "federalism from below"; promoting a more sustainable, inclusive and accountable system of governance and fiscal management that is more appropriate for Myanmar's considerable social and economic heterogeneity. Central to this is to move beyond a host of historical institutional legacies, including: the underrepresentation of women; civil service norms that prioritize compliance and surveillance over performance and transparency; bureaucratic silos; weak public investment management that results in poorly targeted capital expenditure; and underperforming subnational revenue handles, which limits the potential fiscal space available to states and regions.

C. Subnational context: Yangon region, Mandalay region and Shan state

Economic development

- 1.20. **Among Myanmar’s seven region governments, Yangon and Mandalay are strongly represented in Myanmar’s political, social and economic dynamics.** Together, the Regions of Yangon and Mandalay Regions constitute 26 percent of the national population and 49 percent of the total urban population. These are the primary hubs of private-sector economic activity growth. Yangon alone is estimated to produce 26 percent Myanmar’s 106 Trillion Kyat GDP in 2018/19 and Mandalay will contribute a further 11 percent of GDP (Figure 1.2). By virtue of containing the country’s two largest cities, Yangon and Mandalay Regions have larger services and industry sectors than the Union average. 32.7 percent of all firms and the majority of the manufacturing sector are located there.¹⁴ Estimates (based on night light illumination) indicate that the GDP of the Yangon region has grown by 11.2 percent per year since 2008.¹⁵
- 1.21. **In contrast, Shan State lags the rest of the country on formal economic performance.** Shan State accounts for around 6 percent of the national GDP, a disproportionate share given that it accounts for 23 percent and 12 percent of Myanmar’s landmass and population, respectively.¹⁶ Shan State’s economic output per person (per capita GDP) is expected to be just 1.06 million Kyat; half of the national GDP per capita and the second-lowest output of all Myanmar states and regions (only Chin State is lower). Shan State’s per capita GDP is less than one-third of that of Yangon Region, which is the country’s highest at 3.69 million Kyat (Figure 1.3).

Figure 1.2: GDP in Shan, Yangon, Mandalay, in billion kyat in 2018/19

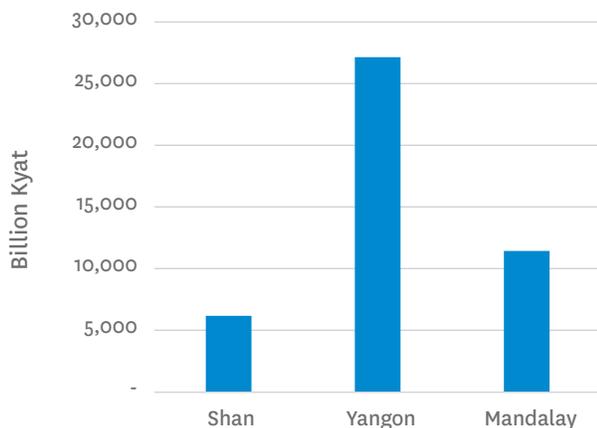
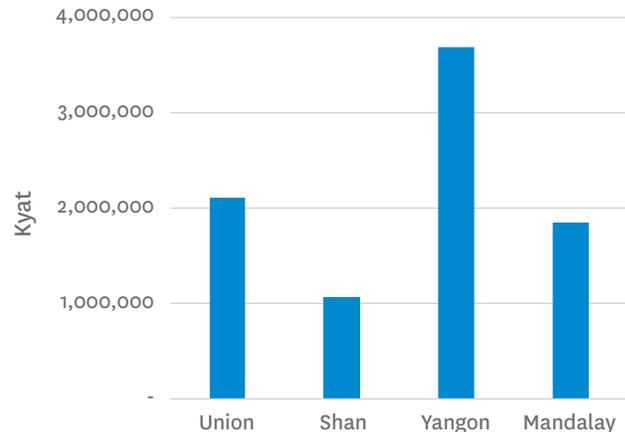


Figure 1.3: GDP per capita, union average and Shan, Yangon, Mandalay, Kyat in 2018/19



Source: MOPF; WB staff estimates

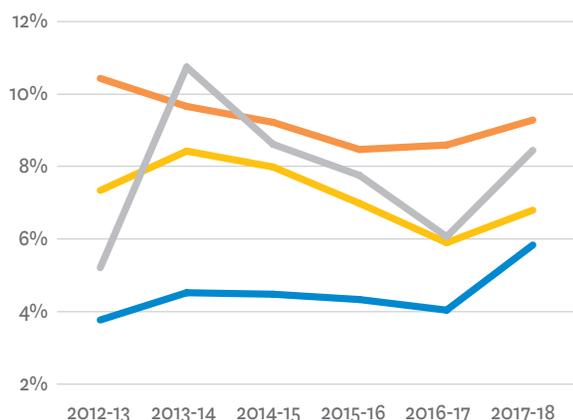
14 UNDP/Central Statistical Organization, 2015. Myanmar Business Survey

15 Fox, S. and Verrucci, E. (2017). Estimating GDP Growth in Greater Yangon Using Nightlight Data

16 Shan State contribution to national GDP has been consistent at around 6 percent every year since 2013/14.

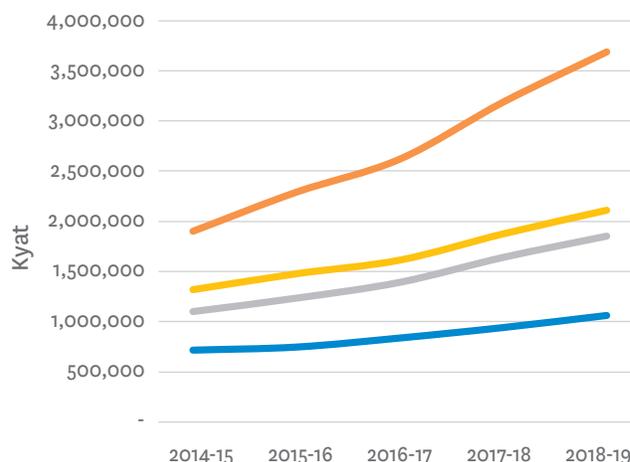
1.22. **Despite sustained growth, Shan State’s formal economy is not converging with the rest of Myanmar** (Figure 1.4). The Union of Myanmar has grown at a faster rate than Shan State since 2014/15, and Shan State has become comparatively poorer than the national average. This can be quantified in the per capita income gap with the Union average, which is estimated to be 1 million Kyat in 2018/19 – nearly twice as large as in 2013-14 (524,000 Kyat) (Figure 1.5).

Figure 1.4: Real rate of growth, 2011-2018



Union
Yangon
Shan
Mandalay

Figure 1.5: GDP per capita, union average, and Shan, Yangon, Mandalay; current prices in kyat, 2014-2019



Union GDP per capita
Yangon region GDP per capita
Shan state GDP per capita
Mandalay region GDP per capita

Source: MOPF; WB staff estimates

1.23. **The sectoral composition of economic output is an important determinant of the divergent growth rates between Shan State and Yangon and Mandalay Regions (Figure 1.7).** Agriculture is the largest economic sector in Shan State and estimated to be worth 33 percent of state GDP in 2018/19 (2 trillion Kyat). This is considerably larger than agriculture’s share of GDP in Yangon Region (5 percent), and Mandalay Region (17 percent) and the Union average (22 percent). A much higher share of the labor force works in agriculture in Shan than elsewhere. In contrast, Yangon Region is almost entirely dependent on industry and services sectors, while Mandalay Region broadly resembles the national average in its sectoral composition. Figure 1.7 indicates the economy in Shan State has been slower in moving to non-agricultural areas of growth than Yangon, Mandalay and the Union of Myanmar generally. Agriculture is a large share of Shan’s economy, yet it made relatively small contribution to growth. Growth in industry and services in Yangon and Mandalay Regions has been higher than in Shan State and in the Union overall.

Figure 1.6: GDP of union, Shan, Yangon, and Mandalay, by sector % of total, 2018/19

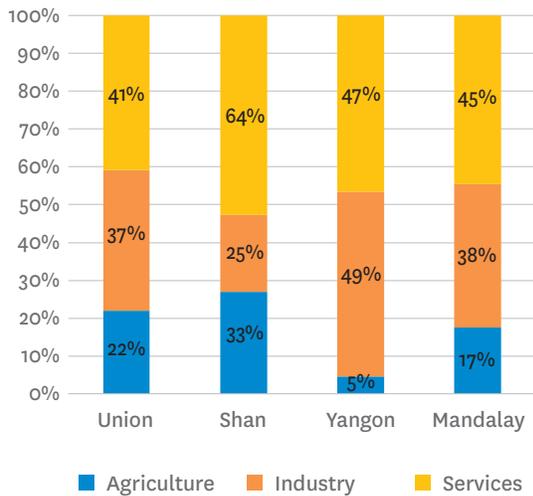
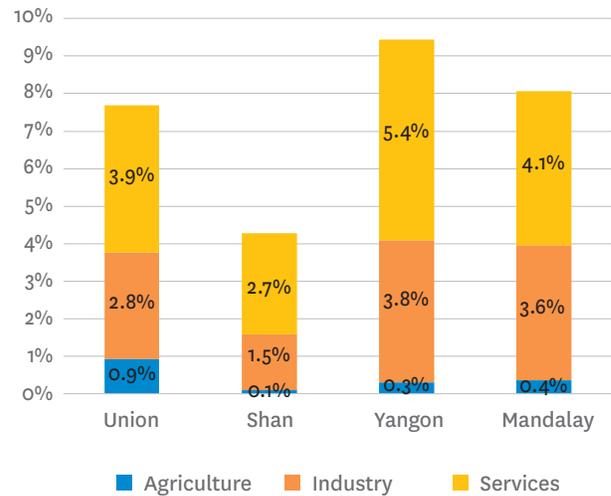


Figure 1.7: Sector contribution to real growth, annual compounded growth 2011-2016



Source: MOPF; WB staff estimates

1.24. **Despite sustained economic growth, women’s labor participation remains low, particularly in Yangon Region.** According to the 2014 census, around 50 percent of females aged 15-64 were actively employed or looking for work, much lower than the 85 percent of males (Figure 1.8). Female labor force participation in Yangon Region is much lower, at 46 percent. Shan State stands out for having the highest female labor force at 66 percent, although the gender gap is still high, at 22 percentage points. Higher female participation in Shan could be attributed to the composition of the economy, which is dominated by agriculture. Figure 1.9 supports this by illustrating that a large share of Shan’s population is employed in agriculture, forestry and fishing sectors, with almost equal participation for both males and females, overall figure for agriculture are also significantly larger in Shan than in Mandalay, Yangon and the Union overall.

Figure 1.8: Labor force participation for males and females

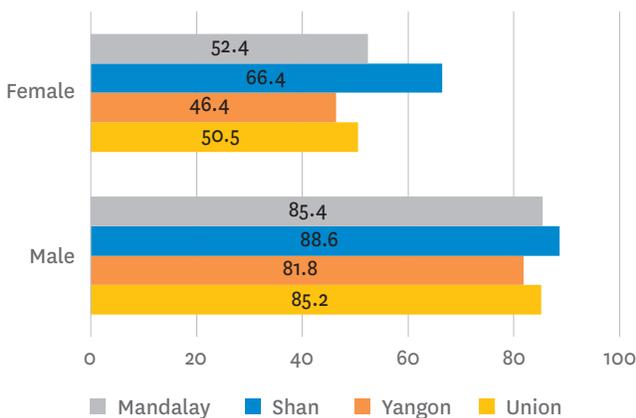
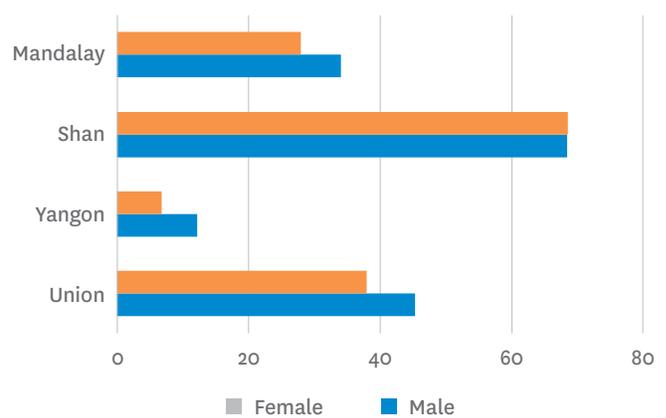


Figure 1.9: Proportion of employed population working in agriculture, forestry and fishing



Source: Census 2014

- 1.25. **Shan State borders two of Myanmar’s largest trading partners, China and Thailand, it is therefore not surprising that trade is an important component of its economy.** China accounted for 38 percent of exports and 33 percent of imports in 2017/18, while Thailand accounted for 20 percent of exports.¹⁷ The city of Muse in Shan State is the largest land border crossing by value in Myanmar, and accounts for 75 percent of trade between China and Myanmar; though only a fraction of these goods are likely to come from Shan.^{18,19} Formal trade in Shan is estimated to be worth 1.3 Trillion Kyat in 2018/19, or 21 percent of its GDP, and has nearly doubled since 2014/15. Despite reports of falling trade at some of the larger border crossings, trade in Shan State is forecast to grow by 8 percent in 2018/19. Shan also remains well placed for an increase in agricultural exports resulting from: (i) the rebound in rice exports following the 2015/16 floods; (ii) expansion into new markets; and (iii) the removal of Chinese import restrictions (Myanmar Economic Monitor, May 2018).
- 1.26. **GDP estimates for Myanmar are likely to give an incomplete picture of economic activity.** As in most agriculturally-based low and middle-income countries (LMICs), much economic activity in the informal sectors of Myanmar are not fully captured in the country’s GDP calculations. Furthermore, the GDP figures are generally blind to the considerable effects of the informal and illicit economy, which is estimated to generate approximately 18 Trillion Kyat annually; equivalent to 24 percent of national GDP.²⁰ Estimates suggest that 84 percent of illicit proceeds are from organized crime groups, the majority of which is from transnational organized crime flowing mainly to China and Thailand. Shan State’s geographical proximity to China and Thailand exposes it to such illicit informal economic activity, (see Box 1.2). Consequently, actual economic activity is likely to be higher than officially reported, especially in Shan state. Despite its imperfections, subnational GDP figures still provide a useful economic reference for historic and geographical comparisons.

Box 1.2: Drug production and profits in Shan State.

Recent analytical work has shown that Shan State has become a hub for a sophisticated drug production and trafficking, and one of the largest global centers for the production of crystal methamphetamine. Drug production and profits in Shan State are thought to be significantly larger than the formal economy. The value of Myanmar’s opium economy alone is estimated at between 1 and 2.2 billion USD (1.5-3.3 percent of the 2017 Union GDP or 27-56 percent of Shan GDP in 2018-19). It is estimated that about 87 percent of opium cultivation in 2018 took place in Shan State.

Source: International Crisis Group (2019)²¹ UNODC (2018)²²

17 Myanmar Economic Monitor. (December 2018). World Bank.

18 Available trade data makes it difficult to gauge what share of traded goods passing through Muse derive from outside Shan State. Trade data do not show the geographical origin of exported goods, nor sectoral disaggregation.

19 Sino-Myanmar trade value plunges through Muse gate. (2018). Mizzima
<http://www.mizzima.com/article/sino-myanmar-trade-value-plunges-through-muse-gate>

20 Myanmar National Risk Assessment Executive Summary Report on Money Laundering and Financing of Terrorism. (2018). National Risk Assessment Committee

21 Fire and Ice: Conflict and Drugs in Myanmar’s Shan State. (2019). International Crisis Group

22 https://www.unodc.org/documents/southeastasiaandpacific//Publications/2019/Myanmar_Opium_Survey_2018_web.pdf

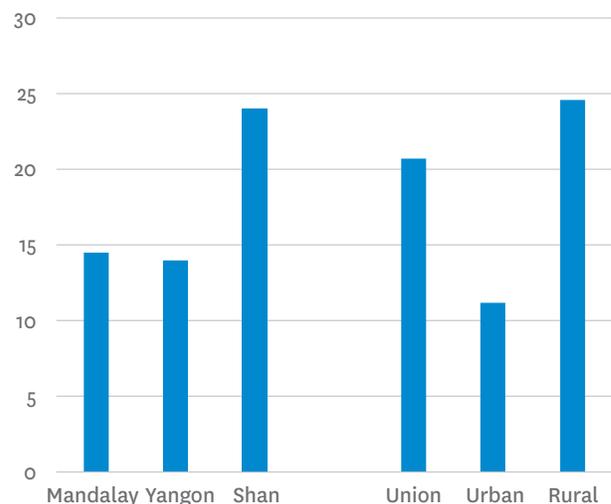
- 1.27. **Shan State’s high exposure to illicit economic activity also acts as a drag on the local economy.** Illicit activity is a driver of conflict in Myanmar (see Box 2.1 in Chapter 2) which negatively affects the Shan economy. In 2016, regular border trade between Shan State and China was estimated to have been reduced by USD 210 million due to armed conflict (Burke, A. et al., 2017).²³ Participation in illicit markets also weakens the pull towards the formal economy by possibly preventing opium farmers from diversifying their agricultural activities. For example, taking farm-gate prices of opium, Shan farmers’ share of production is equivalent to between 1.3 percent and 2.2 percent of Shan’s economy in 2018/19 (or about 4-7 percent of its formal agricultural sector). In addition, the production of methamphetamine does not require large amounts of labor to produce and therefore the profits are not dispersed. These profits are also not taxed nor are they likely to be reinvested inclusively in the state, contributing to inequality and exclusion from public services.

Social development

- 1.28. **The unique economic and geographical characteristics of Yangon Region, Mandalay Region, and Shan State can be seen in their divergent welfare outcomes, as measured by the Multidimensional Disadvantage Index (MDI).** Shan’s lag in economic performance is reflected in relatively higher levels of disadvantage in this index. Shan’s MDI-1 score (i.e., the percentage of weighted deprivations experienced by an average Shan citizen) is 24; higher than the Union average of 20.7 and well above both Yangon (14) and Mandalay (14.5) (Figure 1.10). Box 1.3 provides further details on the calculation of the MDI.

- 1.29. **Township-level estimates reveal that that deprivation within states and regions is not uniform, which means that efforts to strengthen inclusion must focus on addressing variations within, as well as between, states and regions (Figure 1.11, Figure 1.12, and Figure 1.13).** Examining MDI-1 scores for individual townships shows that Shan has pockets of extreme deprivation, that the average person is disadvantaged in 37 to 50 percent of weighted indicators (red areas) in a number of townships. Human capabilities and welfare are influenced by many factors²⁴, however, lagging income growth and low welfare indicators suggest that Shan State is not benefitting from Myanmar’s recent welfare gains.

Figure 1.10: Welfare - multidimensional disadvantage index



Source: Multidimensional Welfare in Myanmar, The Republic of the Union of Myanmar 2018; WB staff estimates

²³ Burke, A. et al. 2017. “The Contested Areas of Myanmar: Subnational Conflict, Aid, and Development”. Yangon: The Asia Foundation.

²⁴ For example, the nature of growth and the supply of basic public services; Dreze, Jean and Amartya Sen. 2002. India: Development and Participation, Delhi: Oxford University Press.

Figure 1.11:

MDI-1 in Shan townships



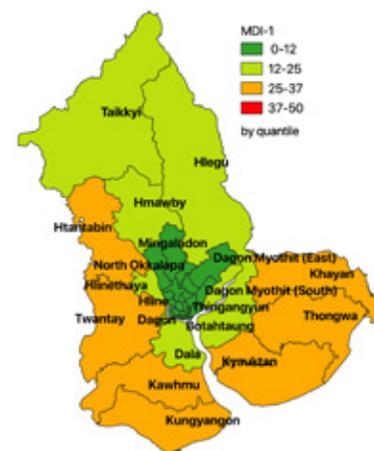
Figure 1.12:

MDI-1 in Mandalay townships



Figure 1.13:

MDI-1 in Yangon townships



Source: Multidimensional Welfare in Myanmar, The Republic of the Union of Myanmar 2018; WB staff estimates.

Box 1.3: The multidimensional disadvantage index (MDI)

The Department of Population (DoP), together with the World Bank, has developed a national measure of multidimensional welfare for Myanmar, referred to as the “Multidimensional Disadvantage Index” (MDI).

The MDI focuses on examining whether people are unable to fulfill their basic needs in a variety of non-monetary dimensions. According to the MDI, a household is considered to have a “disadvantage” if its members are unable to meet their basic minimum needs in a specific dimension, for example if they live in a temporary shelter, or if they use candles or kerosene to meet their lighting needs instead of electricity.

The MDI is able to focus on multiple disadvantages that many individuals may experience concurrently, this overlap makes people particularly vulnerable. The higher the MDI value for an area²⁵, the greater the extent of multiple disadvantages among households living there.

In all, the MDI measures deprivation across fourteen indicators spread across six domains using data from the 2014 Population and Housing Census (Table 1.5). Each of the six “domains” is given equal weight (1/6) in the calculation.

25 State, region, township, or village tract.

Table 1.5: Six domains & fourteen indicators selected for the multidimensional deprivation index

Two MDI measures were created:

Domain:	Education	Employment	Health	Water and Sanitation	Housing	Assets
Indicators	Literacy	Unemployment	Disability	Drinking water	Dwelling	Communication asset
	Primary education	Casual employment	Child and youth mortality	Sanitation	Lighting	Mobility asset
	School enrollment	Child work				

- **Headcount adjusted measure (MDI-1):** which takes the average of the weighted sum of all indicators across the relevant population.
- **Distribution sensitive measure (MDI-2):** which assigns more weight to an indicator with higher incidence of disadvantage.

1.30. **Differences across townships can be, at least to some degree, characterized along the rural and urban divide.** Deprivation tends to be higher in townships with a larger rural share of the population while the reverse tends to be true for urban populations (Figure 1.15). This correlation holds for Yangon, Mandalay, and Shan. In Shan State only Taunggyi township, where the capital is located, has an MDI-1 score in the lowest quantile. In Yangon Region, the 33 townships of YCDC generally have low levels of deprivation, while 15 percent of Yangon’s townships, all rural, have MDI-1 scores between 25-37, which is worse than some townships in Shan. Rural deprivation is generally not as severe in Mandalay, though it is more prevalent than in the seven urban townships of MDCD.

Figure 1.14: Density of MDI-1 across townships in Mandalay, Yangon and Shan

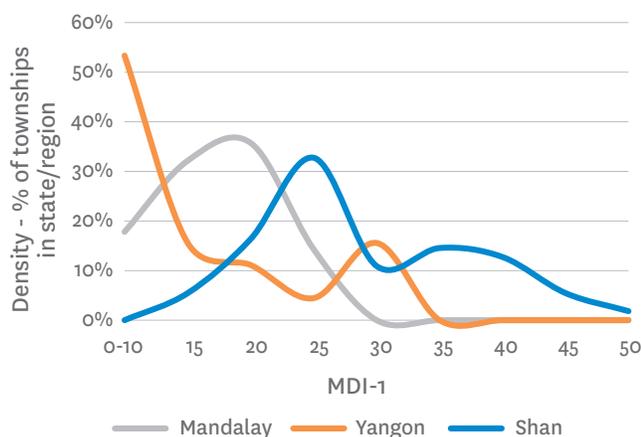
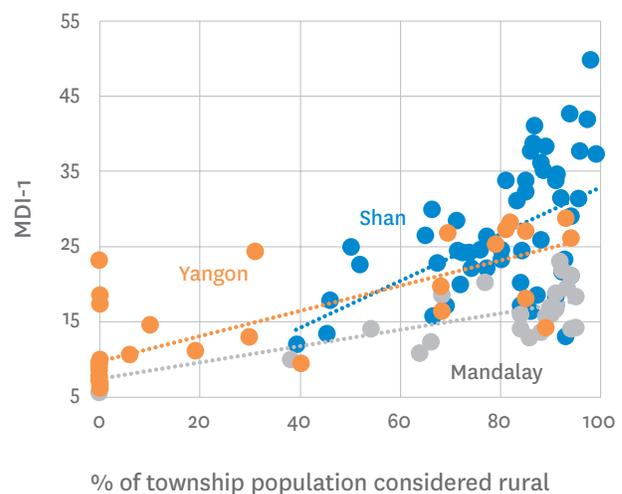


Figure 1.15: MDI-1 and rural ratio in townships in Mandalay, Yangon and Shan



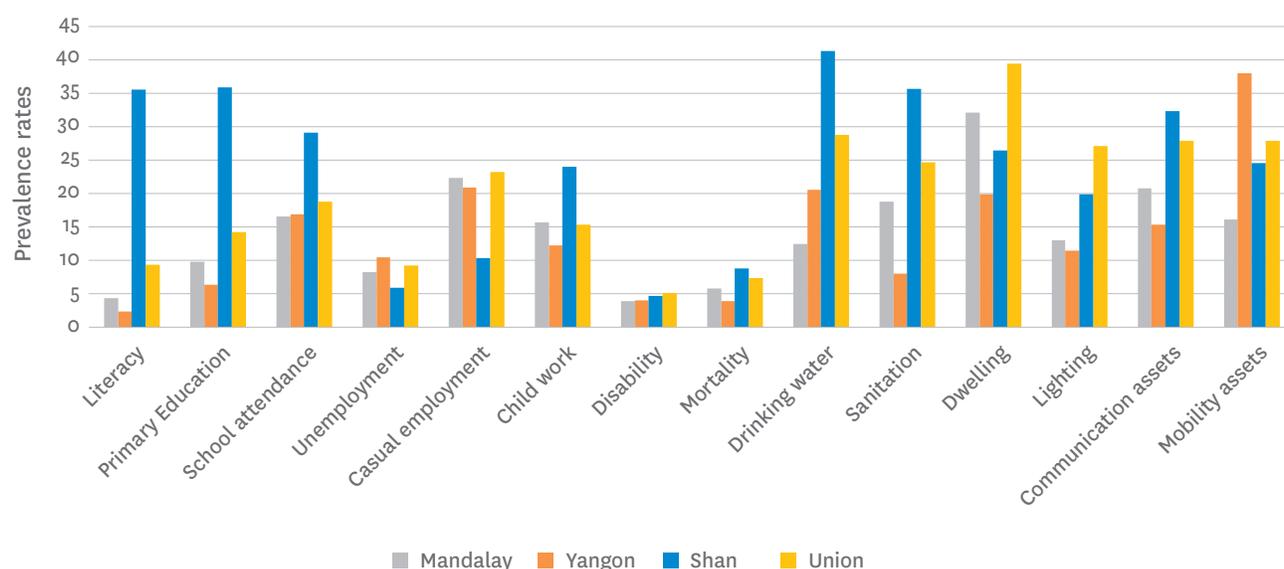
Source: Multidimensional Welfare in Myanmar, The Republic of the Union of Myanmar 2018; WB staff estimates.

1.31. **Yangon, Mandalay, and Shan each have unique deprivation fingerprints.** Shan State is characterized by a large share of townships experiencing widespread deprivation (Figure 1.14). The three most common disadvantages in Shan, access to drinking water, primary education, and sanitation, contribute to half of the State’s total MDI-1 score (Table 1.5).²⁶ In contrast, Shan is less disadvantaged than the others in terms of access to decent housing; as measured by dwelling quality and access to lighting; Mandalay is acutely affected by low-quality dwellings. Deprivation in Yangon and Mandalay is somewhat less pervasive across townships and more narrowly focused. Both regions are afflicted by widespread casual employment (i.e. a majority of the household members are working in ‘elementary’ occupations)²⁷ and low asset holdings. Needs across most indicators are significant and may require investments, however, the unique character of each state and region and the considerable township-level variance highlight the importance of precise local calibration of investments.

Table 1.6: Most and least common disadvantages in Mandalay, Yangon, and Shan

State/Region	3 most common disadvantages	3 least common disadvantages
Mandalay	Dwelling, Casual employment, Communication assets	Disability, Literacy, Mortality
Yangon	Mobility assets, Casual employment, Drinking water	Literacy, Mortality, Disability
Shan	Drinking water, Primary education, Sanitation	Disability, Unemployment, Mortality

Figure 1.16: Multidimensional disadvantage index by indicator and prevalence rates



Source: Multidimensional Welfare in Myanmar, The Republic of the Union of Myanmar 2018; WB staff estimates.

26 Shan State performs worse in all measured aspects of education; literacy, primary education and school attendance.

27 Examples of elementary occupations include: domestic, hotel and office cleaner or helper, news vendor, shoe-polisher, caretaker/ cleaner, washer, labourer, construction, digging, mining, fast food preparers, kitchen helpers, garbage and recycling collectors, sweepers.

1.32. **These deprivation measurements reflect a broader pattern in Myanmar where rural areas fare relatively worse than urban areas in terms of poverty, access to public infrastructure, access to and quality of essential services.** The lack of all-weather roads in rural areas creates physical isolation in many villages and limits the potential of rural populations to benefit fully from poverty reduction efforts, by having less access to other markets for example. Myanmar’s Rural Access Index (RAI) is estimated at 36 percent²⁸, which is the second-lowest in Asia, after Afghanistan.²⁹ There are about 24,000 villages with no road access and a further 20,000 villages that have road access only in the dry season, these villages are across most states, but Shan State is one of the worst affected with 1.6 million residents across 5,000 villages (out of about 10,000) estimated to have no access to an all-season road (Figure 1.17), this represents 18 percent of all of the villages in Myanmar without all-season road access (Figure 1.18).

1.33. **Shan’s combination of size, low density population and lack of connective transport infrastructure creates a particularly difficult economic geography that inhibits development and inclusion.** The lack of roads increases the economic distance, making it more difficult and costly for goods, services, labor, capital, and even ideas to move between places (World Bank, 2009)³⁰. This is reflected in the large estimated travel times, with one-quarter of the state’s population requiring more than 3 hours (and up to 24 hours) to reach the nearest town (Figure 1.19). In contrast, the majority of the population in both Yangon and Mandalay require less than one hour to reach the nearest town. Physical isolation also inhibits access to services, such as medical outreach, and heightens the likelihood of students discontinuing their studies, limiting human development (World Bank, 2017; World Bank, SCD 2019).

Figure 1.17: Village road access levels, 2016
Number of villages by type of access

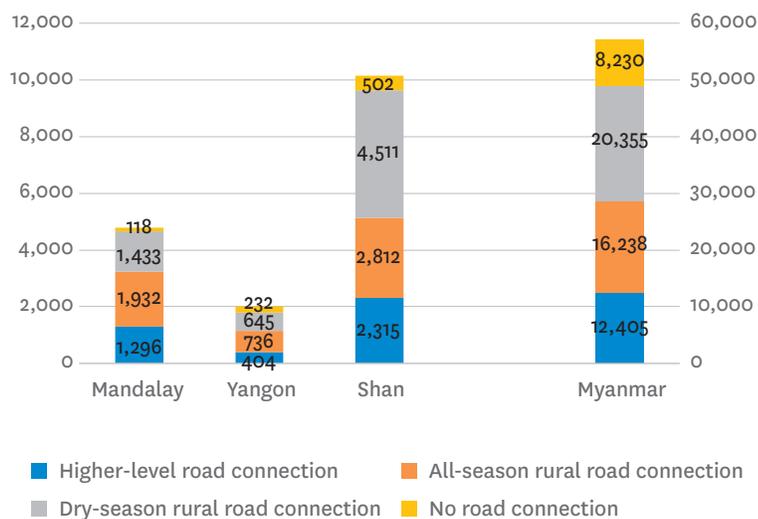
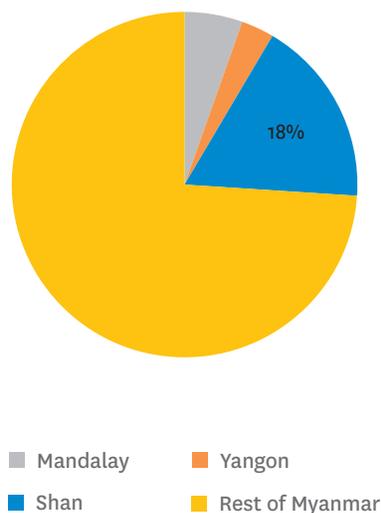


Figure 1.18: Villages without all-season road access



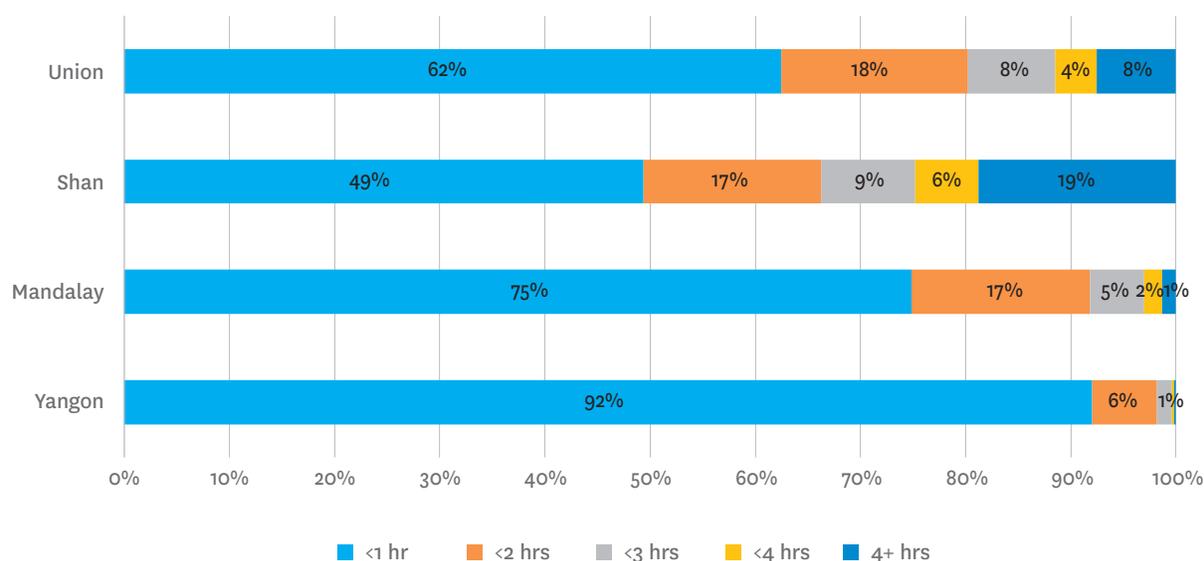
Source: GoM, road access strategy; WB staff estimates

28 The Rural Access Index (RAI) is an indicator that measures the portion of the rural population living less than 2 km away from an all-season road. 36 percent RAI implies that 64 percent of the rural population has to travel more than 2 km to reach an all-season road.

29 Rural Roads and Access. Myanmar Transport Policy Note. ADB. 2016

30 World Development Report, 2009, World Bank

Figure 1.19: Travel time to nearest town, % of population



Source: 2014 census

Note: Travel time calculation model: Friction surface 2015 - https://map.ox.ac.uk/research-project/accessibility_to_cities/; Calculations don't take into consideration road closures due to conflict, traffic, and elevation in this analysis.

1.34. **High levels of inequality in access to electricity across the country may also be contributing to welfare inequities.** Yangon has an electrification rate of 78 percent, followed by Kayah at 46 percent, Mandalay with 40 percent, and Nay Pyi Taw (39 percent), but rural areas are still poorly electrified, averaging less than 20 percent. In total, only about one quarter of the rural population in Myanmar is connected to the national electricity grid. Access to essential infrastructure and services is most circumscribed in the more mountainous and remote conflict-affected areas of Shan, Chin and Kachin states (Asian Development Bank, 2016).³¹

1.35. **These economic geography issues are further compounded in Shan by the presence of a highly complex conflict environment.** Shan has the largest number of conflict-affected townships of any state/region, with many still characterized by active conflict (Figure 1.20 and Table 1.7). Conflict directly threatens human security, causes displacement³² and can play a crucial role in exclusion from services and economic benefits that are instead being captured by a narrow set of local and national elites (The Asia Foundation, 2017).³³ Restrictions on movement, and having competing authorities within conflict-affected areas also undermine development by creating greater divisions between much of Shan's population and the economic and social hubs within Myanmar and internationally (WDR, 2009).

³¹ Asian Development Bank (2016). Myanmar: Energy sector assessment, strategy, and road map.

³² As of February 2019 UNHCR estimated that around 9,200 people were in IDP camps within Shan State, while many more may have fled in recent years across the border due to conflict (BBC, 2017 - <https://www.bbc.com/news/world-asia-39221889>)

³³ The Asia Foundation notes that economic activity in conflict-affected areas remains opaque and tends to benefit a narrow set of local and national elites. For example, in Kachin and Shan State, some ruling EAOs have accumulated vast wealth, often as a result of illicit trading of natural resources, though many in the community remain without access to quality essential services such as health, education, electricity and water (The Asia Foundation, 2017).

Figure 1.20: Conflict-affected townships

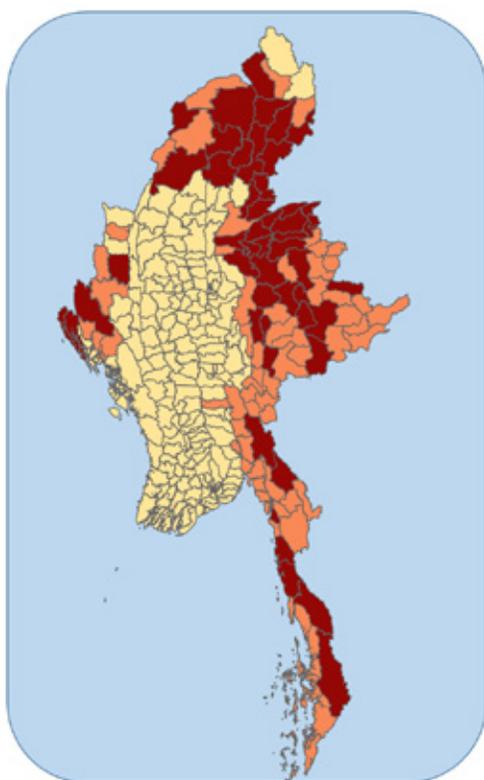


Table 1.7: Conflict-affected townships (TSPs) in each state and region

	Conflict-affected	Active conflict	Inactive conflict	Total TSPs
Ayeyarwady	0	0	0	0
Bago	4	0	4	4
Chin	5	2	3	5
Kachin	15	13	2	18
Kayah	7	0	7	7
Kayin	7	2	5	7
Magway	0	0	0	25
Mandalay	1	0	1	28
Mon	10	2	8	10
Nay Pyi Taw	0	0	0	8
Rakhine	7	4	3	17
Sagaing	6	3	3	37
Shan	48	25	23	55
Tanintharyi	10	3	7	10
Yangon	0	0	0	45

Sources: The Asia Foundation (2017); ACLED

Red – Active conflict - Battle recorded within the township in 2017 or 2018. Includes battles where Government regains territory; battles where there is no change of territory; and battles where a non-state actor overtakes territory (source: Armed Conflict Location and Event Data, ACLED);
Orange – Latent conflict-affected areas presence of EAO but no battle since 2017 (source: The Asia Foundation).
Yellow – not conflict-affected.

1.36. The interdependence of conflict and illicit activity complicates efforts for inclusive economic growth in Shan State. Conflict tends to undermine formal cross-border trade and allows smuggling to flourish; the continuous dominance of the illicit economy impedes efforts to end the state’s long-running ethnic conflicts and undermines the prospects for better governance (International Crisis Group 2019). The underlying drivers of conflict are beyond the scope of this analysis, but the prevailing context has important implications for targeting expenditure. For instance, downward shifts in demand for opiates, in favor of other drugs, may leave large numbers of opium farmers in search of alternative livelihoods.³⁴ Barriers to moving to other agricultural production could pose a risk of unemployment and continued participation in the illicit economy. The widespread prevalence of drugs also has significant, if yet unquantified, adverse effects on women and girls along Myanmar’s northern borders (particularly in Shan and Kachin). Women particularly suffer in these areas where they’re left as sole providers in households with addicted male members. In certain instances, desperate to support their families but with few opportunities to do so, many feel they have no choice but to seek informal work abroad, which risks their being exposed to traffickers, abuse and sometimes sexual slavery (Human Rights Watch, 2019).³⁵

³⁴ Some estimates suggest a shift from opium cultivation of hundreds of thousands of farmers in coming years (UNODC, 2018).

³⁵ <https://www.hrw.org/report/2019/03/21/give-us-baby-and-well-let-you-go/trafficking-kachin-brides-myanmar-china>

- 1.37. **The remainder of the PER is organized in seven chapters, split into four parts.** Part 1 introduces the country subnational context (Chapter 1) and reviews the unique institutions of subnational governance (Chapter 2); while not a traditional PER chapter, the form and function of Myanmar’s subnational governance are germane to the rest of the PER analysis. Part 2 presents financial reviews; in detail subnational expenditure (Chapter 3) and funding (Chapter 4), and evaluating their alignment with the national and subnational priorities of growth and inclusion. Part 3 reviews public services, particularly two key facets of municipal governance: solid waste management (Chapter 5) and urban transport (Chapter 6). Part 4: Chapter 7 is a digital review and evaluates the institutional performance of the subnational level with respect to information and communication technologies.

2 SUBNATIONAL GOVERNANCE INSTITUTIONS

A Hesitant Decentralization

A. Introduction

- 2.1. **This chapter examines Myanmar’s institutions of subnational governance.** The creation of a *de jure* subnational level of government opens up space for local political groups to seek power through democratic means. State structures and intergovernmental relations, however, remain profoundly shaped by Myanmar’s legacy of conflict and military rule; strong centripetal biases persist in authority and accountability. Myanmar’s legacy of authoritarian rule also echoes throughout the civil service, shaping administrative norms, values, and behavior. Despite considerable formal and informal constraints on their authority, subnational governments continue to influence politics and society and are exerting increasing control over public finance and service delivery; they are also aiming for greater inclusion and accountability in government.
- 2.2. **This analysis is structured in six parts.** Following a brief introduction, the second section examines subnational governments through the prism of their constrained authority, focusing on their formal presence but limited role, and on their limited discretion over managing personnel. The lower tiers of Myanmar’s subnational governance framework are also examined. The third section discusses the historical and political context, of how Myanmar’s subnational architecture has come nearly full circle since Independence, via the fully centralizing detour of the 1974 Constitution. Section four examines the unique features of municipal governance, which stands alone as a wholly devolved responsibility. Section Five examines the incremental growth in subnational governments since 2008 and section six details policy options.

B. The constrained authority of subnational governments

Formal presence with a limited role

- 2.3. **The codification of formal *de jure* subnational governments in the 2008 Constitution established the legal basis for decentralization in Myanmar.** The specific *de jure* powers of the subnational level of government are detailed in Chapter 1. Most countries in Southeast Asia have a strong formal basis for decentralization, but Myanmar resembles Thailand, the Philippines and Lao PDR in enshrining subnational governance in the constitution and in a range of laws (Table 2.1). Many other countries have a legal basis, but not a constitutional basis, for decentralization; China has the weakest formal basis for decentralization (Smoke, 2005).¹ Malaysia is the only country in Southeast Asia that has a formally federal nation, although Myanmar has also included a formal subnational semi-elected tier in its constitution.

1 Smoke, P. (2005). “The Rules of the Intergovernmental Game in East Asia: Decentralization Frameworks and Processes” in World Bank East Asia Decentralizes: Making Local Government Work. Washington, DC. World Bank.

Table 2.1: Constitutional basis for decentralization in South East Asia

Cambodia	No constitutional basis for decentralization.
China	The constitution of China provides for three de jure levels of government, though there is no constitutional or dedicated legal basis for decentralization.
Indonesia	Constitution embeds regional autonomy in Indonesia's system of government; stating that provincial, district, and city governments regulate and manage their own government in accordance with the legal basis for local autonomy.
Lao PDR	Constitutional amendment (2015) allows for the establishment of the Local People's Assembly for the first time, this is set to function like the national assembly at the provincial level.
Myanmar	Constitution of Myanmar (2008) established a formal subnational tier of government.
Philippines	Constitution (1987) includes decentralization and local government autonomy among the fundamental principles; though in reality the Philippines is a unitary state so local autonomy is subservient to the national parliament (Congress) and the president.
Thailand	Constitution (2017) enshrines the principles of local autonomy and elected local government that were first included in the 1997 constitution.
Vietnam	No constitutional basis for decentralization.
Malaysia	Constitution (1957) is federal.

Source: Authors; tables adapted from Smoke (2005).

- 2.4. **Most *de facto* powers remain concentrated at the union level through an interlocking web of political, administrative and financial provisions.** The chief minister of each state and region is not elected by their fellow Hluttaw members but is appointed by the President. He or she may be selected from the elected Hluttaw members or may be an unelected representative.² Any chief minister can be removed by the president. The chief minister selects the subnational ministers, who are not required to be elected in most cases.³ The president formally appoints the subnational ministers and allocates their portfolios. All significant taxes are assigned to and collected by the union. The union government formally approves subnational budgets through the Financial Commission (Chapter 4 examines the Financial Commission in more detail). This vetting gives the union a *de facto* fiscal veto over subnational expenditures; this veto power extends to municipal expenditures⁴ – nominally the only devolved power of subnational governments (see below) – given that municipal budgets are completely embedded within subnational budgets.
- 2.5. **The military also has a constitutionally mandated role in subnational governance.** In addition to the military's reserved parliamentary seats, the state/region Minister for Border and Security Affairs must be a serving military officer nominated by the Commander-in-Chief of the Defense Services. Until recently, the military also controlled the main subnational implementation arm, the General Administration Department (GAD), through its control of the Union Ministry of Home Affairs. However, recent changes have civilianized the control of the GAD (more detail on this important reform is provided in Section E below). During the previous government's tenure (2010-2015), several uniformed officers even served as chief ministers.
- 2.6. **Subnational governments in Myanmar have a narrow functional mandate relative to other countries in the region.** In addition to the standard central functions such as defense, monetary policy, and foreign

2 A military appointee to the Hluttaw can also be appointed as the chief minister.

3 At present, over 27 percent of state/region cabinet positions are filled by non-elected appointees, with a majority of non-elected cabinet members in Yangon. The Hluttaws can cause the president and the chief minister to review their nominations for chief minister and the ministers, respectively, if the Hluttaw can prove the nominees do not meet the constitutional requirements. The Hluttaws cannot, however, suggest alternative names.

4 Nominally the only devolved power of subnational governments.

affairs, the union directly controls all the functions of education, health, and social welfare ministries: these functions are typically assigned to lower levels of government in South East Asia (Table 2.2). The only wholly devolved function of subnational governments is municipal services. Functions not explicitly mentioned in the constitution also come under the union.

Table 2.2: Subnational allocations of social services in South East Asia

Country	Functional allocations*		
	Education	Health	Social welfare
Cambodia	Provincial	Provincial	Provincial
China	Local	Local	Local
Indonesia	Local (Primary and Junior High by District, High School by Province)	Local, Provincial (some hospitals are managed by provinces)	Local, Provincial (some institutionalized care is managed by provinces)
Lao PDR	Provincial, local	Provincial, local	N/A
Myanmar	Central	Central	Central
Philippines	Central, provincial, local	Central, provincial, local	Central, provincial, local
Thailand	Central, provincial	Central, provincial	Central, provincial
Vietnam	Provincial, local	Provincial, local	Provincial, local
Malaysia	Central	Central	Provincial

Source: Authors; tables adapted from Smoke (2005).

*"Provincial" refers to the level immediately below the central or national level; "local" refers to all levels below the provincial level. Classifications vary across countries; municipalities, for example, can be at either the intermediate level (as in Cambodia and Vietnam) or the local level (as in the Philippines and Thailand). In Myanmar the equivalent to what would be the states and regions.

2.7. The actual authority within the limited subnational mandate is also unclear, with jurisdictions generally concurrent with the union and spending assignments mostly shared. The standard maxim for decentralization is that finances and functionaries should follow function. In Myanmar, this is reversed; the allocation of funds – about one-quarter of all capital expenditure is currently planned through the subnational governments – has preceded devolution of exclusive functions and responsibility for personnel (Chapter 3 has a more detailed discussion). Most sectoral legislative and expenditure responsibilities are not exclusively assigned to the subnational level; rather, the union and the subnational governments are responsible for the same eight “sectors”, with broad subcategories.⁵ While this provides some basis for the incremental allocation of more responsibilities to the subnational governments, overall legislative control remains with the union government. Financing responsibilities are also blurred, with subnational governments co-financing union expenditure functions (primarily roads) which in turn reflect the priority of the central government with some limited local input at the planning stage (ADB, 2016, p.55; Valley et al., 2018).

Limited discretion over managing personnel

2.8. All employees of public sector organizations across different branches of government, including those paid by subnational governments, are classified as civil servants and governed by a central set of rules. All civil servants are regulated by the same comprehensive Public Service Personnel Act, as well as the Civil Service Rules 2014, approved at the union cabinet level. These rules designate authority for human

5 These eight sectors include: i) Finance and Planning; ii) Economic; iii) Agriculture and Livestock Breeding; iv) Energy, Electricity, Mining and Forestry; v) Industrial; vi) Transport, Communication and Construction; vii) Social; and viii) Management (including Development Matters).

resource management and document disciplinary and accountability measures. There is only one public service commission, The Union Civil Service Board (UCSB), with the overall mandate of recruiting, training and regulating civil servants. There are no specific subnational institutions that govern civil servants.

- 2.9. **Article 257 of the constitution permits states and regions to “form Civil Services organizations” and “appoint the required number of Civil Services personnel.”** This clause potentially provides subnational governments with more authority to deliver on their mandates by offering a platform to build a civil service that could be more ethnically diverse, locally representative and more responsive to local needs. However, the opportunity to create subnational civil service has not been substantively implemented as yet.
- 2.10. **Subnational governments have no dedicated permanent bureaucracy.** Except for municipal affairs (discussed below) and a limited number of dedicated staff in ministerial offices, subnational departments fulfill their responsibilities with the help of the pre-existing vertical organizational structure of the union ministries. Salaries and other benefits of permanent employees working within subnational departments are paid from the subnational government budget (from the subnational general-purpose transfer system – see Chapter 4) and are grouped by their formal affiliation with the union ministries. In Shan State, for instance, of the 12,517 permanent staff members employed by the subnational government as of October 2018, around 48 percent, were working in the Ministry of Home Affairs (MoHA), 35 percent was accounted for by GAD. This was also reflected in the Shan State wage bill. In Yangon and Mandalay, in contrast, municipalities account for a much larger share of the total permanent employees and wages (Table 2.3).

Table 2.3: Wages of permanent staff working at the subnational level*
Value of total permanent wage bill; and percent of total wage bill by ministry

	Shan State	Yangon Region	Mandalay Region
Total permanent staff wage bill (million kyat)	29,517	48,761	35,829
of which:			
Ministry of Home Affairs	44.9	25.6	33.4
of which: General Administration Department	33.8	17.0	24.5
Municipalities	9.9	43.6	25.9
of which: YCDC / MCDC	--	41.0	18.6
of which: DAOs	9.9	2.6	7.3
Ministry of Construction	6.3	3.6	3.3
Ministry of Planning and Finance	3.9	2.8	3.0
Ministry of Information	0.0	0.1	0.0
Ministry of Health and Sports	1.9	1.1	1.3
Ministry of Livestock, Fisheries and Rural Development	16.8	8.4	13.8
Ministry of Natural Resource and Environment Conservation	7.0	2.4	8.0
Cabinet Office	0.4	0.7	1.0
Hluttaw	0.5	3.4	1.9
Other**	8.3	8.3	8.5

* Actual monthly salary payments in Shan as per October 2018 and Salary and Honorarium in Yangon and Mandalay (2018-19 Budget Estimate)

** Includes legal offices (Supreme Court and Attorney General Office) Auditor General Office and Cargo Handling Committee Office.

- 2.11. **Civil service management functions are highly centralized at the union (Table 2.4).** Despite paying their salaries, the subnational governments have no *de jure* authority over the appointment, posting, transfer, promotion, evaluation, and training of staff.⁶ Establishment control sits completely with centralized institutions, requiring the ultimate approval of the country's president based on advice from the Organization Inspection Unit of the Project Reporting and Progress Reporting Department (PAPRD) under the MOPF.⁷ Recruitment of gazetted staff (commissioned civil servants), is also centralized within the UCSB; recruitment of non-gazetted (administrative/junior technical) staff is decentralized, though still within the line ministry structure. Firing staff is almost exclusively the purview of the union ministry to which the department belongs (Davidsen et al., 2018). Performance management is also organized through the verticalized line ministry structures.
- 2.12. **Staff working at the municipal level are an exception.** Civil servants working within the city administrations of Yangon, Mandalay and smaller cities are solely accountable to the subnational government, via the respective state/region Minister of Development Affairs/Mayor. Strict rules and norms still apply to establishing and filling gazetted posts within municipalities, and wage rates are set centrally at the union level. However, unlike other subnational departments, establishment and recruitment are partly the responsibility of the state/region, even if new staff members are subject to some union government civil service rules and regulations. Municipal staff members are regarded as subnational civil servants, with promotion and transfers primarily limited to the state/region Development Affairs ecosystem (Winter and Thin, 2016). Further, the 2018 YCDC law delegates some key civil service functions to YCDC; permitting the committee, for instance, to recruit civil servants in accordance with the organizational structure approved by the region government.
- 2.13. **The accountability of union government civil servants towards the subnational governments is informal and blurred, despite their role in executing subnational budgets.** Staff carrying out subnational-level functions, pursuant to Schedule Two of the constitution, receive funding from the state/region government and are accountable, via their state/region-level directors, to the relevant state/region minister as well as the union minister (green box in Figure 2.1). Staff working in departments that are responsible for carrying out union functions, pursuant to Schedule One, receive funding from the union government and are solely accountable to their union minister (with the exception of the General Administration Department). In general, subnational departments of all union line ministries are instructed to coordinate with the chief minister/relevant subnational minister, though the relationship is informal.

6 Recent presidential instructions have indicated that the subnational political leadership should have input into the promotion and posting decisions of senior civil servants discharging responsibility at the subnational level. These instructions have not been given formal weight in legislation or regulations.

7 A strict norm proliferates throughout the civil service that departments are allowed to fill only two-thirds of the officially sanctioned posts in order to control budget constraints.

Table 2.2: Subnational allocations of social services in South East Asia

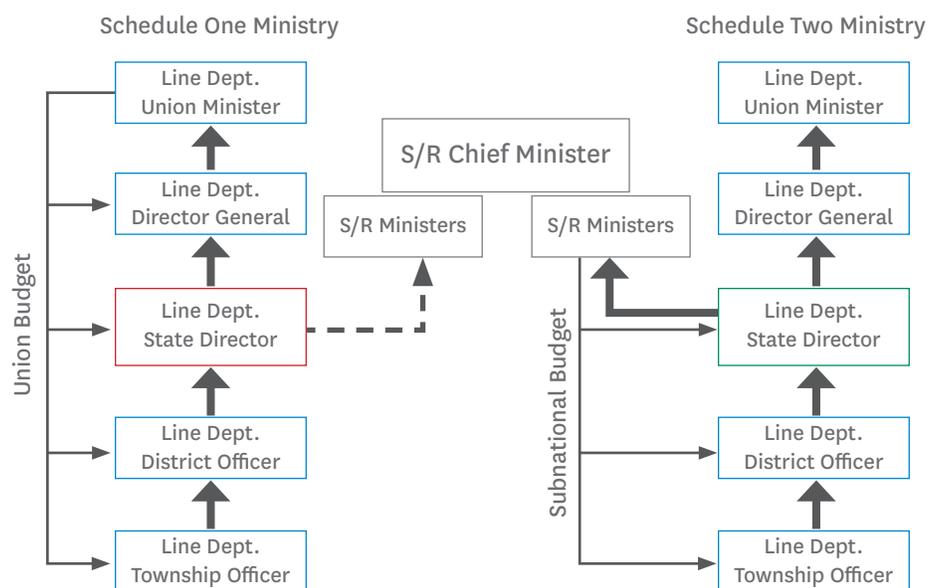
	Punjab, India Pop: 32 million	Punjab, Pakistan Pop: 110 million	Philippines SNGs	Myanmar SNGs		
				GAD	Schedule 2 Ministry*	Municipality
Establishment Control						
Control over overall staff numbers	Y	Y	Y	N	N	S
Control over staff numbers in individual local offices	Y	Y	Y	N	N	Y
Recruitment						
Recognized as a formal employer	Y	Y	S	N	N	S
Authority to hire	Y	Y	Y	N	N	S
Independent merit-based recruitment mechanism	Y	Y	S	N	N	S
Career Management						
Mandatory training	Y	Y	Y	N	N	N
Promotion	Y	Y	Y	S	S	S
Horizontal inter-SNG transfers	Y	Y	S	N	N	Y
Intra-SNG transfers/postings	Y	Y	S	N	N	Y
Performance Management						
Direct and supervise activities	Y	Y	S	S	S	Y
Conduct performance evaluations	Y	Y	S	S	S	Y
Offer financial rewards	Y	Y	S	N	N	S
Discipline staff	Y	Y	S	N	N	Y
Set pay policy	N	N	S	N	N	N
Set local financial incentives / salary top-ups	Y	Y	S	N	N	S
Provide non-monetary perks	Y	Y	S	N	N	Y

Abbreviation and symbol: SNG: Subnational Government: N – total control of the central; government; S – partial control of the central government; Y – complete control of the subnational government.

Schedule 2 ministries include subnational departments carrying out subnational-level functions, pursuant to Schedule Two “Region or State Legislative List” of the constitution.

The allocation of HR management responsibilities in Punjab does not reflect the situation of a very small number of employees – some 200 or so – hired by the federal government Federal Public Service Commission for administrative and police services and deputed to the provincial government such as Punjab. Their recruitment, training, promotions, and mobility among subnational governments are controlled by the federal government. Even their horizontal mobility within the subnational government and yearly evaluations etc. are completely controlled by the respective subnational government.

Figure 2.1 Blurred accountabilities of civil servants working within subnational departments



Note: S/R = state/region

- 2.14. **The severely circumscribed oversight of the subnational political executive over the union ministries is underscored by the case of the General Administration Department (GAD).**⁸ The constitution allocates the role of the Executive Secretary of the state/region government, and management of the office of the respective chief minister, to the head of each state/region GAD office (generally a deputy director-general, DDG, position). The GAD presently manages the country’s hierarchical and geographically-defined administrative units (state/region, district, township, and village) and plays a crucial role in coordinating, convening, and monitoring local government activities around the country.⁹ The GAD is also the most “local” of all the union ministries, accounting for the largest share of the monthly wage bill for permanent employees in Shan, Yangon, and Mandalay (Table 2.3). Despite its centrality to subnational governance more broadly, state/region governments have no formal authority over the GAD, which remains formally part of, and accountable to, its union ministry. The implication is that the chief minister has no formal authority over who is posted to the GAD secretary – a cabinet position – within his or her jurisdiction; though informal consultations typically occur at the time of the appointment.
- 2.15. **Strict staffing levels and wage bill controls are practiced.** Until recently, the Yangon City Committee law had capped the total amount of employee wages and financial benefits at no more than 30 percent of the budget. This restriction is still law in Mandalay. Subnational governments tend to skirt restrictive legislation and union government guidance of keeping one-third of approved positions vacant by resorting to hiring temporary workers to manage their labor needs. Managers in subnational departments have considerable discretion for hiring temporary positions and such hiring practices are widespread, particularly in cities. For instance, around half of all staff in YCDC are temporary workers (Table 2.5).

⁸ See Batcheler, et al. (2018, p18) for a diagram of the structure of the General Administration Department.

⁹ GAD officials perform a wide range of activities, including law and order management, land administration, and coordination of government ministries at each horizontal level. It also plays a key role in collecting administrative, socio-economic, institutional and security information from the ward/village, township, district and state/region levels as well as being central to day-to-day administration, service delivery and tax collection.

Table 2.5: YCDC staffing
As of 31 December 2018

Staff type	Number	% of total
Permanent		
Gazetted	858	4.9
Non-gazetted	6,220	35.3
Temporary		
Contractual employees	1,648	9.3
Daily wage employees	1,418	8.0
Labourer	7,500	42.5
Total	17,644	100

- 2.16. **Temporary workers allow line departments and municipalities to expand the workforce while containing labor costs**, as well as avoid contingent liabilities, although this may disadvantage individual workers. Daily wage workers receive a considerably lower basic wage than permanent staff working in equivalent positions; a temporary office worker in YCDC earning 4,800 Kyat per day would earn nearly 27 percent less each month than the lowest level permanent civil servant.¹⁰ This excludes pensions, which temporary workers are not eligible to receive. It also excludes benefits, which are key to overcoming a negative public sector wage gap vis-à-vis the private sector.¹¹
- 2.17. **Local discretion over large scale recruitment of temporary workers can have implications for civil service development, planning, and budgeting.** Excessive use of local discretion can undermine transparency and also heightens the risk that recruitment of temporary workers is used by local managers as a form of patronage. Reliance on temporary workers even for entry-level professional work can harm the development of the talent pipeline. The wages of non-permanent staff are not included as part of the wage bill and are instead booked as ancillary government expenses in the recurrent budget.¹² These ancillary costs can be considerable when compared against the wage bill, inclusive of salaries and allowances (Table 2.6), which can skew assessments of actual labor costs and undermine planning and wage-bill forecasting. It also weakens the mapping of staff to positions. Within Yangon Region, YCDC has the highest ancillary labor costs compared with permanent wages and benefits, though the ancillary cost ratio is also elevated in number of individual departments within the Ministries of Construction (MOC), Livestock, Fisheries and Rural Development (MLFRD) and Natural Resource and Environment Conservation (MONREC), as well as DAOs and Region Administration (Table 2.6), indicating that the use of temporary labor is widespread. Notably, this does not extend to the GAD.

10 This assumes a temporary worker earns the prevailing daily wage rate in YCDC and works for 22 days each month. A Grade 1 civil servant receives a salary of 144,000 per month. Grade 1 staff only have to work for approximately 20 - 22 days. Temporary workers, in contrast, can be required to work up to 26 days each month, depending on the contractual arrangement set by YCDC.

11 2015 Labor Force Survey data show that in the absence of benefits, civil servants suffer a 4 percent negative pay gap compared with those in paid employment in the private sector when gender, education, age, location (urban or rural), and basic pay are taken into account. Highly skilled and educated positions, such as managers, still suffer from a 43 percent disadvantage, in terms of basic pay and benefits compared with wages in the private sector. Professionals suffer a 16 percent wage disadvantage.

12 Specifically, these expenses are recorded under 0301 Labor cost of 0300 Purchase of goods and services and labor cost.

Table 2.6: Ratio of ancillary labor expense to permanent workers' wages in Yangon region
By department 2018-19 budget estimate

Department	Ratio
YCDC	1.14
MOC – Urban and Housing Development Department	0.61
MLFRD – Department of Agriculture	0.39
MONREC – Environmental Conservation Department	0.28
DAOs	0.28
Yangon Region Administration	0.22
MONREC – Forestry Department	0.19
MLFRD – Small-scale Industries Department	0.13
MOC – Road Department	0.09

Source: Yangon Region Government

Other selected artefacts of subnational public administration

- 2.18. **In a further step to accommodate political and ethnic pluralism, the constitution also created six self-administered areas (SAAs).** Five self-administered zones (comprising two or three townships) and one larger self-administered division (comprising six townships) provide political representation to designated ethnic groups; for the most part for non-Shan communities in Shan State as well as the Naga ethnic group in Sagaing Region (Joliffe, 2015).¹³ Each SAA includes its own leadership (known as “Leading Bodies”) and has a limited array of legislative powers, as outlined in Schedule Three of the constitution; they draw budgets from the respective state and region. Practical autonomy, however, is limited. Defense services personnel occupy one-quarter of the total membership; the GAD is mandated as the secretary of the SAA administration, ensuring a high degree of centralized influence. However, these practical limitations belie the real significance of SAAs; they are a distinct, albeit limited, level of government explicitly created to allow self-governance for designated non-Bamar ethnic nationalities. Leading Bodies are made up of mainly locally elected officials (comprising the state/region Hluttaw representatives elected from the townships within each SAA) and provide an official platform for ethnic representatives to cooperate with government and allow local elected leaders to exert direct influence over practical administration within their townships.
- 2.19. **The constitution also mentions three more tiers of subnational administration: district; township; and the ward/village tract.** There are no elected representatives at the first two levels, with the constitution prescribing that the “administration of district and township level shall be assigned to the Civil Service Personnel”.¹⁴ While the district level mostly coordinates between the state/region and lower levels, the township level is the most significant tier of day-to-day administration and service delivery, as almost all major departments have a presence at the township level. The GAD township administrator (TA) has the formal authority to coordinate among all ministries within the township.¹⁵ Semi-elected Township Development Affairs Committees (TDACs), led by the GAD TA, have some decision-making powers and their own budgets, albeit at the municipal level. TDACs may also set municipal priorities, ensure coordination with other government actors and communities, decide local development projects, and conduct public outreach.¹⁶

13 Joliffe, K. (2015). *Ethnic Armed Conflict and Territorial Administration in Myanmar*. The Asia Foundation, Yangon.

14 This clause has been interpreted by some to exclude the possibility of an elected tier at the district and township levels.

15 No law governs the township level; the coordinating and planning roles of the GAD administrator have been specified in a series of notification issued during the 1980s.

16 Arnold, M., et al. (2015), *Municipal Governance in Myanmar*, Subnational Governance in Myanmar Discussion Paper No. 7 (San Francisco: The Asia Foundation).

- 2.20. **Below the township administrator exists the crucially important tier of ward and village tract administrators (W/VTAs).** The smallest administrative unit is the ward (in urban areas) and the village tract (in rural areas). The Ward or Village Tract Administration Law (2012)¹⁷ governs their appointment, benefits, and duties within the general constitutional guidance that ward and village-tract administration shall be “assigned in accordance with the law to a person whose integrity is respected by the community.”¹⁸ Currently, the W/VTAs are elected in locally determined processes from an electoral college of household heads. W/VTAs are not GAD employees, nor are they civil servants, although they are supported by a village tract clerk, who is a GAD staff member appointed by the respective TA. Given that the TA appoints and can initiate removal of W/VTAs, the W/VTAs “report” to the chain of command of the GAD.
- 2.21. **The W/VTAs serve as the “face” of the government at the community level.** W/VTAs are the main conduit of public information and play a key community representative role, bringing local matters to the attention of the government administration at the township level (UNDP, 2015).¹⁹ The MyJustice survey²⁰ also shows that people prefer VTAs over formal government institutions to maintain law, order, and justice and are seen by communities as more responsible for preventing and investigating crimes than the police and for meting out justice than judges (Figure 2.2).
- 2.22. **Myanmar is one of only two countries in South East Asia²¹ where the first level of *de jure* government below the union is the only level of government with formally assigned budget (expenditure) authority.** Apart from the six SAAs, which draw annual budgets and co-ordinate for approval with the respective state and region government, there is no formal *de jure* government with formal budget authority below Myanmar’s states and regions, Myanmar itself is a clear outlier in the region in terms of the average population of its lowest level of *de jure* level of government (Table 2.7). In this sense, it is behind only China and Indonesia in terms of the average population for the first tier of government – particularly China where the first subnational level of government, the province, is larger than that of most countries. Indeed, the average population of Myanmar’s lowest tier of *de jure* government with formal budget authority is nearly an order of magnitude larger than the next largest in South East Asia.

17 *Pyidaungsu Hluttaw Law No. 1/2012*

18 These include: “Security, prevalence of law and order, community peace and tranquillity and carrying out the benefit of the public”; “Carrying out the functions and duties relating to the disciplinary matters of the persons who live in the ward or village tract; safeguarding the right of persons who live in the ward or village tract”; “helping and assisting in implementing the works relating to the rural development and poverty reduction”; “informing and assisting the relevant government departments and organizations in respect of revealing informing and organizations in respect of revealing, informing and complaining and arresting and taking action of crimes and vices”;

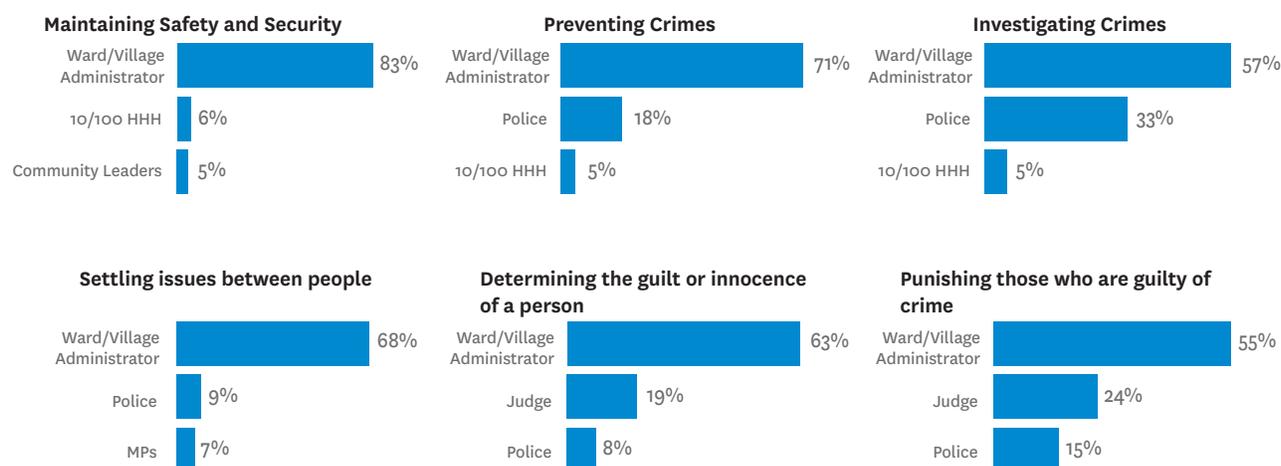
19 UNDP (2015) *The State Of Local Governance: Trends In Mandalay*.

20 See: https://www.myjusticemyanmar.org/sites/default/files/Policy%20Brief%20Final_English_o.pdf

21 The other country is Lao PDR

Figure 2.2 Perception of roles and responsibilities for community-level affairs

In your community, who do you think is the most responsible for ...?



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Table 2.7: Vertical organization and size of subnational government in South East Asia

Country	Levels of subnational government	Population (2016 millions)	Average population of first-tier subnational governments (millions, 2016)	Number of lowest tiers of subnational government	Average population of lowest-tier subnational government (2016) ^b
Cambodia	2	16	0.7	1,646 (Commune & Sangkat)	8,523
China	3	1,379	41.8	2,862 (Counties)	484,785
Indonesia	3	261	7.7	514 (Kotamadya & Kabupaten)	502,327
Lao PDR	2	7	0.4	18 (Provinces)	360,679
Myanmar	1 (state/region)	53	3.6	14 (States/Regions)	3,591,421
Philippines	4	103	1.2	42,045 (Barangays)	2,362
Thailand	4	69	0.9	7,435 (Tambons & Khwaeng)	8,896
Vietnam	3	93	1.5	11,162 (Communes)	7,881
Malaysia	3 (states, local councils)	31	2.4	154 (City, District, Municipal Councils and Modified local authorities)	202,597

Sources: Respective country Population Census of Intercensal Population Census (Government Gazette in Thailand).

- a. "Level" refers to an organ of government with some degree of formal budget (expenditure) authority. In some cases (such as Indonesia), this can be highly circumscribed, particularly at the lowest levels.
- b. Myanmar includes the population of Naypyidaw, which remains a Union territory.

C. The historical and political context

- 2.23. **The policies and architecture of subnational governance in Myanmar are predictably influenced by its modern history and political evolution.** A key policy lesson of public administration reform, even in fragile, conflict-affected countries where major institutional architecture is likely to be unsettled and subjected to major reform, is to “think history, not *tabula rasa*” (Blum et al., 2019).²² Locating the features of subnational administration in history and politics helps to understand the nature and the intent of the current decentralization policy in Myanmar. It will also help understand the potential, speed, and direction of change in the future.
- 2.24. **The constitutional distinction between ethnic “states” and Bamar “regions” has deep historical antecedents.** The non-Bamar ethnic nationalities residing in the upland and mountainous areas of Myanmar’s natural borders have a long history of distinct governance from the Bamar nationalities residing in the lowland areas. While the *Konbaung* Dynasty directly controlled and administered the area known as Lower Burma, it left internal administration in the Shan State and to the east and the north largely to local hereditary rulers who paid occasional tributes to the kings (Joliffe, 2015). Separate governance systems were also retained by the British colonial administration throughout its rule. The less developed, less profitable and harder-to-control non-Bamar areas in the north, known as “Frontier Areas”, were always governed separately from the Bamar-dominated plains in Lower Burma (Seekins, 2006).²³
- 2.25. **The enduring demands of several major ethnic groups for more autonomy under a federal structure are also rooted in events around the Burmese independence struggle.** Faced with the challenge of integrating multiple ethnic groups into one state, the founders of the union struck an agreement at the 1947 *Panglong* Conference with leaders from the Frontier Areas; some of whom had fought against each other during World War II. The agreement, which remains in high esteem, established the key principle that Frontier-peoples should be entitled to fundamental democratic rights; that they should enjoy full autonomy in domestic affairs and that they should be entitled to assistance from the revenues of Ministerial Burma (Furnival, 1960). Reflecting the principles laid down in the Panglong Agreement, the 1947 Constitution created a weak form of asymmetrical federacy with largely centralized powers. Three states — Shan, Kachin, and Karenni (later Kayah) were created as “constituent units” of the Union of Burma, as opposed to a single administrative unit comprising all other colonial territories in Lower Burma, known as divisions.²⁴ Each state had its own assembly that operated as the state legislature (known as State Councils), whose elected members served concurrently in the union parliament.
- 2.26. **From the very beginning fears of national disintegration collided with the hopes of the ethnic minorities for higher degrees of autonomy, sowing the seeds of violent conflict.** As noted by Chief Justice Chan Htoon, an important architect of the 1947 Constitution, there was fundamental tension at the heart of the document; being “in theory federal” but “in practice unitary” (Sai Kham Mong, 2007).²⁵ This was despite the agreement reached at Panglong, and the initial acknowledgment by General Aung San himself that a unitary state was “not feasible” and that the rights of minorities must be safeguarded (Aung San (1946) quoted in Maung, 1961).²⁶ A member of the union government was appointed as minister for each of the four states and for Chin Affairs by the president on the nomination of the Prime Minister acting

22 Blum, Jürgen René; Ferreira-Rodriguez, Marcos; Srivastava, Vivek. 2019. Paths between Peace and Public Service: A Comparative Analysis of Public Service Reform Trajectories in Post-conflict Countries. Directions in Development—Public Sector Governance; Washington, DC: World Bank.

23 Seekins D. (2006) *Historical Dictionary of Burma (Myanmar)*, The Scarecrow Press, Inc. Lanham, Maryland.

24 The Chin ethnic group were not granted a state, but instead a less robust “Special Division” under the administration of the Union. No state was created for the Mon and Arakanese ethnic groups. The Karen State was subsequently created in 1951.

25 Sai Kham Mong (2007), ‘The Shan in Myanmar’, in Ganesan, N. and Kyaw Yin Hlaing (2007), *Myanmar: State, Society and Ethnicity*. Singapore: Institute of South East Asian Studies.

26 Maung, M. (1961). *Burma’s Constitution*. Dordrecht: Springer, Netherlands.

in consultation with the respective State Council.²⁷ The effect of this was to keep the administration of states under the tight and direct control of the central government (Brand, 2012).²⁸ Crucially, Shan and Kayah states were granted the right of secession after ten years of independence – though arguably these powers were never meant to be exercised (Silverstein, 1958).²⁹

- 2.27. **Grievances over broken promises set in motion one of the world’s longest and most complex civil wars.** By 1961, there were considerable tensions between the government and ethno-nationalist groups. In particular, in Shan State leaders were increasingly vocal in their demands for constitutional amendments to create a more federalist structure. Also, on the rise were armed rebellions by ethnic groups who felt that their rights and cultures were being disregarded within the newly independent Burma (Joliffe, 2015). A protracted cycle of violence would ensue over the next seven decades with fighting occurring in parallel between military, known as the Tatmadaw, and as many as sixteen armed ethnic and religious groups, all with claims for some form of autonomous subnational governance or even secession. The legacies of this conflict continue to have direct implications for governance in ethnic states (Box 2.1).

Box 2.1: Conflict and subnational governance in ethnic states

Ethnic-dominated states, as opposed to the Bamar-majority regions, have been the centers of Myanmar’s subnational conflict. In all, the conflict has affected around one-third of the country’s 330 townships (and almost one-quarter of the country’s population) and has been predominantly concentrated in the country’s periphery, home to most of its many ethnic minorities (The Asia Foundation, 2017).³⁰ All states are affected by conflict and all but one experienced active conflict defined as a battle as recently as 2017 or 2018 according to Armed Conflict Location and Event Data (ACLED). Shan State, in particular, has been a hotbed of violent conflict for more than 70 years. Active war erupted in the 1940s and early 1950s (due to the spill-over of the war between the Chinese communists and nationalist forces), and then again in the 1960s as a result of conflict between ethnic Shan groups demanding autonomy and the centralizing military governments. The sizeable drugs trade, Shan state is part of the “Golden Triangle” which produces much of the world’s opium, heroin and other drugs, also fuels the conflict between competing Ethnic Armed Organizations (EAOs).

A key legacy of Myanmar’s intra-state conflict is various forms of mixed governance arrangements in conflict-affected areas. In some ethnically controlled areas, especially the Wa Special Administrative Zone in Shan State, the Myanmar Government has limited direct involvement and little authority over the local population of around 550,000 (nearly 10 percent of Shan’s population). Visiting government officials may need to inform EAOs in advance and basic local administrative functions and service delivery are carried out by the local ethnic authority (Burke, A. et al., 2017). Separate to the formally recognized special administrative zones, which, in the case of the ‘Wa’ Self-Administered Division that functions as a state within a state with its own army, judiciary and fiscal arrangements (Thu 2019).³¹

27 The Chin ethnic group were not granted a state, but instead a less robust “Special Division” under the administration of the Union. No state was created for the Mon and Arakanese ethnic groups. The Karen State was subsequently created in 1951. Accordingly, Mon, Chin and Rakhine states were not established until 1974.

28 Brand, M (2012) ‘A bird in the hand ...’ - The federal pattern of Myanmar’s 2008 Constitution Brand, Unpublished discussion paper

29 The 1947 Constitution required the President to order a direct vote with the entire electorate before the secession could take place. Such questions as who shall vote in such a plebiscite and what majority is necessary to express the people’s will were, however, left to be legislated by the union Parliament. This indicates that the right of secession was hardly exercisable as long as it was left to the legislature to interpret the meaning. See Silverstein, J. (1958). “Politics in the Shan State: The Question of Secession from the Union of Burma”. *The Journal of Asian Studies* 18, no. 1: 43-57.

30 The Asia Foundation (2017) *The Contested Areas of Myanmar: Subnational Conflict, Aid, and Development*, The Asia Foundation, Yangon, Myanmar

31 Thu, M.K. (2019) “Welcome to Wa State”, *Frontier Myanmar*, May 15, 2019

In many conflict-affected areas ad-hoc forms of governance by EAOs have emerged in parallel to the Myanmar Government. The local level dynamics of these administrative arrangements can be complex. The Asia Foundation (2017) notes that multiple EAOs are often present in the same township and vie with the Myanmar government for influence over local populations by raising revenues, building roads, training teachers, providing health services and administering local justice. In Kayin, for example, surveys show that people place greater trust in ethnic service providers than government services and pay taxes to both ethnic groups and the government (Safeworld & KPSN, 2019).³² The parallel systems of tax collection and service provision inhibits the quantum and quality of government spending, and weakens the government's capability to effectively manage the performance of service delivery.

While all parties to the 2015 national ceasefire agreement (NCA), agreed to by 10 EAOs so far, aspire to the enduring ideal of a federal union, there is no agreement on the details.³³ Some of the largest armed groups have still not signed the NCA and progress has stalled over the past year amid recent increases in conflict (Nyein, 2019).³⁴

- 2.28. **Myanmar's enduring conflict has had profound implications for state structure.** The conflict and the fear of disintegration was a principle *raison d'être* for the military's direct incursion into national politics. In 1962, fearing disintegration of the union, the military seized power in a coup d'état, abrogated the 1947 constitution, and centralized all power in a single, militarized state. The ensuing 1974 Constitution codified these arrangements by establishing Burma as an entirely unitary authoritarian socialist state under a one-party rule with centralized government functions. Fourteen constituent units were designated: seven ethnic "states", named after the seven major non-Bamar ethnic nationalities, and seven ethnic-neutral (but majority Bamar) divisions in the southern and lower-lying areas, though these units possessed no political or administrative autonomy. The special status of all ethnic minority states as defined in the 1947 Constitution was not renewed.
- 2.29. **The military junta (1988-2010) attempted to increase the inclusion of more political groups but without diluting the strong hand of the union.** A National Convention process was launched in 1993 to draft a new constitution as part of the rulers' push toward encouraging "people-centered development", building state legitimacy and ensuring "non-disintegration of the union".³⁵ This process would eventually lead to the 2008 Constitution. The process of setting the decentralization policy and drafting the Constitution was therefore the result of a highly choreographed top-down ("pacted") transition, in marked contrast to the negotiated political settlement of 1947. Decentralization was not linked to a coherent strategy for meeting the demands of warring ethnic groups, nor was it linked to devolving power to state and region responsibilities over their own internal affairs or for improving service provision. Decentralization was instead primarily a tool to relieve center-periphery tensions with the creation of more political space for ethnic and local representation. These political forums were, however, kept on a very tight political and financial leash, so as to not compromise the strong role of the center.

32 Safeworld and Karen Peace Support Network (2019) "Security, justice and governance in south east Myanmar", January 2019

33 In full, the NCA states the basic principle to "[e]stablish a union based on the principles of democracy and federalism in accordance with the outcomes of political dialogue and in the spirit of Panglong, that fully guarantees democratic rights, national equality and the right to self-determination on the basis of liberty, equality and justice while upholding the principles of non-disintegration of the union, non-disintegration of national solidarity and perpetuation of national sovereignty. For more information see: The Nationwide Ceasefire Agreement Between The Government Of The Republic Of The Union Of Myanmar And The Ethnic Armed Organizations. Web resource. Available from: https://peacemaker.un.org/sites/peacemaker.un.org/files/MM_151510_NCAAgreement.pdf

34 Nyein, N. (2019) Military Vows to Remain in Politics as Long as EAOs Exist" The Irrawaddy online, 26th February 2019

35 The Convention was formally proclaimed by SLORC Declaration 11/92: Convening of the National Convention)

2.30. **Myanmar's subnational architecture has yet to come full circle to its relatively decentralized beginnings (Table 2.8), from 1947, via the fully centralizing detour of the 1974 constitution, until today.** The 2008 Constitution falls substantially short of what happened in the first 14 years of the union in terms of functions, finances, and functionaries. The unitary practices of the union government appear to have further diminished the façade of decentralizing. A side-by-side comparison of the state legislative lists between the 1947 and 2008 Constitutions shows that the assignment of powers granted to contemporary states and regions falls well short of the powers initially granted to states (i.e. the union fully controls the civil service, security, education, and health). For the most part, modern-day subnational revenue assignments remain similar to those in the 1947 Constitution, with the notable exception of royalties from natural resources. A further notable difference is that, at Independence, state and division Councils had their own secretariat, i.e. a civil service to manage basic administration. Executive authority also extended over a State Public Service Commission and all matters relating to recruitment to the state civil services, including postings and transfers, and disciplinary matters relating to services.

Table 2.8: The evolution of Myanmar’s structural arrangements with respect to ethnic minority representation and sub-national governance

	Pre-independence	1947 Constitution	1974 Constitution	1988-2010 State Law and Order Restoration Council (SLORC)/ State Peace and Development Council (SPDC).	2008 Constitution
Features	<ul style="list-style-type: none"> - Colonial administration. - Distinction between directly governed Lower Burma, and indirectly governed ‘Frontier Areas’. 	<ul style="list-style-type: none"> - Drafted by the nationalist leaders of the Anti-Fascist People’s Freedom League (AFPFL). - Representative parliamentary democracy with a quasi-federalist structure and rights granted to specific ethnic minorities. - Recognizes the special position of Buddhism. - Establishes that the state is the ultimate owner of all lands. 	<ul style="list-style-type: none"> - Drafted by the Burma Socialist Programme Party (BSPP) – the party created by the Army-formed Revolutionary Council. - Authoritarian Socialist. - Entirely unitary state under the one-party rule of the BSPP and implemented under the “Burmese Way to Socialism”. - Based on a principle of equal and indivisible treatment of all Burmese citizens. No real concessions to ethnic minorities. - Nationalized all means of production within the land. 	<ul style="list-style-type: none"> - Extra-constitutional authoritarian military government. - Assumed all executive, legislative and judicial powers and governed the nation by Martial Law. 	<ul style="list-style-type: none"> - Drafted by the SPDC in a top-down process. - Reestablished quasi-representative multi-party parliamentary democracy. - Some nods to federalist features but most powers still concentrated within the union.
Territorial organization	<ul style="list-style-type: none"> - Lower Burma divided into eight divisions: Arakan; Irrawaddy; Magwe; Mandalay; Meiktila; Pegu; Sagaing; and Tenasserim. Each division was subdivided into districts, subdivisions, townships, and village tracts. - Frontier Areas include: the Federated Shan States; Arakan Hill Tracts; Chin Hills District; Kachin Hill Tracts; and other mountainous areas alongside the Thai border. 	<ul style="list-style-type: none"> - Three states created: Shan; Kachin; and Karenni (the latter later named Kayah State) as “constituent units” of the Union of Burma. - Amendment to the constitution in 1951 granted the Karen the full status of a state. - The Chin ethnic group were not granted a state, but instead a less robust “Special Division” under the administration of the union. - Eight Burman-majority divisions retained from colonial times. 	<ul style="list-style-type: none"> - Integration of Burma into a single political unit. - Townships grouped into seven states and seven divisions (retaining most of the same territorial divisions inherited from the RC) - Chin Special Division and Arakan Division reconstituted as Chin and Arakan States, respectively. - Tenasserim Division split into Mon State and Tenasserim Division. - No administrative distinctions between states and divisions - States do not juridically belong to the group that primarily resides within it. 	<ul style="list-style-type: none"> - Maintenance of the unitary state as a single political unit. - Retained territorial states and divisions as administrative areas. - Changed state and division names to their modern incarnations. - Relocated national capital from Yangon to Nay Pyi Taw, within Mandalay division. 	<ul style="list-style-type: none"> - Codified 14 separate states and divisions into constitutionally equivalent subnational political units (seven “ethnic” states majority and seven Bamar majority regions). - Same territorial boundaries as the states and divisions in the 1974 constitution. - Created six self-administered zones/divisions (Naga in Sagaing Region and Danu, Pa-O, Palaung, Kokaung, and the Self-Administered Division of Wa in Shan State). - Established one union territory containing the capital Nay Pyi Taw and surrounding townships.

	Pre-independence	1947 Constitution	1974 Constitution	1988-2010 State Law and Order Restoration Council (SLORC)/ State Peace and Development Council (SPDC).	2008 Constitution
Political architecture		<ul style="list-style-type: none"> - Bicameral union parliament (a lower house, the Chamber of Deputies, and an upper house, the Chamber of Nationalities) with specified numbers of representatives from all states and divisions. - All adult residents of Burma elect representatives to the union Parliament. - No creation of independent subnational parliaments – instead 13 state and Division legislatures created in the form of state/ Division Councils³⁶, whose elected members served concurrently in both houses of the union Parliament. - The head of each of state/division council was also the minister responsible for that state/ division’s affairs in the national cabinet. Chosen by the majority of council members. Based on the model of the Scottish Minister in the British parliament at the time. - Councils elected ministers to form a state/region cabinet. - Shan and Kayah states were granted the right of secession after ten years of independence subject to a majority vote in the state assembly and majority in a plebiscite (a right explicitly denied to Kachin and Karen states). Though the clause was not meant to be exercised. 	<ul style="list-style-type: none"> - A unicameral national legislature, the <i>Pyethu Hluttaw</i> (People’s Assembly) replaced the Chamber of Deputies and Chamber of Nationalities with the sole right to make laws. - One representative elected per township from BSPP-approved lists of candidates. - A minimum of ten seats in the legislature was guaranteed for each state and division. - Complemented by a Council of State, which consisted of 29 members (one representative elected from each of the country’s 14 states and divisions and the prime minister as an <i>ex officio</i> member. 	<ul style="list-style-type: none"> - All state organs, including the People’s Assembly and Council of State, were abolished and their duties assumed by the SLORC. - SLORC comprised a small group of 19 senior military officers, who governed by proclamation or decree. - All legislative, executive, and judicial power concentrated in SLORC. 	<ul style="list-style-type: none"> - Bicameral union legislature - the <i>Pyidaungsu Hluttaw</i> - was also established, comprising <i>Amyotha Hluttaw</i> and the <i>Pyithu Hluttaw</i>. - States and regions equipped with separate legislative, executive and judicial institutions. - Unicameral legislature (<i>Hluttaw</i>) in each state and region. Includes elected members (two from each township plus one for each ‘national race’ with a population of at least 0.1 percent of the population) and non-elected members (one-third of the total of the elected members (or one-fourth of the total membership). - Chief Minister appointed by country’s President. - Chief minister nominates cabinet ministers and assigns ministries with input from the president. - One-quarter of seats in each state/region <i>Hluttaw</i> are appointed by the military. - States and regions are expressly forbidden to secede from the union. - Self-administered areas governed by “leading bodies” that include MPs elected to the state/ region assemblies, military appointees, and representatives of other minorities within the area.

36 The notion that there were both state and division councils in the 1947 Constitution is asserted: in Saw, KPS and Arnold, M (2014). *Administering the State in Myanmar An Overview of the General Administration Department* The Asia Foundation; and Hook, D. Maung Than, T. and. Ninh, K. (2015). *Conceptualizing Public Sector Reform in Myanmar*, The Asia Foundation. Separate Division councils are not mentioned in Furnival (1960).

	Pre-independence	1947 Constitution	1974 Constitution	1988-2010 State Law and Order Restoration Council (SLORC)/ State Peace and Development Council (SPDC).	2008 Constitution
Functional and managerial responsibilities		<ul style="list-style-type: none"> - State Councils provided with executive authority. Permitted to make laws with respect to any eight sectors enumerated in the positive State Legislative List: 1. Constitutional affairs (the power to draft a state constitution) 2. Economic Affairs (such as) <ul style="list-style-type: none"> - Agriculture - Fishing - Land and water management 3. Security (Public order, policing, administration of justice, jurisdiction and powers of all Courts subordinate to the High Court) 4. Communications (road and bridges) 5. Education (including all educational institutions controlled or financed by the state and Universities after 10 years had elapsed) 6. Public Health (including the establishment, maintenance, and management of hospitals) 7. Local Government including municipalities and village administration) 8. General <ul style="list-style-type: none"> - Chin Affairs Council had a much lesser degree of autonomy, though autonomy over education and cultural affairs was a special power also conferred to Chin - Residual powers vested in the union. 	<ul style="list-style-type: none"> - Supreme power and all legislative authority vested solely in the <i>Pyithu Hluttaw</i>. - Executive power concentrated in the hands of two organs: the State Council (Cabinet), which ran the government when the legislature was not in session, and the Council of Ministers, which operated as a cabinet with functionally specific portfolios and was the highest administrative body. - Established a highly centralized form of local governance: via popularly elected Peoples' Councils (from among BSPP-approved lists of candidates) which were formed in each state / Division, Township, and Ward / Village-tract. - People's Councils were structurally analogous to the national legislature, with the BSPP as the key decision-maker and headed by the military. Given executive and judicial powers and responsible for public administration. 	<ul style="list-style-type: none"> - Abolished cabinet, state/region, Township, Ward/ Village People's Councils. - Executive powers delegated to military-led Law and Order Restoration Councils (LORC) (later known as Peace and Development Councils, PDC) for each state and division, district, township, ward and village tract. 	<ul style="list-style-type: none"> - Legislative powers are divided between the union, states or regions, and self-administered areas. - State and Region <i>Hluttaw</i> are assigned the right to promulgate laws for the entire or any part of the region or state over specific matters prescribed in a positive list in Schedule Two - Union and states/region Legislative lists include the same eight "sectors" 1. Finance and Planning Sector 2. Economic Sector 3. Agriculture and Livestock Breeding Sector 4. Energy, Electricity, Mining and Forestry Sector 5. Industrial Sector 6. Transport, Communication and Construction Sector 7. Social Sector 8. Management Sector (including Development Matters) - Self-Administered Zones are assigned the right to enact laws outlined in Schedule Three. - All residual powers are vested with the union. - Hierarchy of laws means that the laws of the states/ regions have to give way to those of the union. - Notably, the union controls: <ul style="list-style-type: none"> - civil service, - education, - health, - security and natural resource management. - Municipalities (practically interpreted as a part of "Development Matters") stand alone as a wholly devolved administrative responsibility of subnational governments - There are no areas of legislation solely up to the self-administered leading bodies. - The union may reassign executive power over any administrative matter to subnational governments via an Act of Parliament.

	Pre-independence	1947 Constitution	1974 Constitution	1988-2010 State Law and Order Restoration Council (SLORC)/ State Peace and Development Council (SPDC).	2008 Constitution
Civil Service Administration		<ul style="list-style-type: none"> - State and division Councils had their own secretariat, i.e. a civil service to manage basic administration - States provided the legal basis for Parliament to establish a Public Service Commission to assist “in matters relating to recruitment to the civil services of the union.” - Extended state executive authority to a State Public Service Commission and all matters relating to recruitment to the state civil services, to postings and transfers, and to disciplinary matters relating to the services. 	<ul style="list-style-type: none"> - All civil servants centralized within the party-state. - Managed by the Central Services Selection and Training Board which reported directly to the Council of State. (renamed in 1977 as Civil Services Selection Board (CCSB). - Membership in the BSPP became an important selection criterion for civil service - High-ranking positions in the bureaucracy were reserved for uniformed military officials. 	<ul style="list-style-type: none"> - All civil servants centralized and accountable SLORC - CCSB placed under the direct control of SLORC. Responsible for recruitment and training of “gazetted” officers as well as for scrutinizing any proposals by government agencies regarding civil service personnel. - Active and retired military officers are appointed to senior posts in government ministries and seconded as executives to state economic enterprises. - General administrative support provided to SLORC/PDC by the General Administration Department (GAD) of the Ministry of Home Affairs. 	<ul style="list-style-type: none"> - Administration remains highly centralized via the GAD, which – until the announcement in January 2019 – was ultimately accountable to the union level Ministry of Home Affairs, controlled by the military - States /regions have no dedicated civil service – GAD provides for public administration - Power to hire and fire resides with the union. - Union Civil Service Board as a separate office of the union government, accountable to the president. - States / regions may form Civil Services organizations and appoint the required number of Civil Services personnel in coordination with the union Government.

	Pre-independence	1947 Constitution	1974 Constitution	1988-2010 State Law and Order Restoration Council (SLORC)/ State Peace and Development Council (SPDC).	2008 Constitution
Financing		<ul style="list-style-type: none"> - Each state expected to depend largely on its own resources. - States assigned revenues include taxes (land, motor vehicles and local economic activity and excise duties) plus fees, fines, rents and other dues plus contributions from the union. - Included royalties on oil, minerals, forests and rubber extraction, alcohol, forests etc. - Transfers from the union <ul style="list-style-type: none"> - deficit-based, lump sum allocated by Parliament and distributed to the states by a State Aid Council. 	<ul style="list-style-type: none"> - Exclusive power vested in <i>Pyithu Hluttaw</i> to enact laws relating to state economic plans, annual budget and taxation. 	<ul style="list-style-type: none"> - Exclusive power vested in <i>Pyithu Hluttaw</i> to enact laws relating to state economic plans, annual budget and taxation. 	<ul style="list-style-type: none"> - All major taxes assigned to and collected by the union government. - States / regions provided with an assortment of small own-source revenues, including: <ul style="list-style-type: none"> - taxes (wheel tax, property tax, excise tax, mineral, land tax, water and embankment tax, tax on the extraction of forest products, tax on fisheries); and - Non-tax revenues (largely fees and penalties) - Large dependence on intergovernmental resource transfers from the union: <ul style="list-style-type: none"> - Union general-purpose grant transfers - Union tax revenue sharing; and - Constituency Development Funds. - State/region governments prepare budgets and are required to submit budget proposals to the Union Financial Com-mission for approval.
Dispute resolution between levels of government		None.	N/A	N/A	<ul style="list-style-type: none"> - Disputes touching on the constitution between governments are to be resolved by the union government and the Constitutional Tribunal.
Subsequent events	-	<ul style="list-style-type: none"> - 1947 Constitution abrogated in 1962 by the army-led Revolutionary Council (RC). - RC changed territorial boundaries of Pegu Division and created Rangoon division. 	<ul style="list-style-type: none"> - 1974 Constitution suspended by the State Law and Order Restoration Council (SLORC), which seized power in the aftermath of the 1988 uprising. 	<ul style="list-style-type: none"> - SLORC, renamed State Peace and Development Council (SPDC) instigated a slow build to the 2008 Constitution. - National Convention process launched in 1993 to draft a new constitution. - Relunched in 2004 as part of the SPDC's "Roadmap to Democracy". 	<ul style="list-style-type: none"> - Amendments added a long list of taxes to Schedule 5 to be potentially collected by states and regions. - YCDC Law 2018 considerably democratizes municipal governance in Yangon - GAD shifted to civilian control - Committee formed by the <i>Pyidaungsu Hluttaw</i> to debate and propose amendments to the constitution. Opposed by the military.

2.31. **Parallels can be drawn with ethnically-diverse Indonesia, which also devolved political power and budgets to local governments to relieve center-periphery tensions (Table 2.9).** Recent analytical work shows that subnational governments play a key role in mitigating the underlying drivers of intra-state conflict; representing, as they do, the reshaped distribution of political power and demands for greater levels of subnational self-governance (See Box 2.2). In less ethnically and culturally fragmented places, and in places where intra-state conflict has not been the primary driver of decentralization, the predominant focus has been on improving the efficiency of service delivery. In Cambodia, Lao PDR and Thailand, for instance, decentralization has been viewed as a tool to make decision-making and service delivery more responsive and accountable to local people by establishing local democratic institutions and increasing citizen participation.

Table 2.9: Decentralization in South East Asia

Country	Policy orientation
Cambodia	Hybrid case, with deconcentration to provinces and devolution to lower levels; Communes and sangkats operate as a sub-national administrative level with independent governance arrangements involving competitive multiparty elections, but provinces are more significant in terms of public expenditures.
China	Main focus on deconcentration to provinces and larger cities, although lower levels have larger public expenditure role and elements of de facto devolution have emerged in some areas; provinces have considerable regulatory control over lower levels.
Indonesia	Focus on substantial devolution to cities and districts, which replaced earlier emphasis on deconcentration to provinces; limited de jure role at lowest levels, though districts and villages have quite a lot of autonomy; 2004 and 2014 reforms increased the role of higher levels.
Lao PDR	The Lao PDR Government has put in place an ambitious policy (Sam Sang) to delegate responsibilities to the Provincial level and Vientiane Capital. The national level Budget expenditure is executed on the provincial level; Provinces play a significant role in the decision of the final sector budget allocations.
Malaysia	Centrally dominated multi-ethnic federation with limited role of states.
Myanmar	2008 Constitution created a new subnational level of government with partially elected parliaments and a limited range of finance and administrative functions; municipal governance is the only areas over which state/region government have sole accountability. Most formal power remains concentrated at the Union through an interlocking web of political, administrative and financial provisions.
Philippines	Focus on devolution to sub-provincial units, but provinces still play a significant role.
Thailand	Historical focus on deconcentration to provinces and districts, but, since 1997, framework shifted toward devolution to municipalities, districts, and subdistricts. De facto implementation has lagged with the central government retaining a high degree of control, fragmentation within institutions leading to coordination problems and a lack of effective local accountability mechanisms."
Vietnam	Focus mainly on deconcentration with stronger role for provinces, including regulatory control over sub-provincial levels; subnational governments have been allocated rights over specific functions, approaching devolution.

Source: Authors; Smoke (2005); Shah (2007)

Box 2.2: The role of subnational government in mitigating the underlying drivers of intra-state conflict

Across the world, contemporary conflict is increasingly protracted and intrastate. As in the case of Myanmar, these conflicts frequently manifest themselves as demands for greater levels of subnational self-governance from communities on the periphery, clashing with efforts by the center to retain control over policy-making. They are often driven by identity-based grievances, perceptions of economic marginalization, and horizontal inequities between groups.

By fundamentally reshaping the distribution of political power and state resources between actors in the center and the periphery, subnational governance arrangements, ranging from administrative decentralization to federalism, offer a potential compromise between the competing positions. They have the potential to establish a sustainable and compatible combination of power and institutions that target the underlying drivers of conflict, and that generate and distribute a range of practical benefits. Accordingly, subnational governance has been among the most common form of political settlement in fragile and conflict-affected countries (Wolff, Ross and Wee, 2019).³⁷

Transferring political power and resources to the periphery offers the prospect of improved and more widespread political participation and greater responsiveness of government and public services to local preferences. However, decentralization is not a panacea; its utility in addressing the underlying drivers of conflict also reflects the underlying nature of the elite bargain that gave rise to it – in particular, whether the political settlement was negotiated (competitive) or dictated from above (dominant) (Levy, 2014). Further, it also creates scope for misalignments within government, including functional fragmentation and duplication (Shah, 2007).³⁸

The success of subnational governance in contributing to sustainable peace, democracy, and development depends on several factors. The processes of designing and implementing subnational governance arrangements that are inclusive and that help lead to conclusive negotiation processes are more likely to produce sustainable outcomes. The content of the settlement should ensure that institutional arrangements, resolution mechanisms and financing are appropriate to deal with the main drivers of conflict. The domestic and external context in which a settlement is designed, implemented, and operated also requires active “management” to ensure that settlements are not derailed by potential spoilers who are resistant to change and may even benefit from conflict (Wolff, Ross and Wee, 2019).

- 2.32. **The considerable gap between the political visibility and formal authority of Myanmar’s subnational governments reflects a common trait observed in fragile, conflict-affected states where central governments are reluctant to relinquish power (World Bank, N.D.).³⁹ States and regions are located within a hierarchical structure that requires chief ministers, and their state/region cabinet colleagues, to be explicitly accountable to the president.⁴⁰ Region/State Government Law (2010) specifies that “The Chief Minister shall be responsible to the President,” and the “Ministers shall be responsible to the ...**

37 Wolff, S., Ross, S. Wee, A. (2019). “Subnational Governance and Conflict: The Merits of Subnational Governance as Conflict Mitigation Mechanism”. Fragility, Conflict and Violence Group. World Bank, DRAFT.

38 Shah A (ed) (2007) The Practice of Fiscal Federalism: Comparative Perspectives, Kingston/Montreal: McGill-Queen’s University Press

39 World Bank (N.D) “Policy Brief Intergovernmental Relations in Fragile and Conflict Situations: Draft Report for Decision Meeting.

40 Global New Light of Myanmar (2018) “Presidential spokesperson explains pensions increase and GAD move” December 22, 2018. Available from” <http://www.globalnewlightofmyanmar.com/presidential-spokesperson-explains-pensions-increase-and-gad-move/>

President through the Chief Minister”.⁴¹ In this sense states and regions are mostly viewed as implementers of the policies of the union government rather than autonomous bodies responsible for developing and implementing their own policies.

- 2.33. **The GAD is the modern incarnation of the graded general administrative model that has been a staple of local governance in Myanmar since precolonial times.** Bamar kings practiced a form of indirect rule by organizing the land into a hierarchical system of clusters that were overseen by a hierarchy of local administrators.⁴² The British administrative system retained a chain of superior authorities, through councils, in geographically-defined jurisdictions, in a top-down line of command managed centrally by the Secretariat Office (Furnival, 1960). Township councils managed the smallest unit of general administration and reported to councils at the district and the division levels. District and township officials, staffed or supervised by the generalist administrators of the Indian Civil Service, acting as agents of the central government, performed all essential functions of government, including judicial, magis-terial and revenue collection. The primary focus, though, was the maintenance of law and order. The system of indirect rule through local leaders was also retained within village tracts. The graded territorial system of general administration inherited from the British has endured in various guises, for example, in the form of district collectors from the Burma Civil Service from 1937 to 1962. The structures and institutions of the modern GAD were formally established in 1988 by the State Law and Order Restoration Council (SLORC). The majority of its gazetted positions, including the senior leadership of the department, is staffed by ex-military officers.

D. The unique features of municipal governance

- 2.34. **An important exception to the constrained authority of subnational governments is municipal affairs, which stands alone as a wholly devolved responsibility. Through the subnational Ministry of Development Affairs, states and regions have sole jurisdiction over municipal services in Myanmar’s urban areas.** This includes smaller cities as well as the largest cities Yangon and Mandalay, which have unique governance arrangements. Since colonial times, municipalities have occupied a unique place in Myanmar’s local governance (see Box 2.3).

Box 2.3: How municipal governance evolved to be a subnational function

Governance of smaller cities

As a legacy of the Revolutionary Council’s rule (1962-74), municipal governance and rural development were the responsibility of Township Development Committees. In 1994, responsibility for municipal affairs was shifted from the General Administration Department to the Department of Development Affairs of the Ministry of Border Affairs. In 2008, as part of the remit of the new state and region governments for “Development matters”, the subnational offices of the department of Development Affairs were reassigned across the 14 states and regions under the authority of the respective Minister of Development Affairs.

⁴¹ The State Peace and Development Council Law No. 16 / 2010

⁴² During the Konbaung Kingdom, for instance, a hierarchical system of administration involved *Myo Wun* (governor of a township) and *Kayaing Wun* (administrators of larger townships), that served at the pleasure of the king, and *Ywa Thugyi* (largely autonomous village heads at the lowest level) (Saw and Arnold, (2015). These individuals played a strong role as traditional ‘judges’ solving local disputes and in upholding social harmony and peace.

Starting in late 2012, all 14 state and region governments developed their own Development Affairs Laws, which established, in state and region law, the partially elected Township Development Affairs Committees (TDAC) that oversee the activities of Development Affairs Organizations (DAOs) – the municipal administration in the urban areas of each township. These laws are all largely based on *SLORC Law No. 5/93* (the “Development Committees Law”), which provided the legal basis for DAOs and established their primary functions.

Each TDAC includes seven members, of which four are elected by the community through methods that vary from one state/region to another (though not via universal suffrage). The other three members are government appointees, including the director-level civil servant that is the paramount authority with the DAO office. TDAC candidates cannot be members of political parties. TDACs have decision-making powers, their own budget, and are responsible for setting municipal priorities; ensuring coordination with other government actors and communities; deciding on local development projects; and conducting public outreach.

Governance of Yangon and Mandalay

Municipal affairs in Myanmar’s largest cities, Yangon and Mandalay, are organized differently and have a separate legal genesis. Yangon is managed by the Yangon City Development Committee (YCDC) and Mandalay is managed by the Mandalay City Development Committee (MCDC). Each committee existed before the 2008 Constitution; YCDC since 1922 and MCDC since 1992. While at times, YCDC has acted as local government, in general, it has been overseen by a higher authority (colonial government, president in the post-independence period and the respective region government since 2008).

The broad contours of municipal governance were shaped by two foundational laws governing the colonial city of Rangoon, each of which persisted for nearly one-hundred years until their eventual repeal. The *1874 British Burma Municipal Act* (repealed in 1993) established representative municipal committees in Lower Burma (subsequently extended to the whole of Burma under the *Burma Municipal Act of 1898*) and established the foundations of municipal taxation assignments, which persist to this day. The law also established the office of the mayor. The *1922 City of Rangoon Municipal Act* (repealed in 2018) created the Municipal Corporation of the City of Rangoon: a separate legal entity with partially elected councilors. It established a wide range of similar core municipal service delivery functions that had an enduring influence on subsequent municipal laws, both within Yangon and across other cities. The first election for the Yangon Municipal Committee was held in 1949.

From the 1960s to 1990s elections for the municipal council of Yangon were abandoned and the city was placed under the firm control of the central government. In 1972, the Revolutionary Council restructured all Municipal Committees and District Councils to fall under the purview of the General Administration Department (GAD), as part of the Ministry of Home and Religious Affairs. Thus, for a time, all municipal governance was harmonized.

Under the SLOPRC regime, some fundamental changes were made to Yangon’s governance. The *1990 City of Yangon Development Law* (The State Law and Order Restoration Council Law No. 11/90) established YCDC as a SLORC-appointed committee with a minimum of seven “suitable citizens” selected by the chairman of the SLOR. One committee member was appointed the chairman and functioned as mayor. The committee managed an abridged set of 11 broad mandatory municipal responsibilities. This law was mirrored in the *Mandalay City Development Law (1992)* which established MCDC as an incorporated entity.

As part of the reassignment of municipal affairs under states and regions in the 2008 Constitution, both YCDC and MCDC were placed under the responsibility of their respective region governments. The 2013 *Yangon City Municipal Law*, adopted by the Yangon Region Hluttaw, restructured the YCDC executive committee to include nine members – four members directly elected and five directly appointed (four by the region government and the fifth, the mayor, who is at the same time chair of the YCDC, appointed by the president). The mayor also functions as the Regional Minister for Development Affairs.

Sources: Arnold et al. (2015)⁴³; Batcheler et al. (2018); Htet (2019)⁴⁴

- 2.35. **City governments are not, however, politically or financially autonomous, as the union is able to exert considerable influence in larger, more significant cities.** Despite being largely autonomous in their day-to-day functioning (Winter and Thin, 2016), cities are completely subordinated into the legislative remit of subnational governments and wholly contained within subnational budgets. Moreover, the union retains an effective fiscal veto over municipal affairs via the Financial Commission (see above). The two largest cities of Yangon and Mandalay clearly have greater central influence than smaller cities, despite having their own laws and internal organizational structures. The mayor of each city is appointed by, and accountable to, the president and serves concurrently as the respective Minister of Development Affairs with a position in cabinet. The result is that in Yangon Region, four out of the nine members of cabinet, and four out of eight in Mandalay, are centrally appointed, and therefore unaccountable to the public. This stands in contrast to other states and regions where the Minister of Development Affairs is an elected member of parliament.
- 2.36. **That Myanmar's largest city Yangon is wholly subordinate to the first tier of subnational government is a feature unique to Myanmar's decentralization.** If the city of Yangon were a separate jurisdiction, it would be among Myanmar's largest. In most countries in East Asia, the largest city stands separate to the provincial structure and sits alongside the top tier of subnational governance. Yangon, in contrast, is delegated its administrative and budgetary functions from the Yangon Region Government.⁴⁵
- 2.37. **The assignment of municipal affairs to subnational governments provides states and regions with authority over a critical area of local governance and service delivery.** YCDC and MCDC stand alone as important parts of the local administration in Myanmar. Their outsized role is evidenced by the fact that, collectively, the two cities account for almost all the own-source revenue in Yangon and Mandalay regions (85 percent in 2016-17). As Myanmar's rapid urbanization continues apace and the country continues its adjustment away from a dependence on agriculture, effective municipal administration will have increasingly important implications for Myanmar's development prospects. Moreover, the trend toward a more urban and densely populated Myanmar means an increasing share of Myanmar's population will interact with their government through municipal authorities, including urban planning, regulation of land and construction activity, and a variety of essential daily urban services, such as solid waste management, water, and sanitation.

43 Arnold, M. et al., (2015). "Municipal Governance in Myanmar" The Asia Foundation Subnational Governance in Myanmar Discussion Paper Series;

44 Htet, K. S. (2019) "Yangon municipal election, what you need to know". Myanmar Times, March 5 2019

45 A special designation is given to the political capital Nay Pyi Taw, though it remains a union territory.

E. More decentralization since 2008

2.38. **Rather than being simply forums for greater political inclusion and democratic oversight, subnational governments are overcoming severe limits on their authority to play an ever-greater role in the administration of public finances and delivery of services within the constitution.** Subnational Hluttaws create space for a new form of political contest, particularly in ethnic states, and are an important forum for nudging greater inclusion and accountability in government. In aggregate, the subnational share of government spending is comparable to a host of countries in the region (Table 2.10). Subnational expenditure increased from around 6 percent of general government expenditure in 2012/13 to nearly 12 percent in 2017/18.⁴⁶ Most subnational spending is on capital expenditure which grew as a share of total subnational spending from 36 percent in 2013/14 to nearly 55 percent in 2016/17 (see Chapter 3). Much of this increase in capital expenditure is financed by intra-government grant transfers to the subnational level, which increased significantly in the two years to 2015/16 (see Chapter 4).⁴⁷

Table 2.10: Subnational expenditure shares in South East Asia

Country	Subnational expenditure (% of total)*
Cambodia	4
China	85
Indonesia	45 (including 4% managed by villages)
Lao PDR	31
Malaysia	9
Myanmar	12
Philippines	16
Thailand	18
Vietnam	54

Sources: Country Fact Sheets: Global Observatory on Local Finance; UCLG, available from <http://www.uclg-localfinance.org/observatory>; Myanmar Ministry of Planning and Finance 2017/18; World Bank Public Expenditure Review (2015).

*2013 unless otherwise stated; Myanmar 2017/18 Budget Estimate; Lao PDR: 2014/15 Budget; Malaysian Treasury; Indonesia 2017 Ministry of Finance.

2.39. **Several factors have contributed to the growing role and weight of subnational governments.** The focus on democratic institutions since the 2015 transfer of power to a civilian government also means more focus on the elected tier at the subnational level. The chief ministers are very visible in the media as senior political figures and representatives of the ruling political party at the local level. A key focus on the ongoing peace process, to “[e]stablish a union based on the principles of democracy and federalism” (NCA, 2015, Chapter 1) also means increased significance of the subnational tier.⁴⁸ The civilian government has also focused more on service delivery, responding to the demands of the increasingly vocal media and social media-savvy population. There is clearly an appetite among citizens, according to surveys, for states and regions to play a greater role in service delivery (Box 2.4).

46 Renaissance Institute (2018) “What’s in the Wallet? -Public Money in Myanmar’s Regions and States”, Yangon.

47 Addison, Douglas M.; Rab, H N; Boothe, R; Sondergaard, L M.; Chawla, M; Nthara, K L. (2015). *Realigning the union budget to Myanmar’s development priorities: public expenditure review (English)*. Washington, D.C.: World Bank Group.

48 The Nationwide Ceasefire Agreement Between the Government of the Republic of the Union of Myanmar and the Ethnic Armed Organizations (2015). Available from https://peacemaker.un.org/sites/peacemaker.un.org/files/MM_151510_NCAAgreement.pdf

Box 2.4: The public's hesitant embrace of decentralization

In a 2018 survey on citizens' expectations of political reform, there was clear support for assigning greater responsibility for basic education, higher education, and healthcare to subnational governments. Only a small minority of respondents supported full centralization of these services, which is presently the case. On the question of power-sharing between levels of government, however, public opinion is yet to crystalize. While 27 percent of citizens support giving more power to state and region governments, 21 percent support the current balance of power between the union and state/region governments. A large proportion of the population, 39 percent, however, remains undecided. Notably, citizens in states are much more likely to support greater power-sharing (33 percent) than citizens in regions (24 percent) though the undecided rate is universally high.

The general hesitancy about the exact nature of a much more decentralized Myanmar squares with the results of a separate survey of citizen's democratic aspirations. Citizens generally placed constitutional reform low on the list of the country's national problems, only 1 percent indicated it was the most important, compared with conflict and peace (39 percent) and the economy (31 percent).⁴⁹ This is very probably a function of the wider lack of understanding of the role that constitutional architecture can play, and is being demanded to play by the EAOs in addressing conflict, which is the number one issue on the public's mind. That citizens in states are more supportive of power-sharing, however, is consistent with the generally lower opinion citizens in states have of the Pyithu Hluttaw MPs compared with regions across several performance metrics. Respondents from states were also less likely to agree that the 2008 constitution guarantees democratic elements than the respondents from regions.

Sources: People's Alliance for Credible Elections–PACE (2018a; 2018b).

- 2.40. **In addition to their increasing budgets, the slow but steady growth in influence and autonomy of the subnational government can be witnessed in other political and administrative developments.** These include: expanded taxation jurisdiction with a constitutional amendment in 2015; increased assertiveness of the subnational Hluttaws; increasing service delivery and regulatory role using the relevant enabling provisions of the constitution; an increasing coordinating role at the subnational level; the shift of the GAD to civilian control; increasing incubation and adoption of innovations; strengthened role of women; and increased accountability, participation and transparency.
- 2.41. **Constitutional amendments approved in 2015 also suggests a broad trajectory toward greater power-sharing between levels of government.** The amendments added a list of taxes to Schedule Five, to be potentially collected by states and regions. While it had no immediate impact on subnational finance, the amendment acts as a placeholder for subsequent union laws that could possibly lead to considerable changes. For example, the list includes taxes on natural resources and customs; decentralization of which may have significant implications for horizontal equity between locations.⁵⁰
- 2.42. **Despite their relative inexperience, civilian Hluttaw members have generally grown in assertiveness and autonomy under the current NLD government, albeit from a low base.** Data from The Asia Foundation indicates that, since the NLD-led subnational governments assumed power in 2016, the legislative outputs of subnational Hluttaw have been broadly on par with the previous USDP-led governments (see Batcheler et al., 2018). Between 2016 and April 2018, the NLD-led state/region Hluttaw collectively passed 168

49 People's Alliance for Credible Elections–PACE, (2018b). *Public Opinions on Citizen's Democratic Aspirations*. (Yangon: PACE).

50 Section 3 of the Law Amending the Constitution of Republic of the Union of Myanmar, The Pyidaungsu Hluttaw Law No. 45, 22 July 2015.

laws, of which 66 were nonroutine laws related to the authorities assigned in Schedule Two.⁵¹ One-third of the nonroutine laws have been amendments to laws passed in 2010–2015. Laws passed by state/region Hluttaw since 2016 have covered a wide variety of subjects, including all sectors covered under Schedule Two, with some passed in response to issues identified by civil society.⁵² The second terms of the state/region Hluttaw have, however, seen an increase in the parliament holding the executive to account. Largely this has been through committees. In the life of the NLD parliaments, more than 9,000 questions have been raised and 387 motions passed. Though there are significant variations among the states and regions.

- 2.43. **A signal achievement of the Yangon Region Government was the 2018 *Yangon City Development Law*, with profound implications for democratic oversight of municipal institutions.** Most notably, the new law introduced two new elected executive committee positions, bringing the total number of seats to 11 and the number of elected positions to six. This will be the first time that a majority of executive committee members will be popularly elected. The president will continue to appoint the mayor. The shift to universal suffrage from the previous system of household suffrage will particularly benefit women voters, who were disproportionately disenfranchised by the one-house one-vote system. The law also establishes the position of deputy mayor, following feedback from public consultations. The first elections under the new regime were held in March 2019 following a period in which the entire executive committee was unelected (See Box 2.5).

Box 2.5: Increased participatory governance in YCDC

In December 2014, Yangon held its first municipal elections in 50 years. A total of 115 YCDC committee seats were up for election: four elective executive committee seats, 12 seats at the district level, and 99 seats for the township level. Turnout, however, was low, reflecting the one-vote per household system and strict criteria that severely restricted the number of eligible voters (Arnold et al., 2015). In May 2016, however, the eight elected and appointed members of the executive committee were removed from their seats owing to a change to the YCDC by-laws that truncated the terms of the committee to coincide with the five-year term of the previous union government (Myanmar Times, 2016).⁵³ Similar changes were made in MCDC. Since then, YCDC has been governed solely by the five non-elected appointees (the mayor plus four appointed interim members).

In March 2019 YCDC held, for the first time in Myanmar's history, a genuinely democratic local election. In all, 105 positions were up for election (six executive positions and three positions within each of the 33 townships). The campaign period was one month. More than three million people were eligible to vote. In addition to the change to universal suffrage, the 2019 elections are the first time that political parties and their symbols were permitted to be used in the local government contests (they were previously banned). Oversight of the election process was completely decentralized; managed by the YCDC Electoral Commission and funded by the Yangon Region Government.

The election was contested by 272 candidates, with 27 candidates contesting the seats on the executive committee. Thirteen candidates ran uncontested for township level seats. The NLD party won 89 of the 105 seats available; including all six seats on the Executive Board and 83 township committee seats.

51 Between 2010 and 2016 the state/region USDP governments passed, on average, 18 nonroutine laws.

52 This does not include the YCDC Law 2018 (passed in June 2018), which was a substantial change to democratize and restructure municipal governance in Yangon.

All other seats were won by independents. The synchronizing of the YCDC, national and subnational electoral cycles means that the elected YCDC candidates will be in place until the national elections in 2020.

Voter turnout in the election, however, was low, with less than 15 percent of total eligible voters casting a ballot. This reflected, in part, the relative unpreparedness of the city election commission for its first major local-level elections. The YCDC election commission was unable to access the Union Electoral Commission's voter roll and had to create a list of the city's estimated 3.4 million eligible voters from scratch, for which it relied on handwritten registers kept by local branches of the General Administration Department (Dunant, 2019).⁵⁴

- 2.44. **The 2018 Yangon City Development Law also reformed the organizational structure of YCDC, abolishing district-level committees and streamlining YCDC's 20 existing departments into seven working groups and three departments.** Each committee member will be designated chair of the working groups, with three external experts as members. Specific assignments will depend on the expertise of each committee member. The three departments (administration, security, and budget) will be under the Joint Secretary. Harsher penalties are imposed for street impediments, such as unregulated street vendors, squatters and generators, as well as penalties for pollution and littering; it strengthens YCDC's regulatory powers over businesses, construction, and urban planning. Similar amendments are being considered for MCDC.
- 2.45. **Several enabling provisions of the constitution and other legislation allow the union government to assign roles to the subnational governments.**⁵⁵ There are numerous examples of the delegation of union responsibility to the subnational governments through legislation and administrative orders. Although education is a union function, the Education Act of 2014 recognizes the pivotal role that state and region governments can play in promoting education. Subnational governments, in addition to other duties, can facilitate non-local teachers and educational administrators to live and travel in their area. They can also administer, help and guide educational matters in accordance with current law. Recognizing the role of state and region governments in the promotion of local culture, the Act authorizes them to implement the teaching of ethnic languages and literature at the level of primary and even higher grades. State governments can also help to "open classes to develop the ethnic group's literature, language, culture, arts and traditions and to start subjects/majors in ethnic groups' culture, literature, and history in universities". The National Land Use Policy 2016 assigns the substantial role of land management to state and region chief ministers; it assigns district, township and village tract level officials through the formation of various committees for dispute resolution and day-to-day administration. The subnational governments were delegated the authority to approve up to 5 million dollars of foreign investments in permitted sectors. The union government 2016 guidelines on procurement of civil works assign the state and region executive body the leading roles in the tendering, assessment and contract management processes; even for the contracts executed by the union ministries with the union budget.

53 <https://www.mmtimes.com/national-news/yangon/20378-ycdc-members-accept-termination.html>

54 Dunant, B. (2019) Yangon's election: a democratic milestone? Frontier Myanmar. Available from <https://frontiermyanmar.net/en/yangons-election-a-democratic-milestone>

55 Article 249 states that the executive powers of the regions or state governments also extend to "matters which the Region or State Government is permitted to perform in accord with any Union Law." Article 251 says that "The Region or State Government shall, subject to the policies adopted by the Union Government and Union Law, implement projects that are to be undertaken in the region or State with the approval of the Region or State Hluttaw concerted." Article 259 states that "The Region or State Government shall discharge the functions occasionally assigned by the Union Government "

- 2.46. **Crucially, the constitution also mandates the subnational governments to “inspect, supervise and coordinate” the functions of all union ministries in their jurisdiction.** Chief ministers have an increasingly strong informal oversight role over line ministries. The references to the administration of basic education in the Education Act can be interpreted as a manifestation of this important power.
- 2.47. **Hluttaw Office Departments, separate from the GAD, were created to serve as independent offices working directly for each state and region.** Upon the insistence of the subnational government, this change operationalized an existing provision in *The Region and State Hluttaw Law (2013)* (Nixon et al., 2015). Staff was transferred from the GAD to the new department. Similar to most departments at the subnational level, the ultimate responsibility for human resources in these Hluttaw offices rests with the union, specifically, the Pyidaungsu Hluttaw Office.
- 2.48. **In perhaps one of the biggest reforms of Myanmar’s governance architecture, in late 2018 it was announced that the GAD would be shifted from military to civilian control.** The omnipresent GAD, and its more than 36,000 staff, will be shifted from the military-controlled Ministry of Home Affairs to the civilian Ministry of the Union Government Office.⁵⁶ While the objectives of this reform may take years to realize, the move has the potential to improve civilian oversight and strengthen downward accountability, particularly at the grassroots level where the GAD’s presence is most salient.
- 2.49. **The Myanmar Sustainable Development Plan (MSDP) also places states and regions at the center of its vision for a more inclusive, decentralized system of governance that supports equitable and conflict-sensitive, socio-economic development.** The MSDP is the most important expression of the government’s proposed development strategy and provides a coordinated and coherent whole-of-government distillation framework of the country’s various existing sector and thematic-level plans. In particular, as part of Pillar 1, “Peace & Stability”, the MSDP envisaged decentralized management as a key means through which to foster greater social cohesion in post-conflict and conflict-affected areas. An essential feature of this strengthened fiscal federalism is improved efficiency and equitable distribution of inter-governmental fiscal transfers to states and regions, accompanied by strengthened fiscal capacities of subnational public entities.
- 2.50. **Subnational entities are increasingly innovating to address longstanding problems.** As Chapter 7 shows, there has been progress on using technology-driven solutions to collect tax and utility fees in smaller cities; to digitize land dispute cases in Yangon Region; map MDCD’s fleet of garbage trucks; and survey buildings and land in YCDC using satellite imagery to provide the basis for a geographic information system that can support the administration of the municipal property tax.
- 2.51. **Tentative steps have been taken to make subnational governments more inclusive, transparent and accountable.** Since the 2015 elections, the subnational parliaments have become slightly more gender-balanced. The previous parliament had no women chief ministers; as of May 2019, there was one woman serving as chief minister in Kayin (the Chief Minister of Tanintharyi was dismissed in March 2019 following her arrest in the wake of an investigation by the Anti-Corruption Commission). The number of women in cabinet has risen from four to nine, while 12.7 percent of elected seats were won by women, up from 3.6 percent in the 2010 election. Nationally, the number of women in W/VTA positions has increased at each election, rising from 41 in 2012, to 88 in 2016 and 101 in 2018. Though the overall proportion of women’s participation remains small across the political and civil service and much more needs to be done to lift female participation (see Box 2.6).

56 As per Union Government Meeting No. (23/2018).

Box 2.6: The underrepresentation of women in subnational governance and the civil service

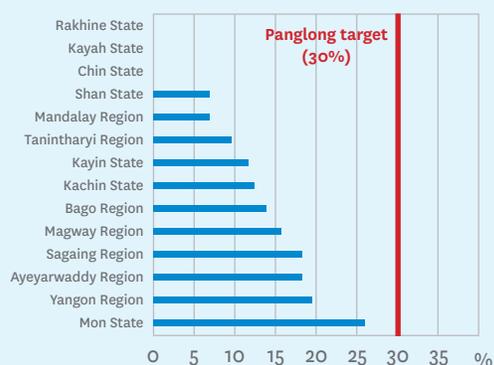
The Third Session of the Union Peace Conference-21st Century Panglong and the Myanmar Strategic Development Plan aims for “30 percent involvement of women” in administration and political dialogue. However, at the subnational level, women constitute only 12.7 percent of total elected MPs. While there is considerable variation between states and regions, all fall far short of the Panglong goals (Figure 2.3).⁵⁷

Within the civil service, there are no affirmative action policies on the basis of ethnicity, gender or domicile. Accordingly, it is widely held that the character of the civil service continues to reflect old power structures, being biased toward Bamar males (see for example Cifuentes 2015 and Hook et al., 2015).⁵⁸ The GAD is a pertinent example. Only 11 percent of GAD’s 1,452 gazetted officers are female (Saw and Arnold 2015, p17). There are no female township administrators anywhere in Myanmar and only one serving Deputy Township Administrator is a woman, in Cocokyone Township in Yangon Region. The Deputy Minister of MoHA stated in August 2018 that women will be promoted to administrator positions in the future (Batcheler et al., 2018, p58). GAD rules now state that only men can be hired as village tract or ward clerks (Saw and Arnold, 2015, p17). As of September 2017, only 101 of the 16,829 W/VTAs were women (Batcheler et al., 2018, p44).

A noticeable counterpoint to the GAD is YCDC, where women account for a considerable proportion of most staff cadres, well in excess of the Panglong targets in most cases (Figure 2.4), as is also the case with the non-gazetted staff of most union ministries. This does not extend to the political realm, however, with 44 registered women candidates (16 percent of the total) in the recent YCDC elections. The new YCDC Law says nothing about promoting gender equity.

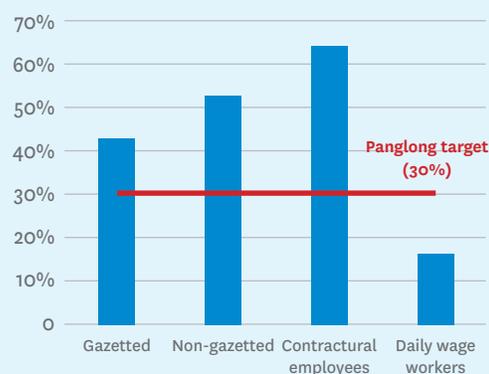
On the other hand, the decision to open voting in the municipal elections to all eligible voters is a positive step. The earlier practice whereby only household heads were able to vote disenfranchised a disproportionately larger percentage of women given that a very small fraction of women are identified as household heads.

Figure 2.3: Women’s representation in states and regions (Per cent of elected MPs in respective Htuttaw)



Source: Minoletti (2016b).

Figure 2.4: Women’s representation in YCDC (Per cent of each staff cadre)



Source: YCDC

57 Minoletti. P. (2016b).

Gender (in)Equality in the Governance of Myanmar: Past, Present, and Potential Strategies for Change. (Yangon: The Asia Foundation).

58 Based on partial evidence, as the government does not yet publish information on race and religion in the civil service.

- 2.52. **States and regions are increasingly becoming more transparent and accountable to the public, though not yet consistently or at scale.** Voluntary budget transparency is improving. Most of the subnational annual planning and budget laws are publicly available at the Myanmar Law Information System developed by Union Attorney General Office; however, not across the whole country and only in the middle (or later) part of the budget calendar.⁵⁹ There is currently no public access to in-year budget reports, year-end financial statements, external audit reports, or information on large contract awards. More recently, subnational governments have started publishing citizen’s budgets. Nearly all states/regions (including the three subjects of his PER) have published at least one citizen’s budget since 2016.⁶⁰ They present information from enacted budgets in more accessible language, incorporating visual elements to help non-specialist readers understand the information. There is also some evidence of legislation being passed in subnational parliaments in response to issues identified by civil society (Bachelor, et al., 2018). Similar to a number of countries in East Asia, there is no formalized and routine governmental engagement with civil society during the budget and planning processes. Rather, civil participation is, at best, patchy. However, individual MPs are known to directly engage with civil society (Shotton, Wint Yee and Pwint Oo, 2017).
- 2.53. **While these initial signs of progress related to inclusion, participation, and transparency need to be appreciated and supported, it must be recognized that this movement stems from very limited baselines.** Much needs to be done to fully realize the potential of subnational governments to positively impact service delivery, participation and pluralism. The PER discusses issues that relate directly to the mandate and role of subnational governments. In addition to these challenges, the day to day administration mirrors the many institutional challenges of the union government (Box 2.7).

Box 2.7: Echoes of Myanmar’s history of conflict and authoritarian rule on governance institutions.

Focused on fighting separatist civil wars and suppressing democratic movements, the various military rulers built a “minimally functioning” state in Myanmar, with low taxes and low provision of services. Major social and economic policy decisions across the country, including in the cities of Yangon and Mandalay, were exclusively discussed within the internal advisory mechanisms of the military leadership with limited input from “civilian” bureaucrats. Executive decision-making and planning remain highly centralized, ad hoc and opaque, with scant input generally sought from the bureaucracy (Arnold and Aung, 2018; Valley et al., 2018). A small and lowly-paid civil service with a large military presence implemented state policy within a culture that prioritizes protocol and compliance over innovation and responsiveness.

The bureaucracy is relatively disciplined and functional. Administrative issues such as absenteeism that typify poor service delivery in many developing countries are not significant in Myanmar. Administrative policies are often underpinned by well-observed regulations and procedures, though these may be slow, paper-based, and inefficient. Performance evaluations reward compliance rather than service quality, with significant risks that critical inquiry and innovation may not be encouraged. Government departments continue to collect reams of administrative data on all kinds of subjects across the country; however data are typically viewed as a monitoring tool to report progress towards a target rather than to more broadly provide information to inform and guide public policies and spending priorities.

59 <https://www.mlis.gov.mm/>

60 <https://www.mopf.gov.mm/my/blog/47/143/5541>

The inward focus on compliance has come at the expense of an outward focus on service to the Myanmar public. Nationwide, it is common for citizens to be asked for small bribes (called “under-table money” or “tea money” or even “donations”) when attempting to access a government service (Transparency International, 2017).⁶¹ This trend is also endemic within cities; a survey of City residents in Yangon, Mandalay and Taunggyi by The Asia Foundation (Owen and Htun, 2018) found that between 40 and 50 percent of respondents experienced corruption as a common practice. As noted in the World Bank’s 2019 Strategic Country Diagnostic, citizen trust in government remains low and the country is mired in a vicious cycle, in which inadequate public services engender resistance to paying taxes, which in turn limits spending on public services.

F. Policy options

- 2.54. **Most stakeholders in Myanmar recognize the significance of the role of subnational governments to address the long-standing issues of conflict and the requirement to build necessary institutional capacity in targeted states and regions as a mechanism to foster ‘federalism from below’.** Pursuing a democratic, federal union is an often-expressed aspiration of the ruling party: the National League of Democracy. While details of an eventual federal solution are likely to be extremely contested, expanding the political autonomy of subnational governments appears to have emerged as a key initial point in the recently initiated a constitutional reform process (Box 2.8).
- 2.55. **While the results, if any, and the timelines of the constitutional reform process are uncertain, it is essential to highlight the fact that much can be done with the scope of the current constitutional provisions to address the critical challenges of service delivery, inclusion, oversight, coordination, and participation.** The growing significance of subnational governments attests to this fact. Much can also be done, as suggested throughout the PER, to strengthen the institutional capacity of subnational governments to help strengthen the “federalist” model. There are many enabling provisions in the constitution⁶² which provide space for a much greater role for subnational governments.
- 2.56. **International experience shows that there is no one perfect federal model. Even in mature federal unions, reform is a long process of trial and error rooted in historical experience, context, and learning from doing.** The relationship between entities under a federal union are shaped not only by the underlying legal framework but also by practice and norms of intergovernmental cooperation. Debate will continue to happen, ideally informed by experience and evidence to chart the next stage of reform. The current constitution does provide a platform for such debate, as well as a degree of experimentation and practice.
- 2.57. **This PER has adopted this incremental approach of working within the four corners of the current constitution from the very outset.** Pragmatic approaches to improving public administration that best fit with the prevailing traditions, norms, and values of public administration can also be superior to first-best prescriptions and blank-slate approaches, which usually come unstuck owing to their lack of legitimacy.⁶³

61 Transparency International (2017), People and Corruption: Asia Pacific – Global Corruption Barometer, (Transparency International). From https://www.transparency.org/whatwedo/publication/people_and_corruption_asia_pacific_global_corruption_barometer.

62 For example, the right of subnational governments to inspect, oversee and supervise the performance of union government ministries in their jurisdiction

63 Blum et al (2019, pxx) cite the common failure of pursuing “visions of a lean, efficient, and affordable public service; [seeking to] build standard institutions for establishment control and merit protection, such as independent public service commissions; and [aiming] to establish rational pay and grade structures based on job evaluations.”

The overview of the historical development of subnational architecture in Myanmar that shows that the current constitution is yet to provide as much autonomy as was available around the first decade of independence also informs us that drastic reforms in this space are unlikely.

Box 2.8: Emerging dialogue on constitutional change

In January 2019, the NLD-controlled parliament approved the formation of a 45-member joint committee to propose amendments to the constitution that would then be debated by the Parliament. The outcomes of this sensitive process are uncertain given the far-reaching range of the proposed amendments (the NLD has previously published a list of proposed amendments to 168 of the constitution's 457 articles), including changing provisions relating to the role of the military in national politics. However, it is possible that some agreement may emerge on granting more political autonomy to the subnational governments – the right of the subnational legislatures to elect their own chief minister without any veto of the president, for example. Media reports suggest this would have the support of the major parties and ethnic leaders (The Irrawaddy, 2019)⁶⁴ while surveys indicate it would also enjoy majority popular support (PACE, 2018a).⁶⁵

A survey of citizens indicates that there is public support for constitutional reforms that would facilitate national reconciliation, allow each state and region to manage its own resources, and introduce greater checks and balances between the branches of government (PACE, 2018b). However, some questions of power-sharing are likely to be contentious. These include land management and natural resource sharing, teaching ethnic languages and history, and the right to have organized militias, which have been longstanding demands of ethnic stakeholders.

Energize coordination and oversight

- 2.58. **The large size of states and regions places a premium on strong and structured systems of oversight over the various institutions of local governance to ensure services and resources are appropriately targeted and responsive to people's needs.** The constitution also mandates subnational governments to “inspect, supervise and coordinate” the work of all union ministries within their jurisdiction. Given the blurred or limited accountability of civil servants to the subnational political leadership (despite working on the subnational mandates and being paid by the subnational budgets), it is difficult to fully realize the role of the subnational governments.
- 2.59. **Reorienting the reporting and supervisory lines of GAD for subnational control is central to this process.** The GAD performs the coordination role at all local level tiers, it serves as the office of the subnational government, its head serves as the member of the cabinet, its township officials lead the coordination of all government departments at the local level, and its village and ward secretaries are the lower-most officials in government with the maximum outreach. It is also the department fully paid for out of the subnational budget. The chief minister can exercise informal authority through his or her relationship with the union minister overseeing GAD either on a personal basis or through party structures. For example, informal consultations with the chief minister are reportedly held at the time of the appointment of the state secretary. The GAD state/region secretaries and their subordinate administration also comply with

64 The Irrawaddy (2019). “The Parliamentary Battle over Amending the Constitution” The Irrawaddy Online, available from: <https://www.irrawaddy.com/specials/parliamentary-battle-amending-constitution.html>

65 People's Alliance for Credible Elections–PACE (2018a), *Citizens' Mid-Term Perceptions of Government Performance* (Yangon: PACE).

the instructions of the chief minister, but the “supervisory” relationship is not grounded in any formal reporting or evaluation system. At the township level, the TA heads many committees consisting of various department officials but there is not any formal reporting or evaluation system to underpin the leadership role.

2.60. **Similarly, the state/region ministers have a growing role vis-à-vis the state level officials of union ministries, but this relationship is also informal.** Vertically organized line ministries prioritize upward accountability, do not share information with subnational governments regularly, and do not effectively coordinate with other ministries at the township level. This contributes to challenges of coordination between departments of line ministries at each horizontal level of administration and fragmentation between line ministries and the states/region governments.

2.61. **Four changes can substantially strengthen the all-important coordination and oversight function of the subnational political leadership.**

- i. Formally involving the chief ministers in the posting and performance evaluation of the GAD state secretary in their jurisdiction. The government may wish to formalize the current informal arrangements of Human Resource (HR) management into a matrix structure. The Ministry of Union Government (MoUG), the ministry controlling GAD, may be required to formally seek clearance of the relevant chief minister for the posting of the DDG (for example, by submitting a panel of three options from which the minister would choose). This would still give the MoUG ultimate control over who is put forward, but places additional power with the subnational government. The chief minister could also be authorized, as per law, to provide formal input into the periodic performance evaluation processes of the DDG and other senior GAD officials. The career management relationship with the MoUG will continue, and this will still promote and transfer GAD officials.
- ii. Formally involving the relevant subnational ministers in the posting and performance evaluation of the state/region level director for Schedule Two departments in their jurisdiction. In parallel to the formal shifting of reporting lines for GAD officials, the director level officials of line ministries that receive recurrent and capex funding from the SNGs, the senior-most in at the SNG level, may also formally report to the chief minister through the subnational ministers and the DDG GAD in a matrix structure.
- iii. Allowing the GAD township administrator a formal evaluation role into the performance evaluation of counterpart township department officials. This will help strengthen the all-important coordination function at the township level. Elected township structures may emerge over time and may head township administration and supervision roles, but the current township administration system is in the hands of civil servants. (One interpretation of the constitutional clause governing township administration argues that that the township will be led by civil servants only). In short, a matrix reporting structure, with minimum formal soft reporting lines to the subnational executive – the chief minister, the minister and the township administrator – needs to be adopted for the GAD and schedule two ministries.
- iv. Formalize the flow of information (e.g. information on performance, financing, and staffing), from the union ministries to the subnational ministers. Ministries, including GAD, collect reams of data but the information, including budget planning and execution information, is often shared vertically and not horizontally at different subnational tiers, undermining the potential of oversight. Matrix reporting structures with strengthened accountability towards subnational ministers will also help information sharing, but more formal systems mandated by the union government will also help. Digitization of data also facilitates information sharing.

- 2.62. **The above suggestions to formalize the reporting structure of line ministries, including the GAD, to subnational ministers should have the net effect of strengthening democratic oversight.** They foster decentralization by pushing some HR management powers downwards, and are expected to enhance horizontal coordination at local levels. Most importantly, they strengthen the office of the chief minister for coordination and oversight across a range of ministries, through the GAD and through the minister, at all subnational levels. Systematizing reporting lines will help strengthen the resilience of intergovernmental cooperation to disputes and greater political heterogeneity. At present, the broad political alignment across the tiers of governments (the NLD presently controls the union and 13 out of 14 subnational legislatures) is potentially helping to smooth out inherent tensions that may exist between the subnational and union governments as a result of the ambiguities over mandates and dual accountabilities of civil servants. This benefit is likely to be transitory as future elections are likely to be increasingly competitive.
- 2.63. **These four recommendations may face some challenges in implementation.** Union government officials may not be inclined to sharing their HR management power with the state/region chief ministers and cabinets. Matrix reporting structures, while often needed in large bureaucracies, may be cumbersome to implement and are resented. There remain echoes of the longstanding mistrust of GAD's role in suppression of democratic activists during the rule of the State Peace and Development Council (SPDC). At the township level, GAD's coordination mandate, while unquestioned during days of military leadership, has eroded. GAD also faces substantial challenges with modernization and reorientation towards a citizen-focused service delivery role.
- 2.64. **Despite these challenges, these recommendations could be implemented on account of their incremental nature and because they go with the grain of the current system of public administration and the general direction of the existing process of decentralization.** The president recently issued instructions that the subnational political tier should have a greater say in posting and performance evaluation. Moreover, the proposed reforms may not require new legislation, perhaps only rule changes or official notifications. They also do not involve any immediate budgetary implications. Coordination is a key issue at all levels of government and administration. The Ministry of Union Government (MoUG) has the unique mandate of coordination and leadership that can be extended through the chief ministers and minister down to the local levels. The constitution already specifies the leading role of the senior-most GAD officials in the state/region as the state secretary.
- 2.65. **A Subnational Governance Innovations Forum may be created and may meet every three months to ensure that reform experience is fully disseminated, discussed, and absorbed.** The secretariat may be hosted by one major state or region government or by the Ministry of Union Government. One important benefit of increased autonomy of subnational governments is the potential flowering of innovations across the governance landscape. As is noted in this chapter and the chapters that follow, Myanmar is also reaping this benefit in the form of a ferment of new ideas: extensive use of information and communications technology in Mandalay city; outsourcing solid waste management in Shan state; introduction of citizen budgets in Yangon region - being tried to improve efficiency; accountability and transparency across state and region governments, and city committees. To ensure that lessons, both positive and negative, from such experience (and from the innovations being introduced by the union government) are fully documented, disseminated and used, it is important that state, region, and city officials regularly meet and share their experience. Learning from international experience is important, but learning from local experience is also critical. Recognizing trailblazers is also vital to encourage more such behavior.

Build stronger capacity by decentralizing and filling human resource gaps

- 2.66. **While it is premature for large scale decentralization of HR functions, there are potential benefits from delegating an increasing number of day-to-day HR functions to the subnational level while preserving the policy-setting functions of the union Government.** Myanmar has a long history of centralized control over civil servants, it is also not administratively feasible or advisable to have such large scale creation of new parallel departments at the subnational level. Nonetheless, there are likely to be advantages from progressively localizing control over a limited set of HR functions, such as: transfers within the same state/region; initiation, and conclusion of disciplinary and performance evaluation processes; performance awards; identification of technical specifications; and recruitment and placement of non-gazetted staff. These processes should apply to all ministries (including health and education ministries) that may eventually be placed within the functional remit of the state and region governments. Such an approach would also be consistent with standard federal systems, such as in federating entities of India and Pakistan, where responsibilities over establishment, recruitment, promotion and performance management are either fully with the subnational government or shared between the central and subnational governments. It can also help foster a more inclusive, capable and accountable civil service at the subnational level.
- 2.67. **Push toward greater inclusion of service delivery at local levels.** To overcome skills shortages in remote areas, the government of Myanmar provides a hardship incentive payment. However, this payment is not well-targeted and does little to ensure the last mile of service delivery is calibrated to the local cultural context (Box 2.9). The government may wish to target relocation incentive payments exclusively on incentivizing the deployment of scarce specialized technical and management skills to remote areas. Lower-skilled positions, such as clerks, could also be hired locally while a broad suite of well-targeted, monetary and non-monetary incentives could be used to attract the most skilled workers that are not locally available (see Bhatti and McDonald, 2019 for a list). Complementing this could be a longer-term focus on building a sustainable pipeline of skills from the local area, through a combination of subsidized professional development and targeted investments to reduce remoteness and hardship. It would be advantageous if subnational governments were charged with administering the hardship allowance to improve targeting, with the use of the funds capped at the existing amount.

Box 2.9: Myanmar's hardship allowance

In 2012, the government of Myanmar introduced an incentive payment to encourage the deployment of civil servants to 110 “socially difficult” townships split across three hardship classifications: fairly hard, hard, and hardest. In 2016–17, allowances were provided to 8 percent of civil servants and cost \$45 million: around 3 percent of the total basic civilian staff salary bill.

The allowance hasn't yet overcome the maldistribution of skills. Three shortcomings stand out:

- The allowance is not well-targeted. One-third of all townships are classified as “socially difficult.” Civil servants receive allowances regardless of their skill level, home town, or position. Of the civil servants receiving the allowance in 2016–17, 81 percent were at the clerical or helper level.
- The focus is entirely on financial incentives, which is not the only consideration when deciding to move to a remote community, and doesn't reflect international best practice. A survey of civil servants found that allowances are insufficient to compensate for the difficulties associated with housing, transportation, conflict, and language barriers.
- No long-term government-wide approach sustainably addresses skill shortages.

Source: Bhatti and McDonald (2019).⁶⁶

66 Bhatti, Z.K. and McDonald, L. (2019). Overcoming Shortages of Skilled Civil Servants in Remote and Hardship Areas (English). Governance notes; no. 2. Washington, D.C.: World Bank Group.

- 2.68. **For much-needed technical skills, such as auditors, accountants, and information technology specialists, the government may wish to grant states and regions the right to circumvent onerous centralized controls if a justifiable case can be made.** The current city laws allow for consultants to be hired but such market-based recruitment is rarely practiced. Detailed guidelines for such hiring can address the hesitation to resort to in-sourcing skills from the market. Information technology specialists are especially hard to recruit and retain given the substantially better salary and career opportunities available in the private sector in Yangon and Mandalay (see Chapter 7).
- 2.69. **Reducing the dependence on temporary workers will help improve the qualitative composition of the civil service.** Yangon city law has abolished the restrictive 30 percent ceiling on the wage bill and therefore skirting these restrictions may not be required. Recent reforms in the Union Civil Service Board law also allow more discretion to subnational civil service entities to determine processes to hire non-gazetted civil servants. Temporary workers are likely to be suitable for some low-skilled positions, such as daily laborers in construction, and teachers' assistants, where permanent staff are not needed. They are likely to be less suited to skilled positions and administrative roles where institutional memory is needed. Caps could be placed on total temporary staff numbers especially at the gazetted level.

Strengthen downward accountability

- 2.70. **Within Yangon, the new law and the first election to include universal suffrage offers an opportunity to considerably strengthen the democratic accountability of YCDC.** YCDC, in particular, has been largely unaccountable to local populations since the removal of the eight elected members of the executive committee in 2016. The new law and recent election offer an opportunity to shape new democratic norms within the city administration. Areas to consider include:
- i. Ensure the newly-created elected deputy mayor position is not merely titular but wields practical authority over day-to-day administration in YCDC. Formally, the elected deputy mayor will assume tasks assigned by the mayor, offer advice and support to the mayor, and temporarily assume mayoral responsibilities while the mayor is not around. Though it is not clear how much authority the deputy mayor will actually have (Dunant, 2019). The deputy mayor could be formally put in charge of the solid waste management functions of the city, an extremely important function high on citizens' priority list.
 - ii. Consider an elected member of parliament as the Minister of Development Affairs in Yangon and Mandalay regions. The role of mayor of Myanmar's largest cities is a considerable undertaking. In addition to strengthening democratic accountability of the region cabinet, an elected Minister of Development Affairs can better manage the process of planned urbanization outside of YCDC and MCDC boundaries and integration with these existing cities.
 - iii. Create a more accountable mayoral position. As the peak member of the Executive Committee, the position of mayor is significant for the strategic trajectory of the city. Around the world, it is common for the mayor, or equivalent, to be elected either directly by the citizens or from within the city council (Sud and Yilmaz, 2013). At present, neither is the case in Myanmar where the mayor is hand-picked by the president.
- 2.71. **As subnational governments grow in authority, the importance of strong downward accountability also increases.** The new Yangon law emphasizes transparency and accountability as major city objectives, but processes to operationalize these important aims are not discussed. There are several sections on the importance of public relations and communication, including using modern ICT, but the emphasis is almost entirely top-down messaging from the city to the citizens. The increased use of social media to communicate with and gather feedback from citizens is a welcome development in a country renowned

for its government secrecy. Such engagement, with its challenges of fake accounts and trolling, is not necessarily representative and risks being manipulated. Therefore it must not be seen as the only channel of communication and engagement with the residents. One option for deepening downward accountability includes:

- i. **Proactively soliciting feedback from citizens.** Targeting citizens, such as users of particular services, for feedback can be an effective and efficient mechanism for monitoring service delivery, improving the evidence base of government policies and enhancing citizen-state trust. Two pilot projects have been developed in two regions; Yangon and Bago; which solicit feedback from identified users of individual government services. Increasing the scale and scope of such feedback mechanisms and making them more structured, for example embedding them within the performance management systems of line ministries, will provide subnational governments with a valuable source of information, improve citizen engagement and strengthen downward accountability.

Strengthen social inclusion by increasing the role of women in subnational governance.

2.72. **Government institutions cannot be responsive to community needs and preferences unless they are populated with people that represent the communities that they serve.** This will necessitate a focus on recruiting, promoting and retaining women within the civil service. Women participate freely and actively in commerce and education but are rather invisible in politics and senior echelons of the civil service. The process of improving gender balance in subnational institutions should begin immediately. A number of changes can substantially strengthen gender inclusion in both politics and the civil service:

- i. Encourage women to participate in elections. Indonesia provides a potential model. By law, political parties must ensure that at least 30 percent of their *candidates* in each multi-member constituency are women. While this has helped underpin a rise in women's representation in Indonesian state parliament, it has not been fully translated into 30 percent of seats won by women, in large part due to women being placed low on the list of candidates (Prihatini, 2018).⁶⁷ Women's political participation in legislative bodies in the provinces and districts has generally remained lower than the national level. Evidence from India has shown that reserving seats in local governance institutions has important effects on policy decisions at the local level, including more gender-responsive capital expenditure (Chattopadhyay and Duflo, 2004).⁶⁸
- ii. Remove rules that prevent women's participation in the civil service. The arcane rule that prohibits women from being a ward/village tract clerk is an obvious first step. Review civil service rules and by-laws for any other provisions that explicitly (or implicitly) prevent the participation of women.
- iii. Progressively introduce quotas to support women rising through the ranks of GAD. Clear benefits are likely from actively promoting women to key administrative posts, such as township administrators and deputy administrators.
- iv. Provide supportive infrastructure, government-supported child care arrangements, to help retain existing female civil servants. For example, subnational line departments could invest in rooms to support nursing mothers; this would follow from the extension of maternity leave for women up to six months in 2013.

67 Prihatini, E. (2018) How can Indonesia increase the number of women legislators?" *The Conversation*, January 25 2018. Available from: <http://theconversation.com/how-can-indonesia-increase-the-number-of-women-legislators-90446>

68 Chattopadhyay, R. and Duflo, E. (2004). Women as Policy Makers: Evidence from a Randomized Policy Experiment in India. *Econometrica*, vol. 72 (5), 1409-1443

Table 2.11: Summary of policy options and recommendations

	Issues	Options
<p>Energize coordination and oversight</p>	<p>Given that subnational functions and spending assignments are mostly shared, the subnational political executive has severely circumscribed oversight of the union ministries, even GAD, the most “local” of all the union departments. Important enabling constitutional provisions that may foster decentralization are not being fully employed.</p>	<p>Activate the constitutional provision mandating the subnational oversight of union government performance with a more agile information system, improved data sharing, and regular oversight reviews by the state and region governments.</p> <p>Formalizing the current informal arrangements of HR management into a matrix structure with soft reporting lines by considering the following:</p> <ul style="list-style-type: none"> • Involving relevant members of the subnational executive in the posting and performance evaluation of senior civil servants at the subnational level (the chief minister for the GAD state secretary and relevant subnational ministers for state/region level director positions for schedule two departments). • Reorient the reporting and supervisory lines of GAD for subnational control. Providing the GAD township administrator with a formal role to evaluate the performance of counterpart township department officials. • The resultant matrix-reporting structure would formalize the flow of information (e.g., information on performance, financing, and staffing), from the union ministries to the subnational ministers, promoting more democratic accountability, increased oversight and would support the implementation functions of the subnational executive. <p>A Subnational Governance Innovations Forum may be created to meet every three months, to ensure that reform experience is fully disseminated, discussed, and absorbed. The secretariat may be hosted by one major state or region government or by the Ministry of Union Government</p>
<p>Build stronger capacity by decentralizing and filling human resource gaps</p>	<p>Subnational governments have no dedicated permanent bureaucracy, most human resource functions are highly centralized, and the accountability of the union government civil servants who disburse subnational budgets to the subnational governments are informal and blurred.</p>	<p>There are potential benefits from delegating an increasing number of day-to-day HR functions to the subnational level while preserving the policy-setting functions of the union Government. For instance, control over a limited set of HR functions could be localized; these functions could include: transfers within the same state/region; initiation, and conclusion of disciplinary and performance evaluation processes; grant of performance awards; identification of technical specifications; and recruitment and placement of non-gazetted staff.</p> <p>Consider improving the inclusion of service delivery at local levels through</p> <ul style="list-style-type: none"> • Short-term: target relocation-incentive payments exclusively to scarce specialized technical and management skills in remote areas while recruiting lower-skilled positions from the local population. • Longer-term: focus on a building a sustainable pipeline of skills from a local area, through a combination of subsidized professional development and targeted investments to reduce remoteness and hardship <p>There are potential benefits from increasing flexibility for recruitment of necessary technical skills by delegating some day-to-day HR functions to the subnational level while preserving the policy-setting functions of the union Government</p>

	Issues	Options
<p>Strengthen downward accountability</p>	<p>The executive of Yangon and Mandalay is appointed by, and accountable to, the President and serves concurrently as the respective Minister of Development Affairs with a position in Cabinet. This means the union has greater influence in the two largest cities of Yangon and Mandalay than in smaller cities, despite having their own laws and internal organization structures.</p> <p>As subnational governments grow in authority, the importance of strong downward accountability also increases. The new Yangon law emphasizes transparency and accountability but the emphasis is almost entirely top-down messaging from the city to the citizens.</p>	<p>Downward accountability of municipal governance could be strengthened by the following measures:</p> <ul style="list-style-type: none"> • Increasing the authority and visibility of the democratically elected members of the YCDC executive committee, in particular, the deputy mayor • Assigning supervisory responsibilities over solid waste management to the newly created deputy mayor - central service delivery function. • Consider an elected member of parliament as the Minister of Development Affairs in Yangon and Mandalay regions. <p>Proactively soliciting feedback from identified users of individual government services.</p>
<p>Strengthen social inclusion by increasing the role of women in subnational governance.</p>	<p>Women participate freely and actively in commerce and education but are rather invisible in politics and senior echelons of the civil service.</p> <p>The Union Peace Conference - 21st Century Panglong and the Myanmar Strategic Development Plan aim for “30 percent involvement of women” in administration and political dialogue.</p>	<p>Several changes can substantially strengthen gender inclusion in both politics and the civil service:</p> <ul style="list-style-type: none"> • Encourage women to participate in elections • Remove rules that prevent women’s participation in the civil service. • Progressively introduce quotas to support women rising through the ranks of GAD. • Provide supportive infrastructure to help retain existing female civil servants.

3 SUBNATIONAL EXPENDITURE

A. Introduction

- 3.1. **Myanmar, a nation in transition, has embarked on significant reforms that have delivered immediate economic gains but faces considerable challenges in ensuring that the benefits of growth are broadly shared.** Myanmar is the only country in the region where the incomes of the bottom 40 percent of the population have grown more slowly than the national average. Inequalities persist, with rural areas, conflict-affected states, and ethnic and religious minorities lagging across most dimensions of welfare, from stunting to educational attainments and access to electricity and basic sanitation (World Bank SCD, 2019).
- 3.2. **This chapter analyzes options for strengthening and sustaining inclusive growth through improved subnational fiscal management.** Despite their constrained formal authority, limited responsibility for service delivery (outside municipalities), and relatively small budgets, subnational governments have a key role to play in promoting inclusive growth in Myanmar. This is particularly the case with capital expenditure, which is within the assigned remit of state and region governments and is key to Myanmar's future growth prospects given several decades of underinvestment which have constrained production and supply capacity in the economy. The potentially high marginal product of capital spending is dependent on the geographic and sectoral composition of investment being aligned with its highest economic and social value (allocative efficiency) and on robust public investment management systems and processes to support productive efficiency (World Bank, 2017).¹
- 3.3. **Capital deepening is becoming a priority for Myanmar's subnational governments, as evidenced by the rising share of capital expenditure in state/region economies.** As noted initially in the 2017 PER, subnational governments are playing an increasingly prominent role in capital spending, supplementing union government investment. Recent shifts to bottom-up planning have also increased the role of state and regions to influence the size and nature of total public capital expenditure within their jurisdictions though challenges remain (Shotton et al., 2016; Valley et al., 2018). Locating decision-making of capital budgets closer to citizens has the potential to improve targeting of infrastructure investments to meet local needs; which, in a country as geographically, culturally, and economically heterogeneous as Myanmar, will be highly context-specific.
- 3.4. **The framework of the analysis is guided by three key elements that mediate the link between subnational expenditure and stronger, sustainable, and inclusive growth (Figure 3.1).** A detailed review of subnational expenditure trends, where data is available, focuses on the size, spatial allocation, and sectoral composition of the capital budgets of both tiers of government. This reveals partial information on the extent to which investments are targeted at supporting the investment needs of Myanmar's growth poles, Yangon and Mandalay Regions, and the extent to which investments target barriers to inclusion in Shan State. Subnational recurrent commitments are also reviewed; revealing, for example, the different approaches to the recruitment of staff and maintenance of assets.² Specific attention is given to township-level targeting of capital budgets in both levels of government – a critical spatial lens given the considerable heterogeneity of deprivation that exists within the state (see Chapter 1).

1 World Bank (2017). "Myanmar Public Expenditure Review: Fiscal Space for Economic Growth".

2 Municipal services which are also wholly within the remit of subnational governments and key to sustainable and inclusive growth are separately examined in Chapter 5 and Chapter 6.

- 3.5. **Attention is also given to the medium-term issues that are likely to affect the allocative and productive efficiency of subnational capital expenditure.** Medium-term planning, to the extent that it exists, remains fragmented from budgeting, which is strictly on an annual basis, and is often undertaken independent of future resource availability, recurrent investment decisions, and multi-year procurement needs.

Figure 3.1: Framework for Improving subnational expenditure to strengthen inclusive growth



- 3.6. **The chapter has four sections.** Following a brief introduction and discussion of the framework, Section B undertakes a detailed review of subnational expenditure and is broken into four parts, focusing on: i) aggregate subnational expenditure; ii) capital spending in Yangon, Mandalay, and Shan by both levels of government; iii) recurrent spending of subnational governments; and iv) the geographic distribution of capital spending of both levels of government within Shan State specifically. Section C provides an overview of a medium term-performance and some outstanding challenges; Section D details policy options.

B. Review of subnational expenditure

B1. Aggregate trends

- 3.7. **Total subnational expenditure has grown significantly since 2012/13.** Since the first subnational budgets were enacted in 2012-13, expenditure across Myanmar's fourteen states and regions has nearly tripled, rising from 864 billion Kyat to 2,445 billion Kyat in 2016-17 (Table 3.1). This translates to an increase in subnational spending from 1.7 to 3.1 percent of Myanmar GDP during the same period. The provisional actual spending outturn for 2016/17 shows that the subnational level accounted for 20.4 percent of general government spending. Budget estimates indicate that subnational spending is set to rise to 2,859 billion Kyat in 2018/19. The declines in subnational spending as a share of GDP since 2014/15 are consistent with the broader downward trend in union spending; both trends reflect sluggish general government revenue mobilization (Word Bank, 2008).³

3 Word Bank, (2018) Myanmar Economic Monitor, December 201.

- 3.8. **The growth in subnational expenditure has been largely driven by increases in fiscal transfers from the union.** Because of the vertical fiscal imbalances, the union finances much of subnational expenditure. Accordingly, there is a strong, positive correlation between changes in aggregate subnational budgets and total fiscal transfers (Valley and Kyaw, 2018).⁴ After a near tripling of subnational budgets between 2012 and 2015, subnational spending has plateaued in line with the shift to a more rules-based approach to intergovernmental fiscal transfers, linked to the medium-term fiscal framework (MTFF), and fiscal constraints at the union level (World Bank, 2017). Union transfers to states and regions are similar to the share of the budget spent on education (around 9 percent in 2018/19 BE) and exceed government budget shares spent on sectors like health and agriculture (Figure 3.2)). Chapter 4 provides more detail on intergovernmental fiscal arrangements.

Table 3.1: Aggregate fiscal operations in states/regions

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
	Act.	Act.	Act.	Prov. Act.	Prov. Act.	Revised estimate	Budget estimate
Expenditure in billion Kyat							
Mandalay	82	112	176	240	226	269	323
Yangon	215	193	365	470	481	466	650
Shan	97	163	367	246	253	279	270
All states/regions	865	1,235	2,697	2,385	2,445	2,711	2,859
General government	7,249	7,348	10,860	12,115	12,013	12,947	16,020
Expenditure, percent of state/region GDP							
Mandalay	1.6%	1.9%	2.7%	3.2%	2.6%	2.8%	2.8%
Yangon	1.9%	1.5%	2.5%	2.8%	2.5%	2.1%	2.4%
Shan	2.9%	4.4%	9.2%	5.6%	5.2%	5.1%	4.4%
Expenditure, percent of national GDP							
All states/regions	1.7%	2.1%	4.1%	3.3%	3.1%	2.9%	2.7%
General government	13.1%	13.1%	14.6%	15.4%	14.3%	14.9%	14.2%

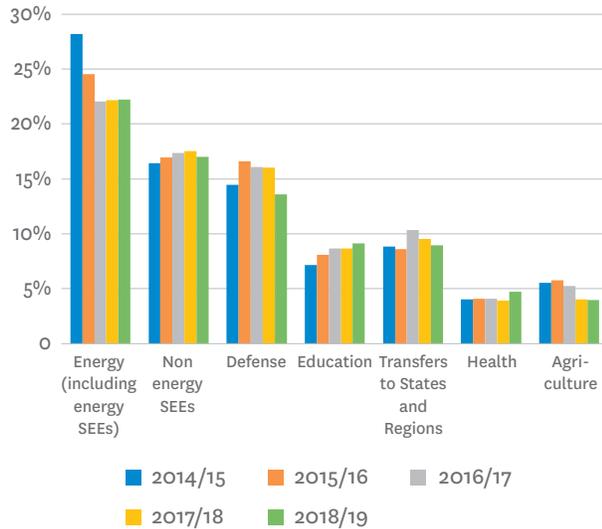
Source: MOPF; WB staff estimates

Note: General government approximates central government (outside of state-owned enterprises) and state/region governments.

- 3.9. **Despite nominal growth in subnational budgets, spending remains small on a per capita basis, although divergence is emerging between Yangon and elsewhere (Figure 3.3).** In 2016/17, per capita spending in Yangon Region was around 65,000 Kyat; higher than the levels in Shan State (43,000 Kyat) and Mandalay Region (37,000 Kyat). Government budget estimates for 2018/19 suggest that this gap is continuing to widen – with Yangon Region’s expected budgetary expansion likely driven by the geographical concentration of expected economic growth in the city of Yangon, bolstering own-source revenues and shared tax revenues (see Chapter 4).

4 Valley I and Kyaw, H.A. (2018) “What’s in the Wallet? -Public Money in Myanmar’s Regions and States”, Renaissance Institute, Yangon.

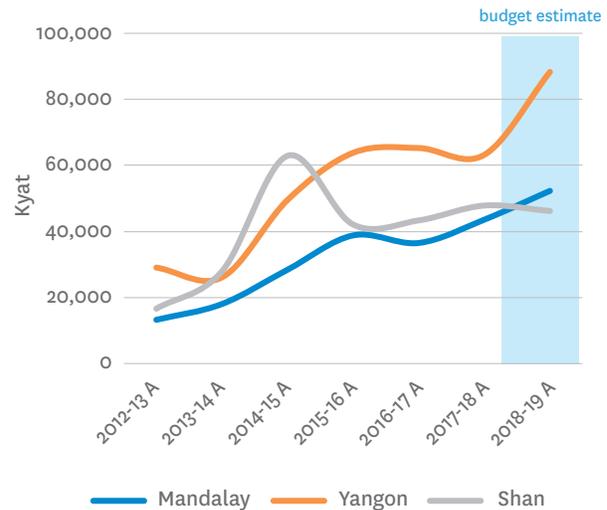
Figure 3.2: Union government spending, % of budget 2014-2019



Source: MOPF; WB staff estimates

Notes: budget figures include spending on ministries and departments (M&D) and state economic enterprises (SEEs). SEE operations are equivalent to public sector financial and non-financial corporations. PA = provisional actuals; TA = temporary actuals; BE = budget estimates

Figure 3.3: Subnational per capita expenditure in Kyat

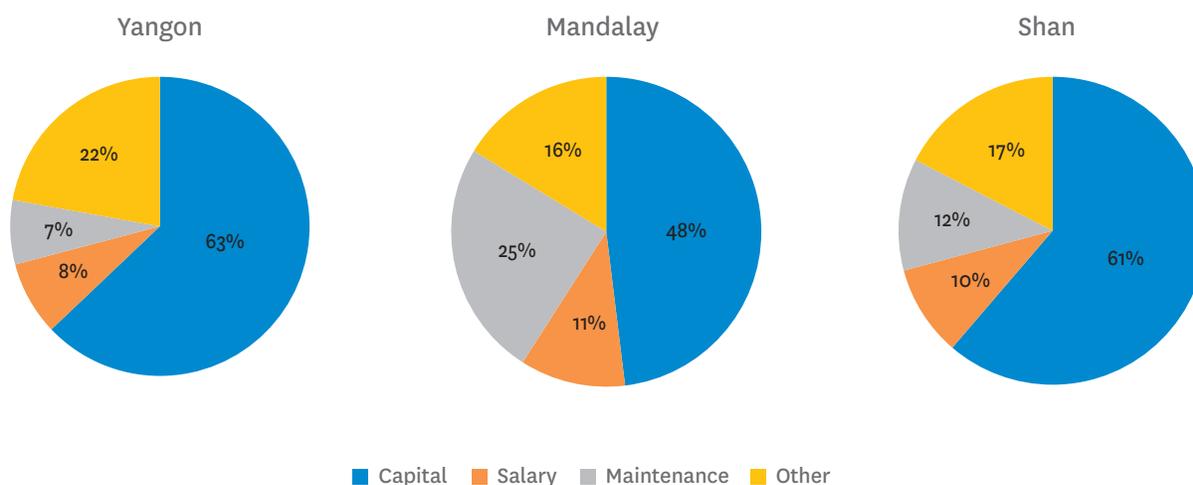


Source: MOPF; WB staff estimates

3.10. In general, capital spending has dominated the budgets of Yangon Region, Mandalay Region, and Shan State since 2014, though the exact composition of spending has varied between locations. A review of subnational budgets across years provides a useful illustration of the broad priorities of each state and region, abstracting from year-to-year variations. Capital spending accounts for the largest share of all subnational budgets (Valley and Kyaw, 2018). This is true for Yangon, Mandalay, and Shan, which spent an average of at least 48 percent of their annual budgets on capital between 2014 and 2018 (Figure 3.4). Maintenance costs, however, vary between the two more urbanized areas, accounting for 7 percent of the budget in Yangon Region and 25 percent in Mandalay Region. The high maintenance expenditure in Mandalay is consistent with the relatively high level of road maintenance spending by MCDC (see Chapter 6). Consistent with the general containment of the civil service wage bill observed in the World Bank’s Systematic Country Diagnostic, labor costs appear to be well contained at the subnational level, accounting for between 16 percent and 22 percent of expenditure. Though, as described in Section B3 below, the exclusion of temporary workers and pension liabilities, plus accounting classification issues, means the economic classifications of spending understate the labor costs.

3.11. Budgeted figures may not reflect the actual economic composition of spending. Broadly, capital expenditure in Myanmar budgets corresponds to the acquisition of non-financial physical assets while current expenditure relates to operational expenses (like salary, maintenance, and purchases of goods/services). In practice, budget classifications across time and ministries are not necessarily consistent. Differences can be, at least partially, attributed to accounting norms, and changes in budget classification. They can also arise as a result of an array of further challenges as identified in Box 3.1. This is an issue that needs to be addressed at all levels for both budget and budget execution reporting; with clear accounting policies, definitions and thresholds set at the central level and applied at all levels for capital expenditure.

Figure 3.4: Expenditure shares, by economic categories. annual average 2014-2018



Source: MOPF; WB staff estimates

Box 3.1: Difficulties classifying budget items

The authors' experience working with budgets across the country reveals that the boundary between maintenance, purchases of goods, and acquisition of fixed non-financial assets (capital expenditure) can be blurry. Machinery and equipment that form an integral part of a building, for example, can be classified as either maintenance or capital expenditure. Equally, goods acquired for use as fixed assets or valuables, for use in capital formation under a certain Kyat threshold could be classified as current spending rather than capital. It is not clear if there is guidance for the definitions of capital expenditure categories to subnational governments (for example, in the form of a manual).

Inconsistencies in budget classification are partly a result of accounting practices, but they may also reflect incentives for states and regions to list projects as capital expenditure rather than current expenditure to secure funding. On the other hand, capital expenditures may also be underreported. Interviews conducted for this study suggested that capital investments are broken down into smaller projects and sometimes classified under current accounts. These inconsistencies in classification blur the picture of overall subnational investments and may constitute a source of potential fiscal risk.

In any case, the analytical content of budgets is limited because budgets are often only reported by administrative units. Such reporting masks the functional nature of spending. Although these practices are changing (which allowed for some functional level analysis in this PER), challenges remain as is seen in expenditure reviews of other chapters in this report.

B2. Capital investment trends

3.12. There has been a general rebalancing of a rising capital budget toward the subnational level. The government’s focus on capital deepening in recent years is evidenced by the near-doubling in the size of total capital expenditure between 2011/12 and 2016/17, from around 3.1 trillion to 5.3 trillion Kyat. The broader policy push towards the decentralization of spending and budgets have considerably increased the subnational share of capital spending over the life of states and regions; it has risen from 3 percent in 2011/12, to 6 percent in 2012/13 and 26 percent in 2016/17. The total value of capital expenditure shaped by the subnational executive and approved by their respective legislatures rose nearly five-fold between 2012/13 and 2016/17, from 280 million to 1.4 trillion Kyat.⁵ The rebalancing toward states and regions meant that subnational capital spending continued to rise even as total capital expenditure fell between 2014 and 2017 on account of challenges in budget execution (World Bank, 2018).⁶ At all levels of government in Myanmar, there has been a greater focus on infrastructure investments, which reflects the central government’s priorities of improving physical infrastructure. Budget estimates for 2018/19 suggest a further steady increase in capital spending, with nearly one-quarter to be undertaken by state/region governments (Figure 3.5). However, actual spending may be different, especially if challenges with budget execution persist.

Figure 3.5: Capital spending by ministries, states/regions and SEEs, in million Kyat and % of total

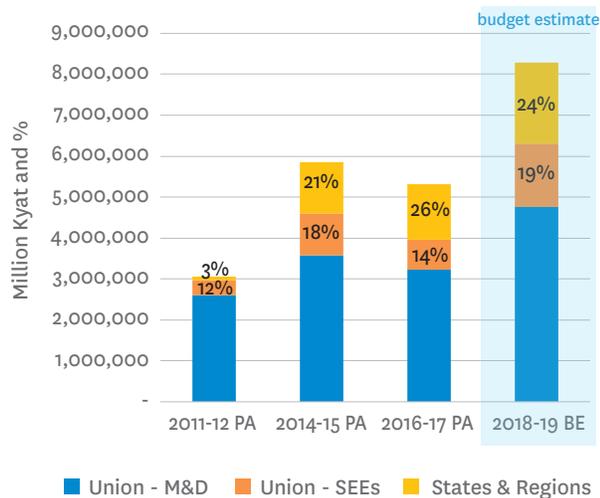
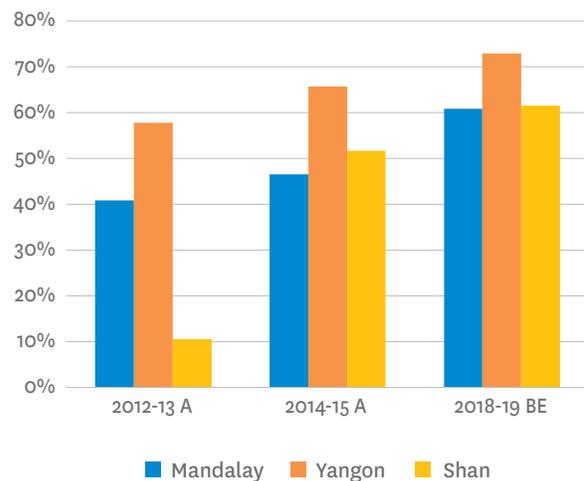


Figure 3.6: Subnational capital spending, as % of their budgets



Source: MOPF; WB staff estimates

Notes: SEE = state economic enterprises. SEE operations are equivalent to public sector financial and non-financial corporations; M&D = ministries and departments; A = actuals; PA = provisional actuals; BE = budget estimates

5 According to Nixon et al (2015) “despite only having separate budgets from the Union since the 2012-13 fiscal year, the extent of budgeted funding to state and region governments has been recorded in the Union budget since 2011-12”. (see: Nixon, H., Joeline, C., Saw, K.P.C., Lynn, T.A. and Arnold. M. (2015), “State and Region Governments in Myanmar,” The Asia Foundation, Yangon

6 World Bank (December 2018) Myanmar Economic Monitor

3.13. **The increases in overall subnational capital spending is reflected in the growing share of the budgets in Yangon, Mandalay, and Shan (Figure 3.6).** Capital spending increased appreciably as a share of total spending in Yangon, Mandalay, and Shan between 2012/13 and 2014/15. In 2018/19, budgeted capital investments are estimated to increase further to 73, 61, and 62 percent of budgets in Yangon, Mandalay and Shan, respectively. As a budget spending norm, subnational governments aim to allocate no more than one-third of their expenditure toward recurrent expenses.

3.14. **A large share of capital investments across both tiers of government is directed toward Yangon Region, potentially reflecting the prioritization of the region’s high growth potential.** Yangon Region is the most urbanized subnational jurisdiction, a commercial hub and the fastest growing area in the country. Potentially reflecting a focus on investing in the drivers of growth, the largest share of all planned union capital expenditure in 2017/18 and 2018/19 (23 percent in both years) is directed towards Yangon (Figure 3.7). This picture is similar at the subnational level, with Yangon accounting for 19 percent of the combined subnational capital budgets in 2017/18 RE – a share that is estimated to rise to 24 percent in 2018/19 BE (Figure 3.8). The result is that across the capital budgets of both tiers of government in 2018/19 BE, per capita planned capital expenditure in Yangon Region (197,000 Kyat) is more than twice as large as in Mandalay and Shan (96,000 and 90,000 Kyat respectively). In all three areas, total planned capital expenditure is expected to rise as a share of state/region GDP (Table 3.2).

Figure 3.7: Budgeted union capital expenditure in Mandalay, Shan and Yangon, % of total in 2017/18 BE and 2018/19 BE

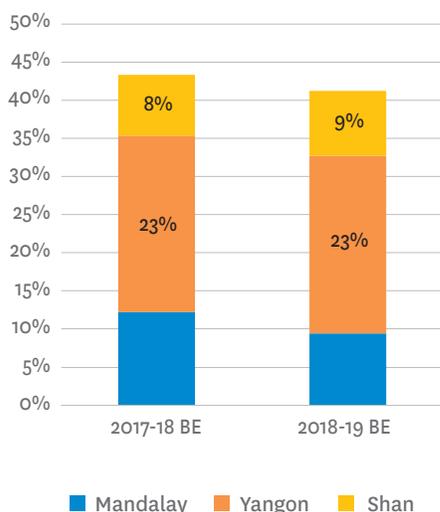
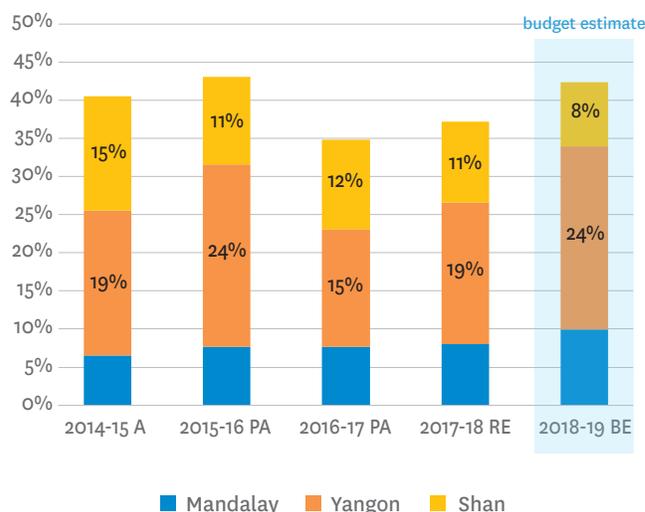


Figure 3.8: Subnational capital expenditure in Mandalay, Shan and Yangon, % of all states/regions in 2014-19



Source: MOPF; WB staff estimates

Notes: Union figures include spending by ministries and departments (M&D) and state economic enterprises (SEEs) and exclude defense; union figures are budget estimates; A = actuals; PA = provisional actuals; RE = revised estimates; BE = budget estimates

3.15. **The union capital budget balances capital investments in growth areas with investments in deprived areas.** Unless capital expenditure helps reduce the economic differences between poorer states like Shan from Yangon, then the benefits of investments in Yangon’s higher growth potential may not be broadly shared. In general, there is considerable variance among states and regions in per capita capital expenditure (Box 3.2). In most states and regions, the union accounts for a substantial share of total

budgeted capital expenditure – more than two-thirds in Bago, Shan, Ayeyarwady, Yangon, and Mandalay. Figure 3.9 illustrates that growth in planned union capital expenditure is accelerating as a share of GDP in all states and regions except Mon State, Tanintharyi, and Ayeyarwady Regions. In Shan, the rise in total capital expenditure as share of state GDP, from 6.3 percent to 8.5 percent,⁷ is entirely driven by the near-doubling of the union capital budget, with the broadly unchanged capital budget of the Shan State government resulting in a decrease in its economy, from 3 percent to 2.7 percent. It is worth noting that while the figures for union capital plans provide the government’s estimates and broad direction of the government’s vision, the actual direction of spending may differ with the publication of the provisional actual spending outturns later in the year.

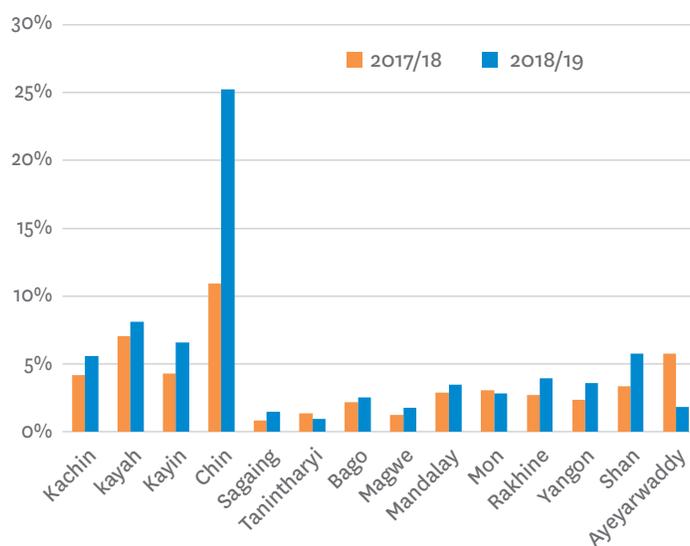
Table 3.2: Total budgeted capital expenditure as share of state/region GDP

	2017/18	2018/19
	Budget estimate	Budget estimate
	(percent of local GDP)	
Planned capital expenditure		
Mandalay	4.2%	5.2%
region budget	1.3%	1.7%
union budget	2.9%	3.5%
Yangon	3.6%	5.3%
region budget	1.2%	1.7%
union budget	2.4%	3.6%
Shan	6.3%	8.5%
state budget	3.0%	2.7%
union budget	3.3%	5.8%

Source: MOPF; WB staff estimates.

Notes: Union figures include spending by ministries and departments (M&D) and state economic enterprises (SEEs) and exclude defense; All figures are budget estimates; actual spending may differ

Figure 3.9: Union budgeted capital expenditure, as % of state/region GDP 2017-2019



Box 3.2: Total per capita planned capital expenditure across Myanmar’s states and regions

Figure 3.10 complements the analysis from the previous PER by incorporating capital investments from both budgets. In 2018/19, close to 462,000 Kyat (231,600 Chin budget + 230,400 Union budget) per capita in capital spending was planned for Chin State as contrasted with Ayeyarwady Region, which had 50,660 Kyat per capita (16,400 Ayeyarwady budget + 34,200 Union budget). Densely populated states/regions like Yangon, Mandalay, Ayeyarwady, and Bago were highlighted for the lowest capital spending per capita (World Bank, 2017) although these are partially offset by higher allocations from the union. These four regions have the largest share of capital investments financed by the union

7 Investments as share of GDP are larger in Shan than in Yangon and Mandalay. This is a reflection of Shan’s relatively smaller economy, as highlighted in Chapter 1

budget (Figure 3.11). Historic data beyond 2017/18 (Figure 3.12 and Figure 3.13) were not available for this report but would be needed to assess potential deviations from year to year. It is worth noting that per capita variations may partly reflect the higher cost of service provision in more mountainous and harder to reach states like Chin, Kachin, and Shan. A better understanding of the cost associated with implementing capital projects is required to assess the spatial equity of total capital spending.

Figure 3.10: Budgeted capital expenditure by union and state/region budgets, kyat per capita 2018/19 BE

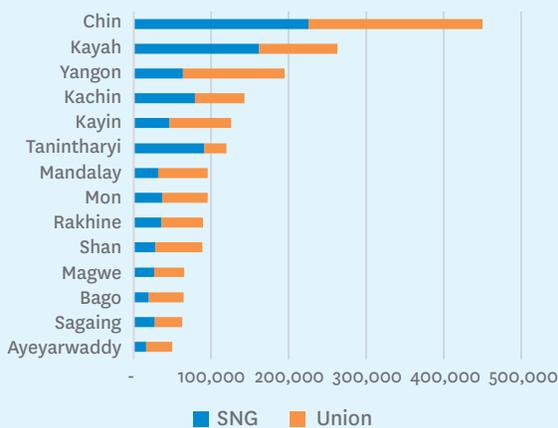
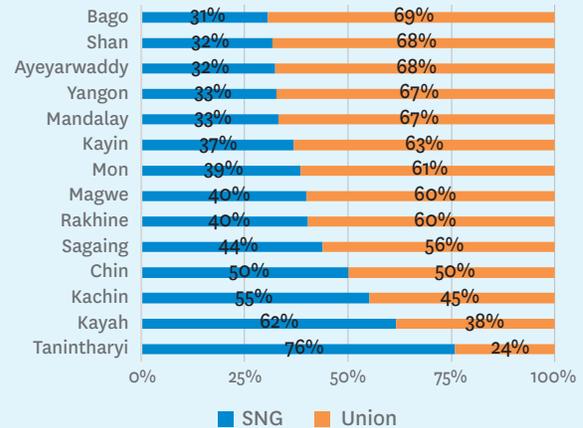


Figure 3.11: Budgeted capital expenditure, % financed by union and state/region budgets, 2018/19 BE



Source: MOPF; WB staff estimates

Note: Union includes spending by ministries and departments and state economic enterprises, excludes defense spending; SNG = subnational governments; figures are budget estimates

Figure 3.12: Total budgeted capital expenditure by union and state/region budgets, kyat per capita 2017/18 BE

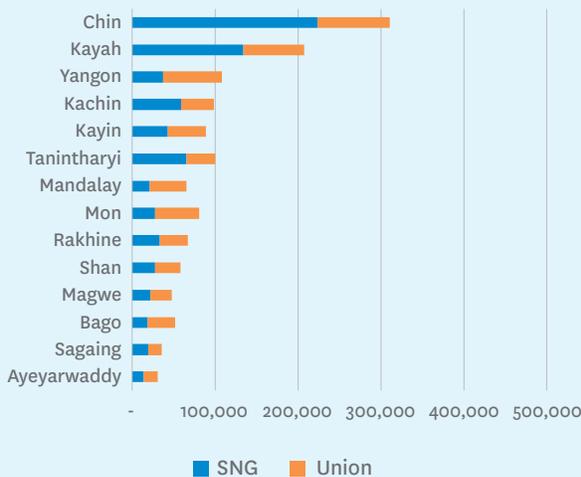
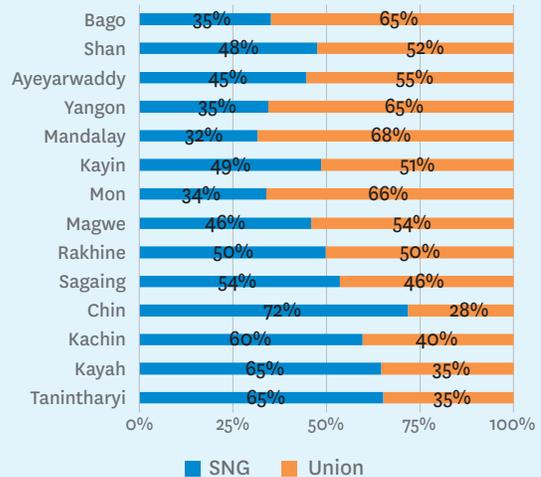


Figure 3.13: Total budgeted capital expenditure, % financed by union and state/region budgets, 2017/18 BE

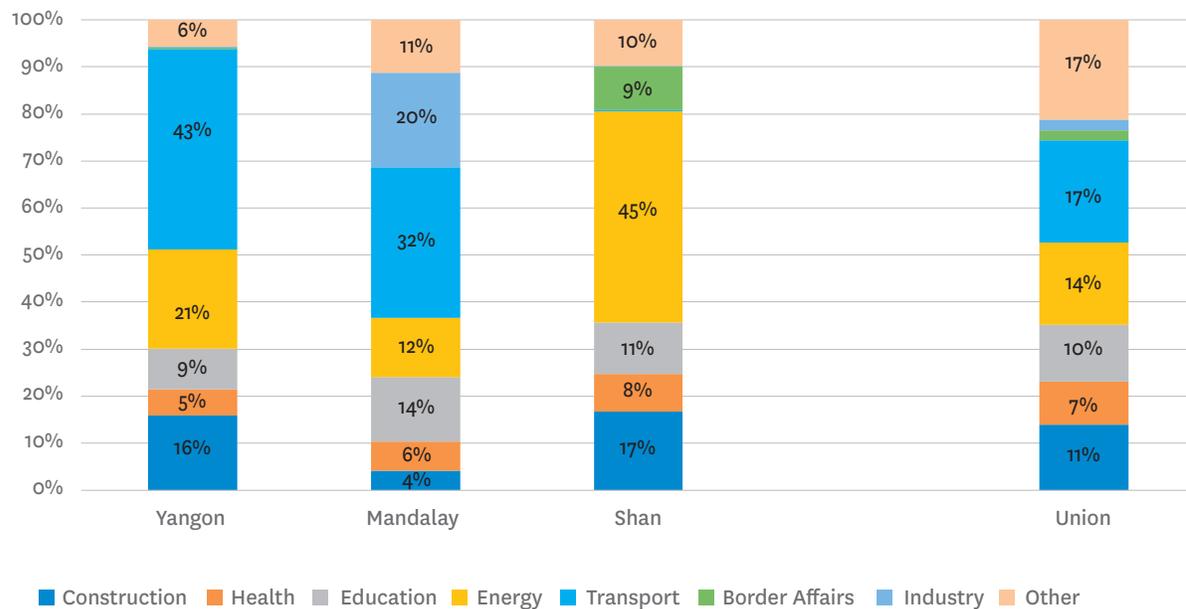


Source: MOPF; WB staff estimates

Note: Union includes spending by ministries and departments and state economic enterprises, excludes defense spending; SNG = subnational governments; figures are budget estimates

3.16. **The administrative classifications of planned union capital spending indicate that the sectoral composition of spending differs between urbanized Yangon and Mandalay Regions, and more rural Shan State.** Relying on 2018/19 union budget estimates of spending in states and regions (as actual spending data were not available) the union plans to spend a considerable share of its capital budget in Yangon and Mandalay Regions via the Ministry of Transport (accounting for 43 percent and 32 percent of the total, respectively) as well as the Ministries of Energy (in Yangon) and Industry (in Mandalay). In contrast, the union plans to spend the largest share of its capital budget in Shan State via the Ministry of Electricity and Energy (45 percent of total).⁸ Project-level data indicate that the Union Ministry of Energy plans to undertake a limited number of larger-scale investments (Table 3.3) worth, an average, 7.3 billion Kyat (\$4.8 million) – much larger than the ministry’s average project size in Yangon (2.4 billion Kyat) or Mandalay (1.1 billion Kyat). The Union Ministry of Construction, which primarily spends on highways and trunk roads (see Box 3.4 below) plans to spread its budget across a large number of smaller projects in Shan (571 million Kyat, or \$380,000) – much smaller than the average project size in Yangon (4.3 billion Kyat). Capital investments by the Ministries of health and education across three states/regions vary between 5-8 percent and 9-14 percent, respectively.

Figure 3.14: Union budgeted capital expenditure by ministries, 2018/19 BE



Source: MOPF, WB staff estimates

Note: Excludes defense spending. Other includes: 1) Ministry of Agriculture, Livestock and Irrigation; 2) Ministry of Social Welfare; 3) Ministry of Natural Resources and Environmental Conservation; 4) Ministry of Planning and Finance, and others

8 Union planned investments in electricity 2018-19 reflect a broader trend since 2011-12. It is in line with Myanmar’s National Electrification Plan, which seeks to provide country-wide access to electricity by 2030. Source: HARP-F and MIMU (2018).

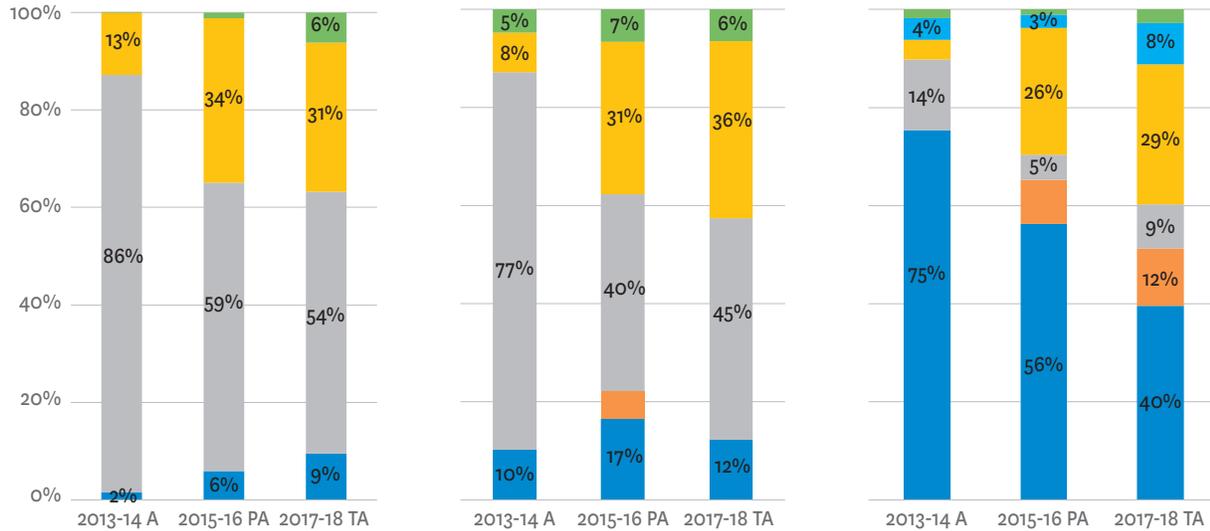
Table 3.3: Number of and average size of planned capital projects
Union budget 2018/19 BE

Ministry	Yangon		Mandalay		Shan	
	Projects	Average value (million Kyat)	Projects	Average value (million Kyat)	Projects	Average value (million Kyat)
Transport	72	5,775	36	3,517	-	-
Electr./Energy	86	2,381	46	1,072	22	7,271
Construction	36	4,320	-	-	104	571
Education	397	212	618	88	554	70
Industry	-	-	14	5,679	-	-

Source: MOPF, WB staff estimates

- 3.17. **The governments of Yangon and Mandalay Regions prioritize urban investment projects, consistent with their higher rates of urbanization and their assigned expenditure responsibilities.** As highlighted in Chapter 2, state/region governments' primary function is to support prioritization of spending undertaken by deconcentrated units of central line ministries and recorded under state/region budgets. A clear exception is the management of urban services, where states/regions have more explicit control over provision, administration, production, and distribution. Highly urbanized Yangon and Mandalay Regions spend most of their budgets through municipal offices. Indeed, the two municipalities of YCDC and MCDC account for a substantial share of the total budgets of Yangon and Mandalay, spending a large percentage of their budgets on urban roads and water supply projects (Box 3.3 provides an overview).
- 3.18. **In contrast, the investment focus of the Shan State Government is on roads and electricity.** The Shan State Government allocated around 40 percent of its capital expenditure in 2017/18 to the Ministry of Construction (mostly by the Department of Highways) and a further 12 percent to the Ministry of Electricity and Energy (mainly by the Department of Electrical Distribution). This is broadly a mirror image of the priorities of the union government in Shan State (Figure 3.16 and Figure 3.17). Municipal offices accounted for only about 9 percent of the state's capital budget in 2017/18.
- 3.19. **Subnational administrative offices have gained increased budgetary visibility.** In 2017/18, state and region administrative offices (AO in Figure 3.15), through their cabinet offices, account for around 31, 36 and 29 percent of capital budgets in Yangon, Mandalay and Shan respectively; a notable increase from 2013/14. The cabinet office is not an implementing agency, and its large share of capital expenditure could act as a means to facilitate execution, and reprioritize spending within the budget year. The exact nature of spending that has been budgeted under the cabinet offices is not clear; however, some evidence from the Renaissance Institute's series of budget reviews suggests that at least in some states/regions it includes spending on roads, irrigation projects, and various other capital investments (Renaissance Institute, 2017).⁹ The practice could imply pragmatism and flexibility within the budget process; however, it may also dilute transparency and scrutiny of subnational spending.

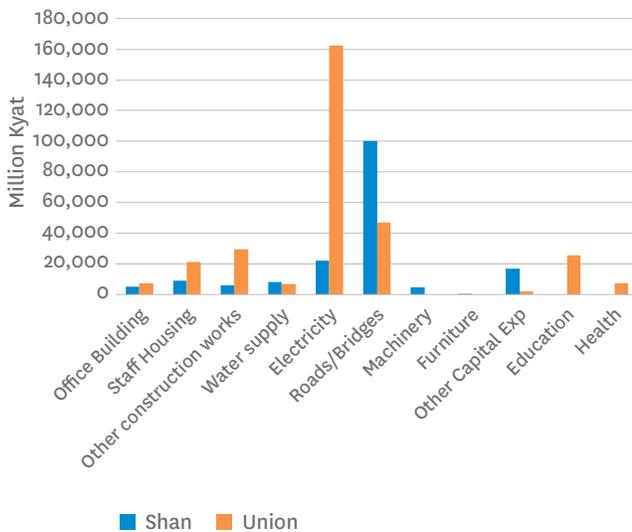
Figure 3.15: Subnational capital spending, by administrative unit in Yangon, Mandalay and Shan. In million Kyat, 2013/14, 2015/16, 2017/18



Source: MOPF, WB staff estimates

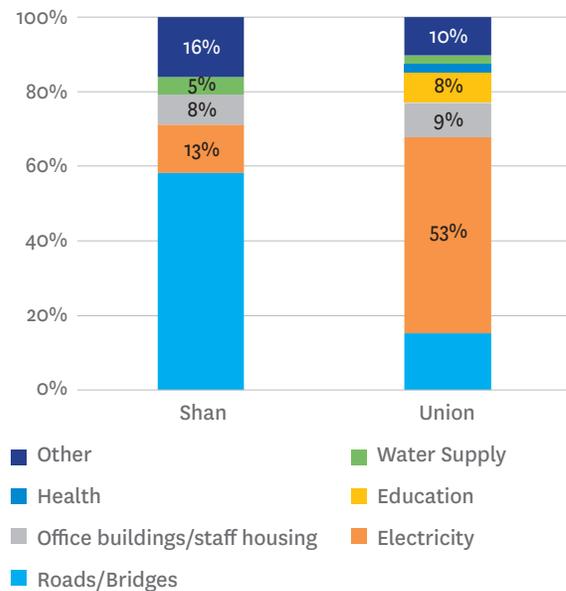
Notes: Municipal includes city development committees (CDC) and development affairs organizations (DAO); MOC = ministry of construction; MOE = ministry of electricity and energy; AO = administrative offices of state/region governments; A = actuals; PA = provisional actuals; TA = temporary actuals.

Figure 3.16: Capital budget in Shan in million Kyat, by function and sector, 2018-19 BE



Source: MOPF, WB Staff estimates

Figure 3.17: Capital budget in Shan, by function and sector, % of Union and Shan budget, 2018-19 BE



3.20. Aggregate overspending of subnational capital budgets is likely an indication of cost overruns rather than an avoidance of budget execution challenges. The general challenges faced by union ministries in completing capital projects and low budget execution rates within health and education have been highlighted previously (World Bank, 2017; 2018). Subnational capital budgets, in contrast, are characterized by a degree of aggregate overspending. Collectively, Yangon, Mandalay, and Shan overspent in most budget years between 2012 and 2017, with spending overruns in Yangon Region commonly in excess of 10 percent (Figure 3.18). Estimates (temporary actuals) for 2017/18 suggest considerable overspending in Yangon and a possible pattern of underspending in Shan and Mandalay, although until these figures are confirmed they should be treated with caution. Moreover, aggregate spending is a crude measure of budget execution; masking sectoral- and project-level implementation. In Yangon, the municipal office (YCDC) underspent by 20 percent and 37 percent in FYs 2015/16 and 2017/18 respectively, while the cabinet office (AO in Figure 3.19) overspent by 5 and 117 percent during the same period. Overspending may indicate that the effect of time and cost overruns in some departments more than offsets underspending elsewhere, and not that the subnational governments can avoid the underexecution of challenges observed at the central level.

3.21. Substantive changes were made to the fiscal calendar in 2018/19 to better accommodate project implementation. The 2018/19 budget is the first to follow the new fiscal calendar implemented by the union government. Previously, the fiscal year ran from April 1st until March 31st. Beginning in 2018/19, the fiscal year was moved by six months to run from October 1st to September 30th. The previous budget calendar meant that the rainy monsoon season began immediately after the fiscal year began which disrupted infrastructure investment and capital expenditure. The rationale behind the change in the budget calendar is to mitigate this issue and improve budget execution. A 6-month interim budget was implemented to bridge the gap to the budget calendar, which is not shown in this report due to its temporary nature. The first budget cycle under the new fiscal year had not been completed at the time of writing of the report, and so it is not possible to assess the implementation of subnational expenditure under the new fiscal calendar.

Figure 3.18: Divergence between actual and budgeted subnational capital expenditure, 2012-2018

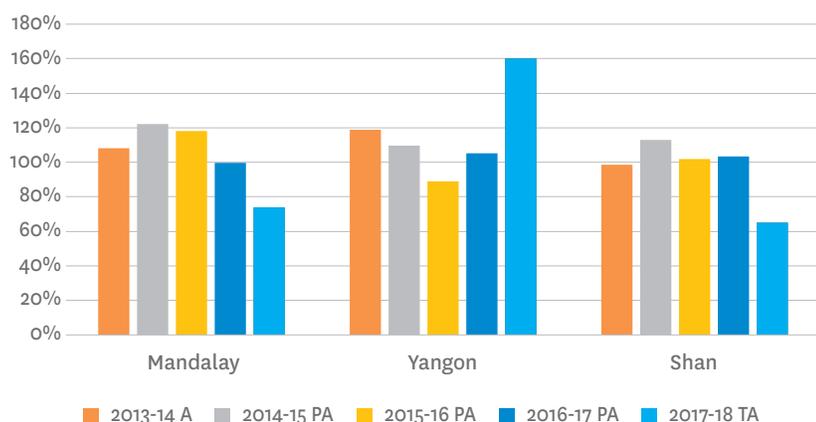
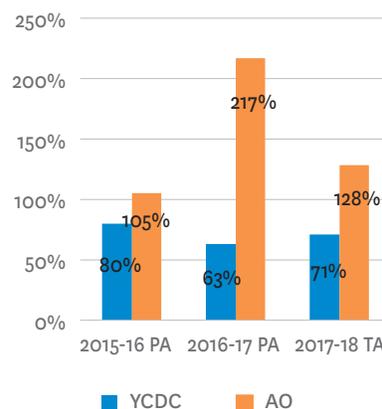


Figure 3.19: Divergence between actual and budgeted capital expenditure in Yangon, 2015-2018



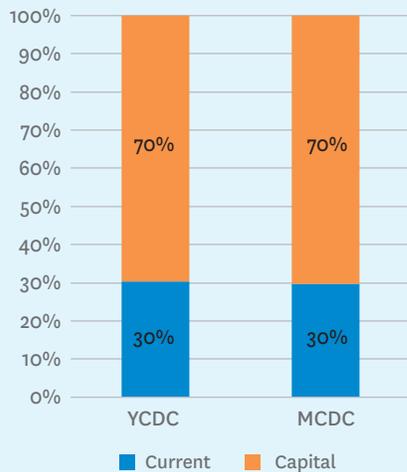
Source: MOPF, WB Staff Estimates

Notes: A = actuals; PA = provisional actuals; TA = temporary actuals; YCDC = Yangon city development committee, municipal office; AO = administrative office of Yangon Region Government.

Box 3.3: A general overview of budgets in MCDC and YCDC

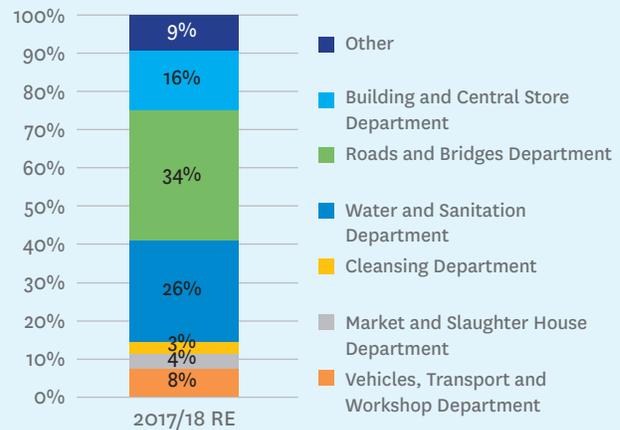
Capital expenditure dominates the budgets in MCDC and YCDC (Figure 3.20). In 2017/18, MCDC allocated most of its capital budget to the Department of Roads and Bridges (34 percent) and the Department of Water and Sanitation (26 percent) (Figure 3.21). Capital allocations in YCDC show a similar picture, with most of the expenditure directed towards water supply and roads (Figure 3.22 and Figure 3.23). Figures for YCDC are budget estimates, and execution challenges highlighted earlier in the chapter could translate into a different functional composition of actual spending, in this case, a further, separate analysis would be needed to explore the budget execution of municipal offices from the functional perspective.

Figure 3.20: Budget by type of expenditure in MCDC and YCDC, 2018/19 BE



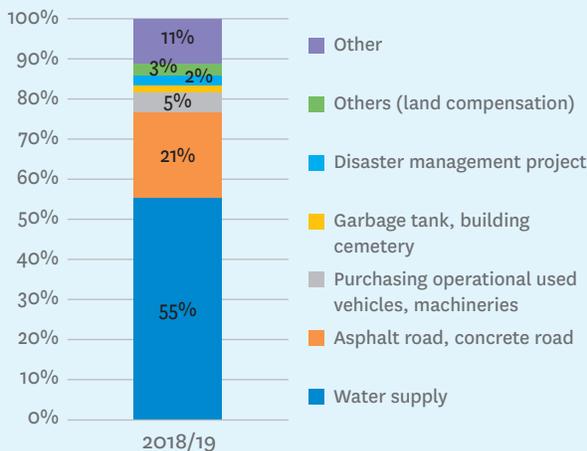
Source MCDC, Yangon Citizen's budget 2018/19; WB staff estimates

Figure 3.21: MCDC capital budget by administrative unit, 2017/18 RE



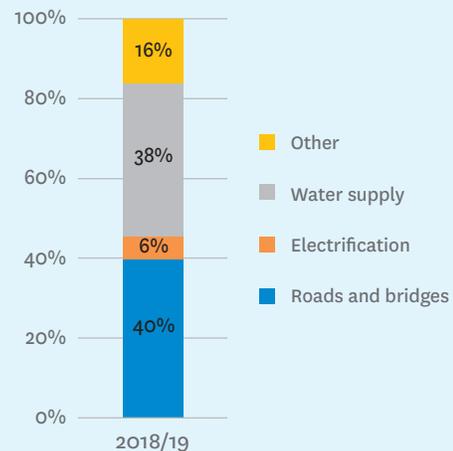
Source: MCDC; WB staff estimates

Figure 3.22: YCDC capital budget, 2018/19 BE



Source: Yangon Citizen's budget 2018/19; WB staff estimates

Figure 3.23: YCDC overall budget by functional breakdown, 2017/18 BE



Source: Yangon Citizen's budget 2018/19; WB staff estimates

- 3.22. **Beyond broad sectoral trends, limited budget classifications mean that it is difficult to determine whether capital spending is targeted at the underlying sources of need, particularly in Yangon and Mandalay.** Spending is mostly presented through administrative units. This provides some information on the nature of capital spending, but conceals the actual function. Prima facie, the administrative classifications suggest that investments are well-calibrated to the relative needs of different locations. In Yangon and Mandalay, the investment focus of the transport union is consistent with buttressing urban growth; this complements the broad investment focus of the respective region governments on urban roads and water projects (Box 3.3). In Shan State, investments by both levels of government are aimed at addressing critical infrastructure shortages in roads and electricity. Available functional breakdown of roads indicates that subnational roads spending is increasingly being targeted, at a high level, at a critical need highlighted in Chapter 1]: the inaccessibility of rural roads (see Box 3.4).
- 3.23. **However, assessing the allocative efficiency of spending using available data is problematic.** The 2017 PER highlights that the lack of information on union line ministries' spending in states and regions was a key barrier to allocative efficiency analysis. Ministry-level budgets, and even information on the number and size of individual projects, is not sufficient to close this gap in information. In Shan State, for example, we cannot say, with certainty if the right roads/electricity projects are being built, or even if projects have been completed. The problem of incomplete projects is known to be widespread (World Bank, 2017). Critical data gaps include the aforementioned classification issues of the capital budget; the obscure role of the Administrative Office; and the lack of a digital register of capital projects with unique identifying codes. There is also a lack of data on donor-funded projects, which could be high in some states/regions, and this adds another layer of complexity to assessing allocative efficiency. One area that could be evaluated with available data is the geographical distribution of capital spending and its links to deprivation in Shan State (see Section B4).
- 3.24. **Early evidence suggests that subnational capital spending may not be efficient.** The disconnect between multi-year plans and annual budgeting at the subnational level (see Section C) may create a bias toward smaller projects. The low average value of projects and the proliferation in the number of projects could reflect issues in project selection, appraisal as well as a lack of prioritization in capital spending (World Bank, 2017; Valley et al., 2018; Shotton et al., 2016). Data on the number, and the average size, of projects carried out under state/region budgets were not available for this analysis and creates a gap for understanding comparative allocative efficiencies between the two levels of government and for the broader discussion on fiscal decentralization. Preliminary evidence presented in Section B4 suggests that subnational capital budgets are spread thinly across townships.

Box 3.4: Road spending in Shan State

The roads sector is the most fiscally decentralized sector in Myanmar and accounts for the largest share of subnational budgets. Roads spending, therefore, provides an important example of regular interactions between the union and subnational governments. Valley et al. (2018) highlight an acute misalignment of functional authority that results in ambiguous divisions of responsibilities for roads between the different levels of government; it also creates highly fragmented administration across different government agencies; blurred distinctions in administrative accountability; and mixed financial responsibility for certain types of roads.

As is common across Myanmar’s subnational governments, road spending and implementation in Shan State is fragmented across several implementing administrations. The majority of spending is budgeted under the Department of Highways, responsible for highways and trunk roads, and the Shan Cabinet office (Figure 3.24). The allocation for the latter is surprising given that the cabinet offices are not executing agencies and reflects broader sector fragmentation (Valley et al., 2018). These two departments account for around 85 percent of road investments (64 and 21 billion Kyat, respectively). In 2018/19, around 5.5 billion Kyat was also budgeted for urban roads by the municipal level Development Affairs Organizations.

Figure 3.24: Budgeted road expenditure in Shan in 2018/19, by administrative unit and budget, million kyat

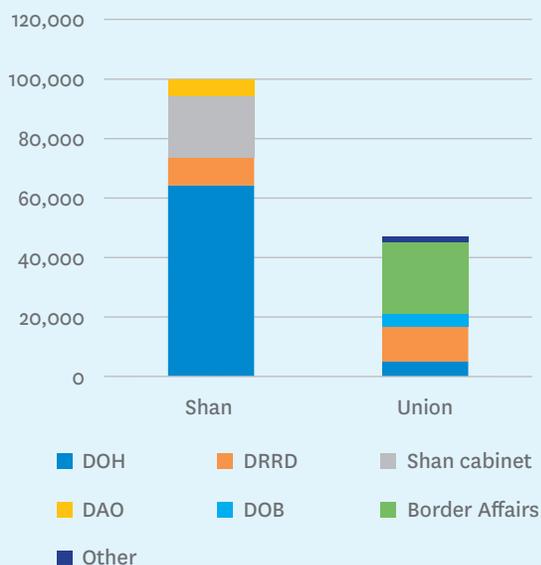
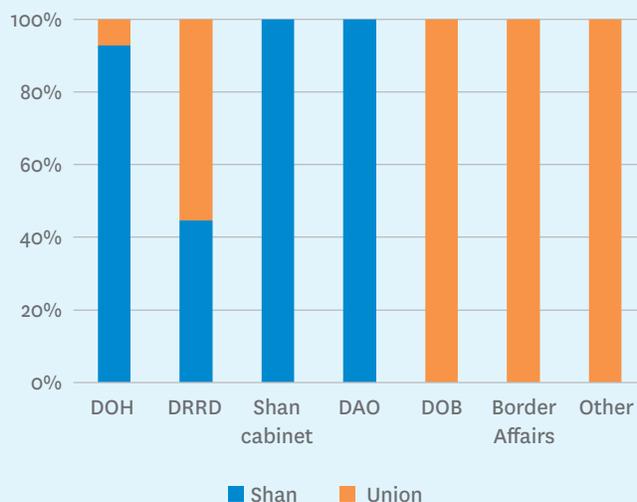


Figure 3.25: Budgeted road expenditure in Shan in 2018/19, by administrative unit and budget, % financed by union and state/region budget



Source: MoPF and WB staff estimates; Notes: DOH = department of highways; DAO = development affairs organizations; DRRD = department of rural road development; DOB = department of bridges

More recently, rural road expenditure under the Department of Rural Roads Development (DRRD) has been assigned to the subnational budgets. Valley et al. (2018) show that rural road spending is a relatively new expenditure responsibility for subnational governments. Decentralization of rural road spending could be a positive development according to principles of subsidiarity, against the backdrop of poor road access. However, such changes should be viewed within the larger context of fiscal space and budget envelopes. Union-level spending on rural roads has been declining in recent years, with the implicit expectation that more rural roads investments will be financed by the subnational governments. In budgetary terms, this means that new rural road spending will have to be accommodated within present budget constraints – adding financial pressure to already small state and region budgets.

B3. Trends in recurrent spending

- 3.25. **A corollary of the rising share of capital expenditure in subnational budgets is the decline in recurrent expenditure, despite nominal increases in recent years.** Between 2012/13 and 2016/17 recurrent expenditure more than doubled in Mandalay and has increased by approximately 40 percent in Yangon (Table 3.4). In Shan, recurrent expenditure spiked in 2014/15, due to an increase in purchases of goods and services, but has since returned to pre-2014/15 levels. Notwithstanding these nominal increases, in all three states/regions, subnational recurrent spending has declined steadily as a share of total spending.

Table 3.4: Subnational recurrent (operational) expenditure

	2012-13 Act.	2013-14 Act.	2014-15 Act.	2015-16 Prov. Act.	2016-17 Prov. Act.	2017-18 Revised estimate
Recurrent expenditure in billion Kyat						
Mandalay	49	73	94	126	117	127
Yangon	91	79	126	114	126	147
Shan	87	112	177	75	93	97
All states/regions	585	764	1,437	898	936	994
Recurrent expenditure, % of budget						
Mandalay	59%	66%	53%	52%	52%	47%
Yangon	42%	41%	34%	24%	26%	31%
Shan	89%	69%	48%	31%	37%	35%
All states/regions	68%	62%	53%	38%	38%	37%

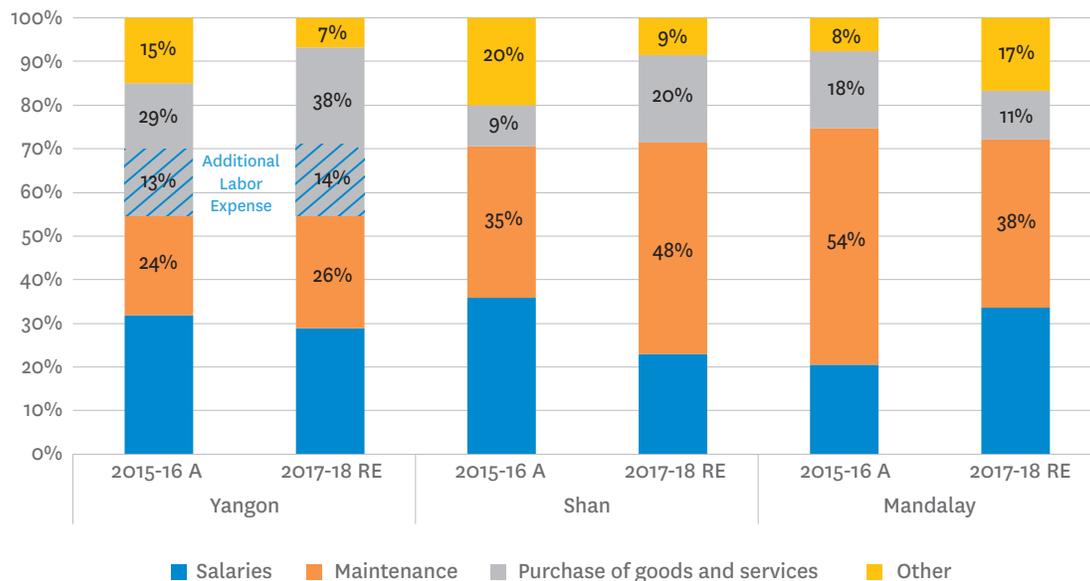
Source: MOPF, WB staff estimates

- 3.26. **Salaries and other labor costs, as well as maintenance, are generally the largest economic categories of subnational recurrent spending (Figure 3.26).** Labor costs and maintenance have accounted for at least half of the recurrent spending in Yangon, Shan, and Mandalay from 2015/16 onwards. Salaries include civil service wages, *honoraria*, and hardship allowances (see Chapter 2 for more information). Maintenance includes the upkeep of machinery, buildings, roads, vehicles, bridges and other assets. Labor expense, electricity bills, and petroleum are some of the largest items recorded as purchases of goods and services.
- 3.27. **Actual expenditure on wages may be higher than budgeted.** This is particularly the case in Yangon Region, reflecting the widespread use of non-permanent staff at YCDC.¹⁰ Temporary employees are not recorded as a salary expense but rather as purchases of goods and services (Figure 3.26). It is estimated that temporary workers account for 36 percent of Yangon Region's total value of goods and services (around 20 billion Kyat). Adjusting salaries to include non-permanent labor would cover 43 percent of the 2017/18 recurrent budget. Hidden labor costs are not likely to be limited to YCDC. Anecdotally, Shan State DAOs have been looking to circumvent norms that cap staff costs at 30 percent of available resources by requesting increases in other line items and then using these funds to pay wage bills.¹¹ It is worth noting that municipal offices are also responsible for the pension obligations of their staff (budgeted under "other" in Figure 3.26). For example, in 2018/19 in YCDC they accounted for about 2.6 percent of the department's total recurrent budget, or 1.8 percent of the region's recurrent spending.

¹⁰ See Chapter 2 for a discussion on YCDC's use of non-permanent staff.

¹¹ Interviews with Taunggyi DAO.

Figure 3.26: Subnational recurrent expenditure by economic categories, shares of total



Source: MOPF, WB Staff Estimates

Notes: A = actuals; RE = revised estimates

3.28. Salary expenses in all three subnational budgets are dominated by the General Administration Department (GAD), and by municipal offices in more urbanized Mandalay and Yangon regions. Collectively, salary expenses across Yangon, Mandalay, and Shan increased by 38 percent between 2014/15 and 2016/17 (66 to 92 billion Kyat) and another 35 percent between 2016/17 and 2018/19 (92 to 124 billion Kyat). The increase in the latter period can be partly attributed to the civil service wide-increase of 20% for non-gazetted staff and 10% for gazetted staff. Nearly half of which can be attributed to GAD and municipal offices given that they account for the largest share of civil servants (Table 3.5, Figure 3.27 and Chapter 2).¹²

3.29. Maintenance commitments vary by administrative units across Shan, Mandalay, and Yangon, reflecting the relative allocations of the capital budgets. Nearly all of the maintenance expense is administered by three departments; DOH, Municipal offices, and the Cabinet. In 2017/18 most of the budgeted expense for maintenance in Yangon Region was under the municipal offices (81 percent), while in Shan State 91 percent was committed to DOH for road maintenance (Figure 3.28).¹³ The maintenance budget in Mandalay Region is more balanced across the three administrative units: Municipal office (23 percent), DOH (46 percent) and Cabinet office (28 percent). Overall maintenance commitments for the three subnational governments increased from 53 billion in 2015/16 to 131 billion Kyat in 2016-17 and to 137 billion Kyat in 2017/18. The figure is estimated to decrease to 130 billion Kyat in the 2018/19 budget estimate. Available data does not show whether maintenance spending is adequately provisioned alongside the growing capital stock. Ultimately, the optimal maintenance budget for roads is context-specific; for example, road maintenance depends on road network conditions and type of maintenance required (e.g., routine, periodic, emergency, or maintenance works).

¹² Some of the increases in the GAD salary expense may be attributed to the GAD becoming responsible for the salary of the ward and village tract administrators.

¹³ Shan's road network under responsibility of the DOH is estimated at around 6,000 miles (9,600 km). This suggests that average maintenance cost could be around 5.5 million Kyat per mile or 3.5 million Kyat per km of road.

Table 3.5: Salary expense by administrative unit. Yangon, Shan and Mandalay
Largest four departments; billion Kyat

Department	2015-16 Prov. Act.	2016-17 Prov. Act.	2017-18 Prov. Act.	2018-19 Prov. Act.
GAD	17	26	27	32
Fire services	3	6	9	11
Municipal	20	25	28	34
Agriculture	3	5	6	7
Other	21	30	35	41

Source: MOPF, WB Staff Estimates

Notes: Municipal includes city development committees (CDC) and development affairs organizations (DAO); GAD = general administration department. Other includes over 10 other departments with small shared of the salary expenditure

Figure 3.27: Salary expenditure by administrative unit across Yangon, Shan and Mandalay, % of total in 2017/18 RE

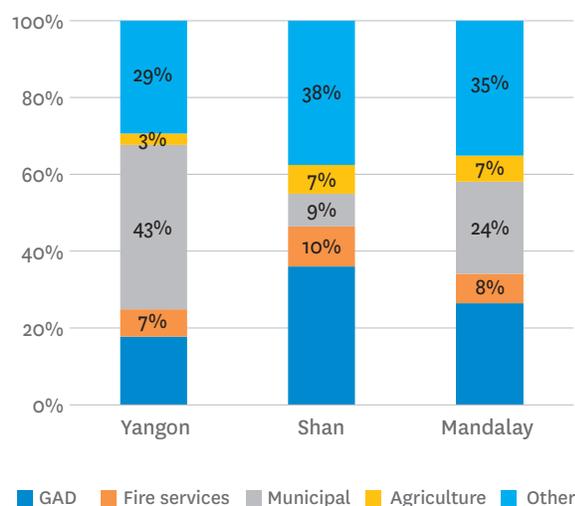
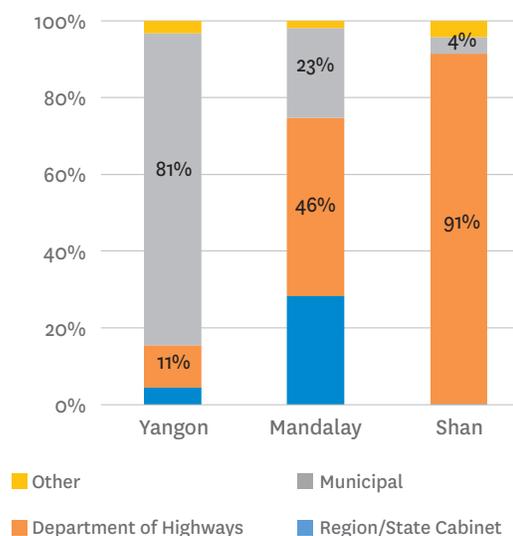


Figure 3.28: Maintenance expenditure by administrative units: across Yangon, Shan and Mandalay, % of total in 2017/18 RE



Source: MOPF, WB Staff Estimates

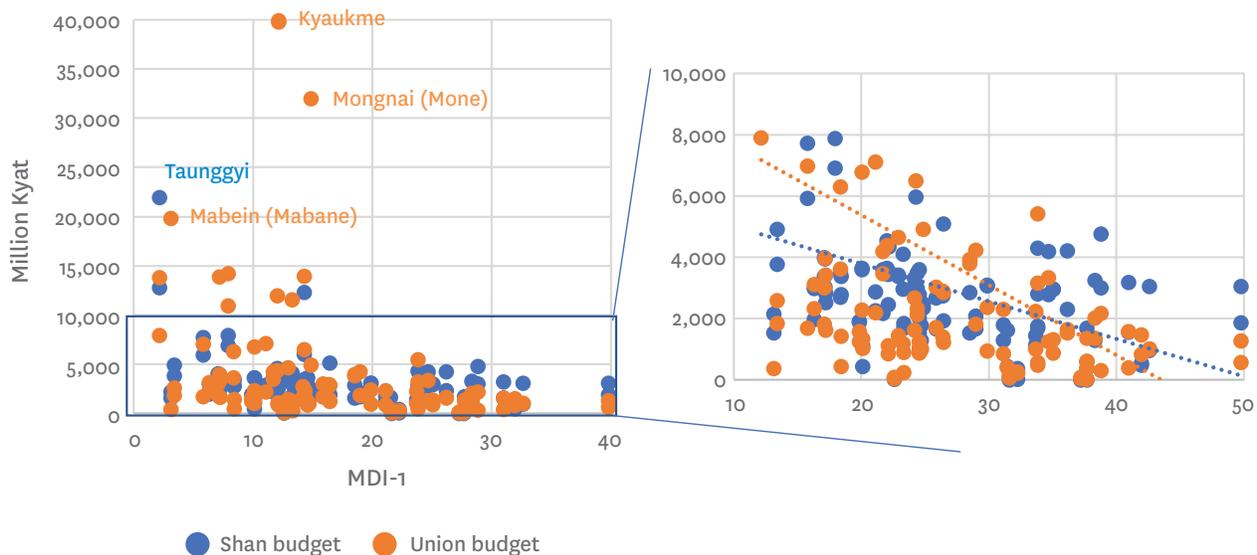
Notes: Municipal includes city development committees (CDC) and development affairs organizations (DAO); GAD = general administration department. Other in Figure 3.27 includes over 10 other departments with small shared of the salary expenditure

3.30. A detailed analysis of the sustainability of labor costs and maintenance commitments in subnational governments is warranted. Rising labor costs have the potential to crimp the fiscal space available for development spending at the subnational level. In addition to the need to fund large, and growing, pension liabilities, the widespread and opaque use of temporary and contract-based labor and various other accounting manipulations, set against a backdrop of strict administrative norms, suggests that labor costs are likely to become an important driver of fiscal sustainability. This could be of particular concern to municipal offices with smaller revenues based in Shan state. The lack of growth in maintenance commitments raises questions about allocative efficiency; the relatively high percentage of subnational (and city) budgets allocated to capital expenditure may be unsustainable because the growing stock of capital assets may not be easily maintained or operationalized from the recurrent budget.

B4. Targeting of capital investments in Shan State

- 3.31. The following subsection examines the township-level geographic distribution of capital budgets in Shan State. The focus is on both levels of government. This is a key dimension of allocative efficiency given the considerable variation of wellbeing within states and regions (see Chapter 1). The analysis compares the spatial allocation of budgets with the geographic distribution of the Multidimensional Disadvantage Index MDI as a proxy of the spatial alignment of spending with needs. It is important to note that due to data availability the analysis is based on government budget estimates and is not conclusive. This review offers a reference point to township-level spending and can be enriched if supplemented with actual budget figures for a larger sample of budget years.
- 3.32. Public investments do not appear to target disadvantaged townships in Shan State (Figure 3.29). There is a negative correlation between the nominal size of capital investments in townships and the township's MDI-1 score. This trend appears to hold for capital spending undertaken for the union and Shan State budgets. There is also no discernible relationship between capital budgets per capita and deprivation (Figure 3.30). It bears mentioning that the MDI amalgamates a wide range of deprivation indicators into a single comparable score. Shan State's main deprivations include education, sanitation, and water, though deprivation is also high across a number of other categories (see Chapter 1). Equally some investments may have a positive spillover effect to neighboring townships, and as such it is not possible to establish a precise link between spending and needs. Moreover, there are unobservable indirect links; for instance, the Shan State Government may not have authority over education spending, though spending on roads may indirectly improve education outcomes by improving access to schooling.

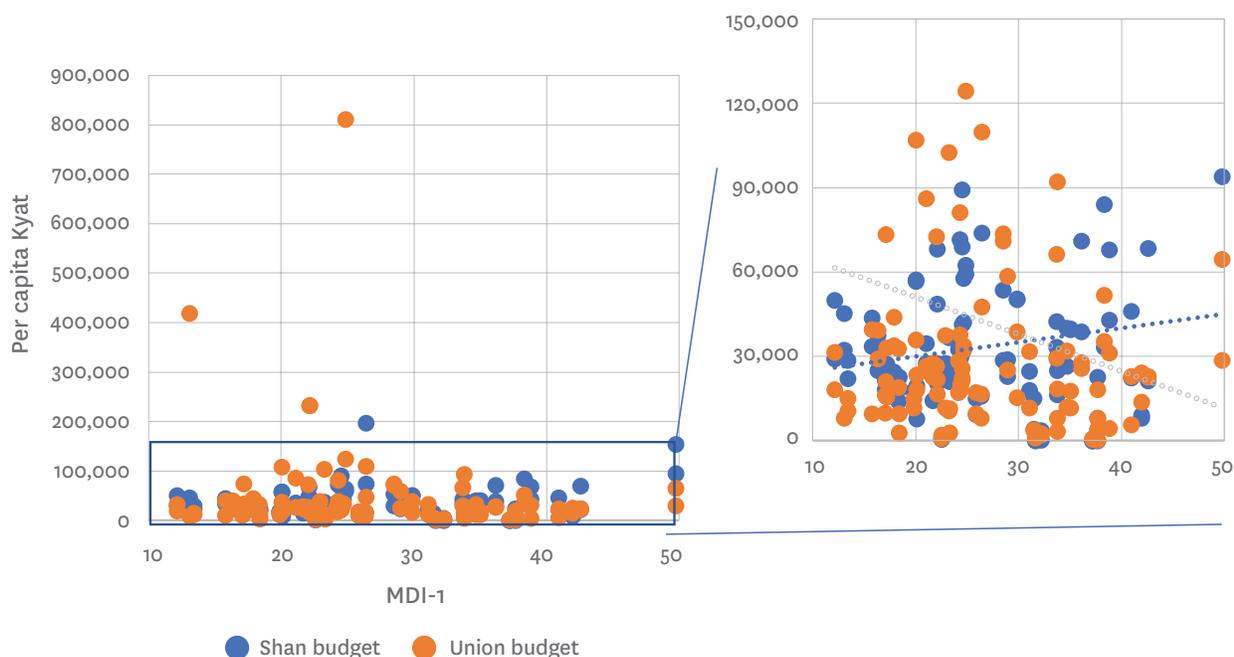
Figure 3.29: Budgeted investments in Shan townships and the multidimensional disadvantage index, 2017/18 and 2018/19



Source: MoPF; WB staff estimates

Note: Illustrated union capital investments do not represent the entirety of union investments in Shan State. About one-third of union capital budget was not matched to any of Shan's townships due to data constraints; three outlier townships of Mabein (Maban), Mongnai (Mone) and Kyaukme constitute nearly a third of union planned investments. These investments are almost entirely planned for the Ministry of Electricity and Energy (by the Department of Hydropower Implementation).

Figure 3.30: Per capita planned capital investments in Shan townships and the disadvantage index, 2017/18 and 2018/19



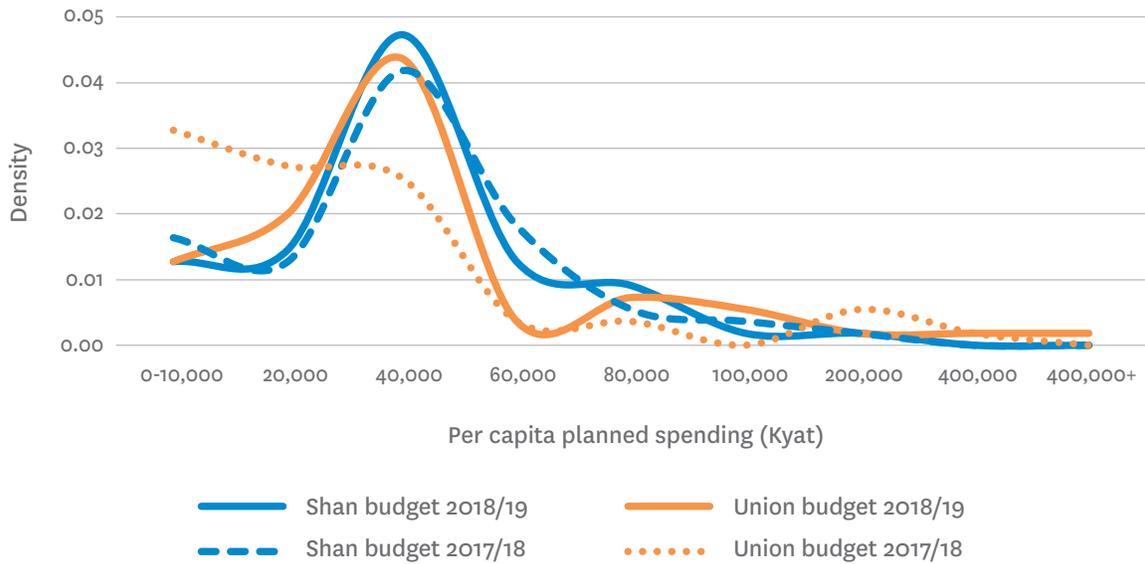
Source: MOPF, CSO; WB staff estimates.

Note: Illustrated union capital investments do not represent the entirety of union investments in Shan State. About one-third of the union capital budget was not matched to any of Shan's townships due to data constraints.

3.33. Instead of being targeted, capital budgets tend to be evenly distributed on a per capita basis and spread thinly across Shan State's townships. Figure 3.31 shows that nearly half of Shan State townships were budgeted around 40,000 Kyat per person (from the Shan State capital budgets in 2017/18 and 2018/19 fiscal years). This is reflected in the union capital budget in 2018/19 and to a lesser extent in 2017/18. Slightly more than 10 percent of townships have seen investment plans of less than 10,000 Kyat per person or zero. This suggests that budgets are spread thinly according to the population to ensure that most townships get at least some local investment, as has been qualitatively observed by Shoton et al. (2016). However, the union also funds larger investments. Nearly one-third of all planned capital spending by the union in Shan State in 2018/19 is concentrated in the three townships of Mabein (Maban), Mongnai (Mone`) and Kyaukme. These investments are almost entirely planned by the Ministry of Electricity and Energy (by the Department of Hydropower Implementation) and may reflect large scale growth-enhancing investments that have national or regional significance with potential spillovers beyond individual townships. It suggests that, the union budget, unlike the subnational budgets, is used for larger capital investments.

3.34. Capital investments across the two government budgets (Union and Shan State) appear to target different townships. Figure 3.32 and Figure 3.33 illustrate the geographic distribution of per capita planned capital investments in Shan State's townships. This shows the relative magnitude of spending between locations. Without sectoral- or project-level detail it cannot be said for certain, that the different levels of government target different needs in different townships. Nonetheless, it shows that there are differences in the allocation of the capital budget between the state and union governments.

Figure 3.31: Density of per capita planned capital investments, kyat per person in 2017/18 and 2018/19



Source: MOPF; WB staff estimates

Note: Illustrated union capital investments do not represent the entirety of union investments in Shan. About a third of the union capital budget was not matched to any of Shan's townships due to data constraints.

Figure 3.32: Shan State capital budget allocations in Shan townships, kyat per capita in 2018/19

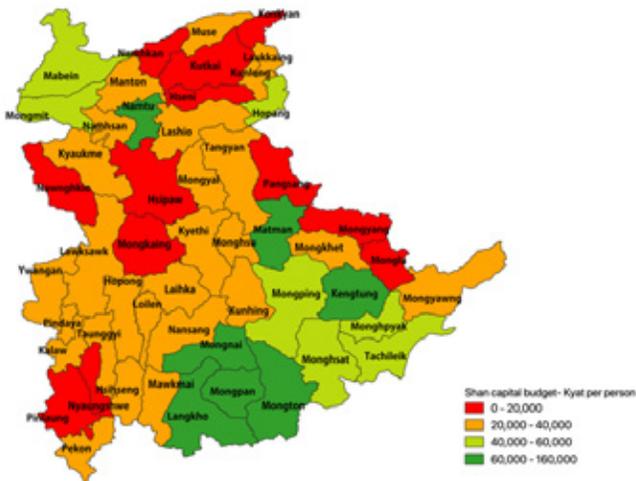
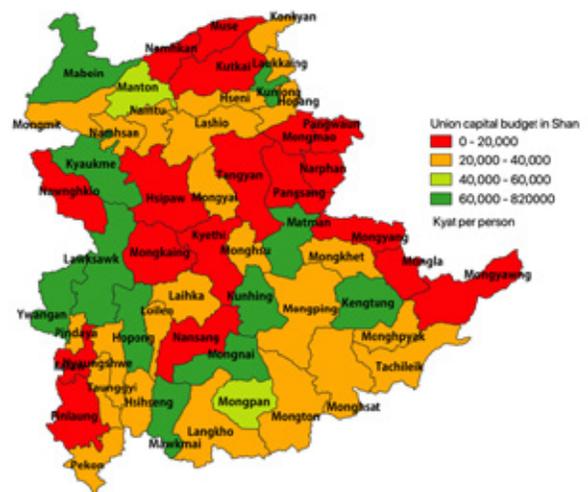


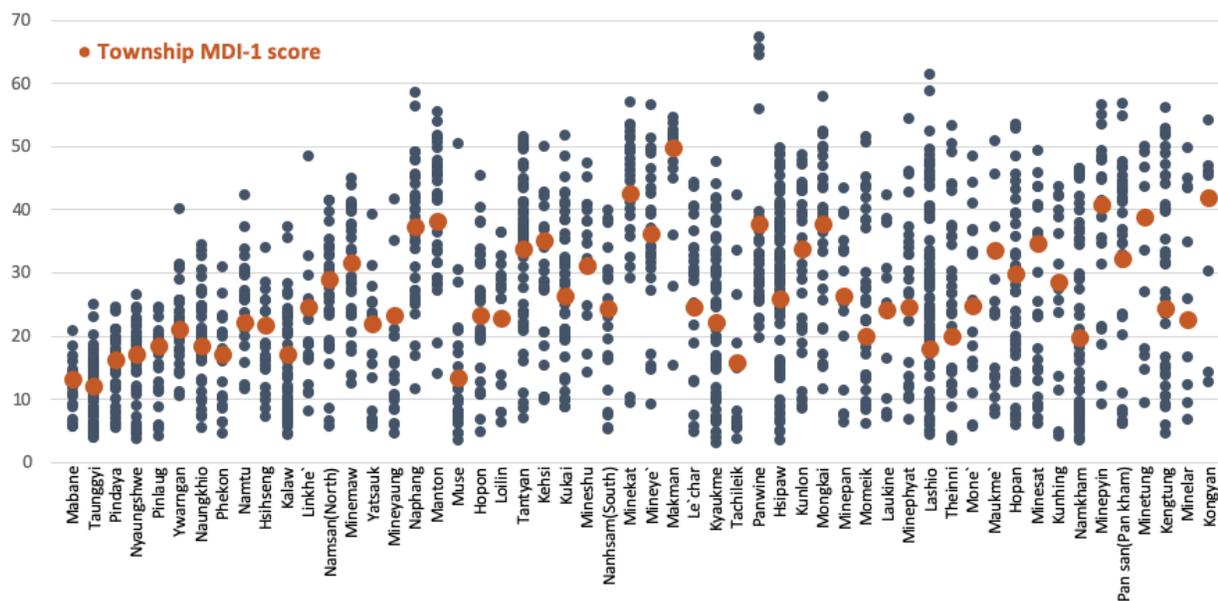
Figure 3.33: Union capital budget allocations in Shan townships, kyat per capita in 2018/19



Source: MOPF; WB staff estimates

- 3.35. **One clear benefit of the geographic distribution is that it shows the limited penetration of both levels of government in mixed-authority areas, such as the Wa Self-Administered Division.** There are no budgeted investments in the Shan budget in the three easternmost townships of Wa territory: Mongmao; Narphan; and Pangwaun (Panwine) (Figure 3.32). In 2018/19 there were minimal investments planned under the union budget, with about 350 and 240 Kyat per person in Narphan, and Pangwaun (Panwine) townships, respectively. This illustrates the challenges of government spending, and how it has to navigate varied and complex local-level relationships. Many conflict-affected areas in Myanmar, including in Shan, operate under a form of mixed-authority – like in the Palaung Self-Administered Zone. In some areas, services can be provided by both the government and Ethnic Armed Organizations (EAOs). In others, visiting government officials may need to inform EAOs in advance. For example, the Myanmar Government has limited direct involvement in the Wa Self-Administered Division and little authority over the local population of around 550,000 (nearly 10 percent of Shan’s population). Basic local administrative functions are carried out by the United Wa State Party (Burke, A. et al., 2017).
- 3.36. **Data availability was not sufficient to conduct analysis of within-township distribution of budgets but may merit focus.** Figure 3.34 illustrates considerable heterogeneity in the MDI across village tracts and wards in Shan State’s 55 townships. Deprivation scores vary across the state and also within given townships. For example, the variance in MDI scores in Mabane township is between 5 and 20. The variances across village tracts and wards in the rest of Shan’s townships appear much larger, ranging from scores of 5 to nearly 70. This suggests that states and regions may also consider a targeting policy of spending for enhanced inclusion within townships.

Figure 3.34: MDI-1 in village tracts and wards in townships of Shan State



Source: Multidimensional Welfare in Myanmar, The Republic of the Union of Myanmar 2018; WB staff estimates.
Note: Each dot represents a village tract or a ward within a township identified on the horizontal axis.

C. Medium-term perspective

- 3.37. **Medium-term planning is still shaped by the legacies of a command economy and centralized planning.** A range of medium-to-long term planning documents is centrally prepared to guide spending across both levels of government.¹⁴ Furthermore, various ministries form their own sectoral plans that influence planning at the subnational level.¹⁵ Subnational annual budgets are prepared in a manner consistent with the medium-term 5-year planning goals and priorities. In practice, this could simply amount to detailing and updating of the provisions and costings in the 5-year plan for that particular year (Shotton et al., 2016).¹⁶
- 3.38. **Over the past few years, a greater emphasis has been given to moving the central annual planning process towards townships, with calls for proposals in early stages of the budget cycle.** Proposals for the annual budgets originate at the township level, with varying degrees of consultation, and are consolidated upwards. More recently, MPs are believed to play a larger role in this process, both with respect to generation and selection of proposals (Batcheler et al., 2018; Valley et al., 2018).¹⁷ The planning and budgeting environment results in a push towards infrastructure spending (primarily roads), reflecting the priority of the central government, with a degree of local input into the proposal and selection of final projects.
- 3.39. **Subnational budgets are not presently prepared with a medium-term focus on fiscal sustainability and future spending obligations.** The subnational capital and recurrent budgets are prepared separately. In each state and region, Planning Departments coordinate the preparation of the capital side of the budget; while in parallel the respective Budget Department prepares the recurrent budget and coordinates formulation of the overall budget to be submitted to the legislature. These subnational Planning and Budget Departments do not act as subnational policy units, but as implementing regional offices of a unitary government. Consequently, budgets are prepared mainly on an incremental basis, rather than being informed by medium-term budgetary policies or financing. Moreover, the institutional fragmentation between budgetary units means capital expenditure proposals are often made independent of future resource availability; the recurrent costs of investment decisions; or funding requirements for multi-year procurement.
- 3.40. **Greater decentralization of spending assignments could improve prioritization and outcomes of service access and delivery. Spending responsibilities need to be assigned systematically.** The union government has been gradually opening up the space for states and regions to participate in fiscal policy and management. However, most administrative responsibilities are concurrently held with the union and are ambiguous (see Chapter 2). In the medium-to-long term, transferring more of the concurrent responsibilities to the states and regions may improve service delivery and inclusive growth by better aligning administrative and spending responsibilities. It is important to note, however, that the pace of reform must be incremental so that institutional capacity is not overloaded prematurely (Pritchett, Woolcock, and Andrews, 2010).¹⁸ Experience in other countries has shown that decentralizing too quickly can have serious adverse impacts when local administrative capacities are low. Moreover, as highlighted in the preceding section, the experience of decentralization in the roads sectors highlights functional

14 Examples include the 20-year National Comprehensive Development Plan (2011–30) prepared under the previous USDP government and a more recent five-year plan (2016/17–2020/21).

15 MOEE's National Electrification Plan, that shapes planning at the subnational level.

16 Shotton, Roger, Zin Wint Yee and Khin Pwint Oo. 2016. "State and Region Financing, Planning and Budgeting in Myanmar: What are the Procedures and What are the Outcomes". Yangon: Renaissance Institute and The Asia Foundation.

17 R. Batcheler et al., "State and Region Governments in Myanmar", 2018; Valley, I., McDonald, L., Hein Aung Kyaw, and Nan Sandi. 2018. *Where the rubber hits the road: A review of decentralisation in Myanmar and the roads sector*. International Growth Centre and Renaissance Institute.

18 Pritchett, L, Woolcock, M. and Andrews, M. (2010). "Capability Traps? The Mechanisms of Persistent Implementation Failure." Working Paper 234, Center for Global Development, Washington, DC.

ambiguity between levels of government and risks placing additional fiscal pressure on small budgets. Greater decentralization of functional and spending assignments needs to be systematic and based on clear principles.

- 3.41. **There are likely to be differences in the direction of reforms among subnational governments.** Even with the additional fiscal space at the union level, medium-term spending adjustments for public service and infrastructure priorities will be gradual (World Bank, 2017). States and regions which are able to generate adequate own-source revenues are likely to follow a different reform trajectory than those states and regions which remain dependent on transfers as a result of a low revenue base. Without significant increases in fiscal space at the union level, and subsequent increases in fiscal transfers, the decision-making process on the spending side will be driven by the growth in own-source revenue.

D. Policy considerations

Identification of barriers

- 3.42. **There has been good progress with measurable data on needs across the country.** Only a few years ago, hard data on socioeconomic outcomes at state/region (and township) level was not available. Today, multiple data sets, including the Multidimensional Deprivation Index (MDI), are available across a range of outcomes. However, the growing body of metrics has not yet been widely incorporated into planning and decision-making processes. Moreover, challenges remain in measuring economic performance (GDP), it does not fully reflect economic well-being as a result of concerns over the quality of calculation and the size of the informal economy.
- 3.43. **The government may wish to implement a digital register of capital projects with unique identifying codes.** Creating a framework that assigns capital projects – big and small – with a consistent, unique ID code would increase the efficiency of the project databases; improve overall capacity for monitoring and evaluating the capital budget; permit managers to review timely information on individual projects; and enable aggregated and disaggregated analysis of a project portfolio. Basic information on each project, such as: the authorizing unit, government function, year, and value can be attached to a unique project ID and stored in a centralized digital database. In the longer term, a project database system will need to be integrated into a broader financial management information system (FMIS). An FMIS has not yet been established in Myanmar. Nonetheless, in line with general thinking of new and cost-effective ways to sequence and implement information systems, progress on developing a unique project ID system can be achieved in the short term without waiting for an FMIS. This can deliver quick wins for project database management; and it can provide time for the project database to mature and incorporate design changes before eventually being integrated into the broader FMIS.
- 3.44. **The project reporting system can utilize smartphone technology.** This is already being piloted by the Project Appraisal and Progress Reporting Department of the Ministry of Planning and Finance, to develop an accurate spatial mapping of projects and resources and to implement remote progress and quality monitoring. Contracts with vendors can include clauses to ensure regular smartphone-based reporting of progress and potentially quality. The requirement of keeping photo records of fortnightly inspections by supervisors as per clause 43 of the Directive on Execution of Works by Contract (August 2016) can also be interpreted requiring entry as of location, date and time-tagged digital photos into a central information and monitoring system.

- 3.45. **Building on this progress, it would be important to complement data availability with community input.** This should reflect attempts to address gaps in data (due to quality or availability) as well as contextual factors. The latter is especially true in areas of mixed-authority, for example, where services can be provided by the Myanmar and Shan Governments as well as Armed Ethnic Organizations. Accountable and inclusive government will require citizens' participation, it will also require context-specific approaches to public investments and service delivery, in some areas this may also need to be conflict-sensitive. Significant and unequal changes in economic and welfare growth can generate grievances and instability. These possible tensions must be acknowledged.
- 3.46. **Identification of barriers will involve incorporating participatory policies, with a focus on the process, and not necessarily the type of investment.** There are no clear-cut solutions (especially for investments in conflict-affected areas), given the fundamental differences in contexts across Myanmar. However, international experience provides some guiding principles that could be incorporated into investment principles that could facilitate peace. The actual implementation mechanisms may depend on a specific area of investment. However, the core principle should be to bring community members together to break barriers:
- **Empowerment:** Provide a menu of data-driven options for projects and let community members help decide which projects to implement
 - **Inclusion/Participation:** All activities should proactively include marginalized and vulnerable groups, particularly those excluded from development programs in the past
 - **Trust/GRM:** Projects must have a transparent grievance redress mechanism (GRM) so that citizens know they can provide feedback, make complaints, and rely on fair protocols for solving disputes over planning; this grievance redress mechanism should also extend to other elements in the budget cycle like execution, implementation, tendering etc.).
- 3.47. **There has been significant progress in subnational fiscal transparency, however, more can be done to strengthen community-level inputs.** Notable improvements have been made to ensure publication of budgetary information. However, the public is not able to contribute to the budget preparation process as the budgets are only published after approval by the legislature. Presenting budget information through citizens' budgets helps facilitate citizen participation in scrutinizing government finances and a broader process of identifying needs. These budget disclosure efforts should be supplemented with efforts to improve the transparency of other aspects of public finance management (e.g., procurement) as well as to encourage citizen participation during budget preparation stage (and implementation).

Enhance targeting for inclusion and linking spending with needs

- 3.48. **The needs within states and regions are not uniform, as evidenced by the considerable township-level heterogeneity in the MDI.** This implies that efforts to strengthen inclusion must focus on addressing variations within, and not just between, states and regions. Within state/region targeting can be characterized in at least two ways: (1) sectoral-level targeting and allocations of budgets to line-ministries; (2) township-level targeting, operated within line-ministry budgets at both levels of government. Given the large variation of deprivation, even within townships, targeting at the village tract level, especially for smaller projects, may also be considered.
- 3.49. **Opportunities to move towards more inclusive targeting of spending have become more tangible with the growing availability of data, but gaps remain.** Progress has been made on the geographic distribution of total capital spending, which allows for a better understanding of the geographic allocation of spending. However, the use of budget data for improved targeting is constrained by the inconsistency

of the classification of capital budgets and the lack of a functional perspective of spending. Further, data on union capital budgets (and actual spending) is not routinely shared across relevant departments in MOPF, which prevents a more thorough government review of spatial allocative efficiency across sectors and functions. Harmonizing budget practices and improving information sharing are therefore priorities for reform

- 3.50. **Township level budget data is becoming increasingly available, enabling stronger links between subnational spending decisions and needs.** Total spending in a given township is an aggregate of line-ministry decisions on geographic allocations of their budgets. This process is coordinated by the planning department, which also aggregates the information for the budget. Matching this data with metrics of welfare can help subnational policymakers guide improve the township-level allocation of budgets. A targeting policy could be constructed in multiple ways, for example: a single township-level allocation mechanism (e.g. formula using aggregate welfare metrics) for all line ministry agencies; or a line ministry-specific allocation mechanism reflecting specific sectoral need (e.g. access to electricity for energy spending, physical access to markets for road spending); or a combination of both. It is important to note that implementation of any subnational policy over township-level targeting of spending (like the use of particular data) depends on the coordination between subnational planning and budgeting agencies, and the implementing line-ministries.
- 3.51. **Targeting of spending within townships is made harder without township-level budget ceilings.** The challenges with project selection and prioritization of capital spending are exacerbated by the absence of township-level budget envelopes, with planning taking place without the knowledge of available financing. This results in considerable variance between the ‘bottom-up’ investment proposals within townships and the eventual ‘top-down’ budget ceilings of the ministries. Consequently, an unrealistic list of proposals tends to be generated, putting a significant strain on an already weak prioritization and appraisal process. A policy of township-level targeting can also help ease within-township planning and prioritization by forming a township-level budget envelope and communicating it early in the planning cycle.

Medium-term perspective

- 3.52. **Subnational governments would benefit from incorporating a medium-term perspective on its resources.** Reforms at the central level have led to the development and use of the Medium-Term Fiscal Framework (MTFF) to guide budget allocations. The MTFF was developed as part of ongoing efforts to strengthen budget preparation, with support from the World Bank. Given the challenges of implementation and the availability of data at the subnational levels, the MTFF approach at lower levels may need to be approached with a longer implementation period. The more immediate focus should be on the predictability of medium-term fiscal transfers for states/regions, allowing the subnational governments a multi-year perspective on the likely availability of its resources. This could help move toward incorporating a fiscal perspective beyond the annual budget and analyzing the potential for fiscal space in their own budgets. Eventually, this should feed into the planning process with clearly identified ceilings. In reality, institutional ability to do this will depend on capacity across states/regions.
- 3.53. **Recurrent spending appears to be in control; however, longer-term sustainability should be systematically assessed.** Rising labor costs have the potential to crimp the fiscal space available for development spending at the subnational level. On the other hand, the lack of growth in maintenance commitments raises questions about allocative efficiency and the ability to maintain growing capital stock. A detailed analysis of the sustainability of labor costs and suitability of maintenance commitments in subnational governments is warranted.

- 3.54. **Accounting practices for wage expenditure and attempts to circumvent budgetary norms to pay for labor costs may pose a fiscal risk.** In the short-term, the government could aim to standardize and enforce budget classification to reduce fiscal risk and to credibly assess the fiscal sustainability of subnational budgets. These should be coordinated and should reflect the budget classification reforms at the central level. In the medium-term, authorities could consider putting in place the information technology systems, and processes to analyze large amounts of data generated by subnational units and incorporated into MTF. The growth in recurrent spending should be better recorded and kept within reasonable limits as a percentage of total spending or as a percentage of GDP. Technical capacity constraints in some states and regions may need support to ensure compliance with standardized classification and potential shifts towards the use of information technology systems.
- 3.55. **There is scope for clarifying spending responsibilities between the union and states/region over the medium-term.** Myanmar's decentralization experience in the roads sector shows that misalignment of functional authority is acute, this results in ambiguous divisions of responsibilities between different levels of government; blurred distinctions in administrative accountability; and mixed financial responsibility. Many functions are shared between the center and states/regions, contributing to ambiguity over spending assignments. Over the medium-term, the government could aim to:
- Clarify current and future responsibilities or assign exclusive responsibility. In the case of shared functions, the explicit responsibilities of the center and state/region authorities should be clearly set out based on agreed criteria.
 - Decentralize functional and spending assignments while taking into account fiscal impact and the capacity of subnational governments .

Table 3.6: Summary of policy options and recommendations

	Issues	Options
Identifica- tion: the barriers to inclusion.	The general public is not able to contribute to the budget preparation process as the budget is published only after it is approved by the legislature.	Require publication of the budget proposal when it is submitted to the local legislature.
	The available data is not systematically incorporated into the planning (public investment management systems) and decision-making processes.	<p>Short-term: Require use of data in submission of proposals. For example, data requirements for road sector proposals could include the number of highways, schools, hospitals or commercial areas the proposed road would connect to.</p> <p>Short to medium-term: Implement a digital register of capital projects with unique identifying codes. Creating a framework that assigns capital projects – big and small – with a unique ID code would allow for more systemic use of data in planning and decision-making processes; increase the efficiency of the project databases; improve overall capacity for monitoring and evaluating the capital budget; permit managers to review timely information on individual projects; and enable aggregated and disaggregated analysis of a project portfolio. This would also allow to make early steps towards strengthening subnational public investment management while providing time for the project database to mature and incorporate design changes before being integrated into more sophisticated information systems (FMIS).</p>
	Shan faces considerable challenges in inclusion of populations in conflict-affected, mixed-governance areas and those negatively affected by the illicit economy.	<p>The authorities could develop and adopt a participatory (and where needed conflict-sensitive expenditure prioritization program to consider the following:</p> <ul style="list-style-type: none"> • Empowerment: Provide a menu of credible options for projects and let community members help decide which projects to implement • Inclusion/Participation: All activities should proactively include marginalized and vulnerable groups, particularly those excluded from development programs in the past • Trust/GRM: Projects must have a transparent grievance redress mechanism system to ensure citizens that they can provide feedback, make complaints, and rely on fair protocols for solving disputes over planning (or other elements in the budget cycle like execution, implementation, tendering etc.).
Institution- al Changes	Faced with small budgets and difficult decisions, investments tend to be evenly spread across the state without explicit consideration of objective needs. Within this limited available fiscal space, subnational governments could still spend better by strengthening the targeting of resource allocation.	Develop a policy to guide township-level targeting of subnational budgets, for example through use of data like MDI.
	There is considerable variance between the ‘bottom-up’ investment estimates of states and regions and the ‘top down’ estimates of the ministries.	Set township-level budget ceilings and announce early in the budget process, at least at sectoral level.

	Issues	Options
Medium-term perspective	No medium-term budgeting, or fiscal-sustainability perspective. Budgetary units act as extensions within a unitary government. This poses problems for states to go beyond incremental budgeting and to conduct credible medium-term planning.	<p>Short-term: The Minister of Finance could consider developing and presenting medium-term fiscal plans and assumptions to supplement its on-going budget transparency efforts (e.g. publication of annual citizen's budgets).</p> <p>Medium-term: Develop technical capacity for credible medium-term analysis and reporting for evidence-based policy making.</p>
	Lack of a standardized classification and manual systems make available information unsuited to deeper analysis and pose fiscal risk.	<p>Short-term: Develop a detailed manual for budget classifications, consistent with budget classification reforms at the central level.</p> <p>Medium-term: Put in place the information technology systems and proceed to analyze large amounts of data generated by subnational units. This will enable improved understanding of how expenditures are being distributed to the population and will help assess the fiscal sustainability of spending.</p>
	Ambiguous divisions of responsibilities between different levels of government, blurred distinctions in administrative accountability and mixed financial responsibility	Take steps towards clarifying current and future responsibilities or towards assigning exclusive responsibility. In the case of shared functions, the explicit responsibilities of center and states/regions authorities should be clearly set out based on agreed criteria. Greater decentralization of functional and spending assignments needs to take into account fiscal impact and capacity of subnational governments to fund a given function.

4 SUBNATIONAL FINANCE

A. Introduction

- 4.1. **Getting the right balance of subnational financing is essential for spending efficiency and equity.** Subnational financing is a combination of three pillars: own-source revenue (OSR); intergovernmental transfers via grants and shared revenue; and subnational borrowing. Each financing source has advantages and disadvantages.
- **Own-source revenues (OSR)** tend to be under the discretion of local decision-makers, which can strengthen the link between spending and income, improve downward accountability, and impose greater fiscal discipline on subnational governments. However, misalignments between the sources of revenues and the benefits of spending can heighten risks of distortions such as cost-shifting (known as tax exporting) and unhealthy competition between jurisdictions. Local revenue collection can also overwhelm local administrative capacity. Inequities can also arise due to differences in fiscal capacity.
 - **Intergovernmental transfers via grants and shared revenues** can play an essential role in reducing vertical and horizontal imbalances. If revenue responsibilities are mostly centralized, central governments can reduce the gap in fiscal capacity (known as a vertical fiscal imbalance) by sharing revenues with subnational governments through intergovernmental transfers or by allowing subnational jurisdictions to retain a certain proportion of centrally collected taxes. Central governments can also provide transfers to reduce horizontal fiscal imbalances *between* subnational jurisdictions. These horizontal imbalances can be brought about by different revenue-raising capacity and expenditure needs across subnational jurisdictions. However, dependence on central transfers and shared revenues can reduce autonomy and accountability at the local level, and without hard budget constraints, there may have little incentive to provide cost-effective local public services.
 - **Subnational borrowing** offers an opportunity to overcome immediate fiscal constraints and to smooth spending across years. However, without adequate controls and the ability to manage debt, this could lead to excessive fiscal risk-taking and a build-up of liabilities at the subnational level.
- 4.2. **There is no ‘one size fits all’ approach to subnational financing.** In Myanmar, Schedule 5 of the Constitution defines taxes and non-tax handles assigned to the subnational level, with most major revenue sources, such as income, profit and sales tax, retained by the union. Centralization of revenue collection has been a hallmark in Myanmar since independence (see Chapter 2). Accordingly, intergovernmental transfers, mainly comprising a general unconditional grant and shared tax revenues, play a particularly important role in addressing vertical fiscal imbalances and financing most of the aggregate subnational spending. A notable exception is municipalities, the only genuinely devolved function of government, which are primarily dependent on OSR drawn from geographically immobile sources.
- 4.3. **This chapter examines the overall size of state and region financing in Myanmar.** State and region financing has increased significantly since 2012/13. Despite these increases, the level of subnational financing remains insufficient to meet the spending needs identified by subnational governments. The total quantum of available resources at the subnational level, however, is low in nominal per capita terms. This low level of subnational funding reflects weak union tax collection, and declining union non-tax collection, evidenced by the declining union revenue as a percentage of GDP since 2015/16. As a result, the resources available, as a share of GDP, for general-purpose transfers and revenue sharing have also stagnated.

- 4.4. **The chapter also examines the performance and institutional arrangements of the individual pillars. These reveal a broad distinction, consistent with the geographical concentration of economic activity, between Yangon Region, and to a lesser extent Mandalay Region, and the rest of the country.** The widening resource base in Yangon and Mandalay has reflected growth in economic activity, captured by OSR and union shared taxes. In contrast, in the other twelve states and regions, growth in total available resources over the past five years is almost entirely attributable to intergovernmental transfers, consistent with horizontal fiscal rebalancing. Since 2015/16, a small portion of general-purpose grant financing has been allocated to states and regions based on a formula that accounts for equity and fiscal capacity considerations. Moreover, there are outstanding institutional and administrative challenges to the transfer system that continue to undermine some of the benefits achieved through recent reforms. *Prima facie*, the design of the OSR sources are mostly consistent with an optimal taxation approach; in reality, states and regions rely heavily on distortionary non-tax revenues with collection highly fragmented across administrative agencies.
- 4.5. **The chapter develops a comprehensive intergovernmental transfer model covering all sources of revenue for states and regions, which is then used to test the potential impact of policy changes for intergovernmental transfers.** The scenarios tested include: (i) changing the intergovernmental transfers formula, with the surprising result that changing the formula has only a marginal impact on reducing horizontal imbalances; (ii) applying the formula to the whole divisible pool, which highlights that such a change could introduce significant volatility in resource availability for states and regions and (iii) changing the basis for commercial tax revenue sharing from origin-based to formula-based, which negatively impacts Yangon while benefiting other states and regions.
- 4.6. **The chapter models options to increase own-source revenues particularly from property and other land-related taxes.** The key finding from the modeling of property tax and other land-use related taxes, based on plausible assumed scenarios, is that the gains from changing policy vastly outweigh benefits from administrative improvements. The potential gains from modest policy changes, related to updating valuations and introducing a small development change, are more than double the gains associated with improving administration and closing the coverage gap.
- 4.7. **Based on the policy modeling and assessment of the current system, this chapter identifies feasible policy options to strengthen the subnational finance system in Myanmar to facilitate the government's dual focus on investing in urban growth and supporting inclusion.** Specifically, the chapter identifies options for recalibrating the transfer formula and the basis for revenue sharing to reduce further vertical and horizontal imbalances. Potential changes to revenue responsibilities are identified, particularly for tax handles with immobile tax bases. These changes would increase the resources available for investment in urban growth centers, particularly in Yangon and Mandalay, and further incentivize improved collection and administration. Finally, the chapter identifies ways for Yangon Region to better capture land value, mainly through reforming property tax, a key, albeit underutilized, OSR handle in municipal areas.
- 4.8. **Revenue collected from natural resources, an issue of considerable importance to Myanmar and the shape of fiscal decentralization, are not covered in this chapter.** Internationally, selected aspects of natural resource management have been transferred (or decentralized) to subnational governments in at least 60 countries. Key challenges include balancing inter-regional equity with efficiency, predictability, and stability of revenue flows (Bauer et al., 2018). In resource-rich Myanmar, the issue of natural resource sharing is inexorably linked to the overarching peace process. Historically, the union government has been mainly responsible for managing the country's resources. However, a core demand of ethnic groups is for greater subnational control over natural resources. The outcome of these political negotiations, whenever settled, will have important flow-on implications for fiscal decentralization.

4.9. The rest of the chapter is structured around five sections. Section B provides an overview of the size and composition of subnational financing in Myanmar. Section C analyses each of the three pillars of subnational finance in Myanmar: subnational borrowing, own-source revenues, and intergovernmental transfers. Section D provides a quantitative analysis of different policy options to improve availability and equity of the subnational finance system. Section E concludes with policy recommendations

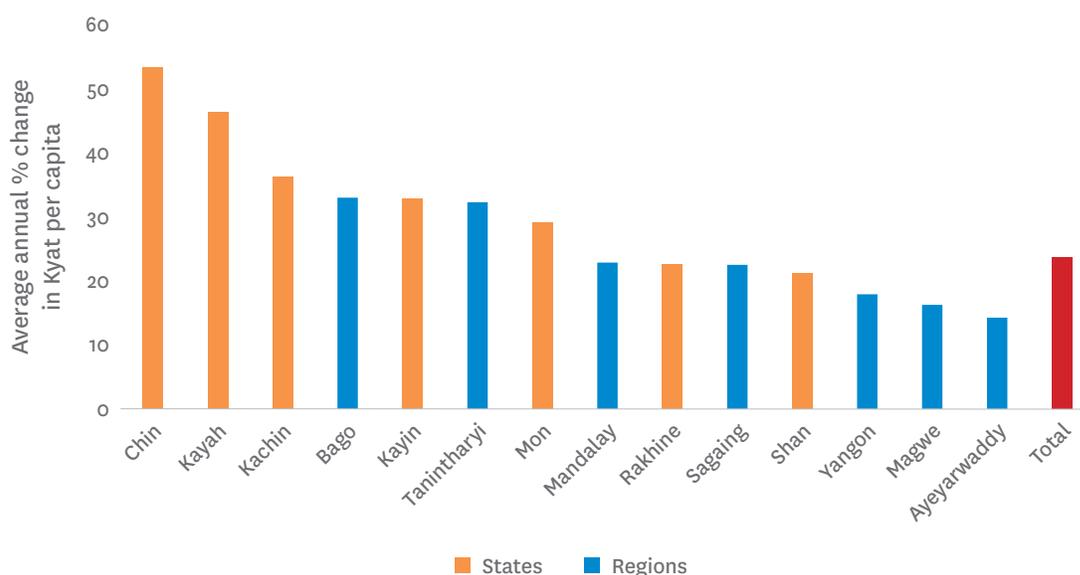
B. The size and composition of subnational financing in Myanmar

State and region financing has increased significantly but is still low and unequally distributed

4.10. State and region financing increased substantially from 2012/13 to 2017/18. The total available resources for state and region budgets increased three-fold in nominal and per-capita terms from 2012/13 to 2017/18, growing by an average of 24 percent per year (Figure 4.1). As a share of national GDP, state and region resources increased from 1.7 percent of GDP in 2012/13 to around 2.9 percent of GDP in 2017/18.

4.11. Overall funding availability at the subnational level remains low, with wide variations between individual states and regions (Table 4.1). On aggregate, state and region governments spent approximately 51,000 Kyat (\$34) per capita in 2017/18. The largest amount per capita, by some margin, was spent in Chin State (around 313,000 Kyat; \$206), the least densely populated subnational entity. Ayeyarwady, which after Yangon Region has the second-largest population, gets the smallest per-capita share, only 26,000 Kyat (\$17). In aggregate, state governments have more resources at their disposal on per capita basis than region governments, 67,667 Kyat (\$45) compared with 45,279 Kyat (\$30) respectively.

Figure 4.1: Total available subnational fiscal resources; average annual percentage change in kyat per capita 2012/13 -2017/18



Source: MOPF, WB Staff Estimates
Notes: States in orange; regions in blue.

4.12. **The gap in overall per capita resources has widened between individual states and regions since 2012/13.** Growth in available resources has generally been faster in states than regions, in line with the general prioritization of union spending in the states. The top three fastest-growing areas, and seven of the top eleven, are states (Table 4.1). The gap between the state or region with the highest per capita resource availability and the lowest per capita resource availability (known as the “equity ratio”), has widened from 4.7 times in 2012/13 to 12 times in 2017/18.

Table 4.1: Per capita subnational financing 2017/18 (PA) and average annual growth since 2012/13

	Total	OSR**	Transfers*	5-year average annual growth		
				Total	OSR	Transfers
Chin	305,012	32,714	272,298	53	13	72
Kayah	207,880	36,378	171,503	46	24	56
Tanintharyi	105,776	13,764	92,012	32	2	46
Kachin	104,248	18,336	85,913	36	10	51
Yangon	67,904	47,508	20,396	18	21	12
Kayin	57,046	9,819	47,227	33	8	46
Rakhine	54,424	7,461	46,964	23	5	28
Magwe	46,157	9,579	36,578	16	2	23
Shan	45,681	9,078	36,603	21	2	31
Mon	46,266	9,925	36,341	29	7	45
Sagaing	39,531	7,818	31,713	23	5	31
Mandalay	36,749	19,828	16,921	23	16	37
Bago	31,886	7,492	24,394	33	13	46
Ayeyarwady	25,792	7,593	18,199	14	3	22
States	66,834	11,251	55,584	30	7	40
Regions	44,896	18,570	26,326	21	14	27
Equity Ratio (max:min)	11.8	6.4	16.1			
Averaged equity (top 3: bottom 3)	6.6	5.2	9.7			

*Includes general-purpose grant transfer and shared tax revenues

**OSR includes tax and non-tax current revenue, capital revenue and finance revenue.

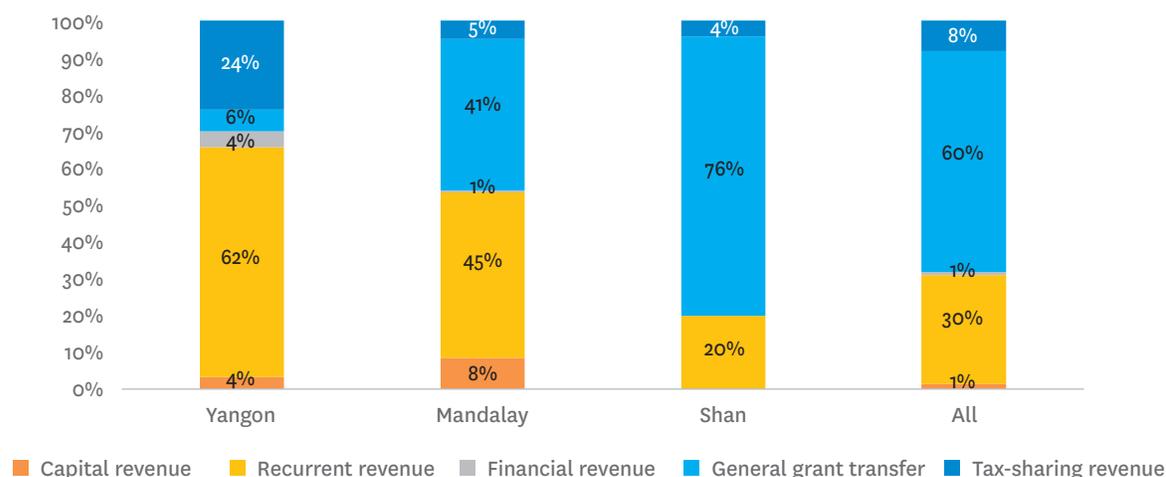
Source: MOPF, WB Staff Estimates

Transfers finance a large share of subnational budgets, except for Yangon and Mandalay

4.13. **Transfers from the union play a dominant role in financing the budget of a majority of Myanmar’s states and regions.** Excluding Yangon and Mandalay Regions, transfers account for the vast majority of available resources – ranging from 71 percent of total financing in Ayeyarwady to 89 percent in Chin State in 2017/18. Moreover, transfers have increased at a faster pace than OSR over the past five years (Table 4.1), and have accounted for almost all the observed growth in available resources per capita in these areas.¹ In contrast, the increase in transfers accounted for less than one-quarter of total resource growth in Yangon Region over the same period and slightly more than half of the overall growth in Mandalay (Figure 4.2).

1 On average across the twelve less urbanized states and regions the regions transfers accounted for 92 percent of the growth in total available resources between 2012/13 and 2017/18.

Figure 4.2: Composition of revenue, 2017/18 FY (PA)



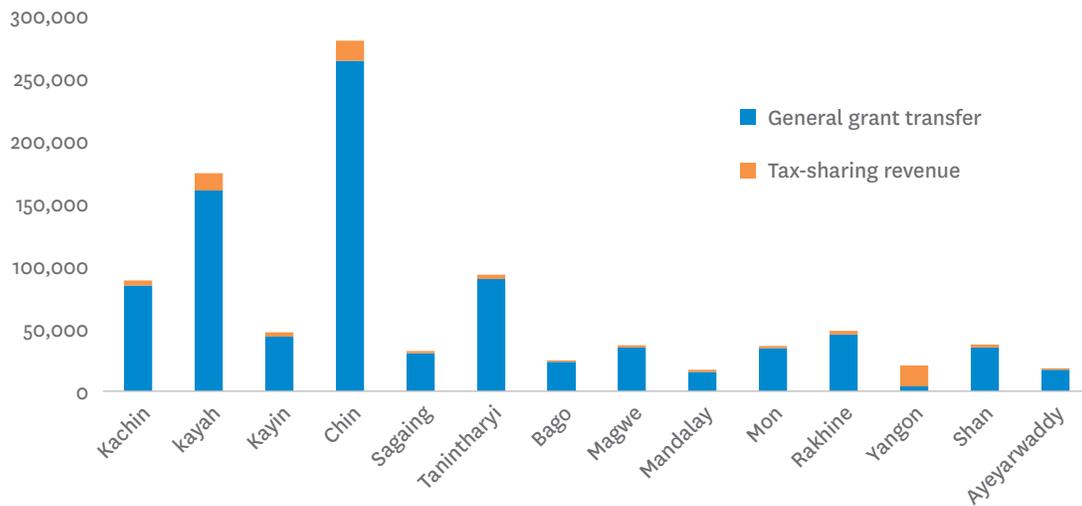
Source: MOPF, WB Staff Estimates
Note: PA = provisional actual

4.14. For most states and regions, the general-purpose grant is the most important of the three broad mechanisms through which resources are transferred between tiers of government (Table 4.2). The general-purpose grant is the largest intergovernmental transfer, and accounted for 87 percent of all funds transferred to states and regions in 2017/18. These funds are allocated using a partially formula-based approach (highlighted in Section C below). Complementing the general-purpose grant are four union taxes collected by the Internal Revenue Department (IRD). Since 2016/17, these taxes have been shared with states/regions based on the location of collection, and the shared revenues accounted for around 12 percent of total transfers in 2017/18. The much smaller Constituency Development Fund (CDF) accounts for a small and declining share of total transfers. There are currently no conditional or performance-based grants in Myanmar’s intergovernmental transfers.

Table 4.2: Typology of fiscal transfers from the union to the subnational level

	Union general-purpose grant transfer	Union tax revenue sharing	Constituency Development Fund (CDF), other ad-hoc transfers before 2015-16 FY
Objective	Redressing horizontal fiscal imbalances across states and regions	Redressing vertical fiscal imbalances between the union and states and regions	Varied objectives across the ad-hoc transfers
Basis	Unconditional grant partially allocated using a formula	Since 2015/16 derivation-based sharing of: - commercial tax (15%) - income tax (5) - special goods tax (15%) - stamp duty tax (2%)	Small 100 million Kyat grants provided to each of the 330 members of the Hluttaw to be spent within their townships
Share of total 2017/18	87%	13,764	<2%

Figure 4.3: Composition of revenue, 2017/18 FY (PA)

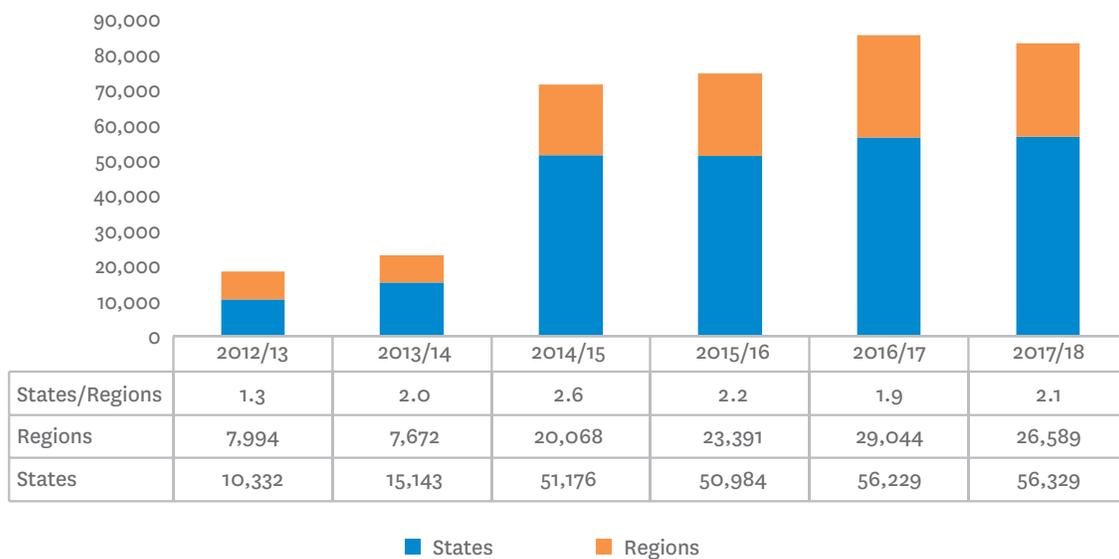


Source: MOPF, WB Staff Estimates
Note: PA = provisional actual

Transfers have only partially helped in reducing horizontal inequities

4.15. Intergovernmental transfers favor states over regions. In aggregate, states receive more than twice the level of transfers, on per capita basis, than regions (Figure 4.4). This skew has grown over time as the growth in transfers to states has outpaced growth to regions over the past five years. Chin, Kayah and Kachin States have seen the fastest growth in per capita transfers from the union.

Figure 4.4: Per capita subnational transfers, states vs. regions



Source: MOPF, WB Staff Estimates
Note: Transfers include general-purpose grant transfer and shared tax revenues

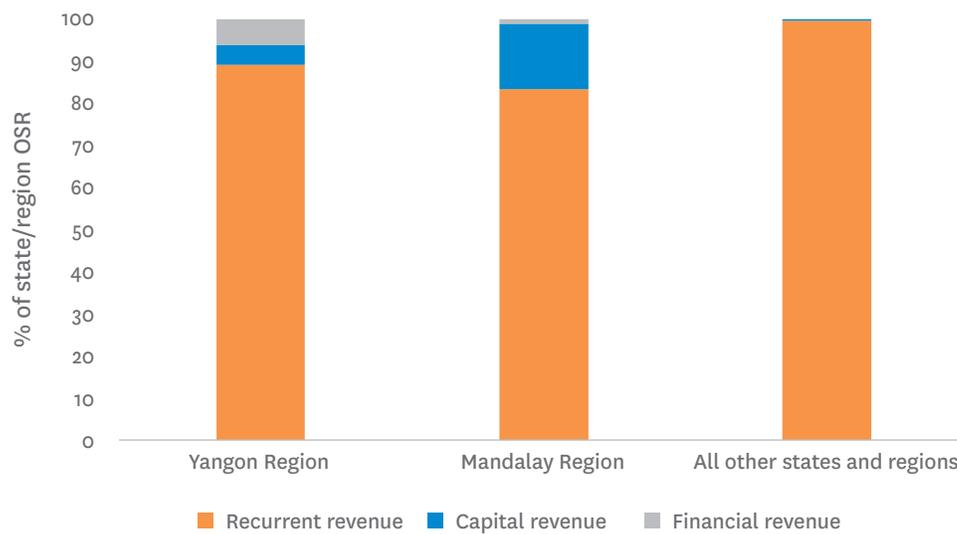
- 4.16. **In the absence of transfers, per-capita subnational financing would have diverged further over time.** Reflecting the gap in revenue generation capacity over time, the average equity ratio of OSR (using the three largest and three smallest values) increased from 3.0 to a peak of 8.7 between 2012/13 and 2016/17, before declining slightly to 5.2 in 2017/18. The general purpose transfer was able to marginally redress the equity gap during this period. Since 2012/13, the averaged equity ratio for subnational financing (OSR plus transfers) has been lower than the ratio for OSR. But the impact has been marginal, and this is linked with the application of the grant transfer formula, discussed in further detail in Section C.

Yangon and Mandalay rely on shared tax revenues and own-source revenues

- 4.17. **Yangon Region, and to a lesser extent, Mandalay Region, exhibit stronger growth in OSR.** OSR, includes tax, non-tax capital, and financial revenues accounted for 70 percent of total financing in Yangon and close to 54 percent of total financing in Mandalay in 2017/18. In Yangon, three-quarters of the growth in total resources from 2012/13 to 2017/18 was attributable to OSR. Yangon is the only state or region in Myanmar where growth in OSR outstripped the growth in transfers from 2012/13 to 2017/18. In Mandalay, transfers and OSR contributed almost equally to the increase in total resources in the same period.
- 4.18. **Shared tax revenues are also crucial for Yangon Region, reflecting the concentration of economic activity, and tax administration reforms.** Reflecting its position as an industrial and commercial hub in Myanmar, Yangon Region accounts for the lion's share of shared tax revenue, 56 percent in 2017/18. Previously as high as 87 percent in 2016/17, it has fallen as a result of some adjustments made to the derivation rules (discussed in Section C). Within Yangon Region, shared tax revenues account for 24 percent of total available resources. Forecasts for shared revenue in 2018/19 foreshadow a near-doubling in the value of shared tax revenue expected to be received by both Yangon (from 121.6 to 239 billion Kyat) and Mandalay Regions (from 11.4 to 25.9 billion Kyat) compared to 2017/18, reflecting the concentration of economic expansion in urban areas.
- 4.19. **Yangon and Mandalay Regions also stand apart in their use of capital income and finance revenue.** Almost all the revenue derived from the sale of capital assets in 2017/18 was collected by Yangon and Mandalay, where capital income accounted for 5 and 16 percent of OSR, respectively.² Municipal offices in Yangon and Mandalay (YCDC and MCDC) include what is budgeted as financial revenue, likely reflecting borrowing in the form of on-lent Overseas Development Assistance (ODA). In contrast, the OSR in the remaining twelve states and regions is almost entirely comprised of recurrent revenues (Figure 4.5).

2 While it makes a significant share of their income, capital income stems from the one-off sale of assets and hence does not provide a sustainable source of revenue and therefore not a focus of this chapter.

Figure 4.5: OSR Composition; by state and region; 2017/18 PA



Source: MOPF, WB Staff Estimates

Notes: Recurrent revenue includes tax and non-tax collection; PA = provisional actual

Examining the Pillars of Subnational Financing

4.20. **This section examines each of the pillars of subnational financing.** Given their importance to overall subnational finance, fiscal transfers (including general-purpose transfer and tax revenue sharing) are considered first before reviewing OSR and subnational borrowing. The focus is on the institutional arrangements of each pillar, and their performance, against certain principles or benchmarks derived from global experience. It should be noted that there is no ‘one size fits all’ in subnational financing, but understanding performance against certain broad principles may help identify areas for improvement.

Fiscal Transfers

4.21. **The system of intergovernmental transfers in Myanmar has been considerably redesigned in recent years, with improvements in transparency, predictability, efficiency, and equity.** As noted in Valley et al. (2018), before 2015/16 the union provided several smaller piecemeal transfers to states and region. These transfers included township development and management funds, regional development and poverty alleviation funds, plus various project-specific transfers of funds. This patchwork of transfers has gradually been replaced with three instruments: revenue sharing; an unconditional general-purpose grant transfer; and the CDF. Streamlining transfers is a welcome development for efficiency as fewer, larger transfers may be less of a burden on administrative capacity and transparency. The legal basis, design, and approval of these three transfers are highlighted in Table 4.3 below. Given that the CDF accounts for a small, and declining, share of overall transfers, it is excluded from the analysis.

Table 4.3: Legal basis, design and approval of fiscal transfers in Myanmar

Transfer		Intergovernmental fiscal transfers - Institutional arrangements		
		Legal basis	Design	Approval
General-purpose grant*		2008 Constitution (Article 230: para c,d)	Intergovernmental Fiscal Relations Division within the Budget Department (MOPF)	Approved by the Financial Commission and the union legislature as part of the annual budget law, no separate bill
Union tax revenue sharing	Individual Income Tax	Income Tax Law Amendment (Article 24)	The union cabinet approves allocation criteria in accordance with the law. It sets and approves sharing rates with input from the Internal Revenue Department (IRD) under MOPF.	
	Commercial Tax	Commercial Tax Law (Article 31)		
	Special Commodity (Goods) Tax (net of tax on imported goods)	Special Goods Tax Law (Article 33, Section A)		
	Stamp Duty	The Stamp Act		
Constituency Development Fund		Pyidaungsu Hluttaw Law No 9/2014	Union Hluttaw with recommendations from the Union Hluttaw office (see Chapter 3 of the relevant law)	Approved by the Finance Commission and the union legislature as part of the annual budget law

* Sometimes referred to as the MTF or “deficit” grant
Source: Adapted from Valley et al. (2018)

4.22. The transfer system still falls short of achieving its key objectives. As noted in Bird and Smart (2002)³, transfers must be designed in such a way that subnational entities have a clear mandate, are adequately resourced, have sufficient flexibility to make decisions and are accountable for results. These principles require transfers to be predictable, timely, and transparent. They should also redress horizontal and vertical imbalances and provide some incentives for subnational entities to collect own-source revenues. The current fiscal transfer system in Myanmar falls short of these goals, as summarized in Table 4.4 below and discussed in detail in this section.

3 Bird, R. and Smart, M. (2002). Intergovernmental Fiscal Transfers: International Lessons for Developing Countries. World Development, 30(6), 899.

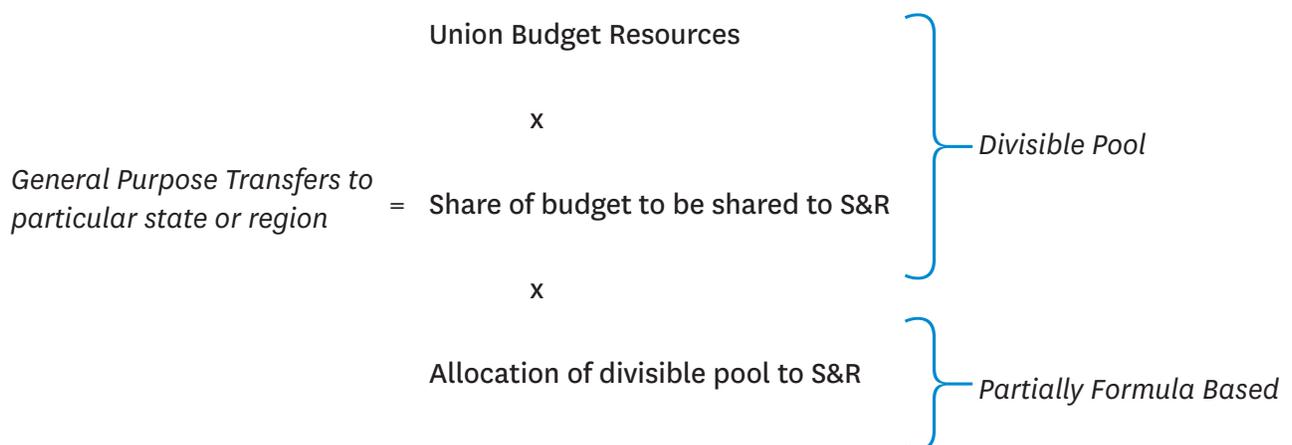
Table 4.4: Performance of fiscal transfer system in Myanmar.

Principles	Myanmar performance
Clear objectives of fiscal transfers	There is now more clarity of the objectives of fiscal transfers, mainly since the number of transfers has been rationalized. Since 2015/16, the general-purpose transfer is more closely linked to improving horizontal imbalances while revenue-sharing is focused on redressing vertical imbalances.
Transparency	Transparency has improved particularly for general-purpose transfers, with the move towards formula-based transfers. However, ad-hoc adjustments are still a feature, and low-quality union revenue forecasts imply that in-year adjustments are frequently made to revenue shared with states and regions.
Predictability and timeliness of transfers	Timeliness of transfers has improved since 2012/13, states and regions are provided transfers on a bi-annual basis. In-year adjustments are still made to second transfers, which reduces predictability.
Horizontal and Vertical Imbalances	Horizontal imbalances across state and region governments remain salient. Transfers have only partially redressed these imbalances, with post-transfer equity ratios marginally lower than pre-transfer ratios. Transfers have been less effective in addressing vertical imbalances.
Incentives for own-source revenue collection	Transfers are currently not designed with the purpose of incentivizing own-source revenue collection. The intergovernmental transfer formula has own-source revenues in the design. No piggy-backing is currently allowed for revenue sharing.

General-purpose grant transfers have only marginally impacted horizontal equity...

4.23. **The size of the general-purpose grant transfers to a state or region is determined by three decisions.** These are: (i) the overall resource envelope of the union; (ii) the size of the divisible pool in the budget to be shared to all states/regions and; (iii) the share of the pool allocated to each state or region. This is illustrated in Figure 4.6 below. Each of these key drivers will now be considered in turn.

Figure 4.6: Key drivers of general-purpose grant transfers



4.24. **The first driver of transfers is overall union budgetary resources, these remain constrained as revenue collections have been declining as a share of GDP since 2013/14.** Revenue to GDP ratio declined from 20.3 percent of GDP in 2013/14 to 16.5 percent of GDP in 2017/18 (Figure 4.7). SEE revenues declined significantly from 10 percent of GDP in 2013/14 to 6.4 percent of GDP in 2017/18, driven by shrinking profitability from lower natural gas prices, inefficient production, and exposure to market competition. Union government revenues remained stagnant in the same period, declining marginally from 10.3 percent of GDP in 2013/14 to 10.1 percent of GDP in 2017/18.

Figure 4.7: Public sector revenues as share of GDP

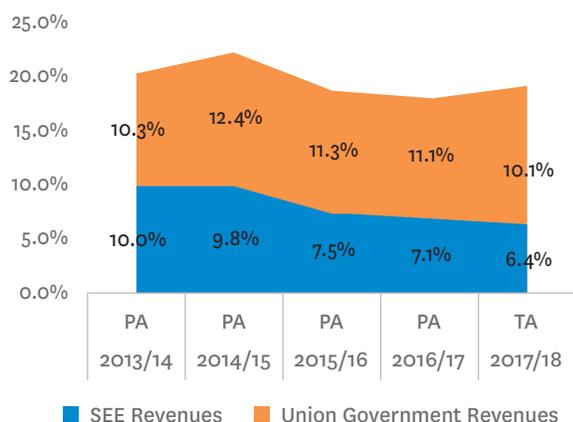
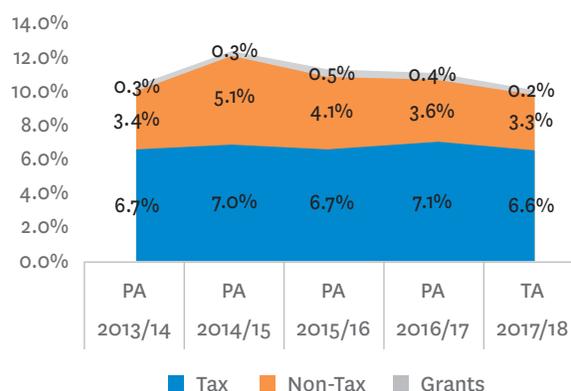


Figure 4.8: Union government revenue as share of GDP



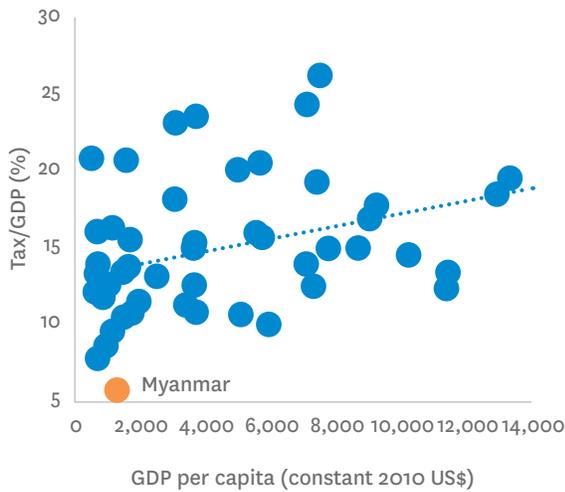
Source: MOPF, WB Staff Estimates; World Bank (2018)

4.25. **Union government tax revenues have remained stagnant, while non-tax revenues have declined (Figure 4.8).** Tax revenues remained at 6.5 to 7.0 percent of GDP between 2013/14 and 2017/18, with limited tax buoyancy. Non-tax revenues declined from 5.1 percent of GDP in 2014/15 to 3.3 percent of GDP in 2014/15, driven by the decline in oil and gas royalty payments because of declining sector profitability and sector exemptions that are eroding the base. Myanmar’s tax to GDP ratio is among the lowest in the world and is significantly below levels predicted by per capita income (Figure 4.9).

4.26. **Tax revenue stagnation has been driven by disappointing income tax collections despite reform efforts, declining from 3.1 percent of GDP in 2013/14 to 2.5 percent of GDP in 2017/18 (Figure 4.10).** In most countries, income tax revenues tend to be buoyant, increasing as a share of GDP as the economy grows, but this is not the case in Myanmar. Average Corporate Income Tax (CIT) collected per taxpayer at the Large Taxpayer Office increased by 40 percent, from 798 million Kyat in 2016/17 to 1.1 billion Kyat in 2017/18. Relatively few individuals and corporations are required to pay income tax; even this limited number enjoys many exemptions⁴.

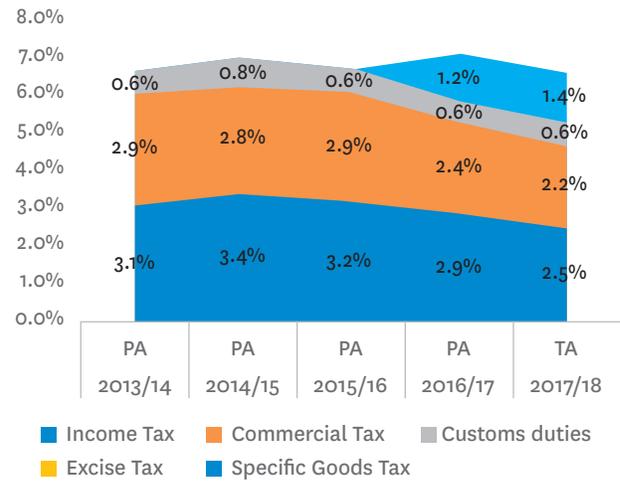
4 “Myanmar Economic Monitor”, World Bank, December 2018.

Figure 4.9: Myanmar's tax revenues to GDP



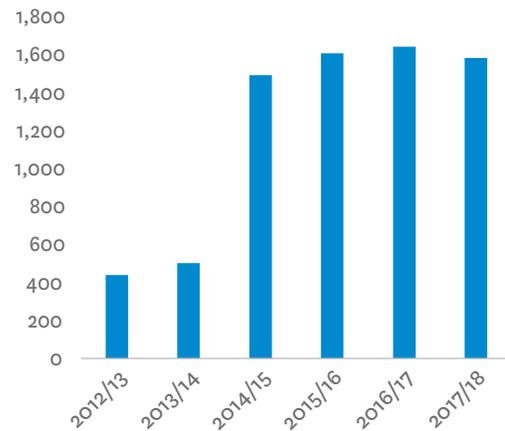
Sources: MOPF, WB Staff Estimates; World Bank (2018)

Figure 4.10: Tax collection by type as share of GDP



4.27. **The second driver of transfer size is the share of union budget allocated to transfers, which has increased significantly since 2013/14.** To date, there has been a concerted effort on behalf of the union government to prioritize transfers, which increased as a share of the union budget from three percent in 2013/14 to nearly 9 percent in 2017/18 (Figure 3.2 in Chapter 3). In 2017/18, the union government transferred more to states and regions than it spent on agriculture and health, and almost as much as it spent on education. The level of transfers has almost tripled from around 437 billion Kyat in 2013/14 to around 1.57 trillion Kyat in 2018/19 (Figure 4.11).

Figure 4.11: Overall size of grant transfers



Sources: MOPF, WB Staff Estimates

4.28. **The basis for determining the overall grant amount in the union budget is discretionary.** The grant transfer amounts each year are specified as part of the annual budget preparation process, with the initial ceilings on the transfer determined when the Medium-Term Fiscal Framework (MTFF) is being prepared (see Box 4.1 for further discussion of the MTFF process). The ceilings are then debated and approved by the Union Financial Commission (Box 4.2) and the union legislature, as part of the annual union budget law in line with other categories of spending.

4.29. **The choice of a discretionary approach does not necessarily imply a reduction in the size of the pool, as has been demonstrated in Myanmar, but it does reduce the certainty that these transfer amounts will be protected in case of further union resource constraints.** This process provides more fiscal flexibility to the union government but poses a challenge to the effectiveness of fiscal transfers in redressing horizontal imbalances and in providing a predictable level of resources.

Box 4.1: State and region transfers in the medium-term fiscal framework (MTFF)

As highlighted in the first and second Public Expenditure Reviews, Myanmar has made significant progress towards policy-based budgeting since 2011/12. As a share of the budget, allocations to education, health, and the energy sector more than tripled from 2011/12 to 2017/18, while the share of budget allocated to general public services declined significantly. These shifts in budgeting have been accompanied by continued adherence to fiscal discipline, with the fiscal deficits contained below 4 percent of GDP during the same period.

The move towards policy-based budgeting has been supported by the introduction of a Medium-Term Fiscal Framework (MTFF) in 2014. The MTFF integrates expenditure, revenue, and debt forecasts within a single analytical framework. It takes, as inputs, projections of key macroeconomic variables such as GDP growth, inflation, exchange rates, and commodity prices, budgetary execution trends, information on revenue projections, and debt financing trends. The MTFF outputs are an overall resource envelope.

As a part of the MTFF process, initial ceilings for intergovernmental transfers to individual states and regions are also determined. As a first step, this process determines the initial limits for a share of the budget to be transferred to states and regions. The ceiling is determined as part of a prioritization process of spending needs and capabilities across line ministries and states and regions, that takes into account the overall resource envelope. The second step, once the initial ceilings for budget share are determined, is to allocate these resources to states and regions. This allocation partially uses a formula-based approach, outlined in below and the Appendix.

Box 4.2: Union financial commission

The Union Financial Commission (UFC) was established as per the Union Government Law (2010)⁵ and the 2008 Constitution. It is a union-level organization, chaired by the president, and includes members of the union executive and each of the 14 chief ministers of the states and regions.

One of the roles of the Union Financial Commission is to scrutinize subnational budgets to ensure harmonization with the union budget, such that a single draft of the national budget can be tabled in the union-level *Pyidaungsu Hluttaw*. As part of the annual budgeting process, and before subnational Hluttaws can pass their respective budget laws, annual subnational budget proposals must be submitted for approval by the UFC.

Another key role of the UFC is to recommend the size and distribution of the general-purpose grant transfer and the CDF, which is included in the union budget law. In this role, the Union Financial Commission operates similarly to the Indian Commission, which also determines a significant part of the volume of the vertical transfers in an institutional environment characterized by large vertical and horizontal fiscal imbalances. Unlike its Indian counterpart, the UFC does not determine the distribution of the net proceeds of taxes to be shared between levels of government, which is set by the union cabinet.

5 The State Peace and Development Council Law No. 15/ 2010

4.30. The third driver of transfer size to a state or region is the allocation of the divisible pool across states and regions. The allocation process has seen the following gradual changes in recent years:

- Deficit financing: covering for the excess of expenditure over revenue in states and regions; this was the basis for the allocation of the divisible pool before 2015/16. This created baseless incentives for subnational spending control as well as for own-source revenue collection in states and regions. It also introduced additional unpredictability and volatility in the volume of resources available every fiscal year.
- A rules-based allocation was introduced in 2015/16, as part of the broader World Bank-supported Medium-Term Fiscal Framework (MTFF) reforms. An overall ceiling was introduced along with a formula to guide the share of allocations between states and regions. The formula attempts to equalize receipts based on six equally weighted variables (3 in the first year of application) related to development needs and fiscal constraints (Box A4.1 in the appendix). This formula is the outcome of a series of negotiations and discussions between the MOPF at the union and respective states and regions.

4.31. Shortcomings have been identified in formula design but no formula can adequately address all equity concerns. Concerns raised about the existing formula include: (i) the equal weighting of the indicators downplays the importance of the population within different areas, which results in an implicit bias in the allocation mechanism towards states/regions with a smaller population size, such as Chin and Kayah States; (ii) the poverty indicator values do not appear to be weighted by relative population; and (iii) the indicators related to fiscal constraints amounting to 50 percent weight could be downplaying the importance of development needs. Changes to the formula to address some of these shortcomings are modeled in the section on policy scenarios, which highlights that making large changes to the formula does not have a significant impact on horizontal equity as: (i) formula changes do not change the overall size of the transfer pool, so the gain for one state or region is at the cost for another and (ii) the formula is not applied to all of the divisible pool, as discussed below.

4.32. The formula-based approach has only been applied to around 6 percent of the total divisible pool. The formula is applied to the marginal amount after ensuring that states and regions receive at least as much in transfers as the previous fiscal year. This suggestion ensures some stability of transfers across years but at the cost of providing a tool for targeting horizontal equity. Currently, only around 6 percent of the general-purpose grant divisible pool is allocated via the formula. The other 94 percent represents the historic distribution of about 1.5 trillion Kyat before the MTFF reforms in 2015/16. This scenario implies that, even with significant changes in the formula, the short- to medium-term redistributive impact of outcomes is likely to be marginal. Furthermore, it is worth noting that formula-driven budgetary allocations may differ from the actual distribution of resources, reflecting administrative challenges described later in this chapter.

4.33. General-purpose transfers have had only a limited impact on redressing horizontal imbalances of needs. The total quantum of grant transfers in each state and region in 2014/15, before the formula was introduced, is weakly correlated with the Multi-dimensional Deprivation Index (Figure 4.12). However, transfers allocated according to the formula in 2018/19 are more strongly correlated with deprivation (Figure 4.13).

Figure 4.12: Total quantum of general-purpose grant versus MDI; 2014/15 by state and region before the formula

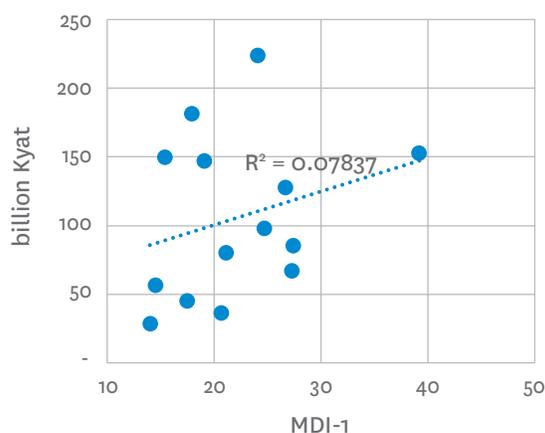
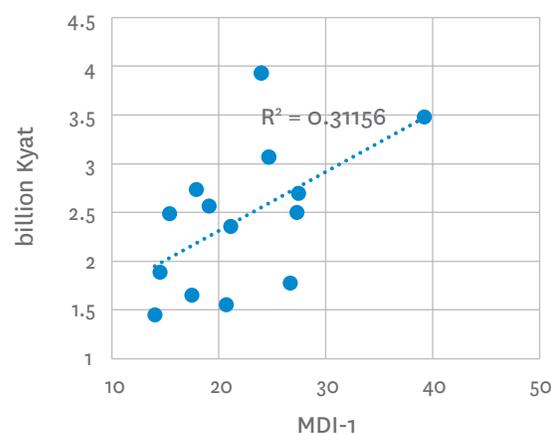


Figure 4.13: Formula-based general-purpose grant transfers and MDI; by state and region



Source MOPF; WB estimates

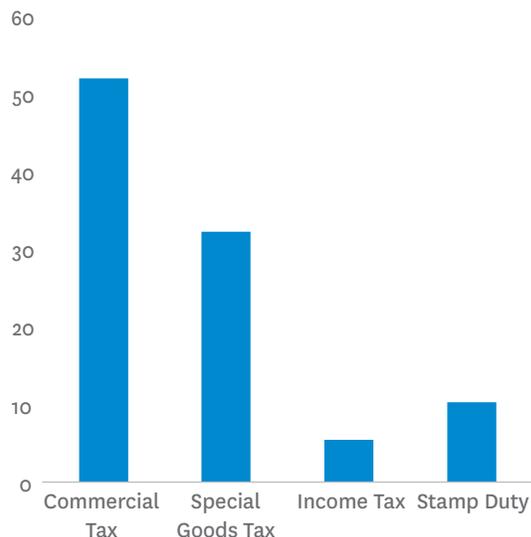
4.34. **When considering the three drivers of transfers, the impact of transfers is diluted by union budgetary constraints, the discretionary basis for determining transfer share and limited application of a formula-based approach.** As noted in Bird and Smart (2002), there are three distinct approaches to determining the size of the divisible pool: (i) as a fixed share of revenues or expenditures; (ii) in a discretionary manner, as in Myanmar, in the same way as other public expenditures and (iii) on a formula basis, i.e., as a proportion of specific local expenditures that need to be reimbursed or in relation to some general characteristics of the subnational jurisdiction’s populations. To a lesser extent, the limited application of a formula-based approach and some weaknesses in grant transfer formula design, also dilute the efficacy of transfers in redressing horizontal imbalances.

... tax revenue sharing is focused on reducing vertical inequity and is mostly based on the origin of collection.

4.35. **Revenue sharing was introduced recently as a significant fiscal reform. In 2016/17 commercial and special goods taxes were added to individual income and stamp duty taxes which were being shared since 2012.** These four taxes are all collected by the Internal Revenue Department (IRD) of the Union Ministry of Planning and Finance (MoPF) and shared at different rates with states and regions. Income tax and commercial tax constitute the majority of union tax collection, at 3.2 and 2.6 percent of GDP in 2016/17, respectively (Figure 4.10).

4.36. **Revenue-sharing is predominantly allocated by origin of collection, favoring more urbanized and economically vibrant Yangon and to some extent Mandalay.** It helps close the vertical gap and by its nature is not a tool for achieving horizontal fiscal balances. The union government shares 15 percent of commercial tax and special goods tax, 5 percent of individual income tax and 2 percent of stamp duty tax with the state/region of the collecting IRD office. Commercial and special goods taxes are the largest by volume, and accounted for nearly 85 percent of all budgeted tax sharing in 2018-19 FY (Figure 4.14). As these taxes are likely to be strongly correlated with economic activity, they could provide a steadily rising source of revenues for the subnational level – though allocations will be correlated with the geographic distribution of economic activity. In 2016/17, Yangon accounted for 87 percent of all of the IRD shared taxes by the union.

Figure 4.14: Shared taxes; percent of total; 2018/19 BE



Source: WB Staff Estimates, MOPF

Table 4.5: Basis of allocation of shared taxes in 2018/19

Tax source	Basis of allocation in 2018-19 FY
Commercial Tax (net of tax on imported goods)	15% of tax receipts from the largest SOEs at Yangon's LTO are redistributed across states/regions according to the general grant transfer formula. Non-SEE, cooperatives and private sector tax receipts are allocated 15% by state/region of collection
Special Commodity (Goods) Tax (net of tax on imported goods)	15% by state/region of collection
Individual Income Tax	5% by state/region of collection
Stamp Duty Tax	2% by state/region of collection

Source: Adapted from Valley et al. (2018); WB staff

4.37. A change to the distribution mechanism of shared taxes in 2017/18 has shifted allocations away from Yangon region toward other subnational governments (Table 4.5). The location of the Large Taxpayers Office (LTO) in Yangon means that large companies pay their taxes in Yangon, not the state or region of operation. This undermines the equity of the shared revenue system and is understood to be the impetus for change: fifteen percent of the commercial and special goods tax receipts collected from the largest State-Owned Enterprises (SOEs) at the Yangon LTO will be allocated across states/regions in accordance with the formula used for the general-purpose grant transfer. The result of the change is that Yangon's share of tax sharing decreased from nearly 87 percent in 2016/17 FY to 56 percent in 2017/18 FY.

The different transfers are not administered in a coordinated manner undermining predictability and transparency

4.38. The administration of transfers is fragmented, different entities are responsible for the administration of different streams. The general-purpose transfer is administered by the Budget Department within the MOPF; revenue sharing is managed by the Internal Revenue Department (IRD); and the Constituency Development Fund amounts are directly decided by the Union Hluttaw. There appears to be some operational cohesion between the administrative units; adjustments are made to the general-purpose grant to account for the described distributional outcomes and in-year variations of union shared taxes. This, however, is performed in-year and does not necessarily reflect a systematic interaction between the two transfers.

4.39. This institutional fragmentation leads to ad-hoc policy adjustments, which undermines the predictability and transparency of transfers. In-year adjustments are also made to transfer amounts to reflect state and region cash balances, which are, at least in part, impacted by some unpredictability of revenue sharing amounts, as the quality of revenue forecasting at the start of the year is still weak. For example, in 2016/17, adjustments were made to the general-purpose grant with four states and regions recording a nominal decline in the value of the grants from the previous years. The largest decline

was for Yangon. While the adjustment in Yangon is likely to have been an appropriate recalibration of grants to account for Yangon's rising OSR and shared revenues, it potentially dilutes future stability and predictability of the grants system for state and region governments.

Intergovernmental transfers are not designed to incentivize own-source revenue collection

- 4.40. **OSR growth has been slower than the growth in transfers.** As noted in Section B, states and regions outside of Yangon and Mandalay rely on general-purpose transfers, with OSR growing at an average rate of 7 percent for states and 14 percent for regions since 2012/13, compared to 27 percent and 40 percent growth in intergovernmental transfers (Table 4.1).
- 4.41. **Despite this weak OSR performance, transfers are not designed to incentivize OSR collection.** General-purpose transfer allocations are only marginally linked to OSR collections, OSR per capita has a limited weight in the allocation formula, which is only applied to 6 percent of the divisible pool. Revenue sharing is also designed in a manner that limits the autonomy of states and regions for the tax handles that are shared. For instance, states and regions have no say in setting the tax base, the tax rate or in administering the shared tax handles. There are no options for piggybacking; the potential for states and regions to add additional tax rates to shared taxes. Moreover, states and regions have no input in setting the percentage split of the shared revenues, which is decided by the union. Limited autonomy limits the incentives for states and regions to improve the base, rate, and administration of these shared taxes.

Own-source revenue (OSR)

- 4.42. **International experience suggests that OSR assignments should be linked closely to service provision, with the degree of tax autonomy clearly specified, and mindful of administrative constraints.**⁶ Linking revenue sources to services provided is the principle of finance following function. In some cases, the cost of service provision may differ across local jurisdictions, necessitating transfers from the center to cover the funding gap. There is no international benchmark on the appropriate level of tax autonomy, but global experience does highlight that there needs to be clarity on the degree of autonomy and the process for determining key revenue parameters to ensure efficient collection and to avoid undue distortions. Finally, a key element of revenue collection is the administrative capacity of local governments to collect the revenues and perform critical administrative functions related to ensuring tax compliance and providing taxpayer services. Adequacy of capacity, in turn, is important to ensure overall efficiency.
- 4.43. **In practice, the link to service provision ('finance following function') in Myanmar is blurred by the ambiguous and concurrent responsibilities of the subnational level of government.** As noted in Chapter 2 most functions of the states and regions, except for municipal services, are jointly held with the union; many functions are dependent, in one way or another, on the imprimatur of union line ministries, which play a crucial role in prioritizing investments, employing staff and channeling transfers through subnational governments for implementation. In this sense, subnational finance is less organized according to standard principles, such as "finance follows function", and is used as a tool for implementing decentralization policy. In short, given that the union is increasing discretionary allocations to the subnational level to be spent on concurrent functions, decentralization in Myanmar may be better characterized as "functions following finance". At this point in Myanmar's transition, this may well serve a useful political purpose: though in the longer term, the optimal financing mix will remain unclear without greater clarity over subnational functions.

6 http://web.worldbank.org/archive/website01061/WEB/0_CO-56.HTM

4.44. **This section will assess Myanmar’s OSR system performance by evaluating the clarity of revenue assignments, specification of tax autonomy, and efficiency of tax collection.** The key findings are that: (i) de facto revenue assignments are unclear and not well specified; (ii) states and regions enjoy limited tax autonomy, except for property and wheel taxes; (iii) OSR collection efficiency is low, with fragmented and distortionary collection and over-reliance on non-taxes; and (iv) property taxes, which could serve as an important source of OSR, are not being collected to their full potential.

De facto state and region revenue assignments are unclear

4.45. **The first key question when it comes to OSR collections is the revenue assignment, i.e., to decide who should tax, where and what.** As summarized in a review of international experience by Bird (2010)⁷, optimally, revenue assignments should follow three rules:

- (i) Lower levels of government, should, as much as possible, rely on benefit taxation of immobile economic units such as households and immobile factors of production. The benefit principle is that taxpayers are willing to pay in order to benefit directly from certain public goods (e.g., for public transport, toll roads, etc.). Lower levels of government are best placed to levy these “benefit taxes” as it would reinforce the direct accountability relationship between the citizen and the state;
- (ii) To the extent that non-benefit taxation of mobile economic units are required, this should be done by a higher level of government; and
- (iii) If non-benefit taxes are to be imposed by local units of governments, these should be imposed on non-mobile uses.

The use of these three rules leads, in turn, to a categorization of a standard optimal taxation approach across three levels of government: central, state and region, and local/municipal for major tax handles (Table 4.6).

Table 4.6: Tax assignment across jurisdictions – the optimal taxation approach

Revenue Handle	Union	States and Regions	Local
Payroll Income Taxes	Yes	Possible piggyback	No
Payroll taxes	Yes	Possible piggyback	No
Corporate Income Taxes/Profit Taxes	Yes	No	No
Natural Resource Taxes	Yes	Limited	No
Value added taxes	Yes	No	No
Retail sales taxes	Yes	Yes	No
Customs Duties	Yes	No	No
Excise Duties	Yes	Possible Piggyback	No
Property Taxes	No	No	Yes

4.46. **The *de jure* allocation of revenue assignments is enabling.** Schedule 5 of the 2008 Constitution, as amended in 2015, enables exercise of jurisdiction over a large tax and non-tax base for which states and regions are granted revenue-raising authority, although this is circumscribed by union legislation in some cases. These include municipal taxes including property taxes, transportation taxes, taxes on a limited range of forestry products, salt tax, and an entertainment tax. Sources added in 2015 to

Schedule 5 include: income taxes; commercial taxes; customs duties; taxes on document registration, on petroleum and natural gas, minerals, mining, gems, and woods, etc. Non-tax revenues include: land revenues, registration fees, and service fees including tolls, fines and profits from investment.

4.47. **In practice, however, it is difficult to determine if state/region *de facto* assignments match their *de jure* assignments.** Available fiscal data from state and region budgets do not allow for a detailed view of own-source revenue (typically reported as current tax, current non-tax and capital revenue categories). Table 4.7 highlights the significant current tax and non-taxes. However, as noted in Valley et al. (2018), even this breakdown into tax and non-tax is blurry; several “taxes” are described as license fees and fees for business operations although they are typically not classified as taxes. The exact nature of non-tax receipts is also blurred by weak transparency standards and budget practices that obscure detailed breakdowns. These data gaps make it difficult to determine whether all the revenue handles specified in Schedule 5 are being collected by states and regions, and whether some of these handles are still being collected at the union level.

Table 4.7: Major own-source tax and non-taxes⁸

Current Taxes	Current Non-taxes
Wheel tax, property tax, excise tax, mineral tax, land tax, water and embankment tax, tax on extraction of forest productions, tax on fisheries.	Fees, penalties, monopoly licenses

States and Regions enjoy limited tax autonomy

4.48. **There is no international benchmark on the appropriate level of tax autonomy, which is the degree of freedom for local governments to define the tax base, tax rate and tax administration.** This ranges from considerable autonomy to no autonomy across different revenue handles (Table 4.8). However, international experience does highlight that clarity on the degree of autonomy and the process for determining key revenue parameters is important to ensure efficient collection and avoid undue distortions.

Table 4.8: Classification of subnational taxes by degree of central versus local control⁹

Degree of Autonomy	Characteristic Features
Local autonomy in revenue policy	Subnational Government (SNG) sets tax rate and base. SNG sets tax rate but can't determine tax base – this includes options for piggy-backing. SNG determines tax base – this usually related to ability of SNG to grant exemptions.
Limited autonomy	SNG sets tax rate, but within limits imposed by the center. Tax sharing, where the split between center and SNG for taxes can only be changed with SNG consent.
No local autonomy	Tax sharing, but the split is fully determined by the center Center sets rate and determines the base of local taxes.

8 “What’s in the wallet? Public money in Myanmar’s state and regions”, Valley and Aung Kyaw (2018).

9 “East Asia Decentralizes”, World Bank (2005).

4.49. **States and regions in Myanmar presently enjoy limited tax autonomy, except for property and wheel taxes.** All states and regions enjoy full autonomy in terms of defining the base, setting the rates, and collecting and administering property taxes (McDonald and Hein, 2017).¹⁰ Constitutional amendments in 2015 that added a list of taxes to Schedule 5 suggest that further changes that expand subnational tax authority may well be forthcoming.¹¹ Yangon Region already made changes in 2017 and 2018 towards greater tax autonomy over wheel taxes, issuing regulations that change the rates. Limited evidence also exists of other states and regions taking initial steps to pass legislation to set rates or to define tax bases in line with the growing role and weight of subnational governments (Valley et al., 2018).

Table 4.9: Taxonomy of sub-national revenue arrangements

Revenue source	Local autonomy					
	Tax base		Tax rate		Administration	
	Typical	Myanmar	Typical	Myanmar	Typical	Myanmar
Own-revenue assignments:						
Property tax* and wheel tax	✓	✓	✓	✓	Possibly	✓
Other Schedule 5 taxes	✓	Possibly	✓	Possibly	Possibly	✗
Revenue sharing	✗	✗	✗	✗	Possibly	✗
Surcharges on national taxes	✗	N/A	✓	N/A	Possibly	N/A

Source: Adapted from Valley and Aung Kyaw (2018); *McDonald and Hein (2017); Note: N/A = Not Applicable

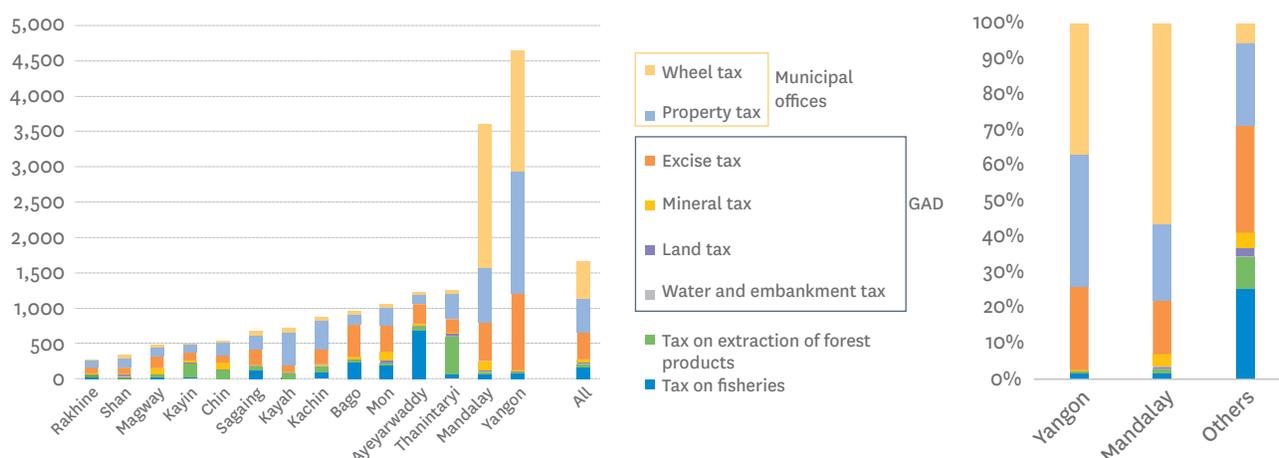
States and regions rely on distortionary non-tax revenues, while OSR tax collection is fragmented increasing compliance costs

4.50. Own-source tax collection is highly fragmented. Figure 4.15 highlights the fragmentation of own-source revenue collection. For Yangon and Mandalay Regions, wheel tax and property tax account for more than 70 percent of total revenues, other smaller handles are less significant. For other states and regions, own-source revenue collection is fragmented almost equally across several revenue handles. On average, an individual revenue handle yields less than 2,000 Kyat per capita annually nationwide.

10 McDonald, L. and Hein, A. (2017). "Managing the challenge of rapid urbanization: a review of the property tax system in Myanmar" Renaissance Institute, Yangon.

11 For example, the list includes taxes on natural resources and customs; decentralization of which may have significant implications for horizontal equity between locations. Source: Section 3 of the Law Amending the Constitution of Republic of the Union of Myanmar, The Pyidaungsu Hluttaw Law No. 45, 22 July 2015.

Figure 4.15: Breakdown of SNG tax collection, by item, 2016/17, Kyat per capita Share of total



Source: Adapted from Valley et al (2018)

4.51. Fragmentation in OSR increases administrative inefficiency, duplicates tax compliance efforts, and imposes a compliance burden on the taxpayer. OSR revenues are collected by different ministries and departments, with limited standardization rules and regulations across and within states and regions. The eight taxes highlighted in Table 4.6 collected by four separate ministries: municipal offices (property and wheel taxes); GAD (land, excise, mineral and water and embankment taxes); Department of Forestry under the Ministry of Natural Resources and Environmental Conservation (tax on extraction of forest products); Department of Fisheries under the Ministry of Agriculture, Livestock and Irrigation (tax on fisheries). Non-taxes are even more widely dispersed across ministries and departments.

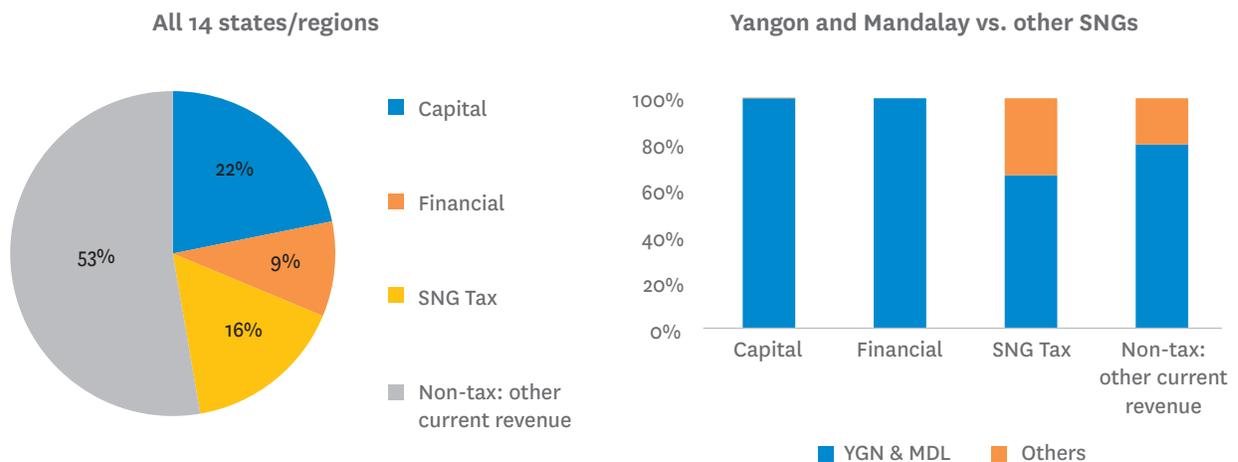
4.52. In addition to the issues of transparency and fragmentation, states and regions tend to rely on license fees, which have the potential to introduce economic distortions. More than half of own-source revenues collected by states and regions are non-tax revenues, mainly in the form of license fees for business operations (Figure 4.16). The share of non-tax revenues in OSR is high, accounting for approximately 86 percent in Shan in 2017/18. In Yangon and Mandalay, non-tax revenues account for about 39 and 64 percent of OSR, respectively (Figure 4.16). Many of these non-tax revenues are collected by municipalities and take the form of fees and licenses, at times issued through auctions, that necessitate up-front payments to engage in economic activity (Bissinger, 2016).¹² Examples include the rights to collect market fees, operate jetties and licenses to operate slaughterhouses. The latter, which continue to be a significant source of OSR in smaller cities impose restrictions on the type of meat to be sold, prices, and area of sales. These fees and licenses lend themselves well to local revenue collection. However, in the way that they are currently implemented in Myanmar, these fees introduce several economic distortions, including:

- Constraints to starting new businesses because of the need for up-front payments, especially given challenges with accessing credit. Such diversion of resources can have a disproportional impact on women entrepreneurs, who tend to have poor access to capital;
- Introducing opportunities for rent-seeking in the case of license-related restrictions; and
- Redistributing resources from rural areas to urban areas; higher meat prices affect the whole township, but the proceeds of slaughterhouse licenses are only spent within municipalities¹³.

12 Bissinger, J. (2016). Local Economic Governance in Myanmar. The Asia Foundation, Yangon, Myanmar.

13 Winter, M. and Nandar Thin, M (2016) The Provision of Public Goods and Services in Urban Areas in Myanmar: Planning and Budgeting by Development Affairs Organizations and Departments. The Asia Foundation, Yangon, Myanmar.

Figure 4.16: State/region OSR; by type, as % of state/region budgets, excluding union transfers, 2016-17



Source: Adapted from Valley et al (2018)
Note: YGN = Yangon, MDL = Mandalay, SNG = subnational government

Property taxes could be an important source of own-source revenues, but are currently underutilized

4.53. **Property taxes are well aligned with the fully devolved functional responsibilities over municipal services.** In Myanmar, property taxes are an ongoing tax on owning property paid to the local municipality. They are distinct from other taxes and charges levied on property, collected by the union and/or paid once and triggered by property transactions (Table 4.10). Since land is a scarce resource, its value and the value of property tax collected on it tend to rise over time.¹⁴ Property tax revenues are not likely to provide sufficient revenues to fund major social expenditures (education, health, social assistance), they are generally adequate to support property-related services such as local roads and garbage disposal (Bahl, 2009), services often assigned to subnational governments.

Table 4.10: Taxes and charges on property in Myanmar

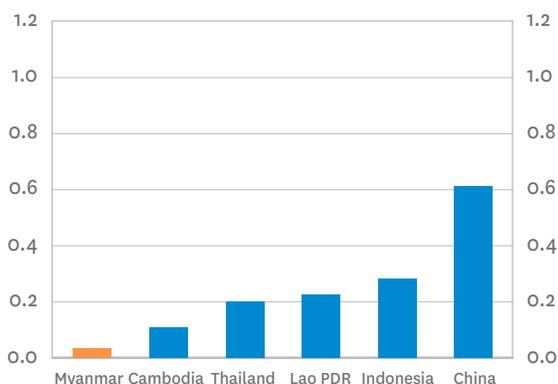
Type	When paid	Paid To
Property tax	Regularly	Municipalities
Capital Gains Tax	Once: on sale of transfer of property	Union
Stamp duty	Once: on sale of transfer of property	Union*

*With 2 percent shared with the state/region of collection

14 This relies on valuation systems for property tax being flexible enough for property tax to capture the increases in property values. Generally, valuation systems are not so nimble. Accordingly, property tax is sometimes considered “inelastic” in that it does not grow automatically when the economy expands (Kitchen and Slack, 2016)

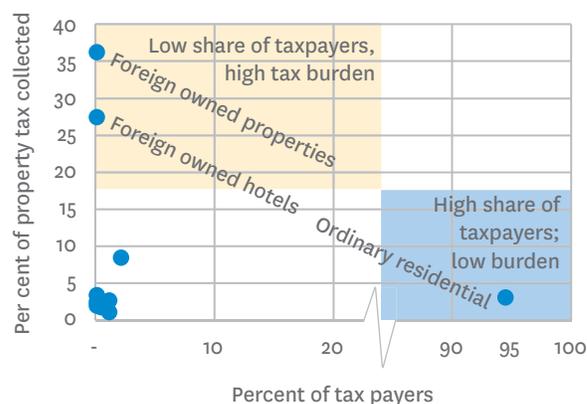
4.54. However, property taxes are being underutilized as a revenue handle. In aggregate, the total yield of property tax is small, accounting for only 0.03 percent of national GDP in 2013. This ratio is well below the rates observed in other middle-income countries in the region (Figure 4.17). In total, YCDC accounted for around half of all property tax collected nationwide (MMK 13.214 billion) in 2016-17. However, the amount of property tax collected in YCDC is small compared with other cities in Asia (Table 4.11). Primarily, this reflects small collections from ordinary residential households, which account for only 3.2 percent of the total tax collected by YCDC (MMK 0.419 billion), despite accounting for almost 95 percent of all registered properties. Much of this burden is borne by a small number of foreign-owned hotels and accommodation (e.g., condos) (Figure 4.18).¹⁵ The median payment made by the 283,569 residential properties, for which data are available, is only 203 MMK paid every six months (\$US 0.14). Eighty two percent of residential properties in Yangon pay less than 350 MMK in property tax every six months – equivalent to the price of a single cup of tea. Only one township in YCDC (Dagon) has a median tax payment above 1,000 MMK (1,231 MMK). In Bahan, considered to be one of the wealthiest areas of Yangon, the median tax payment across 7,068 residential properties is only 254 MMK.

Figure 4.17: Property tax in middle income Asia; percent of nominal GDP; 2013



Sources: IMF Government Financial Statistics Database (Revenue): “Recurrent taxes on immovable property”; World Bank Development Indicators; Myanmar Ministry of Planning and Finance

Figure 4.18: YCDC property tax collection; April 2016 - March 2017; by taxpayer type



Source: YCDC

15 Around 660 foreign owned accommodation properties accounted for nearly two-thirds of the total tax property collected in 2016-17 (see McDonald and Hein, 2017).

Table 4.11: Property tax in cities across Myanmar and Asia 2016/17
Compared with collections in selected Asian cities and other ordinary household purchases

City/Municipality	Per capita collected annually (\$US in parentheses, 2016 values) ^a	Median tax payment (each 6 months)	Cups of tea equivalent ^b
Yangon (2016)	2,535 MMK (\$1.86)	203 MMK	Less than 1
Ulaanbaatar (2013) ^c	(\$3.08)		
Bangalore (2009)	(\$21.45)		
Manila Metro (2009)	(\$22.05)		
Delhi (2009)	(\$29.09)		
Kuala Lumpur (2009)	(\$25.01)		

a – using the prevailing period-average USD exchange rate and adjusted for domestic inflation.

b – presumes the price of a cup of tea is approximately 350MMK (\$US \$0.26).

c – property tax in Ulaanbaatar is levied only on businesses.

Sources: McDonald and Hein (2017)

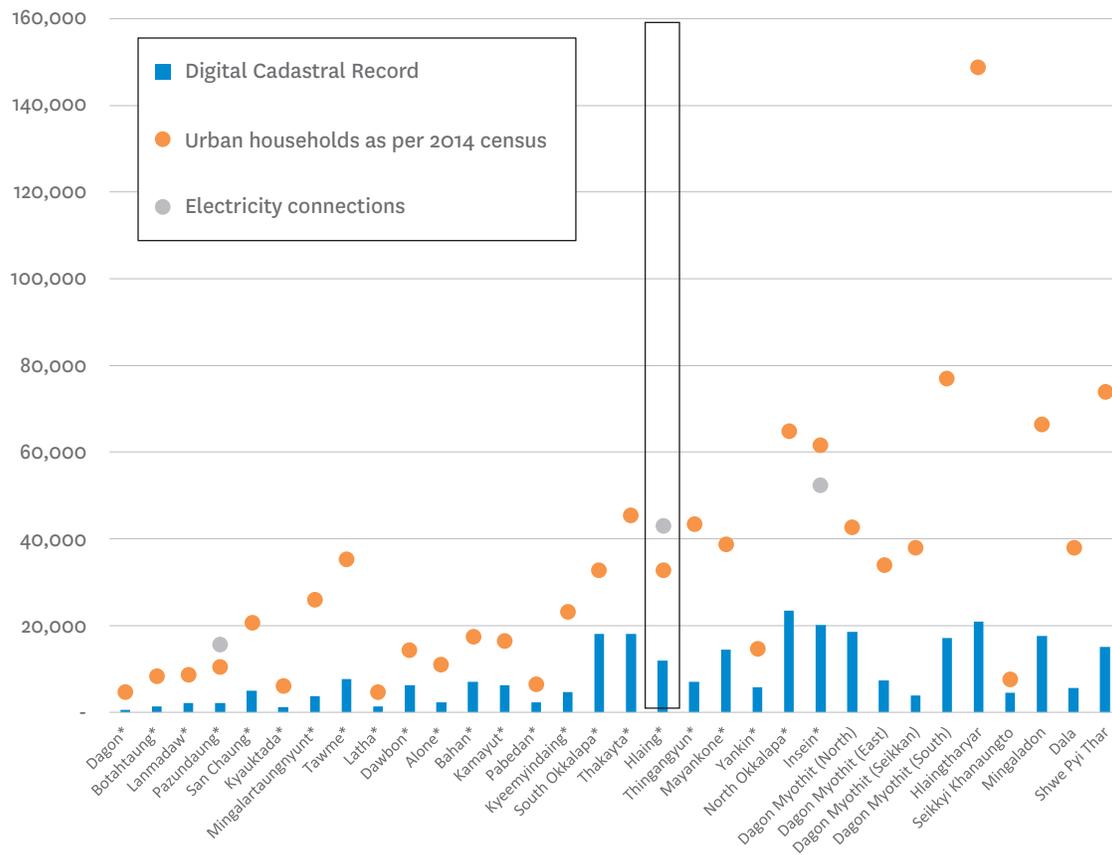
4.55. **There are three primary reasons why the property tax system is ineffective and inequitable (McDonald and Hein, 2017).**¹⁶ Firstly, substantial coverage gaps mean a large share of properties is not paying a fair share of tax. The lack of data on the total number of properties eligible for property tax in each city means that the true magnitude of coverage gaps is not known. However, comparing cadastral records with independent indicators from the Census and the number of electricity connections suggests that the gaps may be large: between one-third and one-half of all properties in some cities (Figure 4.19). In Hlaing Township, for example, 11,884 properties are on the cadastral record, yet the township had 32,837 households in the 2014 Census and around 43,000 separate electricity connections in 2017.

4.56. **Second, the values assigned to properties for property tax assessment are well below their market value, and are not consistent with valuations used for taxes related to property sales.** Like other cities across Myanmar, YCDC values properties for tax purposes using an area-based non-market mass-appraisal system. The total taxable value of a property, expressed as an annual rental value, is the sum of the applied value of land and buildings; calculated as three percent of the estimated spot value of land and six percent of the estimated spot value of buildings, both expressed as a value per square foot.¹⁷ The magnitude of the valuation gap is evident when the applied valuations used by YCDC to calculate taxable value are compared with a sample of median annual market rents per square foot in four of YCDC's wealthier townships (Table 4.12). The median valuation in most townships is more than two orders

16 McDonald, L. and Hein, A. (2017) "Managing the Challenges of Rapid Urbanisation: A Review of the Existing Property Tax System in Myanmar" Renaissance Institute, Yangon.

17 Spot values are determined as one of two township tiers, two types of road and four type of building construction. Progressive 20 percent deductions are provided for each higher floor until 4th floor. That is, the value of the second floor is 20 percent less than the value of first floor and the third floor is 20 percent less than the second floor and so on.

Figure 4.19: Ordinary residential properties on the digital cadastral record in YCDC; by township, cadastral record compared with census information electricity collections*



*Tier 1 townships, (marked with a star) are those designated by YCDC itself as being of higher value; a fact reflected in the higher values ascribed to land and buildings
Sources: YCDC; 2014 Census; Ministry of Electricity and Energy; McDonald and Hein (2017)

of magnitude larger than YCDC.¹⁸ Moreover, YCDC applies the same valuation across all 23 designated Tier 1 townships, despite the considerable variation between and within townships. These low valuations, in turn, are correlated with low average tax collections (Figure 4.20). Static property values also mean that the real value of property tax collected declines each year. Furthermore, property valuations are not aligned with valuations used by other government departments, such as the Internal Revenue Department (IRD), for taxes related to property and land sales.

18 The analysis is limited to properties that are likely to be comparable to ordinary residential properties, though will likely provide biased snapshot of overall properties given their presence in a higher-end property journal. Outside of Bahan, sample sizes are also small

Table 4.12: YCDC property tax valuations and market valuations of rental properties
kyat for square foot; Tier 1 townships

	Spot valuation	Applied / Median market valuation (sample size) [max : min]
Spot valuation of ordinary residential building* (6 percent applied)	700	42
Spot valuation of ordinary residential land** (3 percent applied)	1,000	30
Total YCDC valuation of ordinary residential property for property tax		72
Market valuation in Bahan TSP***		10,745 (138) [127,347 : 1,028]
Market valuation in Kyauktada TSP***		9,436 (38) [50,794 : 3,840]
Market valuation in Tamwe TSP***		8,000 (65) [45,714 : 1,500]
Market valuation in North Dagon TSP***		4,500 (18) [12,500 : 480]

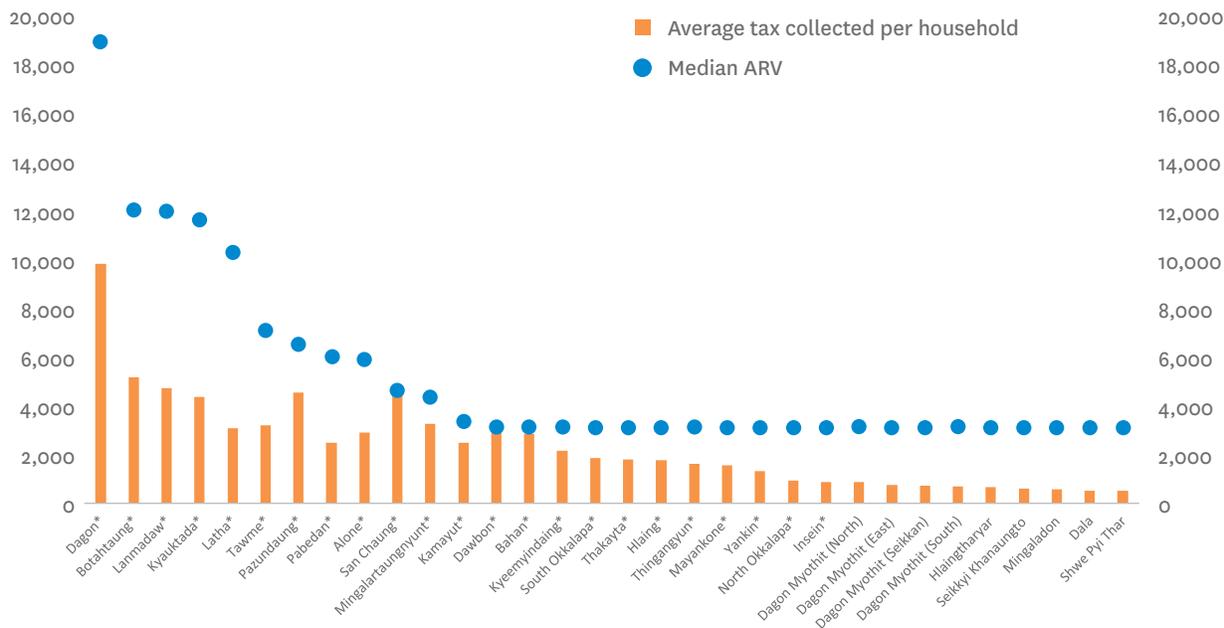
*Presumes Reinforced Concrete (RC) / Steel

**Presumes wide road

*** Market valuations limited to condos, apartments and single-family dwellings; limited to properties rented in local currency; excludes land only listings. Market valuations are now a random sample; collected from a listing in Shwe Sath Tagan Property Journal as at January 2019.

Sources: McDonald and Hein (2017); Shwe Sath Tagan Property Journal

Figure 4.20: YCDC property tax collections ordinary residential collections; Valuations and average tax collections*; Kyat



*Tier 1 townships, (marked with a star) are those designated by YCDC itself as being of higher value; a fact reflected in the higher values ascribed to land and buildings.

Source: YCDC; WB Estimates

4.57. **Third, weak administration exacerbates the problems of a narrow tax base.** Administration systems remain fragmented, paper-based and slow to respond to changes on the ground (for example, new property developments or sub-divisions). Municipal administrations are often unable to access the necessary information from township administrators and other government departments to keep the records updated. These issues are being made worse by rapid migration to urban areas.

Subnational borrowing

4.58. **Subnational borrowing is permitted in Myanmar by law. Subnational borrowing, enabled by the 2015 constitutional amendment, is specified under Chapter 6 of the 2016 Public Debt Management Law.** It indicates that states and regions can borrow from both Myanmar and international lenders, subject to approval from the union government and the Union Hluttaw (Public Debt Management Law, Chapter 6, Article 20). Region and state governments are also required to report on their outstanding debt and new loans no later than one month after the end of each quarter.

4.59. **Available fiscal information suggests that states and regions are not borrowing to finance spending, but this may reflect weak reporting.** Available evidence suggests states and regions are not issuing private debt and are not managing debt independently of the central government. Financial revenue observed in Yangon and Mandalay budgets appears to be ODA funds on-lent from the union government, possibly including a subsidiary agreement between the MoPF and subnational authorities. However, this may be reflecting a lack of data rather than a lack of subnational borrowing. International experience suggests that a framework for regular reporting of liabilities, including contingent liabilities, by the subnational government to the central government is critical to avoid an unsustainable build-up of liabilities.

4.60. **Direct borrowing by the subnational government is currently not feasible in Myanmar given limited debt management capacity and lack of credit-worthiness of subnational borrowing entities.** Government debt markets are nascent in Myanmar, with the first union treasury bonds issued only in 2016 and long tenor debt instruments still absent. As highlighted in the Myanmar PER 2017, debt management capacity is at an early stage in Myanmar; a modern debt management office with front, middle, and back-office functions was only established in 2015. Such functionality is absent at the subnational level, which raises the risk of unsustainable borrowing and inefficient management of cost-risk trade-offs for borrowing. Also, the limited own-source revenue base for most states and regions, except for Mandalay and Yangon (as noted below), limits their creditworthiness and could lead to a high cost of borrowing.

C. Policy scenarios

Intergovernmental transfers policy scenarios (1-3)

- 4.61. **As a part of the chapter collaboration, World Bank teams worked collaboratively with the Internal Revenue Department (IRD) and the Intergovernmental Fiscal Relations Division (IFRD) in MoPF to develop an intergovernmental revenue model.** The model integrates data for all available sources of subnational financing: general-purpose transfers; revenue sharing; and OSR; for all states and regions from 2012/13 to 2017/18 and provides medium-term baseline projections for all of these sources for the five coming fiscal years through 2023/24.¹⁹ This model allows the user to study trends in financing per capita across states and regions, and also to model financing impacts of changes in key parameters.
- 4.62. **The model was used to examine the impact of stylized policy scenarios in order to inform policy recommendations and to improve the functioning of the subnational financing system.** The results are summarized in Table 4.13, and details of the scenarios are provided in Box 4.3. Scenarios studied are:
- **Policy scenarios 1 and 2 focus on the design and application of the general-purpose transfers formula,** responding to some of the limitations examined in Section C. The key policy-related takeaways from these scenarios are that: (i) changing the general-purpose transfer formula has limited impact on redressing horizontal imbalances, and (ii) applying the formula to the full divisible pool creates significant volatility that undermines the predictability of the transfers. The results are summarized in Table 4.13, and details are provided in Box 4.3.
 - **Policy scenario 3 relates to revenue sharing.** The key policy takeaway from this scenario is that changing the basis for sharing from origin to a formula basis results in significant revenue loss for Yangon, which needs to be offset. This large reduction of Yangon's share makes this reform challenging.

19 The model relies on Budget Estimates.

Table 4.13: Scenario analysis
Average per capita revenue gain or loss from 2018/19 to 2023/24

State / Region:	Scenario 1a	Scenario 1b	Scenario 2	Scenario 3
Kachin	-0.4%	-0.1%	-13.9%	4.9%
Kayah	-0.4%	-1.0%	38.4%	9.2%
Kayin	-0.3%	4.6%	42.8%	8.8%
Chin	-0.6%	-1.3%	11.6%	7.2%
Sagaing	-0.2%	-0.3%	-14.4%	4.0%
Tanintharyi	-0.3%	-0.9%	-30.6%	4.1%
Bago	0.0%	-0.5%	-3.7%	4.5%
Magwe	0.1%	1.5%	-5.9%	4.9%
Mandalay	0.3%	-0.9%	-3.6%	-0.6%
Mon	-0.1%	-1.0%	1.3%	5.4%
Rakhine	0.3%	3.4%	15.4%	6.9%
Yangon	0.1%	-0.2%	2.3%	-12.9%
Shan	0.0%	0.0%	-5.7%	4.4%
Ayeyarwady	0.7%	-1.4%	8.5%	5.4%
Average Max to Min Ratio for 5 years	11.4	11.5	11.8	11.7
% change in Average Max to Min ratio compared to baseline	-1%	0.1%	2.4%	1.4%

Box 4.3: Policy scenarios for intergovernmental fiscal transfers

Policy Scenario 1: Changing the transfers formula.

- (i) **Key change:** Two types of changes to the general-purpose grant transfer formula are analyzed: (a) introducing the number of poor in the formula; and (b) removing all fiscal capacity constraints variables in the formula except for own-source revenue collection.
- (ii) **Rationale for scenario design:** The introduction of the number of poor in the formula increases the weight of populous states in the allocation, which has been cited as a major drawback in current formula design. Increasing the weight of own-source revenue collection in the formula, which is negatively correlated with allocations, helps work out if including this fiscal capacity variable is indeed associated with a strong negative impact on horizontal equity.
- (iii) **Key result:** These changes only have a marginal impact on redressing horizontal imbalances (Table 4.13). There is no change in total funds transferred to states and regions. Introducing the number of poor in the formula helps Yangon and Ayeyarwady Regions, while other states and regions are impacted negatively. Removing all fiscal capacity variables except own-source revenue helps Kayin, Rakhine, and Shan States, but only marginally.

Policy Scenario 2: Formula applied on the pool and not just on the marginal amount.

- (iv) **Key change:** This scenario distributes the whole general-purpose grant pool via the current fiscal formula, rather than applying it to the new annual funds only.
- (v) **Rationale for scenario design:** The scenario design responds to the limitation highlighted in Section C that the formula only applies to 6 percent of the divisible pool and thus only has a limited impact on redressing horizontal imbalances.
- (vi) **Key result:** This change has a significant impact on resource availability for different states/regions, and introduces volatility in the first two years of application. On aggregate, horizontal equity is not impacted much over 5 years. Yangon, Kayah, Kayin, Chin, Rakhine and Ayeyarwady gain. In contrast, financing for Sagaing and Tanintharyi Regions goes down significantly.

Policy Scenario 3: Commercial tax revenue sharing by formula, and not by origin.

- (i) **Key change:** This scenario distributes the 15 percent share of commercial tax collection from the private sector via the current formula, instead of by origin of collection.
- (ii) **Rationale for scenario design:** Section C highlighted the move towards sharing commercial taxes by formula rather than by origin since 2017/18, starting with SEE commercial taxes. These changes were introduced on the basis that while SEEs operate and make profits on activities throughout the country, they pay taxes at the LTO based in Yangon. A similar logic could apply to private-sector economic activity as well and this is therefore studied as a policy scenario.
- (iii) **Key result:** This change has a significant negative impact on Yangon Region. This is expected as Yangon is the center of economic activity and it benefits from recent reforms in tax administration through the creation of LTO and MTOs. All other states and regions gain at Yangon's expense.

Policy scenarios for OSR involving improved land value capture

4.63. Policy scenario 4 focuses on improving OSR in Yangon via improvements in property tax collections.

As noted in Section C, the property tax is a handle over which states and regions enjoy autonomy, though is underperforming and is inequitable in its application and coverage. The impact of three potential changes, focusing on ordinary residential properties is examined below (the results are summarized in Figure 4.22):

i. Improving tax administration by closing cadastral gaps

- **Key change:** Estimating the size of the coverage gap is inherently tricky. For several reasons both electricity connections and census information for urban households is likely to overestimate the coverage gap.²⁰ The scenario assumes a coverage gap of 50 percent in each township, i.e., doubling the number of taxpayers on cadastral record in each township. These new properties are multiplied by average tax collection in each township.
- **Key result:** This scenario results in doubling the total property tax collection from ordinary residential properties to MMK 0.839 billion. It also boosts total property tax collection in YCDC by an estimated 3.17 percent based on 2016-17 collections (12.2 billion Kyat).

²⁰ For example, multiple electricity connections to a single dwelling is possible. Some properties with electricity connections are exempted from paying property tax (e.g. and schools, police, etc.) YCDC has a unique approach to collecting taxes from higher-density residential dwellings: it can either be collected as one payment or from individual owners depending on negotiations among the affected parties. Anecdotally, some property records are also kept on paper files.

ii. Tiered change in valuations:

- **Key change:** The policy scenario focuses on the revenue uplift from a change in valuations that lifts average tax collections in the wealthier Tier 1 townships to MMK 10,000 – a level slightly above the current average tax collection in the highest-taxing township Dagon – and the average tax collection is lifted to MMK 5,000 in designated Tier 2 townships.
- **Key result:** The result is the collection of an additional MMK 2.822 billion in property tax. This scenario boosts total property tax collection by 17.27 percent based on 2016/17 collections. The most significant uplift in revenue comes from those townships that are designated as being wealthier, have large numbers of properties, yet have median valuations that are disproportionately undervalued (e.g., Insein, North Okkalapa, etc.) (Figure 4.21)

iii. Focus on raising valuations in the richest townships

- **Key change:** This is modeled as Scenario 5ii plus, a further tenfold increase in the average tax collection in five townships that are widely accepted to be among the richest: Kamayut; Bahan; Yankin; Mayangone; and Kyauktada. This scenario, in effect, proxies bringing valuations in these townships closer to market value and better reflecting the geographic differences in valuations within the city.
- **Key result:** The result is the collection of an additional MMK 5.965 billion of property tax. This would boost total property tax collection by 43.14 percent based on 2016/17 collections. The scenario shows that considerable additional property tax revenue could be generated by placing a stronger focus on increasing tax collections in Yangon's richest townships.

4.64. **A key takeaway from these scenarios is that the gains from changing policy outweigh revenue gains from administrative improvements.** This is highlighted in Figure 4.22 below, where the potential revenue gains from modest policy changes, related to valuations or introduction of a modest development charge, are more than double the gains associated with improving administration and closing the coverage gap.

D. Policy recommendations

4.67. The key findings in this chapter related to the functioning of the subnational finance system are:

- **State and region government rely heavily on intergovernmental transfers.** State and region financing has increased considerably since 2012/13 but remains low in per capita terms and relative to needs in all states and regions. All states and regions except Yangon and Mandalay depend on general-purpose transfers from the union to finance their budget.
- **The sluggish growth in the overall national resource envelope is a core constraint.** Given that subnational governments are likely to depend on transfers from the union for the foreseeable future, as is the case in many other federal countries, transfers will only be able to increase substantially if the national resource envelope expands.
- **Recent reforms to intergovernmental tax sharing based on derivation are inherently pro-cyclical.** This means it has become a key mechanism for reinvesting in the sources of growth. Shared taxes complement the stronger OSR performance in Yangon and Mandalay.
- **Improvements to intergovernmental finance have been made but significant challenges remain.** The size, predictability and efficacy of these transfers in redressing horizontal and vertical imbalances have improved considerably since 2012/13. The past five years have also seen some significant institutional changes; an institutional basis for revenue sharing was introduced and there was a gradual move toward formula-based general-purpose transfers. However, significant challenges remain, notably: (i) the two transfers are administered in a fragmented manner; and (ii) the transfers do not provide any incentives for own-source revenue collection.
- **Low and inefficient own-source revenue collection is a significant challenge.** Own-source revenue growth has been limited, except in Yangon and Mandalay. States and regions enjoy limited tax autonomy, except for property and wheel taxes. The collection is fragmented across a range of tax handles, and is also distortionary, with state and region governments reliant on a range of fees and non-tax handles. Property tax collections, which could be significant for Yangon, are currently well below potential.

The chapter considers a phased policy approach, cutting across each of the sources of subnational finance, to improve the functioning of the system.

General-purpose transfers

4.68. **General-purpose transfers need to be gradually reformed, moving towards greater use of the transfer formula and a discussion about the size of the divisible pool based on a vertical imbalance analysis.** Without significant changes to the size of the divisible pool, any changes in the basis for allocation necessarily benefit one state or region at the cost of another. Furthermore, policy scenario 1 and 2 in Section D highlight that changes in the transfer formula and its sudden application to the whole divisible pool will have limited impact on redressing horizontal imbalances and may lead to volatility. Therefore, in the short term, the recommendation is to accelerate the increase of the share of the divisible pool allocated by the formula (from the current low level of 6 percent) and to initiate a process to update the formula in consultation with the states and regions. One possible approach is to increase the formula-based share of the transfer by 8-10 percentage points each year (substantially increasing the current 2 percent rate) with the ultimate aim of subsuming the full grant into the formula over around ten years.

- 4.69. **In the medium- to longer-term, it will be necessary to have a forum between the union and states and regions to regularly discuss the size and basis for the divisible pool and formula allocation.** The forum could discuss how the intergovernmental transfer system is doing and if needed it could update the transfer formula - the basis for revenue sharing - and it could provide a space for states and regions to express their concerns. Such discussion is critical to ensuring longer-term stability of general-purpose transfers and to ensure that the size of these transfers is safeguarded against competing budgetary priorities. The forum could be the existing Financial Commission but maintaining the voice of states and regions is critical.

Revenue Sharing

- 4.70. **Prior to discussing revenue-sharing and own-source revenues, it should be noted with caution that tax reforms, whether enhancing tax rates or expanding the tax base, are never politically easy.** The incidence of increasing development charges on buildings as discussed below for example, would eventually fall on buyers and would attract criticism. However, the options for reforms discussed above can be introduced sequentially with a focus on ensuring the progressivity of taxation.
- 4.71. **Revenue sharing could be reformed to incentivize collection and to enhance revenue autonomy.** The suggested options would give states and regions various levels of rights to set tax rates and base on the immobile services components of the commercial tax (such as restaurants, hotels, sale of building and jewelry) and stamp duty base that do not have any inter-subnational government trade implications.²¹ This reform would be in line with the current tax sharing practice and consistent with the benefits principle of taxation which states that the tax paid (upon consumption of a meal, for example) should be closely linked the benefits provided (cleanliness, street lighting, for example). Consumption taxes on services are levied by subnational governments in many federal countries (Shah, 2007).
- 4.72. **All states and regions are going to benefit from this option, especially Yangon and Mandalay Regions as they account for a clear majority of the commercial and stamp taxes collected.** This scenario reflects the concentration of private sector business activity, and the strongest property markets, which are in the economic hubs of Yangon and Mandalay cities. Yangon and Mandalay collectively account for 89 percent of budgeted stamp duties yet receive only 2 percent of total revenues. With the buoyant potential of some handles assigned to the growth poles of Yangon and Mandalay, the union government can focus on its role to address horizontal inequities. This reform would also help strengthen the nexus between spending and revenue.
- 4.73. **Stamp taxes are arguably the best candidates for full devolution of rate and base setting with maximum retention of the marginal gains by the respective states/regions.** Stamp taxes are assigned to subnational governments in many federal countries (Australia, India, and Pakistan, for example) because their tax base is immobile.
- 4.74. **Table 4.14 presents several options for consideration, summarized below:**
- **Option 1:** This option would authorize states and regions to add a percentage on top of the tax rates from the immobile bases to be fully passed on to them. A one percent increase in the tax rate on restaurants in Yangon which are assessed by the regional directorate of IRD, for example, would generate an additional \$1.2 million above baseline (commercial tax rates in the Appendix). The reform does not entail any direct cost to the union collection. This tax sharing approach is currently applied in a number of federations, including the United States and Canada for sales taxes. Allowing piggybacking would also let Yangon, in particular, capitalize on its network externalities as the

21 This reform aligns with the constitution amendment of 2015 that enabled subnational government shared jurisdiction over a large range of taxes.

established economic hub. This is the most feasible option as it provides additional revenues and incentives to the states/regions to utilize policy instruments with the least administrative difficulty.

- **Option 2:** This option builds on Option 1 by devolving the right to expand the tax base to states/regions in addition to the rate-setting, and by providing incentives to share the benefits of increased compliance. The baseline amount may be shared with the existing ratios but any marginal increase above the baseline (or the agreed trendline) may be shared according to the revised sharing formula with the bulk of the amount going to states/regions because of the added efforts and political cost invested to enhance the rate, base or compliance. An example of an increase in a share of commercial tax from 15 to 85 percent for the marginal revenue gains because of the state/region efforts is provided in Table 4.15.
- **Option 3:** This option builds on Option 2 by further devolving tax administration. It provides most incentive to local governments but presents significant implementation challenges (e.g., capacity, institutional change). It is presented as a long-term option, the feasibility of which may depend on other areas of Myanmar’s decentralization reforms.

4.75. To ensure that the union government is not disadvantaged, any reassignment would need to be revenue-neutral, at least in the short and medium terms. The revised sharing formula (85 percent to be passed on to states/regions, for example, and 15 percent to be retained by the union government as the administration cost) may be applied only on the marginal revenue increases because of the reform effort. Administration of a devolved base of commercial and stamp tax may still remain with the union government in the short and medium terms. The union government could charge the 15 percent fee to cover the collection cost. This option would avoid fragmenting and burdening the existing limited capacity of states/regions to collect taxes. However, states/regions may be given a role in performance management and of the administration of these taxes so that reforms are duly implemented.

Table 4.14: Reform options for revenue sharing

	Rate	Base	Admin	Revenue Share %	Incentive Alignment	Difficulty of Implementation
Option 1: Tax room sharing	Piggy-back	No change	No change	No change; the marginal increase to be fully passed on to the relevant SNG	Better; insufficient incentive for states/regions to increase the base or compliance, the two core issues.	Low
Option 2: Policy devolution	Devolved for Immobile	Devolved for immobile	No change	Baseline amount is shared as per the existing ratio: the marginal revenue share to be flipped in favor of the SNG.	Strong. Higher incentives for states/regions to increase rate and base. Though achieving improved compliance would be difficult given the absence of formal control in administration.	Medium
Option 3: Policy and administration devolution	Devolved for immobile	Devolved for immobile	Devolved	Baseline amount is shared as per the existing ratio: the marginal revenue to be fully retained by the SNG	Strong. Higher incentive for states/regions to increase rates, base and also compliance.	High

- 4.76. **A closer analysis of Option 2, which relates to reassigning a substantially larger share of revenues of defined immobile bases of commercial taxes to Yangon and Mandalay, highlights that it could provide Myanmar's growth poles with a buoyant source of revenues.** Using information on commercial taxes collected from the Yangon IRD office²², the baseline collection of a subset of restaurants is 7.2 million dollars. This amount would continue to be shared at the ratio of 85 to 15 percent. Any marginal increase because of the revenue-enhancing efforts of the YRG will be shared with flipped ratios, the union government getting 15% and YRG getting 85%. This reform would allow Yangon to capture growth in economic activity and/or improved compliance and changes of policy like the expansion of the base. For example, a 10 percent growth in the number of restaurants and 10 percent increase in average turnover may yield an additional \$1 million to be shared. Each 10 percent increase in the number of restaurants alone yields an additional \$0.6 million per year. This marginal increase may be shared as per the flipped ratio to align YRG political costs with the added revenue incentives.
- 4.77. **Administration of commercial tax and stamp taxes also need reform.** Independent of any tax-sharing reform, SNGs have a substantial stake in the collection of commercial tax, for example. Better surveys of the tax base, improved compliance, risk-based audits, tax facilitation measures, performance monitoring and use of ICTs will benefit both the government and stakeholders.

Own-source revenues

- 4.78. **The fragmentation of own-source revenue collection could be reduced by rationalizing the number of non-tax revenue handles.** As highlighted in section B, states/regions collect a range of small distortionary fees and taxes. Removing some of the non-tax handles is unlikely to reduce own-source revenues significantly. States and regions could potentially compensate for the revenue loss by focusing on property tax collections or commercial and stamp tax reforms (either after piggy-backing or full devolution). The gains from this reform could reduce local economic distortions (boosting economic activity) as well as re-direct scarce tax administration capacity towards a more efficient collection of less distortionary and more buoyant tax handles.
- 4.79. **Property-related taxes and charges represent the most promising avenue for OSR collection, particularly from policy changes related to closing coverage and valuation gaps.** States and regions enjoy autonomy over property taxes. As noted in Scenario 5 in Section D, there is considerable untapped revenue in property taxes. Policy changes in particular, such as closing coverage and valuation gaps among Yangon's wealthiest townships, offer significant revenue potential, as compared to administrative changes. Regarding valuation gaps, one measure that can be immediately considered is to harmonize valuations used by all government departments (such as YCDC and IRD in Yangon) for all property-related taxes.
- 4.80. **The government may wish to immediately focus on raising awareness of the municipal governance and property tax system. In general, the nature and function of property tax is little understood by the public or by policymakers and, ultimately, reform is impossible without public support for change.** Concomitant administrative reforms can focus on widening the tax base and improving compliance and can also be put in place straight away as they are under the control of municipal governments and are technically feasible. Policy reforms, with large revenue effects, will have the best possible chance of succeeding. As with many countries, property tax is a contentious subject, and actual revenues from collections may remain modest in the short to medium term. However, in the longer term, a robust and well-functioning property tax system may become a critical revenue source for larger cities such as Yangon and Mandalay (World Bank, 2019)²³.

22 This constitutes a fraction of taxes collected from restaurants, excluding collection at Medium Taxpayer Offices and the Large Taxpayer Office.

23 World Bank (2019) "Myanmar's Urbanization: Creating Opportunities for All" The World Bank, February 2019

- 4.81. **In the medium to longer term, a development charge, modeled in Scenario 6 in Section D, could be levied as a form of land value capture to finance necessary public infrastructure upgrades.** It is common for city governments to collect upfront fees (development charges) from developers and builders since: (a) municipal policy on the volume of developable floor space on each plot creates or contributes to the value of floor space that can be built and sold by developers; and (b) the municipality needs to recover the cost of additional public infrastructure (roads, water, electricity, gardens, etc.) required to service new developments in a municipality. In a dynamic real estate market such as in the fast-developing townships in YCDC, development charges are a sound and reasonable way for the municipal government to capture a share of the benefits generated by public policy and that typically accrue only to developers. Further, development charges are a relatively straightforward form of capturing land value, commonly involving a lump sum payment collected upfront at the time of granting building permission. They can also be calibrated to the nature and location of the development. For instance, whether the investment is in a specific township, is on greenfield on vacant land, is a change of land use (e.g., from residential to commercial) or is upgrading to existing land use within already built-up areas. An example of such a straightforward and targeted development contribution system is in Hyderabad, India, where the Metropolitan Development Authority has imposed a charge of 125 rupee per square meter for investment on vacant land in Greater Hyderabad Municipal Corporation Area and a charge of 300 rupee for land-use changes in built-up areas of Hyderabad Municipal Corporation Area. However, given the sensitive nature of the reform, this needs to be carefully sequenced and introduced over the medium to longer term.
- 4.82. **Longer term, further OSR policy reforms could include land value capture from investments in transport infrastructure.** Yangon's fast-paced urban development and bold plans to develop infrastructure create space for introducing more land value capture mechanisms. See the discussion of capturing the value of government investments in the increased value of private land in Chapter 6.

Institutional changes

- 4.83. **In addition to changes in specific sources of subnational financing, institutional changes in the design and administration of subnational finance also need to be considered.** In the short term, this entails a focus on a more coordinated administration of revenue sharing and intergovernmental transfers. This reform could involve, for example, the creation of an inter-departmental working group on transfers, this would include the Budget Department, which administers the general-purpose transfers, and the IRD, which operates the shared revenues. The group could focus on ensuring that: (i) both transfers are provided in a predictable and transparent manner; (ii) the goals of each transfer - redressing vertical imbalances for revenue sharing and redressing horizontal imbalances for general-purpose transfers - are clearly specified and monitored; and (iii) there is clear communication of allocations and other information in a consolidated manner to states and regions across both transfer types.
- 4.84. **A short-term option to reduce the volatility of transfers is a balancing fund.** As noted in Section B, in-year allocations for revenue sharing tend to be different from budgeted amounts as a result of incorrect revenue forecasts of union revenues at the start of the fiscal year. These lower allocations and the unpredictability impact budgeting and planning for state and region governments and have an impact on budget execution. A potential response is the creation of a balancing fund. At the start of the fiscal year, a certain amount of general-purpose and revenue-sharing transfers could be guaranteed to states and regions based on the union revenue forecasts. If union revenues are higher than the estimates, then the excess amount could be transferred to the balancing fund, which could be drawn down in years when the union revenues are lower than the forecast. This design is consistent with existing financial rules and regulations in Myanmar, as it could be treated as a special contingency fund. Introducing such a fund will enhance the predictability of transfers and remove the concern from in-year volatility.

Table 4.15: Summary of policy options and recommendations

	Issues	Options
General Purpose Transfers	States and regions, except for Yangon and Mandalay, still rely on general purpose transfers. Transfers have become more effective in redressing horizontal and vertical imbalances since 2012/13, particularly with the introduction of an intergovernmental transfer formula. Challenges remain as the formula is not applied to the whole divisible pool and states and regions do not have a say in the size of the divisible pool.	<ul style="list-style-type: none"> • Short term: Gradually increase the share of the divisible pool allocated by the formula (from the current low level of 6 percent). Initiate a process to update the formula in consultation with the states and regions. • Medium term: Create a forum between the union, and states and regions to regularly discuss the size and basis for the divisible pool and the allocation of formulas.
Revenue Sharing	Revenue sharing is origin-based but current design offers limited autonomy for states and regions, does not sufficiently incentivize own source revenue collection and limits the role of states and regions in increasing compliance or expanding the tax base.	<ul style="list-style-type: none"> • Short term: Authorize states and regions to add a percentage on top of the tax rates from the immobile bases to be fully passed on to them. • Medium term: For taxes with immobile base, devolve the right to expand tax base to states/regions in addition to the rate-setting and provide incentives to share benefits of increased compliance. • Long Term: Gradually devolve tax administration for taxes with immobile base.
Own Source Revenues	Own-source revenue collection is low, and revenue growth is limited except in Yangon and Mandalay. Collection is also fragmented and distortionary, with state and region governments reliant on a range of fees and non-tax handles. Property tax collections are considerably lower than potential.	<ul style="list-style-type: none"> • Short term: Rationalize the number of non-tax revenues that can be collected by states and regions. • Short to medium term: Institute policy changes, particularly related to valuation and coverage, to increase property tax collections. • Long Term: Introduce development charge as a form of land value capture.
Institutional Changes	The administration of the intergovernmental transfer system is fragmented, general purpose transfers are administered separately from revenue sharing. This reduces efficiency and also introduces volatility in terms of the total financing envelope for states and regions.	<ul style="list-style-type: none"> • Short term: Create inter-departmental group between the Budget Department and the Internal Revenue Department, and ensure consolidated communication on overall transfer envelope to states and regions. • Short to medium term: Create a balancing fund to guarantee a certain transfer amount to states and regions at the start of the fiscal year.

5 FINANCING SOLID WASTE MANAGEMENT

Improving Financial and Environmental Sustainability of a key urban service

A. Background and introduction

- 5.1. **This chapter examines the effectiveness of solid waste management (SWM) in the capitals of Yangon and Mandalay, and in Shan State; it also examines its financial and environmental sustainability.** SWM is the collection, transport, and disposal of refuse from household, commercial and government sectors; primary and secondary collection networks; intermediate collection at transfer stations and other collection points; disposal and treatment; and city cleansing and drainage management (Kaza et al., 2018).
- 5.2. **SWM is a universal challenge, and despite its importance, it is an often overlooked factor in maintaining sustainable, healthy and inclusive cities.** SWM is fundamental to public health; the preservation of environmental assets and services, sustaining economic activity and a high level of general amenity. Waste management is also linked with climate change, poverty, and food security.
- 5.3. **Low- and middle-income countries commonly struggle with inadequate SWM systems.** Despite being a critical urban service, SWM is often ineffective, inefficient, and underfunded. As incomes rise and populations become wealthier and more urbanized, cities are often unable to adequately cope with increasing amounts of household and commercial waste, which can cause significant economic, environmental and social problems as a result of insufficient waste collection and improper waste disposal, known as open dumping, or fly tipping. Sustainable financing is a significant hurdle. Municipalities can face problems with financing and end up trapped in a cycle of being unable to generate the taxes and fees needed to maintain services, as residents are unwilling to pay for poor service and lack of cleanliness.
- 5.4. **Inadequate SWM systems also plague Myanmar, unable to effectively deal with both the rising quantities of waste and its changing composition.** Rapid urbanization and rising incomes have led to a rapid increase in production and consumption, with the attendant increases in household, commercial and industrial waste, (Gamaralalage et al., 2017).¹ Changing lifestyles also influence the composition of domestic waste, with a rise of inorganic waste, especially single-use plastics and packaging materials; the presence of hazardous materials such as e-waste, industrial and medical waste is also increasing. A combination of inadequate infrastructure for waste collection and low public awareness leads to illegal dumping of domestic and industrial waste in streets and vacant land and general littering; this ultimately finds its way into drains, streams and other watercourses, which causes additional environmental and health problems.

1 Gamaralalage, D. Premakumara, J. Hengesbaugh, M. Onogawa, K and Hlaing, O.M.T. (2017) "Waste Management in Myanmar: Current Status, Key Challenges and Recommendations for National and City Waste Management Strategies" Institute for Global Environmental Strategies (IGES) Centre Collaborating with UNEP on Environmental Technologies (CCET). Japan. Available from: https://pub.iges.or.jp/pub_file/policy-reportmyanmarfinal-20170131revpdf/download

- 5.5. **Waste disposal and treatment are not well managed, causing further difficulties for health and environmental problems.** Waste, including hazardous waste, is not separated but is typically collected and dumped together with household waste in landfill sites within city boundaries.² Most landfills are poorly managed and have no capacity for environmental management, such as daily compaction and covering; landfill gas collection; leachate treatment or general environmental monitoring. This leads to ground and surface water contamination: landfill gas emissions cause air pollution, ; another contributing factor to air pollution is burning waste, which is often uncontrolled. Open dumping increases the risk of landfill fires, caused sometimes by waste pickers, as well as spontaneously from gases caused by decomposing organic waste. Such fires are difficult to extinguish, as evidenced by the large fire at the Htein Bin landfill in Yangon in early 2018, which blanketed the city in toxic fumes for three weeks. The concentration of pests such as flies, cockroaches, rats, and dogs pose considerable health risks for people who pick through the waste looking for items that are still useful, as well as for communities living around the landfills, and public health in general.
- 5.6. **In Myanmar, SWM is entirely within the mandate of the subnational governments, via municipal authorities.** Sanitation, which includes SWM, has been part of municipal governance since its inception with the 1922 *City of Rangoon Corporation Act* (see Chapter 2 for more information). It is a wholly devolved function of states and regions, via Yangon City Development Committee (YCDC), Mandalay City Development Committee (MCDC) and Development Affairs Organizations (DAOs) in smaller cities across Myanmar. This is common international practice in line with the subsidiarity principle, which dictates that responsibility for services be situated with the lowest level of government consistent with the area where people and communities are benefiting and affected. Since most of the benefit of waste collection is local, responsibility is usually assigned to the lower tiers of public administration.
- 5.7. **Policy guidance, legislation, and regulation to support SWM investments and operations are supported from the national level; the same is true for monitoring and enforcement.** At the national level, responsibility national Waste Policies/Strategies and legislation is with the Pollution Control Division (PCD) of the Environmental Conservation Department (ECD) of the Ministry of Natural resources and Environmental Conservation (MONREC). However, PCD does not have any dedicated personnel that are specifically responsible for Solid and Industrial (Hazardous) Waste Management. Specific legislation for municipal waste management at national and local level is limited and there are no essential by-laws. Municipal solid waste is therefore not precisely defined, the different types of waste to be managed by the municipality as part of the general waste fee have not been catalogued, and special waste that requires a separate fee has also not been identified.
- 5.8. **A National Waste Management Strategy and Action Plan (NWMSAP) was developed recently with donor assistance.** MCDC in collaboration with the Environmental Conservation Department (ECD) of MONREC has developed a SWM strategy (2017-2030). Its first goal is to provide waste collection for everyone and to eliminate uncontrolled disposal, open dumping, and any consequent open burning. This strategy is supplemented by the strategic outline of the NWMSAP (MCDC and ECD, 2017),³ Despite this, there is not enough capacity and financing to implement, monitor and enforce.
- 5.9. **SWM is a key government function for which the public holds municipal authorities accountable.** Surveys of urban residents reveal that most residents are unhappy with their own city's garbage collection and drainage system (Alin Say Taman cited in Hlaing, 2018).⁴ Garbage, drainage and traffic were among

2 Though in both YCDC and MCDC infectious medical waste is incinerated or burned in cemeteries while sharp wastes are buried underground in landfills (Gammaralalage et al., 2017; MCDC and ECD, 2017). There is no dedicated hazardous waste landfill

3 MCDC and ECD (2017): City Waste Management Strategy and Action Plan for Mandalay, the Republic of the Union of Myanmar, Mandalay, Myanmar

4 Hlaing, T. (2018). "Yangon Residents Dissatisfied with Municipal Services". The Irrawaddy. September 17 2018. Accessed September 24 2018. Available from: <https://www.irrawaddy.com/news/burma/yangon-residents-dissatisfied-municipal-services.html>

the top public concerns in the lead up to the recent YCDC elections. Issues with lack of cleanliness of public spaces in particular, are seen as a key shortcoming of the municipal government (Myat Mon, 2019).⁵

- 5.10. **This analysis aims to support municipal administrations with managing waste system expenditures and revenues for the purposes of improved public cleanliness, and environmental and financial sustainability.** It focuses particularly on Yangon, Mandalay, and Taunggyi (Shan State). The primary focus is on YCDC and MCDC, given current data availability as well as the unique organizational structure of Taunggyi. The analysis is divided into five sections, and describes the organization of SWM. It examines the effectiveness of waste disposal services using estimates of coverage and total waste generated; financial sustainability is analyzed based on costs and fee revenues published in municipal budgets⁶. Myanmar's performance is benchmarked against international practice from the most recent global snapshot of SWM (Kaza et al, 2018), significant challenges are identified. The chapter concludes with a suite of recommendations for improvements to waste management and its revenues and expenditures.
- 5.11. **Four broad issues stand out from the analysis.**(i) Myanmar's urban areas are producing a increasing amounts of waste; (ii) the size and scope of current waste collection services can only cover a fraction of the urban population; (iii) municipalities already spend a large part of their budget on SWM, despite incomplete coverage of waste collection services and inadequate environmental protection; (iv) even with relatively low costs, specifically for waste disposal, fee revenue is insufficient to sustain the current level of services and would be even less when capital expenditures that are required for proper waste disposal would be considered.. Consequently, the fiscal space for SWM depends on municipal OSR.

B. Municipal SWM In Myanmar

- 5.12. **Waste management in Myanmar is labor-intensive and generally provided as a public service; it relies heavily on manual workers and non-specialized vehicles.** In most cities solid waste collection and street cleaning is undertaken by an army of day laborers using pushcarts, tricycles and small tippers. They collect waste from households and businesses in narrow streets (usually in the form of plastic bags placed outside) and announce themselves with bells and/or loudspeakers. The collected waste is transported to centralized transfer points, also known as secondary collection points, where residents also commonly bring their waste. At the transfer station, the consolidated primary collection is loaded into large containers (22m³), and when these have reached their maximum capacity, they are transported by a hook lift truck to landfill. Some waste is collected directly by compactor trucks picking up waste containers or door-to-door. Along this chain, the informal sector, consisting of waste pickers, buyers and businesses, collect recyclables from the waste streams.
- 5.13. **In Yangon and Mandalay, waste management is directly provided by the city, services have recently been outsourced in Taunggyi.** In Yangon, the Pollution Control and Cleansing Department (PCCD) under YCDC is responsible for providing financing, manpower, and facilities for waste collection. The PCCD has representatives in each township to oversee the process and to collect fees from residents. In Mandalay, pollution control is separated from cleansing activities, with the Cleansing Department (CD) responsible for SWM. In Taunggyi, most solid waste and fee collection was outsourced to a private operator following a 2015 decision by the municipal authority. This has been moderately successful, but continues to face challenges (see Box 5.1).

5 Myat Mon, S. (2019). "Traffic, garbage and drainage the top concerns in Yangon, say election hopefuls". Frontier Myanmar March 26, 2019. Accessed May 23 2019. Available from: <https://frontiermyanmar.net/en/traffic-garbage-and-drainage-the-top-concerns-in-yangon-say-election-hopefuls>.

6 There are several other indicators that monitor the effectiveness, efficiency and level of advanced systems available in the management structure, the focus here is on the indicators related to expenditure review and the financial sustainability of the sector.

- 5.14. **Landfills are mostly open dumping sites, they are operated by municipalities.** In Yangon, Mandalay, and Taunggyi, the municipal authority owns and operates the dumpsites; unsorted waste is dumped at the landfills and pushed into the center using excavators and bulldozers (Gamaraalage et al., 2017). In Yangon, there are at least six landfills/dumpsites, two of which, Htein Bin and Dawai Chang, are the main ones. There are at least two sites in MCDC, one each in the north and south.)⁷.

Box 5.1: Waste collection in Taunggyi

Taunggyi, the capital city of Shan State, is situated on challenging terrain, and is made up of 22 urban wards of Taunggyi City proper located at the top of a steep escarpment, as well as the sub-townships Aye Thar Yar (12 wards) and Shwe Nyaung (seven wards) in the low-lying flats below (Figure 5.1). The steep Thazi-Kyaingtong road connects the upland and lowland areas. All 41 wards are included in the Development Affairs Organization's (DAO) jurisdiction for delivery of services, and this includes solid waste collection.

Before 2015, the solid waste collection system was a fully government-provided service in Taunggyi, under the DAO, the municipal authority directly provided garbage collection and collected garbage-related property tax from all households. However, some households particularly harder-to-reach sub-townships, missed out on services, despite paying the 'garbage-related component of the tax. The DAO cited the strain on its aging fleet of (donated) trucks traveling up and down the steep road as the primary reason for the low coverage.

Faced with public dissatisfaction over the quality of services, and an increasing problem with illegal dumping that was affecting the flow of water down the mountain, the DAO outsourced most collection activities to a private company in 2015 and removed the garbage related component from property tax. The contract signed between the company and the DAO allows the company to collect garbage and fees from its customers for thirty years. The company pays the DAO an annual fee for this right, which is included in the budget, but collection fees paid directly to the company are the company's revenues.

The DAO still has a garbage collection service using its own compactor trucks and bins (Figure 5.2) to supplement the private operator when needed; this is limited to main roads, the marketplace and centralized collection points.

According to the DAO, the shift to outsourcing has led to an increase in the level of service provision, compared to the government-run system. However, around one-quarter of households still miss out on collections. The company claims that servicing these areas is uneconomic, it is also reluctant to invest in large steel bins at central collection points, and says it is cash-flow constrained as all capital investments are made upfront and costs are recouped over the life of the contract. Profits are only likely to be generated about after several years.

The DAO has no direct contractual lever to force the company to collect waste from hard-to-reach areas. As such, the DAO continues to collect waste from these households despite its outsourcing agreement. The garbage component of the property tax is still collected from these residents (see McDonald and Hein, 2017). The private company and the DAO bring waste to the landfill.

7 There is also an incinerator, which has been temporarily out of use due to technical issues, according to MCDC (2017).

Figure 5.1: Taunggyi DAO jurisdiction



Source: The Asia Foundation (2018)⁸

Figure 5.2: Taunggyi DAO truck and bin in the DAO compound



Photo: Lachlan McDonald (2017)

Effectiveness Of SWM

- 5.15. **The effectiveness of Myanmar’s SWM can be evaluated by comparing actual waste coverage with the National Waste Management Strategy and Action Plan of universal waste collection coverage and the cleanliness of public spaces.** Waste sampling and analysis is not carried out in any city of Myanmar, which means that the exact amount of municipal waste generated is not known. Weighing scales at the entrance of the largest landfills in Yangon and Mandalay provide a guide as to the quantity of waste generation that is collected and disposed in urban areas, and these figures can provide a proxy for smaller cities to generate a national estimate of waste generation. Waste is generally not weighed at landfills in smaller cities.
- 5.16. **In Yangon, an estimated 2,217 tons of waste were collected per day in 2018, equivalent to 809,000 tons per year.** This is made up of 2,040 tons disposed per day at Yangon’s two largest landfills, around 3.5 percent of this is commercial waste, plus an estimated 177 tons taken to smaller dumpsites per day. Waste taken to landfills is reported to have increased to 2,650 tons per day in 2019.
- 5.17. **Analysis of the waste weighed at the Kyar Ni Kan landfill, covering three townships in the north of Mandalay indicates an average waste generation of 0.8kg/person/day.** Assuming the total population of the city has a similar level of access to waste collection as these townships, the total amount of waste generated is estimated to be 1,000 tons per day, equivalent to 365,000 tons per year. As is often the case, the waste is disposed after the informal sector has picked out recyclables estimated to be around 6-10 percent of the waste stream in line with international averages⁹. This estimate is slightly higher than that reported by the MDCD CD (940 tonnes per day 0.64kg/person/day), though it is close to the sample survey carried out by the FASEP/French Grant Urban Services Improvement Project in 2015 (0.74kg/person/day) (MDCD and ECD, 2017).

8 The Asia Foundation (2018). The 2018 City Life Survey Summary Report. Accessed May 24 2019, Available from: https://asiafoundation.org/wp-content/uploads/2019/02/City-Life-Survey-2018_Myanmar.pdf

9 Some of the waste disposed and counted as household generated waste may include industrial waste.

5.18. **Total waste generation across Myanmar is estimated at 0.39kg/person/day¹⁰; amounting to 20,300 tons per day or 7.4 million tons per year.** Based on international experience, the waste generation rate in rural areas is likely to be around half of urban areas. Using a rough 65/35 split in rural and urban populations would reveal an estimated urban waste generation of 0.6kg/person/day

Table 5.1: Waste generation, kilograms per person per day

Myanmar	Lower Middle Income Countries
0.56	0.53

Source: Kaza et al, (2018) Authors' calculations

5.19. **The waste collection coverage rate is estimated to be between 59% (0.8kg/capita/day) and 79% (0.6kg/capita/day) in Yangon and 80% in Mandalay, which means that a considerable quantity of waste is not collected (Table 5.2).** A street sweeper in Myanmar can adequately service between 1,500 and 2,000 inhabitants. The current 1,320 pushcarts cleaning streets are therefore able to serve slightly half of Yangon's 5.63 million population. In Mandalay, the 2,000 workers employed in waste management, of which 65% is involved in primary waste collection (MCD and ECD, 2017), are sufficient to service about 72% of the 1.55 million population, this includes 560 street sweepers MCD's own estimates indicate that Mandalay's average waste collection ratio is about 80 percent (MCD and ECD, 2017).

Table 5.2: Waste generation, collection, and uncollected quantities (Yangon and Mandalay)

	Waste Generated (kg/person/day)	Coverage Ratio	Population (million)	Total quantity uncollected (kg / day)
Yangon	0.6-0.8	59-79%	5.63	710,000-1,850,000
Mandalay	0.8	80%	1.55	248,000

Authors' calculations based on information provided by Cleansing Departments

C. Financial sustainability of SWM

Expenditures on SWM

5.20. **Waste management is a substantial expenditure item in municipal budgets, and was estimated to be 13-19 percent of the recurrent municipal budget in 2017-2018 (Table 5.3).** Based on available budgetary information from SWM-relevant departments within YCDC and MCD, in addition to staff estimates of ancillary costs, total operational costs for SWM are 13.3 billion Kyat in Yangon (\$8.8 million) and 5.3 billion Kyat in Mandalay (\$3.5 million). In Taunggyi, SWM costs are much smaller, at around 181 million Kyat (\$121,000), as evidenced by the cleansing department budget. SWM in Taunggyi is a much smaller as most of the solid waste collection is outsourced. These figures are in line with international experience that indicates that waste management costs are around 20 percent of municipal budgets for low-income countries, and an average of 11 percent for middle-income countries (Kaza et al., 2018).¹¹ However, the costs in Myanmar do not include amortization costs of solid waste infrastructure investments; current costs capture only operational costs and not investments, which means that real costs are actually higher.

10 Kaza, Silpa; Yao, Lisa C.; Bhada-Tata, Perinaz; Van Woerden, Frank. 2018. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050. Urban Development. Washington, DC: World Bank

11 Myanmar is a lower middle-income country.

Table 5.3: Solid waste management operational budgets (millions of kyat)

	Yangon	Mandalay**	Taunggyi
City Recurrent Budget	101,337.1	34,115.7	965.6
Budgeted SWM Operational Expenditure*	13,252.2	5,314.1	181.2
Percent	13.1	15.6	18.8

*Authors' estimates based on CD/PCCD data.

**MCDC Cleansing Department budget plus estimated costs for Vehicle and Transport Department used for waste collection as vehicles are not under the cleansing department.

- 5.21. **Unlike YCDC, where all costs are included in the PCCD budget, in Mandalay, the costs of SWM are fragmented across multiple departments.** The MCDC CD has no waste collection vehicles and the truck fleet is accounted for in the Vehicle, Transport and Workshop Department. Consequently, the stated operations expenditure (OPEX) of the costs are not included in the stated CD OPEX and considerably underestimate actual costs. The following costs are not taken into consideration: (i) drivers, (ii) fuel/oil/lubricants and, (iii) maintenance and repair. Assigning these costs would make a material difference in SWM accounting and would boost OPEX by an additional 58 percent on the reported CD budget (see Table A5.1 in Annex).
- 5.22. **Combining the costs of SWM with estimates of actual solid waste collected shows that YGN and MDY have an average operational cost of collection of around \$10/ton collected (Table 5.4).** Cost estimates are made to get an approximation of total operating costs and its breakdown into the various activities. Cost estimates are based on the existing collection and disposal procedures in Mandalay and Yangon. In Yangon, the average cost for collection is estimated to be MMK14,672/ton (US\$9.8/ton) based on a collected quantity of 2,217 tons per day. In Mandalay the estimated average cost of collecting solid waste is MMK 15,296/ton (\$10.2) based on a collected quantity of 1,000 tons per day, and including the cost of vehicles.
- 5.23. **In Taunggyi, the average cost of collection is likely to be somewhat higher than in the large cities.** No weighbridge is installed at the landfill, there is also no information on SWM activities and costs as a result of outsourcing to the private operator. Calculations based on estimated waste quantities and the required waste collection/transport equipment indicate a possible average cost of at least MMK 17,770/ton (\$11.80). Street cleaning and landfill/dumping costs are not included in this figure¹².
- 5.24. **It is an established international practice to calculate the cost per ton collected for each of the various activities of SWM.** Costs per ton of waste are separated into key activities of solid waste management: (i) collection & transport, including costs of containers/bins; (ii) treatment including separation, recovery, composting and landfilling/disposal of waste; and (iii) public spaces/street cleaning. Such cost accounting should include personnel costs, operation, maintenance, fuel, etc. In more established cost accounting systems, amortization and margins for profit/risk might be allocated as well as costs for closure of landfills in the future.
- 5.25. **There is no separate cost accounting system that could readily produce this information in Myanmar.** In YCDC, all costs are included in a single department, and in MCDC, costs are split across departments. Authors' estimates in this study have produced a rough cost accounting. The cost profile is similar in both cities: collection and transport account for around 60 percent of operational costs; street cleaning and transport account for around one-third; and landfill takes up only a small share.

12 This figure is not estimated based on staff and equipment present in Taunggyi as no information is available due to the outsourcing of the solid waste collection, but on estimate of how many staff and equipment would approximately be needed given the estimate of the waste quantities.

Table 5.4: SWM operational costs (estimates)
Total costs (millions of Kyat) and costs per ton

	Yangon		Mandalay		Taunggyi***	
	Cost	Percent	Cost	Percent	Cost	Percent
Collection & transport	6,871.0	57.9	3,556.0	63.7	n/a	
Street cleaning	4,379.0	36.9	1,836.0	32.9	n/a	
Landfill operations	620.0	5.2	159.2	2.9	n/a	
Transfer station			31.9	0.6	n/a	
Total Costs	11,870.0	100.0	5,583.1	100.0		
Tons collected per year*	809,000		365,000			
Cost per ton collected	14,672		15,296		17,770**	

* Annual collections extrapolated from daily collections; in Yangon based on 2,217 tons collected per day from weighbridge information at the two landfills in Yangon and smaller dumpsites; in Mandalay, based on an assumption of 1,000 tons collected per day, extrapolated from weighbridge information at Kyar Ni Kan landfill, covering three townships.

**Excludes street cleaning and landfill

*** Operational costs not available as waste services are outsourced to the private sector without clear financial and performance parameters but general costs estimated on the basis of waste quantities

See Table A2 Annex for a more detailed disaggregation of SWM costs in Yangon

Sources: YCDC; MCDC; author's calculations.

5.26. **The estimated costs of solid waste disposal in Myanmar are considerably lower than international benchmarks, reflecting gaps in services and environmental protections (Table 5.5).** The costs of open dumping are below the typical corresponding expenditures of US\$ 3-10 for open dumping in lower-middle income countries (Kaza et al., 2018). This means that salaries are low, and environmental protection for waste disposal/dumpsites is inadequate. Investments in infrastructure, such as fencing and paved roads are also almost non-existent. Consequently, given that precise information on the annual operational costs of landfills is not available, the main costs for landfilling are assumed to be for wages, and fuel for excavators and bulldozers. The costs associated with a shift to a more environmentally sustainable landfill (\$15-40) are well above the current total costs in Myanmar.

Table 5.5: Waste management costs by activity (excluding street cleaning)
US dollars per ton

	Yangon	Mandalay	Lower Middle-income countries*	Vietnam
Collection and transport:	5.7	6.5	30-75	35
Open dumping	0.5	0.3	3-10	4
Controlled landfill to sanitary landfill			15-40	

Source: Kaza et al (2018)¹³; Author's calculations and World Bank (2018).

5.27. **Establishing cost centers for the different functions/activities of solid waste management will allow for operational costs per ton of different waste management services to be assessed.** These operational costs may then be compared and analyzed to provide information on increasing cost-efficiency. These

13 Kaza, Silpa; Yao, Lisa C.; Bhada-Tata, Perinaz; Van Woerden, Frank. 2018. What a Waste 2.0 : A Global Snapshot of Solid Waste Management to 2050. Urban Development. Washington, DC: World Bank

functions include: (i) waste collection & transport, (ii) treatment and landfilling of waste; and (iii) cleaning of public spaces. This could allow to analyse the efficiency of these services compared with other municipalities, and serve as an important element for assessing the different ways in which municipalities provide the same services at different costs. This helps provide insights into cost-optimization for similar levels of service.

Insufficient revenues to cover operating costs

- 5.28. **The financial sustainability of SWM can be examined by comparing fee revenue with expenditures. In Myanmar's largest cities, the primary mechanism for financing SWM is fee revenue collected from households and businesses.** The property tax also has a refuse-related component, though this is merely titular, as tax revenues are not earmarked for any specific services. Yangon, Mandalay, and Taunggyi have eliminated the refuse-related component of property tax as they have shifted to a user-fee system.¹⁴
- 5.29. **The city government is responsible for setting the fees, although procedures and methodologies are not clear and are not guided by national legislation.** In YCDC, households pay a fee for waste collection based on where they live. Fees are collected door-by-door by PCCD staff stationed in the townships. Household waste fees are divided into three regions: (i) center, (ii) sub-urban, (iii) other, and must be paid every three months. The center pays the highest fee. The waste user fee is a flat fee and ranges between MMK 3,600 (\$2.4) and MMK 7,200 (\$4.8) per household per year. In Mandalay, households paid the waste-related property tax component (3 percent of the assessed taxable value of each property) until October 2018 when a new fee was introduced based on the type of house, this is collected separately by MCDC employees. In Yangon and Mandalay, the commercial waste fee depends on type and size of business. Hotels pay MMK 20,000/year per room and restaurants pay by the weight of waste that they produce, (tons/day), this can vary between MMK 1,500/month and MMK 100,000/month. The cleansing department in Mandalay also collects waste on demand especially from industries. The cost is estimated at MMK 35,000 per 1.5-2 ton truck (\$23-24/truck). In Taunggyi, the solid waste collection and corresponding fees are collected from customers by private companies, though no information was available.
- 5.30. **The revenue generated from landfilling waste is not enough to support proper environmental standards of waste disposal.** In Yangon, the PCCD does not pay a gate fee at the YCDC landfill, but the private sector pays a small fee of MMK 5,000 (\$3.33) for the first ton and MMK 2,000 (\$1.33) for each additional ton. The annual income in FY 2017-2018 from private sector payments was estimated at MMK 78 million/USD 52,000 (or about MMK 4,670/\$3 per ton) from 16,700 tons/year carried in on trucks with a payload of 1.5 tons per trip for 11,133 trips.
- 5.31. **Operating revenue from solid waste management service is not enough to cover the operating costs of solid waste collection and disposal (Table 5.6).** The operating deficit of the PCCD in Yangon for SWM is 6.7 billion Kyat (\$4.5 million), indicating that the income from solid waste services only comes to about 50 percent of operational expenditure (OPEX). There is likely to be a similarly substantial deficit in Mandalay. It is difficult to precisely estimate operational revenues and costs given the recent shift to a fee-based financing model from households. Under the old system, in which a small amount of fee-based revenue was collected, the total deficit was greater, income from solid waste services only covered 16.4 percent of OPEX¹⁵. Under both scenarios, the deficit indicates a substantial shortage of funds for the operational expenditures and even more if amortization of capital expenditures were considered.

14 McDonald and Hein (2017, p12) provide a detailed explanation as to how YCDC have been thwarted in trying to re-establish the property-tax related component after having originally removed it in the early 1990s.

15 This is the adjusted OPEX where the costs of vehicles used for waste collection but accounted for under the transport department were allocated to the operational costs of SWM.

Table 5.6: Financial performance of solid waste management (2017-18)
Millions of kyat

	Yangon	Mandalay	Taunggyi
Expenditure			
Operational costs (OPEX)	13,252.2	5,314.1	n/a
Investments/Capital expenditures (CAPEX)	12,309.3	1,153.2	n/a
Total expenditure	25,561.6	6,467.3	n/a
Revenue			
SWM services	6,556.8	870.0	n/a
Other revenue*	507.9	3,012.9	n/a
Total revenue	7,064.6	3,882.9	n/a
Balance			
Operating SWM Deficit (SWM services income less OPEX)	6,695.5	4,444.1	n/a
<i>SWM Income as a percent of OPEX</i>	49.4	16.4	

* Other revenue is not related to solid waste revenue as it relates to license issuance, building supervision, cremation, etc and therefore not taken into account in calculation of the balance.

Sources: YCDC; MCDC; author's calculations

- 5.32. Operating deficits mean that municipalities must co-finance SWM activities from their own revenues.** Myanmar's municipalities are largely self-financing and receive few transfers from higher levels of government (see Chapter 2). This implies that, at present, OSR is a key determinant of the available fiscal space for SWM.
- 5.33. Low waste revenues are a result of several factors including low fees, an inadequate fee collection system, poor waste collection coverage, and insufficient cross-subsidization in waste revenue from commerce/industry/institutions to households.** In Yangon, a reported total of MMK 2.1 billion (\$1.4 million) in waste fees was collected from households in FY 2017/18, and MMK 2.4 billion (\$1.6 million) was collected from commerce/industry/institutions. The average revenue per household in Yangon and Mandalay are MMK 3,626/ton (2.4 US\$/ton) and MMK 1,973/ton (1.3 US\$/ton) respectively, less than the estimated OPEX costs of MMK 14,672/ton (8.8 US\$/ton) and MMK 15,296/ton (10.2 US\$/ton)¹⁶. Yearly commercial, industrial, and institutional waste revenues in Yangon and in Mandalay are estimated at around MMK 7,752/ton (US\$5.1/ton) and MMK 3,342/ton (US\$2.2 US\$/ton) respectively while the OPEX costs are MMK 16,380/ton (US\$10.9/ton) and MMK 14,560/ton (US\$9.7/ton).
- 5.34. Current SWM fees make up a small share of household income.** The average household waste fee in Yangon is MMK 5,100/year (US\$3.4/year), which is about 0.06 percent of the average household income of MMK 6.3 million (US\$ 4,200) (Deloitte, Myanmar Consumer Survey 2016). This is well below the international norm of 1-1.5 percent. In Mandalay, the average amount paid for waste-related property tax up to October 2018 provides a rough indication of the yearly amounts paid by households for SWM, despite there being no formal earmarking of revenue.¹⁷ For 2017/18 this amount was estimated at MMK 1,973/year (US\$1.3/year) or about 0.03 percent of average income, and reflects the low levels of property

¹⁶ urban households are presumed to generate around about one ton waste/year based on the average household size in the Census.

¹⁷ Property taxes collected in Myanmar's municipalities are formally divided into four components, commonly called "fees": a fee on building and land; plus three separate service-specific fees, which includes a garbage-related component. Despite the nomenclature, McDonald and Hein (2017) indicate that these are actually "taxes in disguise" for five reasons: i) payment is compulsory; ii) the payment is based on an estimate of the value of the property, and not linked to the use of a specific service; iii) the payment is collected by municipalities; iv) the payment is not linked to the cost of providing any individual service; and v) the payment collected is pooled as general revenue in the municipal budget.

tax collection in general (see Chapter 4). The weighted average of the new fee introduced in Mandalay in October 2018 is estimated at MMK 12,000 (US\$8.0)/household/year, or 0.2 percent of the average income.

- 5.35. **Fee collection coverage among households in Yangon is currently low, and revenues from commercial/ industrial/institutional entities should increase to cover more of the costs of SWM.** Waste fee revenue from households in Yangon indicates a coverage ratio of approximately 71 percent of the population served¹⁸ or an estimated 35 percent of the total national population. The maximum amount of revenue that could be collected from the household sector, given 100 percent waste collection coverage and 100 percent payment compliance, is around MMK 5,940 million (\$3.9 million). No information is available on the number of commercial/industrial/ hotel entities. However, international experience indicates that income from this sector is about 30 percent of total income. This could result in a maximum revenue amount of $(\text{MMK } 5,940 \text{ million} / 0.7) \times 0.3 = \text{MMK } 2,546 \text{ million}$ (\$1.7 million) and would assume a fee collection coverage within the commercial/industrial/institutional sector of almost 94 percent. International experience suggests that revenues from commercial/industrial/institutional sector typically cross-subsidize the household sector.
- 5.36. **Even with improvements in fee collection, the current waste fee in Yangon is too low to cover operational expenses.** The maximum amount of waste fees that could be collected from households and the commercial/industrial/institutional sector is MMK 8,486 million (\$5.7 million), which is still well short of the required MMK 13,252 million OPEX (US\$8.8 mln) before accounting for the costs of amortization. Moreover, an estimated 15 percent of the population in urban areas live below the poverty line and are not able to pay the waste fees; so expecting 100 percent payment compliance would be difficult. A more realistic maximum amount of fees collectible is around MMK 7,213 million (US\$4.8 mln) , without an increase in the fees.
- 5.37. **Low revenues inhibit capital investments that are required for expanding waste collection; and it is clear that significant capital investment will be required to increase waste collection, specifically in urban areas, to 100 percent and to move towards environmentally-compliant disposal.** The lifetime for solid waste management infrastructure varies: waste collection equipment generally lasts 5-7 years, containers last for 3 years and landfill equipment has a lifespan of around 10 years. In Yangon, it will cost around \$20-35 million in capital investment to increase waste collection from the current 50 percent to at least 75 percent in 2025. The cost per ton will be considerably higher if the amortization costs for this capital investment are considered¹⁹. It will also cost up to \$15 million to restore the Htain Bin dumpsite to a full sanitary- and environmental-compliant landfill. Detailed overviews and calculations of the required investments will be included in the ongoing Solid Waste and Pollution Management ASA.

18 49 percent of the population is actually served.

19 Amortization is the depreciation of the capital investment asset over its lifetime plus the financing costs that will allow the municipality to replace the capital investment after its lifetime.

D. Recommendations

Institutional reorganization

- 5.38. **Reorganize the cleansing departments into business units according to different waste activities: (i) collection/transport, (ii) street cleaning, (iii) landfilling; and (iv) other activities.** This reorganization will allow for transparent cost allocation to the different waste activities and for a direct comparison with the revenues of each activity. This can lead to targeted strategies for cost optimization, and efficiency increases in waste and revenue collection. Capacity in the cleansing department would also need to be improved as part of the organization.
- 5.39. **Establish a uniform and transparent method for reporting waste management expenditures.** Amend the cost reporting system, which would allow the cleansing department to become a cost center; establish guidelines to manage revenue generation from municipal waste fees; and create Municipal Ordinances for different service costs to facilitate calculation of eligible expenditures for the different waste services. Under this scenario, the cleansing department could set up cost accounting for each of the waste management services, and could include the amortization costs. Waste management services could be kept separate from other department responsibilities like pollution control, and disposal of industrial and hazardous waste to make the system more streamlined.
- 5.40. **Privatization of waste collection and disposal is currently not an option as the the essential legislation, capacity and regulations for making it successful is lacking.** The current situation and the lack of experienced businesses in Myanmar do not offer attractive financial or legal conditions for private investment in waste management. The alternative could be Public Private Partnership involving foreign companies; however, the sector would need to be subsidized to make it financially attractive. In principle, privatization is more expensive than government-run municipal services. Privatization is often a political decision and is not always driven by economic needs. Conditions for successful privatization are provided in Box 5.2.

Box 5.2: Conditions for privatization

1. Private companies should have a strong reputation, and sufficient experience in similar type and size projects.
2. Private companies should have sufficient financial strength for investments required , equivalent to at least one-year of operational reserves.
3. Waste fees should be attractive enough to realize full cost recovery (OPEX and AMEX) in addition to a margin for profit/risk.
4. Guarantee of fee payment. A contract with the municipality and not with individual households is the preferred option.
5. Supportive legislation needs to be in place.
6. The municipality needs to have strong monitoring and enforcement capacity.

Expand the scale and scope of SWM activities to improve public cleanliness and willingness to pay for waste management services

- 5.41. **Increase waste collection coverage, especially in large cities.** Increase the areas of the major cities where waste is collected and aim to achieve a 100 percent waste collection target in the major cities. This will require substantial investments in new infrastructure in the form of trucks and containers. Improved waste collection coverage and cleanliness are expected to increase the willingness of the population to pay for waste management services, under the premise that residents will only be willing to pay for waste management fees if the collection service and general cleanliness are improving.
- 5.42. **Public cleanliness is one of the main problems for municipal waste management.** The main reasons for low levels of sanitation in public spaces are: (i) lack of public awareness about cleanliness; (ii) insufficient containers: households without proper waste containers/bins place household waste in small (shopping) bags on the street for collection; (iii) poorly organized street cleaning: pushcart operators have to do double duty as street sweepers and waste collectors and shows that there needs to be an increase in the number of street cleaners. As a result of low waste collection coverage, a substantial amount of waste is illegally dumped, this can lead to clogged drainage systems and the subsequent work required to unplug them is hazardous and labor-intensive²⁰.
- 5.43. **Ban plastics where alternatives are available and establish Extended Producer Responsibility²¹ for items such as soda bottles, with a long-term aim of reducing costs of waste management by decreasing the amount of plastic entering the waste stream.** The most common plastics need to be identified as a starting point for this, and the efficiency and effectiveness of plastic waste policies, based on international experience, need to be examined. The ongoing Sustainable Solid Waste and Pollution Management Technical Assistance from the World Bank is providing support to Myanmar to: (i) assist with planning and capacity-building strategies to achieve environmentally and financially sustainable solid waste management in selected cities; (ii) prepare a roadmap for a plastic action plan; and (iii) map and analyze key sources of air and water pollution. Planning and capacity-building, and the roadmap consist of: (a) prioritizing plastic items for public policy by identifying the top 10 plastics found in the environment; (b) analyzing effectiveness of potential plastic policies from other countries at national and municipal level. Such policies are believed to be most effective when they are implemented at national/regional level; policy-makers can take advantage of scale to create enough incentives that packaging producers will want to invest in alternatives; (c) estimating the plastic leakage from key cities into the waterways; and (d) preparation of the roadmap.

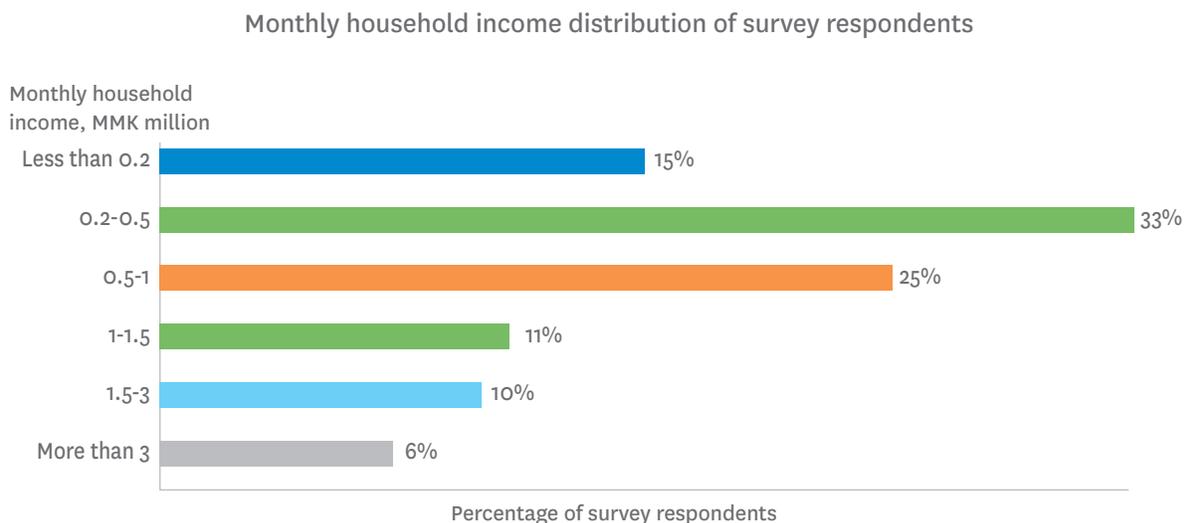
20 Dangerous labor-intensive work of physically going into drains to unblock them <https://elevenmyanmar.com/news/ycdc-collects-tons-of-garbage-inside-the-main-underground-drainage>

21 Manufacturers are given financial and/or physical responsibility to treat or to dispose of their products after they have been used. This could provide incentives to improve design to use fewer materials, support recycling and discourage dumping in landfills (OECD) <http://www.oecd.org/env/tools-evaluation/extendedproducerresponsibility.htm>

Increase SWM fee revenue

5.44. **Sustainable financing for SWM requires a considerable increase in fees, within the international benchmarks of affordability.** Based on the estimated total cost (including amortization), and on current disposal practices, the average monthly fee in Yangon would need to rise to about MMK 2,030 per month (\$1.4 per month) to break even. While this would be a considerable rise on current fee rates²² there is capacity to pay higher SWM fees. The basis for affordability to pay for SWM services is internationally acceptable at 1 - 1.5 percent of the household income. Around 85 percent of the population in Myanmar has an income that would make solid waste fees affordable up to MMK 2,000 or USD 1.4/month (Figure 5.3).

Figure 5.3: Household distribution income



Source: Deloitte, Myanmar Consumer Survey 2016

5.45. **Willingness to pay will need to increase if collection of household fees is to improve.** Any fee change should be gradual and tailored to the capacity to pay, it should also be accompanied by clear improvements in waste service provision and in improvements in the fee-paying system.

- **Gradually increase SWM fees up to a maximum of 1 percent of household income in line with international affordability benchmarks.** Municipalities should allow for fee reductions or exemptions for low-income households.
- **Focus on increasing households' satisfaction with the waste collection service level and therefore increase of the waste collection service area as well.** As municipalities are responsible for fee collection from households, they must make contractual arrangements with the cleansing department about the effectiveness of services. In the absence of online payment systems, the municipality is recommended to open enough payment desks in the townships and to employ sufficient staff to collect directly from the households when needed. Payment must be based on the publication of a Municipal Ordinance. Municipalities should inform the households about the consequences of non-payment such as penalties and undertake more efforts to increase the willingness to pay and reduce littering through increased communication and citizen engagement.

22 Households currently pay, on average between 300 and 600 Kyat per month

- **Use the billing system to keep residents informed about the SWM system.** Billing can be a key mechanism for the municipality to communicate with residents and improve citizen engagement. Invoices should clearly break down all costs to provide transparency about the structure of the waste fees and how they are collected. It may also be used to keep residents abreast of increases in fee collection, and to describe the penalty system for non-payment.
- 5.46. **Fees from the commercial/industrial/institutional sector are an important source to cross subsidize low household fees.** The waste portion of the property tax should not be applied to businesses; the waste fee should be based on individual waste management contracts with companies/institutions, taking into account the actual quantity of waste that needs to be collected (e.g. size/weight of container).
- 5.47. **Further options for increasing waste revenues include:**
- A municipal tourist fee per person per night in hotels and guesthouses with allocated funds for environment/waste
 - Development of commercial waste collection and treatment such as: hospital waste, non-hazardous industrial waste, construction and demolition waste, and bulky waste, which could operate under an “on demand” service with separate fees linked to the amount of waste to be collected.
 - Create a specific definition of “Municipal Solid Waste” in the legislation to distinguish the types of wastes to be collected by municipalities as part of regular waste collection services and categories of waste that require a separate payment²³.
 - Penalty increase for non-compliance with local and national legislation on solid waste management.

Improve waste information systems and public awareness/engagement

- 5.48. **A professional waste information system needs to be set up to gather data on waste collection, disposal and fee structures.** This is essential to improve the efficiency and effectiveness of the waste management process, and also to set clear standards for reporting revenue and expenditure. All stakeholders, who are active in the various waste management services, public or private, should report on the waste that has been collected, transported and disposed. This information needs to be reported at the national level be available for monitoring and enforcement, these are the responsibilities of the ministries, typically Ministry of Environment.
- 5.49. **Education and public awareness on waste reduction, littering, and recycling should be expanded.** Public support and buy-in will lead to proper disposal of waste and more care for public spaces. Increased knowledge and information-sharing will also support more cost-effective waste management, and help establish infrastructure for waste management systems. Educational programs are the cornerstone of awareness-raising; the school and social media programs that have been started in Mandalay and Yangon are good examples of efforts that deserve more funding to scale-up. Public awareness and engagement are ongoing activities that require continuous funding, and an estimated . 1,500 Kyat per household per year is needed as part of the waste fee to finance the required communication, awareness-raising, public engagement and other costs related to the waste collection and fee collection. Educational programs will have little effect if waste collection and disposal services are not improved; continual improvements in service play a large role in with moving towards 100 percent waste collection and environmentally sustainable disposal.

23 Generally, municipal solid waste is defined as: “non-gaseous and non-liquid waste that result from the daily activities of residential, commercial and public operations (public markets, street sweepings, etc.) within a given administrative area”.

- 5.50. **Modern technology and ICT can also improve solid waste operations and track plastic leakage.** The increase in waste collection coverage will require a combination of equipment and operational planning using modern technologies such as databases and GPS planning methodologies. An inventory of current households with housing type and commercial/institutional status is required to assess the quantities of waste quantities that need to be collected. Google maps and GPS planning methodology can track trucks on the actual collection routes to optimize routing. Yangon has already started to track the waste collection fleet using GPS technology.

Improve waste disposal and treatment

- 5.51. **Move away from the current controlled/open dumping practices to using sanitary landfills; conduct landfill rehabilitation and expansion to ensure environmentally sustainable waste disposal.** Very few landfills have weighbridges to track the actual quantities of waste being disposed at the landfill to be able to charge accordingly; substantially more funds are needed to upgrade operations and to move from open dumping of waste to using sanitary landfills.
- 5.52. **Apply a waste gate fee to raise funds for landfilling in an environmentally controlled manner in a sanitary landfill.** This would apply to all waste disposed, including waste that is collected by the cleansing department. Currently, waste disposal fees are only charged for third party waste disposal but not for cleansing department trucks, which limits the landfill operator's ability to raise sufficient funds needed to build sanitary landfills, where waste is compacted and covered daily, and where methane is captured to reduce the risk of fire and other negative impacts to public health and safety.
- 5.53. **Regional sanitary landfills are a basic requirement in any waste management system even when waste management systems include more advanced treatment facilities, such as incinerators.** Landfills will be required for a least a certain fraction of the waste, even advanced waste treatment systems such as separate household collection of different waste fractions, composting facilities, anaerobic treatment or incineration facilities are successfully integrated. Urgent rehabilitation of the current landfills is required to minimize the environmental and health impacts. Over a longer-term, private sector participation could be introduced, specifically for some more advanced waste treatment options, granted a financially and environmentally sustainable solid waste system is in place with sufficient accompanying legislation (for waste collection, transport and disposal) and monitoring and enforcement.
- 5.54. **Feasibility studies are required when considering more advanced solid waste management technologies to inform decision making that will have substantial financial and environmental implications.** This will require skills development, capacity building and monitoring/enforcement as well as a solid waste roadmap/masterplan at the regional level. Following this, work can begin on examining different technologies available to the waste sector. The following training and capacity building programs are needed to prepare for this: (i) policy formulation and planning; (ii) legislation; (iii) infrastructure feasibility analysis and design; (iv) budgeting and accounting; (v) technical operation; and (vi) monitoring and enforcement.
- 5.55. **Improving and expanding solid waste collection and landfill disposal in an environmentally and financially sustainable manner is a priority.** Improvements are most effective when they are applied incrementally, creating the basis for scaling-up and gradually making it affordable for the public. Regulations, laws and financial conditions need to be put in place to encourage cost-effective private sector interest that has an incentive to invest in the sector.

5.56. A summary of key issues related to: costs and expenditures; lack of financial sustainability of the solid waste sector; and lack of environmental sustainability are presented in Table 5.7. Key policy and investment options are also given.

Table 5.7: Summary of policy options and recommendations

Issue	Policy and investment option
Waste management is a substantial expenditure item for the municipal budget, income from solid waste management services does not cover even the operational costs of solid waste collection and disposal	<i>Short term:</i> Increase revenues by increasing waste fees for households; cross-subsidize with a commercial/institutional waste fee; improve billing systems to improve financial sustainability of operations.
No clear cost accounting is applied for the allocation of expenditures to different waste activities; there is also no clear cost accounting that could establish the cost per ton for waste management services as per international municipal practice	<i>Short/medium term:</i> Establish cost centers for the different of solid waste management functions in a transparent manner to be able to assess the operational costs per ton of the different waste management services; compare costs and take action to increase cost-efficiency.
The current low level of revenue is not enough to cover operational costs and also places difficulties for the capital investments required for expanding waste collection to 100% and environmentally compliant waste disposal or treatment	<i>Short term:</i> Increase revenues and optimize costs; <i>medium-term:</i> increase coverage for household waste fee collection by increasing waste collection to 100% in large cities, thereby increasing satisfaction with waste services and improving bill collection efficiency.
Low waste collection coverage, even in large cities, resulting in low public cleanliness and leakage of plastics into the environment and waterways/ocean	<i>Short/medium term:</i> Increase waste collection services to 100 percent for the large cities; identify polluting cities that discharge most plastics into the waterways; develop plastic policies to reduce and reuse material and encourage the development and use of other material
Current practices of open dumping cause multiple environmental and health issues.	<i>Short/medium term:</i> Establish a gate fee at landfills to raise funding for sanitary landfills; <i>medium/long term:</i> rehabilitate where possible and otherwise close old dumpsites; build environmentally-compliant landfills; <i>long term:</i> achieve more advanced waste treatment, and increased waste revenues.
No reliable data on solid waste generation, collection and disposal; inadequate regulations and monitoring/enforcement	<i>Short/medium term:</i> Create a robust and transparent way to report on waste expenditures and on waste received, transported and disposed at local and national level. Strengthen legislation and regulations; monitor and enforce waste compliance.
Low public awareness of waste disposal, littering and plastic trash getting into waterways. The latter can cause serious problems with drainage/flooding, environmental and health problems, and general littering/lack of cleanliness.	<i>Short term:</i> substantially increase public awareness and education on waste reduction; stop littering and properly fund awareness campaigns by including education/outreach/public participation in the waste fee.

6 URBAN TRANSPORT

A. Introduction

- 6.1. **Myanmar's transition into a market economy has accelerated economic and population growth in urban areas adding pressure to lagging urban transport infrastructure.** Conditions for urban transport have rapidly declined since 2012 in Yangon and Mandalay. With the economic recovery and relaxation of restrictions on vehicular imports and licensing, the number of private vehicles has increased quickly. Public transport systems have not adjusted to these rapid changes and have started to lose ground to private vehicles. Increasing motorization, traffic congestion, emissions, traffic-related accidents, travel time and costs affect living conditions in both cities. .
- 6.2. **This chapter¹ summarizes service delivery and associated public spending in the urban transport sector in Yangon and Mandalay.** It first presents an overview of urban mobility dynamics in Myanmar's two main metropolitan areas. It then discusses gaps and issues related to existing policies, institutional setup, and public spending. It examines funding options in the urban transport sector, and summarizes pertinent policy recommendations.
- 6.3. **Two broad areas were identified in the review for future analytical considerations.** First, if Myanmar is to develop rational and realistic policies and plans, then an important starting point will be reliable and consistently updated data on expenditures. Second, incomplete fiscal decentralization, and un-agile and unnecessary layering of decision-making process may dilute the potential benefits of decentralized decision-making in the urban transport sector. Policy makers need to keep this in mind when designing and implementing urban transport policies and investments, particularly in the short and medium term.

B. Overview of urban mobility in Yangon and Mandalay

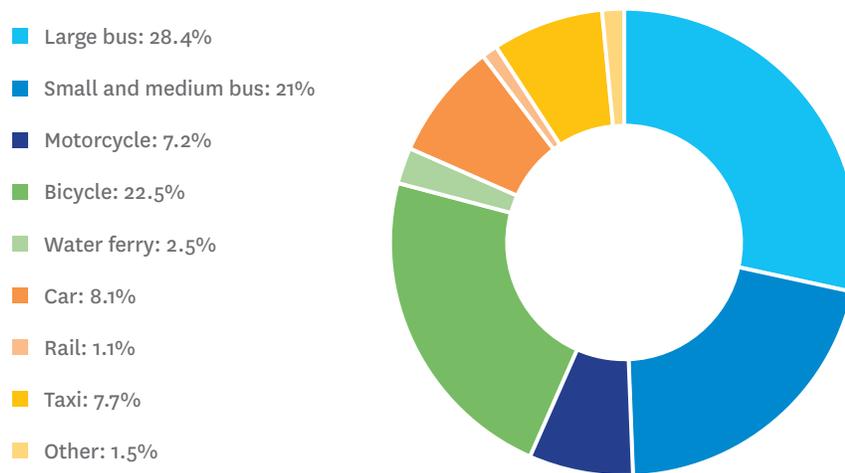
- 6.4. **Yangon and Mandalay regions are very different in terms of their demographics and transport demand characteristics.** Both regions are critical to Myanmar's economy, and together account for about 37 percent of GDP and 27 percent of the population (2017). The Yangon Region is mainly urban and dominated by Yangon City, which has 70 percent of its population. The Mandalay Region, on the other hand, is predominantly rural; Mandalay City and surrounding urban agglomerations represent less than 30 percent of the population of the wider region. These urban geography differences have implications for urban transport demand and accessibility, as well as for mobility patterns which are strongly influenced by contrasting urban mobility policies.

¹ This chapter presents an overview of the urban transport financing and funding in Yangon and Mandalay based on findings of the ongoing analytical work of the World Bank on *Urban Transport Sector Financing in Yangon and Mandalay*.

Yangon

6.5. **Public transport, and particularly the bus system, plays a major role for mobility and accessibility within Yangon City.** On the supply side, the city has bus, rail and ferry (water bus) services. Buses, branded under the Yangon Bus Service scheme, carry around half of the total trips by modal share in Yangon, which is high by comparison to international and regional standards and is partly attributed to the active ban on motorcycle circulation in the Yangon City center. The Yangon Circular Railway, a run-down, nineteenth century legacy system has high potential for consolidating as a mass transit backbone, but currently accounts for less than 2 percent of trips. Similarly, the modal share of ferry services is limited to about 2.5 percent. Figure 6.1 illustrates the trip modal split in Yangon.

Figure 6.1: Modal split in Yangon (excluding walking)

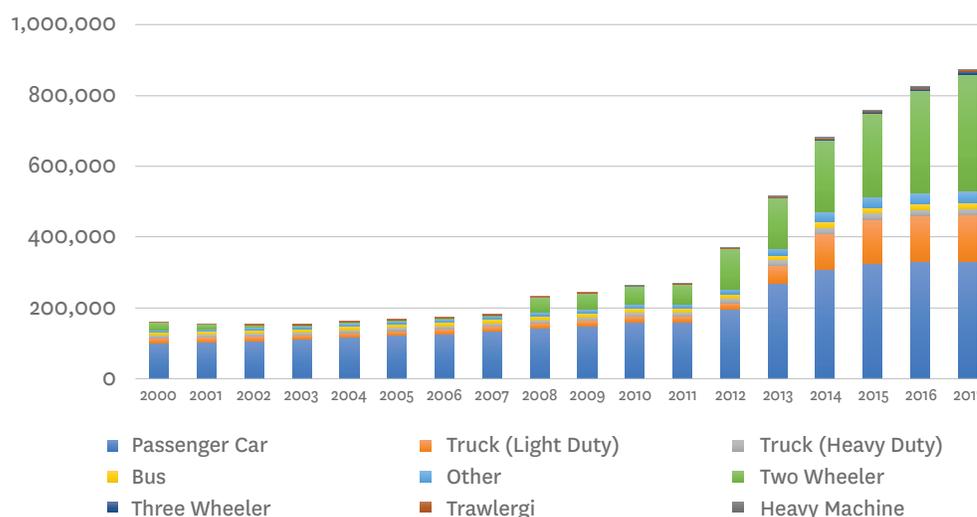


Source: YUTRA Final Report, JICA, 2013

6.6. **Private car ownership has been steadily increasing in Yangon, reflecting a macroeconomic trend of rising purchasing power among urban residents and the decreasing costs of imported vehicles.** Restrictions on motorcycles and bicycles have severely limited the use of these two-wheeler modes in Yangon city, albeit being increasingly used in non-urban areas of the region. This particularity has helped maintain a healthy demand for public transport, predominantly by bus. At the same time, car ownership has increased and is mainly a result of falling prices of car imports and partly a result of rising household income levels. Consequently, motorization has increased almost threefold in the Yangon region over the period 2010-2017 (Figure 6.2). With the rapid increase in personal vehicle ownership and use as well as challenges within public transport services, traffic congestion has emerged as an urgent challenge, which is undermining productivity and quality of life in Yangon city.

6.7. **The public transport agenda has taken on a newfound importance at the Yangon Regional Government with the establishment of the Yangon Regional Transport Authority (YRTA) in 2016.** The most important step toward improving urban transport delivery and its institutional framework took place in 2016 with transformation of the Yangon Motor Vehicles Supervisory Committee (colloquially referred to as Ma Hta Tha), into YRTA. YRTA oversees public transport modes (except rail) and this could further evolve into a modern and integrated regional urban mobility authority. As part of the bus system reforms, an updated

Figure 6.2: Registered vehicles by type in Yangon region



Source: Department of Road Transport Admin, 2018

bus network and service scheme, under the name Yangon Bus Services (YBS) began operations under YRTA's supervision in 2017; this improved the quality of public transport services and moved in the right direction to allow regulated private sector agents to participate in the provision of transport services. Despite this, YBS has significant technical and operational challenges (Box 6.1) which undermine its sustainability. Institutional and financial challenges at YRTA need to be addressed to allow Yangon City to embark on more ambitious urban transport investments, including rail and Bus Rapid Transit (BRT).

- 6.8. **The Yangon government, through YRTA, is focusing its urban transport efforts primarily on improving Yangon's bus network, given that it is the main arterial transport mode in the city.** These improvements are multifaceted, and include: enhanced contracting mechanisms (from limited-responsibility perennial permits to time-bound, performance-based contracts); consolidation and professionalization of low-capacity bus operators into modern operating companies; renewal of the bus fleet; they also include technology projects, like the introduction of fleet management, user information and fare collection systems. These multi-track improvements are the foundation that will allow the bus network to be integrated with higher capacity systems, including BRT, urban rail or other fully segregated technologies.
- 6.9. **The Yangon government has dedicated important resources to devise mechanisms that allow urban transport to be at the core of the redevelopment of four districts and to be a main part of the development of New Yangon.** In addition to this, several international development organizations are supporting union and regional dialogue on strategies to improve urban transport by providing support for studies and analytical activities. Such support includes: (a) a feasibility study for the proposed 19.8 km Pyay Road BRT line was completed with support from the Asian Development Bank (ADB); (b) an investment program to modernize the Yangon Circular Railway, led by Myanmar Railways with support from the Japan International Cooperation Agency (JICA); (c) technical support to YRTA bus operations and bus maintenance, led by JICA; and (d) a feasibility study for the Mass Rail Transit System, also with support from JICA. In addition to mass transit systems, as of early 2019 there are ongoing discussions at the policy level to improve the following: traffic management and traffic signaling systems; parking policy and management; road safety; and taxi regulations and management.

- 6.10. **The physical condition of urban mobility infrastructure remain a critical challenge in densely populated informal settlements, mostly located in urban peripheries.** These areas frequently lack access to basic infrastructure and services including paved roads. In Yangon, 54 percent of the informal settlements have internal road networks provided by the government or built by the community, but most roads are unpaved and only 1.2 percent of the roads have drainage. Many informal settlements are flooded during the rainy season due to lack of drainage systems, which significantly constrains the mobility of people living in these areas and their access to public services.

Box 6.1: Yangon bus system

Operators. YBS has issued permits to operate 100 lines with nearly 6,550 buses to 18 bus companies and 10 “responsible bus line groups” (associations). Two of the 18 bus companies, YUPT and YBPC, are publicly controlled by the Yangon Regional Government, and each company runs 500 modern, compressed natural gas (CNG) buses, totaling 1,000 units. The other 16 bus companies have formal registration as bus operating companies and are financially capable and responsible for fleet purchase, operation, garaging and maintenance. These companies have purchased a modern CNG bus fleet with financing from local commercial banks. The corporate structure of the 10 “responsible bus line groups” is similar to that of cooperatives; it integrates former small bus owners, who operate a combination of new “yellow buses” along with aging buses that pre-date the 2016 reforms.

Fleet. Cooperatives operate a blend of owned and leased CNG buses. Old buses were part of a fleet of used imports provided by Hyundai in 2012. The newer fleet, of 3,194 buses (49% of the total fleet) includes the 1,000 units operated by the publicly-controlled operators, plus 2,194 units controlled by larger operating companies which have purchased their own fleet with loans from local commercial banks. New buses, either private or YRTA owned, are of Chinese origin.

Bus Depots. There are 8 active bus depots, 4 of which are controlled by the YBPC public operator. The other 4 depots are controlled by larger operating companies, while cooperative operators do not have adequate access to depots and maintenance facilities. As a result, most of the publicly-owned buses leased to operators are serviced on the side of the road, and their condition is deteriorating rapidly.

Fare collection. With no unified fare collection system in place, cash flows are managed by each company independently, undermining the ability of the YRTA to centrally manage the finances and remuneration of the system. A plan to implement a smart-card-based, centralized fare collection system exists, which is yet to be implemented.

Fleet Management and user information. Buses are equipped with a GPS system purchased from a Singaporean firm (which provide services to the Singapore Bus System). This modern GPS system is supervised from a central control center, where, despite the potential, functionality is limited to overspeed tracking because of limited human capacity.

Technical and institutional vacuum for traffic management and engineering. Despite having installed modern traffic signaling systems and a control center for YBS, Yangon’s perceived traffic management and engineering capacities are weak. The institutional vacuum in which traffic management operates has various negative consequences: congestion is increasing; traffic signals are poorly timed (evidenced by extremely long cycles and very low level of service on intersections); there is not enough street and road signage; parking management is extremely limited.

Note: Numbers and data, unless indicated otherwise, have been taken from JICA’s Comprehensive Study of The Urban Transport Development Program in Greater Yangon (Yutra Update), 2019, and YRTA’s 2019 Annual Report

Mandalay

- 6.11. **Mandalay, the second largest city in Myanmar, has a comparatively smaller urban footprint and a lower density than Yangon.** The city residents solve most of their commuting needs with direct alternatives, favoring motorbike and walking. This short-distance, straightforward commuting patterns favored widespread bicycle use in the past. Since 2012, the city has experienced an exponential increase in motorization, after restrictions on car and motorcycle imports were eased. Increased motorization and lack of a well-functioning urban transport system undermines the future economic growth potential of the city, becoming a major burden on population mobility and their access to jobs and services.
- 6.12. **Mandalay’s limited urban footprint has allowed motorcycle trips to become the main urban mobility mode.** 2016 estimates from ADB show that two-wheelers account for 70 percent of trips, excluding walking (Figure 6.4). The Mandalay region has 30 percent of the country’s motorcycle registrations with 688,652 registered motorcycles in 2014 in city alone (there are 1,182,691 across the region). This equates to 2.12 motorcycles per household, the corresponding figures for cars and bicycles are 0.16 and 0.92 respectively. It also means that motorcycle ownership is around 400 per 1,000 inhabitants, which may appear high, but international comparisons indicate that it could still grow by 50 percent before reaching saturation point².
- 6.13. **Buses play a minimal role in Mandalay’s urban transport.** In Mandalay, a very small group of users are captive of the existing, if precarious, public transport. Public transport users tend to be citizens who carry voluminous packages to and from the markets, who find too expensive or cumbersome travelling with cargo on motorbikes. Public transport vehicles are uncomfortable, inappropriate in size, difficult to access, poorly maintained and aging fast. While the city has a train line and a central train station, the train line plays no urban transport function and, due to its slow and uncompetitive run times, has a limited regional function. Consequently, the only viable means of public transport is the current 57 bus routes. Buses generally make three trips per day with headways as long as two hours, ridership averages less than 100 passengers per bus per weekday. *Ya ka ka*, a legacy non-government organization, permits mini-bus operations with limited oversight. *Ya ka ka* deals with the day to day relationship with individual bus owners or operators, without keeping a record of operational or financial performance. The fleet is made up of 18 city buses (90,000 passengers per month); 383 Dyna (759,600 passengers per month); 15 Hilux (24,300 passengers per month); and 401 light trucks (686,700 passengers per month).³

Figure 6.3: Mandalay vehicle fleet

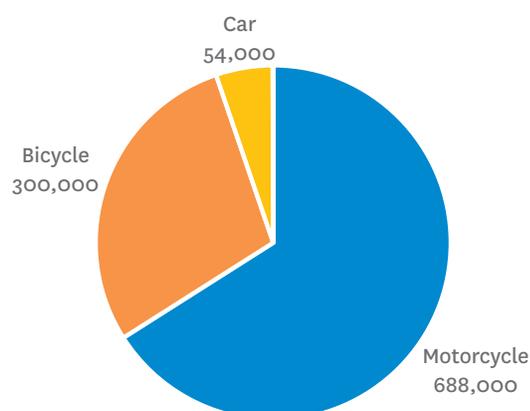
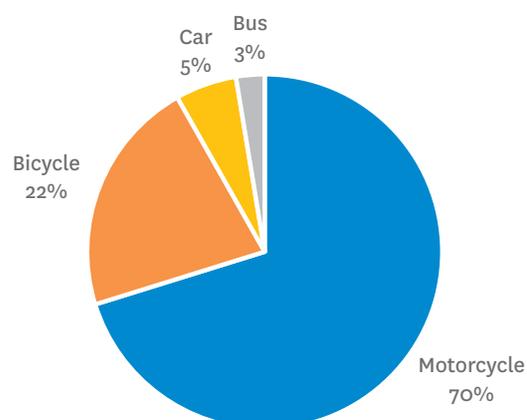


Figure 6.4: Mandalay trip modal split



Source: Myanmar Urban Transport Policy Note, ADB, 2016

² ADB. Urban Transport Policy Note, 2016.

³ Data from *Ya ka ka* interviews, World Bank, 2018.

6.14. **With its limited resources, Mandalay has focused its urban transport policy on maintaining roads and improving traffic management.** The Mandalay City Development Council has recently implemented a traffic control signaling system on 14 intersections. The system, however, is not being used to its full potential, given technical capacity constraints and issues related to enforcement of the traffic system. The city is also working on a proposed automated vehicle registration system and there are plans to develop information systems for parking and bus stops. Other commentators⁴ have recommended a corridor-based improvement strategy for public transport, based on: carefully planned reallocation of road space; prioritized space for non-motorized modes and buses; and parking measures to curb vehicle use.

6.15. **Increased motorization has led to a deterioration of road safety conditions in Myanmar, particularly in urban areas.** Myanmar has one of the highest road crash related fatalities in the region, estimated at 19.9 fatalities per 100,000 population⁵ (Figure 6.5). Riders of motorized two and three-wheeled vehicles and pedestrians are more exposed to road fatality risks in Myanmar, together accounting for about 79 percent of road crash related deaths (Figure 6.6). Road fatalities in Yangon and Mandalay - 39 and 34 fatalities per 100,000 population, respectively - are significantly higher than the country average. Pedestrian and cyclist account for almost half of road fatalities in urban areas. These figures are high compared to global road traffic deaths; Yangon and Mandalay need to invest in Vision Zero strategies to create detailed plans and investment programs to improve road infrastructure with the aim of minimizing road safety risks for the most vulnerable road users (pedestrians, cyclists and people with disabilities). The associated costs of crashes can send already struggling families deeper into poverty and undermine their paths to prosperity, therefore, represent a severe deterrent to poverty alleviation and human capital development.

Figure 6.5: Road fatalities per 100,000 inhabitants

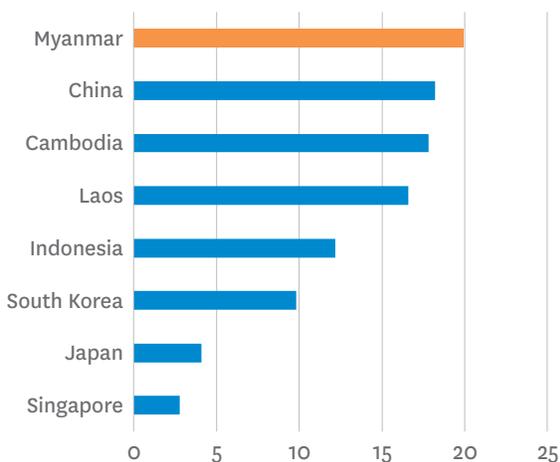
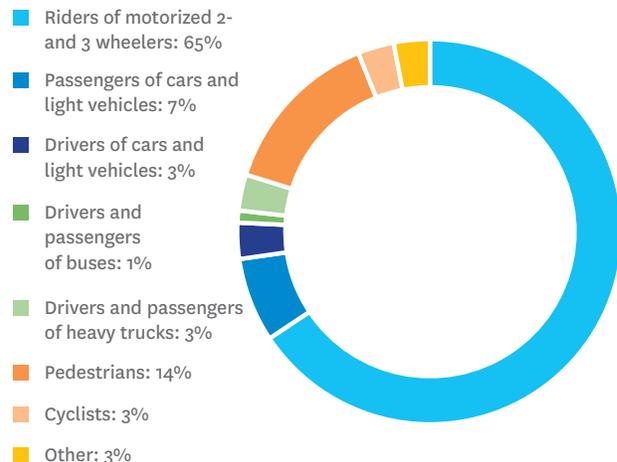


Figure 6.6: Road fatalities in Myanmar



Source: Global Status Report on Road Safety, World Health Organization, 2018

4 ADB. Urban Transport Policy Note, 2016.

5 Global Status Report on Road Safety, World Health Organization, 2018

- 6.16. **The Yangon and Mandalay governments need to place stronger emphasis on social inclusion within their transport systems as means of improving access to opportunities and better serve the needs of all groups including women, people with disabilities, elderly and children.** The benefits of emphasizing social inclusion in transport include enhanced mobility for women, children, elderly and people who may have a disability that prevents them from using public transport. When everyone benefits from increased mobility, they are in a position to benefit from increased access to education, health services and other public facilities. This could be an effective strategy to improve school enrolment, educational attainment, and health outcomes; it could lower levels of gender-based violence and sexual harassment, and support a general reduction in crime and violence on public transport. It could also provide better access to income-generating and other employment opportunities for a wider group of the population and expanded opportunities for trading at local and nearby markets, accessing capital, and building networks⁶. Social inclusion strategies should be linked to financing to support the development of inclusive urban transport infrastructure and services. There are several examples of good practices and success stories that Myanmar can learn from. Some of these are included in Box 6.2.
- 6.17. **Mandalay and Yangon face different issues when planning to meet their future urban transport demands while avoiding productivity and welfare damaging congestion.** Yangon must find a way of making public transport attractive enough to retain and even increase its importance relative to the car; Mandalay must look for ways of persuading people to opt for public transport over the easy mobility of two-wheeled transport, which is overwhelmingly the favoured mode at present. Both are very significant challenges, which other comparable cities in the region have struggled to address but might nevertheless offer some useful lessons.

Box 6.2: International examples on inclusive transport projects

Dar Es Salaam's Bus Rapid Transit (BRT) System: With World Bank support, the Government of Tanzania worked with the Comprehensive Community Based Rehabilitation in Tanzania (CCBRT) Advocacy Unit to understand the needs of people with disabilities (PwDs). This translated into a design with smooth access to stations, platforms with easy access to buses without a ramp, a feedback mechanism for all passengers, including PwDs, to report problems to the appropriate government department. Sufficient revenue allows sustainable budget for maintenance, quickly fixing problems which may prevent PwDs access, such as uneven pavements.

The Greater Dhaka Sustainable Urban Transport Project (with ADB and World Bank support) is implementing a bus rapid transit (BRT) system specifically planned to support women's employment by selecting an alignment along a transport corridor that services a garment factory hub and the residential areas of female garment workers. The physical design of this project tackles issues of safety, harassment, and bullying often experienced by women using public transport in Dhaka; there are separate male/female queues and reserved seats for women, even on a female-dominated transit route.

In Ulaanbaatar, public transportation provides an affordable transit option for most city residents, given the flat fare of MNT 500 (US\$ 0.27) for adults and MNT 200 (US\$ 0.11) for children. Full-fare subsidies are provided for students, PwDs, and the elderly, who collectively constitute 40 percent of the passengers.

The Project for Developing Transport Service for Women in Pakistan ensures that buses serve women, and children under 12. Each bus has a combination of seated and standing spaces, with at least one wheelchair space, internal and external speakers for announcements, and one internal surveillance camera. In addition to the buses, the project constructed 31 specialized bus stops, designed and planned in consultation with female commuters. Each bus stop is shaded, has adequate seating, and has consistent solar powered lights. In addition to women-friendly infrastructure design, the project developed a smartphone mobile app for women commuters to monitor safety. The project also conducted context-specific training sessions in project management skills and tools on mainstreaming gender concerns into regional urban planning, development, and operation of the Women Bus Service.

In Cairo the Harass Map project has been using modern technology to map the incidence of sexual harassment on urban public transport. GPS mapping, mobile phones, cameras, and internet technology can be used to identify or report traffic or public transport performance hot spots. This mobile phone- and internet-based initiative allows women to report anonymously via free mobile texting and has identified hot spots for sexual harassment around public transport stations.

Source: ICED, World Bank, UNW/UNOPS

C. Urban transport policy framework

- 6.18. **There are gaps in the policy and planning frameworks for urban transport, but several actions have already been put in place.** At the national level, the Myanmar Sustainable Development Plan⁷ (MSDP) has a number of ‘action plans’ under its various pillars that address improvements in the urban transport sector (Table 6.1). The MSDP recognizes the importance of decentralized decision-making for transport service delivery and suggests further administrative decentralization of the transport sector to provide adequate public service delivery to the population.
- 6.19. **At the sectoral level, the National Transport Development Plan⁸ (NTDP) sets out broad priorities for Myanmar’s transport sector, together with specific proposals for addressing these priorities.** While NTDP is relatively quiet on urban transport, it does provide some broader policy directions of relevance (Table 6.1). NTDP identifies strategic objectives for different modes of transport, some of which touch on aspects of urban transport.

7 Myanmar Sustainable Development Plan, Government of the Republic of the Union of Myanmar, 2018

8 The Survey Program for the National Transport Development Plan in the Republic of the Union of Myanmar, Ministry of Transport of the Republic of the Union of Myanmar, prepared with support of JICA in 2014

Table 6.1: Priorities for urban transport in MSDP and NTDP

MSDP	NTDP
<ul style="list-style-type: none"> • Further administrative decentralization of the transport sector to provide effective public service delivery to the population at the subnational level; • Revise and enhance key transport-related laws, policies, programs and strategies; • Increase resilience of urban infrastructure and services to protect from climate change, disasters, shocks and other natural hazards; • Promote PPP mechanisms which facilitate the development of commercially viable infrastructure projects through greater public-private sector collaboration; • Adapt infrastructure systems, including transport systems, to mitigate against heightened risks of natural disasters and new climatic conditions, while facilitating a transition to more efficient, low-carbon technologies; • Implement measures to improve road user fees framework, including heavy vehicle license fees, fuel levies, and road tolls. 	<ul style="list-style-type: none"> • Improve coordination among transport sector ministries and agencies; • Improve coordination among transport sector and spatial planning and development ministries and agencies; • Enhance mechanisms for integrated planning of transport and other sector development programs, projects and proposals; • Enable integration of multi-modal transport networks and services in strategic corridors; • Ensure efficient use, upgrading and maintenance of existing transport assets before major new investments are committed; • Enhance opportunities for private sector involvement in the provision of transport infrastructure and services; • Prioritize safety and security of transport services in all states and regions; • Emphasize the importance of environmental considerations in transport planning processes to improve potential for successful implementation; • Adapt appropriate technologies relative to the stage of development of the country to provide future sustainable transport solutions and help reduce carbon emissions; • Institute long term training programs in transport sector planning, management and operations to improve human resource capabilities.

6.20. **At the city level, Yangon has the Comprehensive Urban Transport Plan for Greater Yangon (YUTRA)⁹, which covers Yangon City and the urbanizing areas of Yangon Region.** The promotion and expansion of public transport services in Yangon are central to the YUTRA report. While YUTRA is a long-term masterplan, an interim, resource-constrained solutions may allow advancing with specific actions within Yangon’s investment capabilities. The deterioration of travel times in Yangon, particularly for low income populations depending on public transport, generates demand for early and urgent actions.

6.21. **There is no overarching strategic direction for Mandalay’s urban transport development.** Mandalay does not have a formally-established public transport authority, nor does it have a comprehensive plan that would cover an urban mobility strategy. Service provision is mainly informal and very limited, and motorcycle use is gaining modal share steadily year after year. Consequently, before the prioritization and implementation of major investments on the urban transport sector, Mandalay needs to design an urban transport development plan that is clearly aligned with its plans for economic growth, the mobility needs of its population and its financing capacity.

D. Institutional context

- 6.22. **Incomplete decentralization has led to institutional fragmentation, with disjointed responsibilities and accountabilities in the urban transport sector.** At the union level, the Ministry of Construction (MOC) has the primary responsibility for roads and urban development. The Department of Highways (DOH) under MOC is responsible for national highways and trunk roads. There is a dual reporting structure at the regional level: DOH regional units in Yangon and Mandalay also report to regional ministries, namely the Ministry of Electricity, Industry, Transport and Communications in Yangon Region Government and the Ministry of Electricity, Energy and Construction in Mandalay Region Government. But links to regional ministries are notional only. In the same way, the Department of Rural Roads Development, also under MOC, has responsibility for rural roads in two regions.
- 6.23. **The operationalization of the Constitution's decentralization provisions through lower level legal and regulatory instruments is incomplete.** As would be expected in the country's highest legal instrument, the details of the management, guidance, supervision and inspection functions are not given. The real weakness of the decentralization process evidenced by this review is that these details are not provided in lower level legal instruments either, leaving them subject to interpretation, or even, multiple interpretations. These interpretations include political, financial, and administrative dimensions of the management functions included in the decentralization provisions.
- 6.24. **The only formal actor in urban rail is at the union level.** Rail does not feature in urban transport in Mandalay, but it does have a small role in Yangon. Rail transportation and associated infrastructure are union-level functions managed through the Union Ministry of Transport and Communications (MOTC); MOTC oversees the state-owned railway company, Myanmar Railways, which operates Yangon Circular Line. The circular line is a good example of a valuable asset exploited at a fraction of its potential. Frequency, quality of service, station maintenance, tracks and signalling, and the rolling stock are in a poor state of repair in Yangon, particularly on the Circular Line.
- 6.25. **All public transport service provision, except rail, is under regional governments.** The Yangon Regional Government transformed *Ma Hta Tha* into YRTA in 2016 as a dedicated transport authority with a mandate to manage and regulate public bus transport in Yangon. This is perceived as positive step forward, albeit additional challenges ahead remain. YRTA is nearly 3 years old, and its creation/existence has been well received; however it needs develop its capacity to become an effective and integrated transport authority. Its institutional setup is still precarious, and capacity and staffing are constrained, this is particularly in planning and operations. Unlike Yangon, Mandalay lacks dedicated transport authority, while the regulation of the existing bus system is under the mandate of the regional government.
- 6.26. **In Yangon, public transport service delivery is fragmented, mainly, between rail-based transport (overseen by Myanmar Railways) and road buses (overseen by YRTA).** The design of integrated, high-performing transport solutions, such as bus rapid transport (BRT) and mass rail transit (MRT), requires both infrastructure improvements and service/private participation restructuring, which are difficult to achieve in the current environment. Yangon region could consider supporting YRTA's higher-level strategic planning activities by establishing a Yangon Regional Transport Forum, integrated by delegates from YRG, YCDC and Myanmar Railways, chaired or coordinated by YRTA. The forum could also provide space for key non-government stakeholders to oversee the planning, implementation and management of an integrated public transport network that meets the needs of commuters in an efficient, cost-effective and sustainable manner. YRTA's regulatory roles should be strengthened and complemented with a commercial focus and use of a business-like approach to maximize revenue and minimize costs within the framework of strategic policy set by the YRG. Experience from Yangon could help Mandalay design a new institutional structure for its transport system, as it also needs an integrated transport authority to plan

and implement urban mobility plans.

- 6.27. **The Yangon and Mandalay City Development Committees (YCDC and MCDC) are responsible for urban roads within city jurisdictions.** YCDC and MCDC are responsible for city planning, roads, land administration, tax collection and urban development within their city boundaries. In other townships of the region, Development Affairs Organizations (DAOs) fulfil a similar role. The existence of YCDC and MCDC should theoretically make it easier to execute decentralized responsibilities in urban roads, but complications exist. Firstly, DAOs are responsible for roads in townships outside the city boundaries and their expenditures and the resulting road infrastructure services also need to be considered when evaluating urban mobility and accessibility in the city vis-a-vis urban peripheries and region. Secondly, while the constitution designates management responsibilities for transport infrastructure, sources of funding may not, in practice, always align with these responsibilities. Administrative responsibilities for highways and trunk roads are situated at the union-level and executed by the DOH, but funding may be blended, with states/regions co-financing the cost of works. Such shared financing arrangements are standard in other countries, where they are usually formalized and rules-based; however, in Myanmar they tend to be ad hoc, which blurs responsibilities and lines of accountability.
- 6.28. **River transport comes under the regional government and plays a role in Yangon.** Schedule 2 of the Constitution states that in addition to roads, state and/or regional governments manage ports, jetties and pontoons that fall within their responsibility. In Yangon, river transport represents a small share of urban transport trips, although it carries more passengers than rail each year. As of 2018, YRTA issued licenses to operate Water Bus services on the three routes along the Yangon River. Operation has been tendered to *Tint Tint Myanmar*, which has imported Thai high-speed passenger ferries and is providing reliable and frequent services. The company has indicated that it would like to expand water bus operations and provide reliable transport links in the Yangon River and the Nga Moe Yeik Creek; this may help reduce travel times and congestion from road services entering the Yangon. Absence of proper landing facilities for passengers and cargo currently hamper service expansion, as does the draught limitation for vessels especially during dry season. Relatively low-cost investments could fix these problems and bring a high return relative to other investments.
- 6.29. **The current budget process needs to improve priority setting for the urban transport sector.** Budgeting will work better if prioritization is done within pre-defined financial constraints and using a clear set of prioritization criteria. Bottom-up requests are generated without reference to available fiscal space and their affordability, and without applying strategically oriented prioritization and selection criteria. In this context, the tendency will be to classify all project proposals as the highest priority, irrespective of their actual significance. Additionally, a two-step budgeting process is preferable, whereby baseline spending needs are established before new spending proposals are considered. In addition, the annual focus of the budget is a problem for major urban transport projects implemented over several years and could lead to implementation inefficiencies and higher total costs. As far as urban transport is concerned, such an approach would assist in guarding against stop-go implementation and in ensuring timely delivery of benefits from multi-year projects.
- 6.30. **The use of PPPs may unlock financing for improving and expanding urban transport infrastructure and services in Yangon and Mandalay.** PPPs are still public projects, even if the procurement and financing modality is different; therefore, they should not be regarded as a panacea but must be treated with caution because significant specialist skills are required to negotiate a good deal on behalf of the public sector. PPPs can also pose a significant fiscal risk, either explicitly or implicitly. PPPs need to be subject to the same tests as any other public investment project to determine whether they will deliver net welfare benefits to society. They should only be included in the Project Bank, along with traditionally procured projects, after a thorough appraisal has determined that they will be socially profitable. Once this is confirmed, their suitability as PPPs can be assessed.

- 6.31. **The national Project Bank could be a step in the right direction in public investment management**, but only if it is accompanied by rigorous pre-screening, appraisal, and an objective review process to ensure that it contains only projects that have meet the defined standards in terms of preparation, economic performance and sustainability. For example, this is how Project Banks operate in several Latin American countries, like Chile and Colombia, where the national governments have practiced this approach for many years. Differentiated processes and methods for smaller projects that would not be part of the Project Bank are also needed. These could be a more straightforward approach than for the Project Bank or a similar approach but requiring proportionately less analytical effort.
- 6.32. **There is no single best-practice governance model for urban transport, each city approaches the issue in different ways, depending on their political, administrative and economic contexts** (Table 6.2). Most countries agree that urban transport planning and regulation is the responsibility of the public sector, although operations can combine public and private sector stakeholders. In many North American cities regional governments run public transport services, while city governments take care of it in many European cities. Others, like London, Madrid, Paris, and Singapore operate rail, bus and road under a single, robust agency. These are cities with high institutional capacity and their experience is not necessarily appropriate for countries who are beginning to adopt an urban transport plan. The loosely controlled, fully free-market model is generally not recommended, given the role of the public sector to address market failures in provision of transportation services for broader groups of population.

Table 6.2: Alternative governance models for public transport provision

Functions	Free-Market Model	Nationalised Model	Quasi Nationalised Model	Transport Community Model	Franchising Model
Strategic Planning	Private operators	Government	Government	Government	Government
Tactical Planning	Private operators	Government	Government	Public Planning Agency	Private operators
Operational Planning	Private operators	Government	Private operators	Public or private operators	Private operators
Government Role	None	'Turnkey' Provider	Planner and Contractee	Planner and Contractee	Regulator
Operating Contract Type	None	In-house Provision	Fee-for-service 'Gross cost'	Fee-for-service 'Gross cost'	Franchise / 'Net cost'
Governing Institution Type	None	Government Department or Statutory Corporation	Government Department	Statutory Corporation	Government Department
Oversight	Private shareholders	Commissioners or Department Head	Department Head	Independent Board	Department Head / Private shareholders
Examples	Early Bangkok	Sydney, Adelaide, many US cities	Melbourne buses	Zurich, Hamburg, Vancouver, Toronto, Gothenberg, London, Perth, Brisbane (2008)	UK regions, Melbourne trains/trams

Source: Public Transport Users Association, State of Victoria, Australia, <https://www.ptua.org.au/campaigns/govern/models-table/>

E. Overview of public expenditures

Road sector

- 6.33. A review of road expenditures covers a period when better financial information is being prepared and collated for accountability and transparency purposes; however, there are limitations related to unavoidable gaps in recent historical data and issues with the quality of the current data. Available data collected from different agencies are not always in the same category, they include estimates, actual budget information and proposals. The chapter therefore attempts to consolidate all available data to develop a broader picture of public spending on roads at city, regional and union levels.
- 6.34. Urban roads make up an important share of YCDC’s total expenditure and even greater share of capital spending. Figure 6.7 and Figure 6.8 show YCDC and MCDC road expenditure. In 2015/16 and 2016/17, roads made up 24 percent and 33 percent of total YCDC expenditure respectively. Its importance appears to be declining and in 2017/18 and 2018/19 these figures were only 21 percent and 18 percent,¹⁰. Aggregate spending figures obscure the significantly greater importance of capital expenditure on urban roads, where it made up 41 percent of total capital spending by YCDC in 2015/16, declining to a proposed 21 percent in 2018/19. Road maintenance receives much less funding, total but has held steady at around 11-12 percent between 2015/16 and 2017/18, and even showing signs of increasing importance in 2018/19. From 2015/16 to 2018/19, road maintenance spending increased by 68 percent, at the same time there was a 33 percent decline in capital spending.

Figure 6.7: YCDC road expenditures (million kyat)

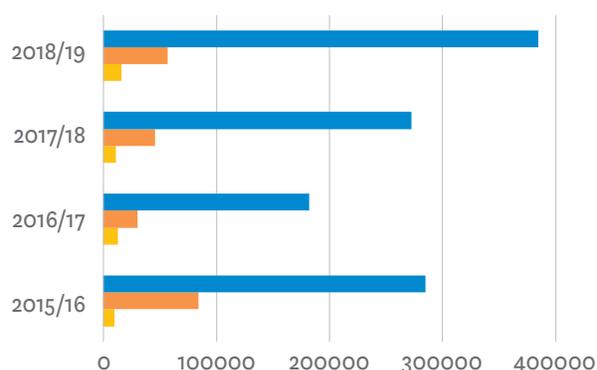
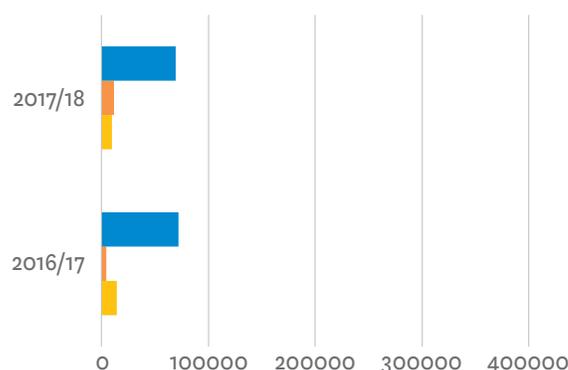


Figure 6.8: MCDC road expenditures (million kyat)



■ YCDC total expenditures ■ Roads capital ■ Road maintenance ■ MCDC total expenditures ■ Roads capital ■ Road maintenance

Source: MOPF, YCDC and MCDC, World Bank Staff Estimates

10 Based on data of budget estimates.

- 6.35. **As in Yangon, roads are a large part of MCDC’s total expenditure, but maintenance dominates spending in Mandalay.** Figure 6.10 shows that MCDC’s spending on roads is also significant, making up 26 percent and 31 percent of total expenditure in 2016/17 and 2017/18, respectively. However, the share of current expenditure is higher than in Yangon – 37 percent in 2016/17 and 28 percent in 2017/18 – indicating a greater relative importance given to road maintenance in Mandalay. Capital spending on urban roads represents 34 percent and 13 percent of total capital spending for 2017/18 and 2016/17, respectively.
- 6.36. **In absolute terms, YCDC’s expenditure on roads is more than double that of MCDC, but its network is three times the size.** This differences in the scale of urban roads expenditure is notable. For the year in which there is matching data, 2016/17, Yangon spent 129 percent more than Mandalay. However, Yangon’s urban road network is three times the size of Mandalay’s, which shows that YCDC is spending less than MCDC on a per kilometer basis¹¹(Table 6.3). This is particularly the case with maintenance, where Mandalay outspent Yangon in absolute terms.

Table 6.3: YCDC and MCDC road network

	Concrete	Bituminous	Macadam	Gravel	Earth	Total
YCDC	1108	1766	0	551	1032	4457
MCDC	55	1034	172	0	491	1752

Source: Myanmar Transport Sector Policy Note: Trunk Roads. ADB. 2019

- 6.37. **There are several sources of expenditure on roads at regional level, but the information is difficult to disentangle from other expenditure data and to assemble into a complete time series for trend analysis.** There is relatively better data on YCDC and MCDC. While DAOs spend on roads outside the city jurisdictions in two regions, it is not possible to separate this expenditure from other activities. The DOH regional offices also spend on national highways and trunk roads that serve urban areas, using a combination of funding from the union and regional budgets. As in other cases, the level of disaggregation of data does not allow separating this spending from non-urban roads. Figure 6.9 and Figure 6.10 below present the best available data on total expenditure from regional budgets on non-rural roads in 2017/18¹² in Yangon and Mandalay, respectively.
- 6.38. **Preserving existing assets through well-funded and timely maintenance is essential for sustainable road infrastructure services.** Yangon and Mandalay need to establish a road asset management system to help prioritize road maintenance and investments based on data and evidences. Analytical work carried out in 2014/2015, with support from ADB, on developing a road asset management program for Myanmar could act as a baseline for Yangon and Mandalay to develop regional systems. The work shows that there is a significant maintenance backlog on the road networks in both regions (Figure 6.9 and Figure 6.10) and suggests that road spending needs a robust plan.

11 It is estimated that road spending per km was about US\$6400/km in Yangon and US\$7100/km in Mandalay in 2016/17

12 The term ‘non-rural’ roads is used to acknowledge that some of the expenditure captured is non-urban. The figures may only be a proxy for regional expenditure on urban roads.

Figure 6.9: Road spending in Yangon region

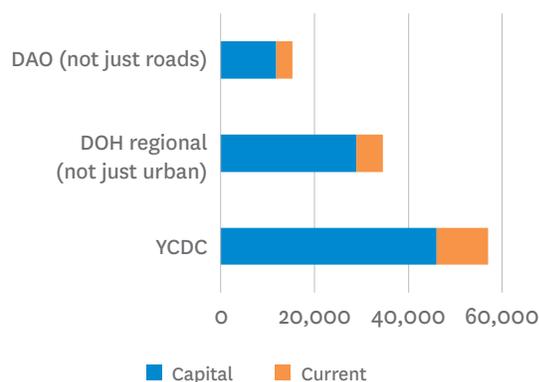
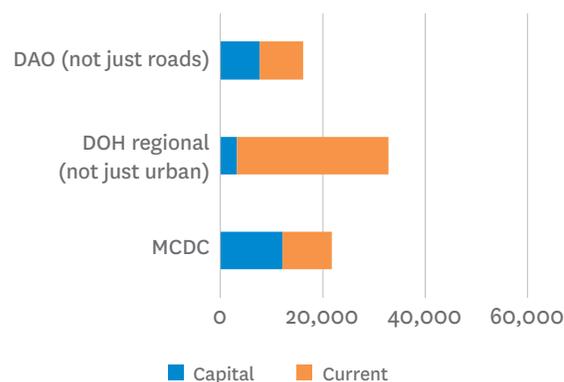


Figure 6.10: Road spending in Mandalay region



Source: MOPF, World Bank Staff Estimates

Table 6.4: Road condition of the sample surveyed network (non-urban, 2014)¹³

Myanmar			Mandalay region and NPT			Yangon region		
Road Condition	Surveyed (km)	%	Road Condition	Surveyed (km)	%	Road Condition	Surveyed (km)	%
Good	9505	35%	Good	660	27%	Good	245	27%
Fair	6519	24%	Fair	908	37%	Fair	134	15%
Poor	2940	11%	Poor	494	20%	Poor	48	5%
Bad	1699	6%	Bad	204	8%	Bad	30	3%
Very Bad	6301	23%	Very Bad	211	9%	Very Bad	459	50%
Total	26963	100%	Total	2476	100%	Total	916	100%

6.39. **Investment needs (CAPEX) need to be distinguished clearly from periodic road maintenance (OPEX).** Ideally periodic maintenance (as well as routine maintenance) should be treated as an obligation of owning an asset and, if assets are properly maintained, there should be no choice concerning its timing, which should be triggered by the condition of an asset and its life-time maintenance plan. This is unlike an investment decision, the timing of which is a choice. Some of what MCDC and YCDC seem to be classifying as investment projects/capital expenditures, falls within the usual definition of periodic maintenance. Periodic maintenance needs to be properly funded before funding is directed towards investment. Rehabilitation of an asset because of neglected maintenance is usually classified as an investment; many of the projects undertaken by MCDC and YCDC seem to fall into this category.

6.40. **The Departments of Highways and Bridges under the Ministry of Construction is responsible for expenditure on roads and bridges in the Yangon and Mandalay Regions, mostly on large investment projects.** Yangon receives more Union-level funding than Mandalay; Figure 6.11 and Figure 6.12 show the combined funding for roads in Yangon and Mandalay regions, respectively. Union-level funding represents 35 percent of the total for Yangon and 7 percent of the total for Mandalay, a significant difference.

13 Developing Road Asset Management Program for Myanmar roads, ADB, 2014

Figure 6.11: Road expenditures in Yangon region

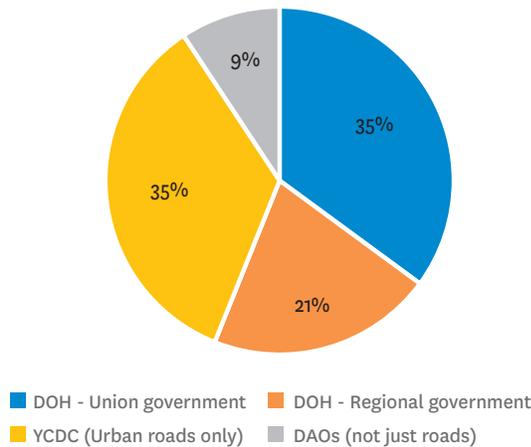
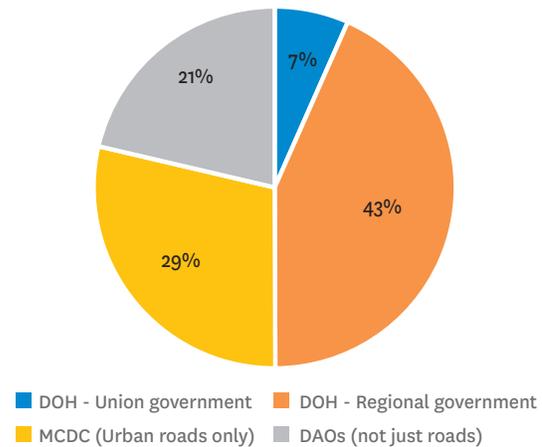


Figure 6.12: Road expenditures in Mandalay region



Source: MOPF, World Bank staff estimates

Public transport

6.41. **The investment and operational expenses for urban buses (YBS capex and opex) are primarily funded by user fares.** Table 6.5 displays figures on operational expenditure provided by in-person interviews with bus operators; Table 6.6 provides details on the performance of the bus system. Bus operators appear to make enough money through fares to cover operating costs but not enough to fund fleet upgrades; this could be the rationale behind YRG's decision to provide in-kind fleet upgrading grants. The Yangon Regional Government has made an in-kind investment in the two public/private mixed-capital, publicly-controlled bus companies, YUPT and YBPC. This has involved the purchase of buses and transfer to the balance books of the bus companies, this is then treated as an equity injection by the government, leading to an increase in its shareholding. Two companies have also obtained private sector loans. There is no documentation of government guarantees provided for these loans, so the analysis done for this review understands that the budget has not taken on any explicit contingent liabilities.

Table 6.5: Estimation of operational expenditures (per bus per day)

Cost Type	Myanmar Kyat per bus per day	% of total per bus per day
Fuel	15,000	24%
Wages and Stipend	26,000	42%
YRTA fees	4,000	6%
Company fees	2,000	3%
Maintenance	15,000	24%
Total Operating Cost	62,000	100%

Source: Study team based on interviews with selected operators

14 It should be noted that in public services, there may be implicit contingent liabilities, whereby governments are expected to step-in in the event of default to keep services running.

Table 6.6: Key performance indicators of Yangon bus system

Indicators	City Bus	Mini Bus	“KaKa” City Taxi
Registered vehicles	4,758	1,253	539
Monthly operating vehicles	106,214	21,995	7,581
Daily operating vehicles	3,542	733	252
Average number of trips per month	385,579	81,704	27,848
Average ridership per month	54,166,651	11,073,108	156,920
Average ridership per day	1,505,555	369,103	5,230

Source: YRTA Annual Report 2019

6.42. Government in-kind funding via the purchase of bus fleets and the acquisition of shares in public transport operators is one of mechanisms used governments to support public transport services.

There is, however, no single best-practice governance model and different cities approach the issue in their own way, based on their political, administrative and economic contexts. Decision-making should consider local market conditions and should ensure that the limited public resources are used efficiently when providing public transport services.

6.43. Myanmar Railways under MOTC is in a weak financial position and reliant on injections from the Union budget. Unable to cover operating costs and investment needs, Myanmar Railways is not financially viable without injections of budget funding (Table 6.7). This is also expected to be the case for individual parts of its operations like the Yangon Circular Railway serving urban areas in Yangon. Any subsidies flow from the Union Budget through MOTC, the parent ministry, to Myanmar Railways. With support from JICA, Myanmar Railways is implementing an investment program to modernize the Yangon Circular Railway, and a feasibility study for the Mass Rail Transit System is ongoing. These investments are expected to be mostly supported by public financing (including government borrowing), therefore, should be accompanied by policy and administrative reforms to improve significantly the operational and financial performance of Myanmar Railways.

Table 6.7: Myanmar railways revenues and costs by type of services (2014, billion kyat)

		Passengers					Freight	Infrastructure	Total
		Express	Mail	Local	YCR	Total			
Costs	OPEX excluding track	23.4	12.0	9.7	7.1	52.1	14.8		66.9
	Rolling stock CAPEX	7.2	3.5	3.3	2.4	16.4	6.2		22.6
	Track OPEX	6.7	3.7	3.3	1.9	15.6	4.0		19.6
	Track CAPEX	4.7	2.3	1.7	0.8	9.6	2.6		12.2
	Total costs	42.0	21.5	18.0	12.2	93.8	27.6		121.3
Revenues		20.4	6.0	5.7	2.6	34.7	18.0	9.1	61.8

Source: Myanmar Transport Sector Policy Note: Railways. ADB, 2016

Public spending needs

6.44. As far as Yangon is concerned, YUTRA recognizes the level of ambition behind the implementation proposals, which are forecast to cost over USD 23.7 billion over twenty years (Table 6.8). Over the first half of the strategy period, annual public expenditure of more than USD \$1.5 billion would be required, which is a multiple of current levels of investments. Expenditure at this level is seen as requiring a massive political commitment, at city, regional and union levels, and would need to be backed up by major reforms of urban transport management and regulatory systems. In the short-term and with current resource constrained budget, the Government may need to prioritize its investments for public bus transport, traffic management and institutions. Preservation of current assets and maintenance also needs to be prioritized. Major proposed investments in road upgrades, new expressways and rail should be matched with realistic and enhanced funding capacity.

Table 6.8: YUTRA estimated government costs by sectors

Sector	Cost to Government (USD million)			Total
	Short-term (2017-2020)	Medium-term (2021-2025)	Long-term (2025-2035)	
Roads	1,328	3,879	1,772	6,979
Expressway	0	2,124	1,403	3,527
Public Transportation	149	123	0	272
Traffic Management	178	0	0	178
Rail	382	5,512	6,396	12,290
Inland waterway	26	2	0	27
Logistic	14	217	153	384
ICT	30	0	0	30
TOD	n.k	n.k	n.k	n.k
Institutions	10	9	0	19
Total	2,117	11,865	9,725	23,707

Source: YUTRA updated, 2019, JICA

6.45. As of 2019, there is no financing plan for urban transport in Mandalay. Before this report was published, discussions were ongoing to develop an urban transport master plan for Mandalay with support from KOICA. Preparation and approval of such plan is likely to take time, and it would be beneficial for Mandalay to implement actions in the interim. These could include: establishing an integrated urban transport authority; preservation and improvement of existing roads; and traffic management and traffic engineering measures¹⁵. Major infrastructure investments would require substantial financing from region and union governments; and this should be carefully assessed and prioritized during preparation of the master plan.

¹⁵ These measures would require modest financing but could yield improvement results and form foundation for implementation of larger investments

6.46. **The current share of regional GDP spending on roads in the two regions is too low to preserve and improve a network capable of supporting sustained economic growth.** The current share of expenditure on roads in the two regions is around 0.7 percent of regional GDP; this would need to be doubled, at the least, to around 1.5 percent in the medium term to avoid choking off economic growth, especially given the role that road transportation plays in these regions.¹⁶ Increases in expenditure should go towards investment, but maintenance also requires higher expenditures, and is particularly important in Yangon, where the state of repair of the existing network is already under stress from growing congestion.

F. Affordability of public transport

6.47. **Public Transport usage (modal share) in Yangon is high, and network density is decent.** With a modal share of 55 percent of trips done in buses, it is hard to argue that transport in Yangon is not pro-poor. There is room for improvement, but precisely because Yangon still has low motorization numbers, has banned motorbikes and had made efforts to improve YBS, modal split looks good and fares are comparably low. An accessibility analysis will allow studying the coverage of transport routes and, considering a modal split of trips done in public transport, further analysis could argue that more coverage in transport and better commercial speeds can increase access and reduce total travel times.

6.48. **Many cities struggle to provide financially sustainable public transport services with affordable fares especially for low income populations.** Given that the goals of financial sustainability and affordability tend to tip the balance in opposite directions, transport systems that prioritize affordability tend to rely on high levels of subsidies; those cities that prioritize financial sustainability meanwhile, may set fares that are too high for low income populations. Many funding strategies for public transport look at farebox revenue ratios, or percentage of operating costs of the system covered by fares, to evaluate the appropriateness of reviewing user fares. This informs strategies that may want to reduce the gap between ticket revenues and operating costs.

6.49. **Evaluating the proportion of income spent by poorer households on transport is a challenge for many cities; mapping commuting patterns to assess distance and time needed on public transport to travel from home to workplace is also a challenge.** This is known as an accessibility analysis, and focuses on access to opportunities for low income residents using public transport. Property costs in urban centers often force low-income households in developing countries to live farther out in the periphery; in addition to making their commute time-consuming and expensive, this also impacts how urban agglomerations develop, including any increase in congestion or air pollution due to increased private car ownership, as well as the direction of the expansion of urban poverty.

6.50. **Public Transport fares in Yangon are relatively affordable as an average percentage of household income spent on transport.** Available data (Figure 6.13) suggests that average household expenditure on public transport is around 5 to 8 percent. The flat 200 Kyat fare per trip in with an average of 2 trips per day means that an average low-income person spends around 8 percent of their monthly income on transport, which is low compared to wealthier cities with higher fares (and possibly better coverage and quality) where households spend 15-20 percent of their monthly income on transport. Without reliable district-level household survey data on mobility patterns (mode split, average number of trips per person, average spending on transport), a proper assessment on affordability of public transport for low income population and the opportunity to revise fare structure is not recommended. -.

16 Larger and higher-income countries, such as Argentina, Brazil, and Mexico, spent around 1 percent of GDP on urban transport over 2008–2013, while others such as Bolivia, Nicaragua, Panama, and Peru invested 2 to 3 times higher shares of their GDP (IDB, 2018), which might be more comparable to Myanmar.

Figure 6.13: Transport as a share of total expenditures, % of household expenditures, Myanmar

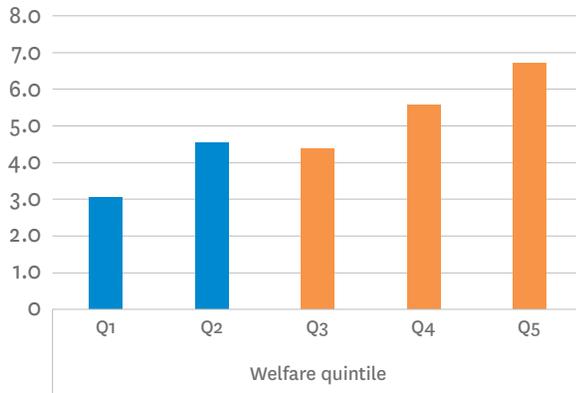
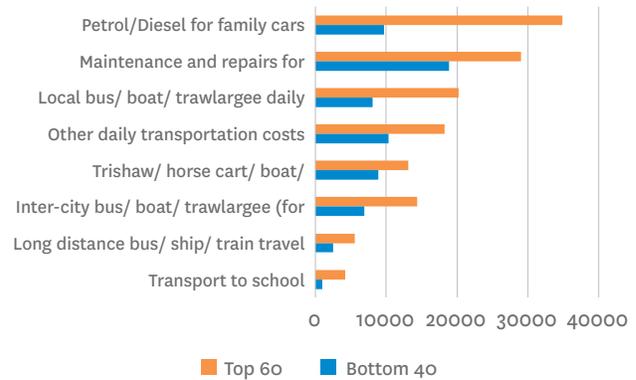


Figure 6.14: Average monthly transport expenditures of households in Myanmar



Source: World Bank staff estimations using 2015 MPLCS

G. Considerations for sector funding

- 6.51. **Transport authorities need reliable long-term funding to be able to make effective infrastructure plans.** This needs to be taken into consideration, especially when cities depend on state and national governments for infrastructure funds that are limited in time or scope - or subject to political influence. Affordability and willingness to pay are also essential, but place additional demands on the financial sustainability of public transport systems. In this context, where subnational governments face limited opportunities for funding amidst fiscal constraints and are therefore not able to develop an urban transport system using own-source revenue, many developing countries set up a targeted national program to subsidize urban transport (Box 6.3). Government budgets need to service numerous public service demands, and so national and subnational governments should identify various funding sources that they can tap to fund the urban transport sector.

Box 6.3: International experience on national support to fund urban transport development

China's municipal finances are unique and reflect the absence of property tax. Its cities raise revenue primarily through the sale of land and development rights, which has funded high per capita spending and high rapid transit ratio growth over the past decade. Most of the urban infrastructure in China is funded by the annexation of peripheral rural and suburban land by cities. The land is then rezoned for urban use, improved, and then let on long-term lease to real estate developers. These off-budget municipal revenues are responsible for more than half of municipal transit investment revenue, the remainder comes primarily from corporate income taxes and a variety of vehicle licensing and other fees. For the near term at least, and barring any crash in urban land value, this is a reliable source of revenue for rapid transit development in Chinese cities, although it can be problematic when poor planning of these areas causes urban sprawl.

The sources of the national funding program for urban transit include fuel tax, oil sales revenue, international development bank grants or loans, and similar instruments. Co-funding from the city government is required to cover 15-70% of project cost depending on how fiscally capable the cities are. Through the funding program, the national government has also set up project selection criteria to select those projects with the best social and economic benefits. This process helps improve cities' capacity for project appraisal and provides incentives to identify feasible projects.

In **Colombia** is the national government stepped in with a program to cover a significant funding gap due to weak revenue raising and the potentially weak institutional capacity of some municipal governments. Cities in Colombia can raise fuel taxes to fund public transport projects, which has given them reliable revenue streams. Because of the significant contribution of the fuel taxes, since the year 2000, Colombia urban transport infrastructure has had reliable funding from the national government and from cities. However, Colombia is rated as mixed reliability for funding because it remains to be seen if the national government will continue its grant program for rapid transit—a significant part of transit funding in Colombia.

In **Mexico**, funding is not very reliable, especially outside Mexico City. Mexico City is a Federal District with a constitutional status equivalent to a subnational state, and since the country's economic activity is concentrated there, the state VAT tax receipts are sufficient to pay for a significant share of the city's infrastructure needs. Outside Mexico City, cities and states struggle to fund infrastructure as they are dependent on national government transfer bylaws that discourage and restrict their own revenue-raising capacity; they depend heavily on the formula-based distribution of national government funds, much of which comes from the sale of oil by Pemex, the former state oil company. In addition, many of rapid transit projects were funded by the federal government, using revenues from intercity highway tolls that are also controlled by the national government.

In **South Africa**, the national government collects fuel taxes; and although the revenue is not earmarked for urban transit or urban transport, it is roughly equivalent to annual spending on urban transportation, and around one-third subsidizes the national highway program's deficits, the remaining two-thirds are spent on urban transit.

Source: Summary prepared by the World Bank staff

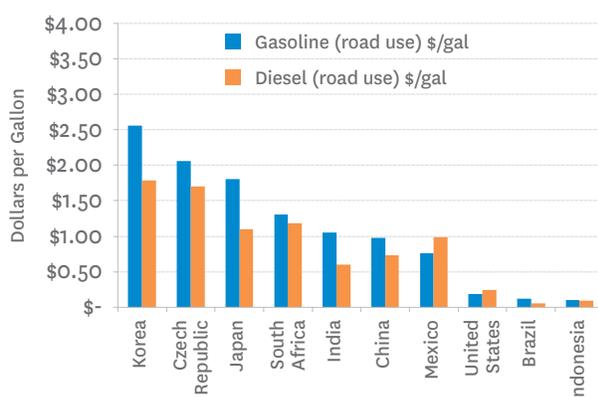
6.52. International experiences suggest three main sources of funding for urban transport:¹⁷

- **General benefit funding instruments:** they are financial instruments for which the beneficiary and funder is the same, in this case the general public. Instruments include public transport subsidies, property taxes, and national and international grants.
- **Direct beneficiaries funding instruments:** these are funding instruments that charge specific groups directly for benefits received, and include parking charges, road pricing, congestion charges, fuel taxes and surcharges, vehicle taxation, and public transport fare.
- **Indirect beneficiaries funding instruments:** these instruments charge actors for indirect benefits stemming from transport investment and include advertising, added-value capture mechanism, transportation utility fees, and development impact fees.

17 Sustainable Urban Transport Financing from the Sidewalk to the Subway, Ardila-Gomez, A., Ortegón-Sánchez, A., World Bank, 2016

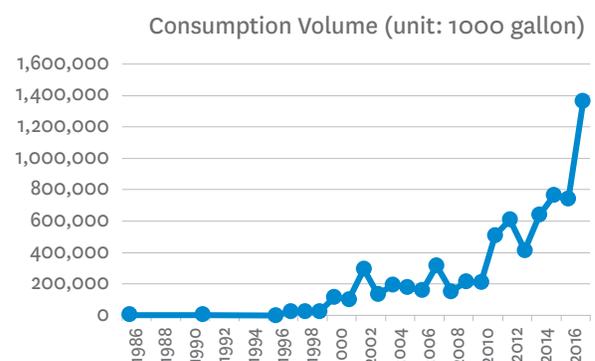
- 6.53. **Some funding instruments for urban transport are in place in Myanmar, despite tax revenue or government fees not being specifically earmarked for the urban (and overall) transport sector.** The general benefit funding instruments include property tax collected in Yangon and Mandalay; direct benefit funding instruments include bus service management fee, wheel tax, car licensing fee, and public transport fare. As one example of indirect benefit funding, Yangon traded the advertising rights with JCDcaux, a multinational advertisement company, in the exchange of the installation of bus stops in Yangon. The implementation of urban beneficiary funding mechanisms has set up a base to move towards planning and directing the use of proceeds of the fund for urban transport.
- 6.54. **As a direct funding instrument for the transport sector, the fuel tax and surcharges have several advantages including high stability of revenue flow and easy administration.** The cost of fuel taxes is borne directly by users proportionally to the amount of fuel consumed, a good indicator of their road usage and distance travelled. In Bogota, Colombia, 50 percent fuel taxes are earmarked for capital investments in BRT lines, 40 percent is for investment and maintenance of the road network, and 10 percent for local councils to maintain local roads. In Germany, fuel taxes are managed and distributed at the federal level; they are used in Bavaria to subsidize 40 percent of operating costs of regional railways¹⁸. Figure 6.15 presents the fuel taxes in select countries.
- 6.55. **Fuel tax is used in many countries to fund transport services (Figure 6.15), but this is not the case in Myanmar.**¹⁹ Fuel consumption has increased dramatically in Myanmar during the past five years (Figure 6.16). Fuel consumption in 2017 was more than three times that of 2013. A fuel tax rate of US\$0.04 per litre²⁰ would be able to generate more than USD\$200 million in annual revenues, which could be used to help fund the transport sector. The fuel tax could also be used as an incentive to move towards more fuel efficient vehicles, with the tax rate set according to engine size and carbon emissions, helping to improve general environmental performance.²¹ The fuel tax could also be used to fund upgrades and maintenance of urban transportation. The economic impact and tax burden to different socioeconomic groups is an important consideration when setting tax rates. The government will need to make sure that changes to fuel tax is done in a careful manner, with a solid communication strategy to keep the public informed.

Figure 6.15: Fuel taxes in selected countries



Source: Taxing Energy Use 2018 - OECD 2018 Database

Figure 6.16: Fuel consumption in Myanmar



Source: World Bank staff based on publicly available data, 2019

18 CODATU 2009, Who pays what for urban transport? Handbook of Good Practices, AFD

19 There is a special good tax (SGT) applied in Myanmar on importing fuel, gasoline and diesel with a 5 percent rate since landed value of imported fuel and diesel, which is different from fuel excise. SGT is collected by national government and is not earmarked to any sector development.

20 As a conservative scenario, the average of three countries with available data and lowest fuel tax rates was applied in estimations.

21 Ardila-Gomez, A. and A. Ortegon-Sanchez. Sustainable Urban Transport Financing from the Sidewalk to the Subway: Capital, Operations, and Maintenance Financing. 2016. World Bank.

- 6.56. **Indirect beneficiary instruments, such as Land Value Capture would support Myanmar’s fast paced urban development and bold plans for infrastructure development.** There is a widely proven positive relationship between improved transport infrastructure and land values, which Myanmar could use to its advantage. This involves basing betterment taxes or similar instruments on increase in land value around newly improved transport infrastructure corridors and/or nodes. Successful experiences in Southeast Asia show that a well-functioning tax collection infrastructure is fundamental to allow successful deployment of tax-based land value capture instruments. Deploying a land value capture strategy within the “who benefits pays” principle means that indirect beneficiaries of improved public transport infrastructure need to be identified; and adequate mechanisms to capture the added value from improved transport infrastructure need to be devised.
- 6.57. **New infrastructure benefits different parts of the community in different ways; several mechanisms can be used to capture benefit.** Understanding who benefits, when they benefit and what form that benefit takes is essential to ensuring equity and transparency in the value capture strategy when it comes to raising revenue. In Yangon, a blend of property taxes, development right sales and in-kind infrastructure contributions could be used to capture value from property/land owners and developers. Capturing value from transit operators who benefit from improved public transport should also be part of this plan. Figure 6.17 summarizes a range of opportunities for these economic instruments, particularly in the context of Yangon.

Table 6.9: Land value capture mechanisms and opportunities for Yangon

Examples of beneficiaries	How and when the benefit is realized	Value capture Mechanisms	Opportunities for Yangon	Level of effort to realize the opportunity
Property owners	Increased utility leading to increased land values – sharp year 1 increase that diminishes over time	Property tax Rates and charges	YCDC property tax system overhauled and improved to increase tax receipts Increased stamp duty receipts Potential to create special area assessment levy, infrastructure contribution levy (likely new legislation would be required)	Moderate: considerable effort ongoing to overhaul property tax collection High: new levy would require new policy and legislation.
Developers	Highly attractive, accessible land – one off Increased development yield and land use opportunities – sharp year 1 increase that diminishes over time	In-kind infrastructure contribution Cash-in-lieu contribution Development bonus scheme Land/air rights sale	Favorable site/precinct specific zone controls to increase the value of project area land Development bonus scheme implemented through planning controls Development contribution scheme	Moderate: current planning reform will include FAR zones around TOD. Should be expanded to include BRT. Policy framework should contain a development bonus scheme through the planning system, or cash contribution per dwelling approved.
Transit operators	Improved infrastructure assisting service reliability – ongoing Greater certainty for route planning and revenue projections – ongoing*	Service contracts and agreements Station naming rights/advertising In station retail/ leases	Higher agreed performance standards Co-contributions to transit infrastructure or acceleration of fleet improvements	Low: could be negotiated through new contracts.

Source: World Bank staff

6.58. **Both cities would benefit from preparing and implementing resource mobilization plans for their transport sectors.** These plans would help evaluate existing funding instruments; match resources with service demand and market conditions; and improve management, and collection rates. Such plans can review types of instruments in place to finance and fund different urban transport system components, review them from the perspective of revenue level, financial and transport sustainability as well as type of beneficiaries. In addition to existing funding instruments, public transport subsidies, fuel excise tax, congestion charges, employer contributions, and betterment levies could be used to expand the urban transport funding for future investment demand. Table 6.9 summarizes an overview of funding instruments related to urban transport and their potential application in Yangon and Mandalay.

Table 6.10: Overview of funding instruments applicable for urban transport sector in Yangon and Mandalay

Type of funding source		Yangon			Mandalay		
		Earmarked	Collected	Potential*	Earmarked	Collected	Potential
General benefit funding instruments	Public transport subsidies	No	No	Yes	No	No	Yes
	Property taxes	No	Yes	Yes	No	Yes	Yes
	National grants	No	No	Yes	No	No	Yes
Direct benefit funding instruments	Bus service management fee	No	Yes	Yes	No	Yes	
	Parking charges	No	No	Yes	No	No	Yes
	Congestion charges	No	No	Yes	No	No	Yes
	Fuel taxes and surcharges	No	Partially**	Yes	No	Partially**	Yes
	Vehicle taxation (wheel tax)	No	Yes	Yes	No	Yes	Yes
	Vehicle/motorcycle licensing fee	No	Yes	Yes	No	Yes	Yes
	Car imported tax	No	Yes	Yes	No	Yes	Yes
	Farebox revenue	Yes	Yes	Yes	Yes	Yes	Yes
Indirect benefit funding instruments	Advertising	Yes	Yes	Yes	No	No	Yes
	Employer contributions	No	No	Yes	No	No	Yes
	Betterment levies	No	No	Yes	No	No	Yes

Potential refers to broader potential for increasing revenues for the sector, including from new collection (if not collected), increasing existing collection rates or earmarking (fully or partially) of existing funds to urban transport services.

** Under the special goods tax for imported goods.

H. Conclusions

- 6.59. **Decentralization in Myanmar is a work in progress, and the absence of clarity about the end destination of this process presents difficulties for urban transport development.** The evolving status of decentralization, at least for transport, is illustrated in the Myanmar Sustainable Development Plan, which includes an action to “explore administrative decentralization in the transport sector, such as for the management of state, regional and rural road networks”. This statement suggests that at the highest levels it is recognized that there is more work to be done before the decentralization arrangements is reached. Given the lack of clarity about the design and implementation of decentralization, there is room for different approaches to be operationalized. While incomplete decentralization has had negative implications for the provision and financing of urban transport infrastructure and services, there are still opportunities to decide on which approach to use.
- 6.60. **Yangon and Mandalay face different issues when planning for future urban transport demands that avoid congestion, and promote productivity and welfare.** Yangon is an outlier in the Southeast Asia region regarding high modal share of public transport (buses); however, motorization levels and vehicle use intensity are steadily increasing and the urban mobility landscape is deteriorating. By prioritizing investments and allocating road space to public transport, Yangon should be able to make public transport attractive enough to retain, and even increase, its importance relative to the car. Mandalay needs to devise comprehensive “push and pull” strategies, these involve “pushing” people to using more sustainable modes by, for example, reducing implicit subsidies to private transport. They also involve “pulling” users to public transport by increasing access, coverage and quality) as a way of persuading people to opt for public transport over the easy mobility of two-wheeled transport, which is overwhelmingly the favored mode at present. Both are significant challenges, which other cities in the region have struggled to address but their experience could still offer some useful lessons.
- 6.61. **The rationale for public sector intervention in public transport has a sound basis in economic theory.** Private car users do not take account of the costs they impose on other road users and non-road users in terms of increased congestion and pollution (externalities). There is a role for the government to correct these negative externalities via a diverse set of push and pull strategies, some of which have relatively lower costs of implementation. For example, pull strategies include road space allocation to public transport, by defining bus priority lanes (London, Chicago); whilst push strategies consider increasing the price of road use (as New York, Stockholm, Milan, Singapore and London have done with through congestion charging). In public policy, pull strategies may consider subsidies to public transport, which is more efficient in its use of road space and less polluting on a per passenger basis. Public sector intervention can also be motivated by economic considerations, knowing that economic productivity will increase with less congested urban roads, and by distributional considerations, acknowledging that public transport users tend to have below average incomes. These interventions need to have sound economic and social justifications.
- 6.62. **Current public spending on urban transport in Yangon and Mandalay is not enough to meet the demand for urban transport service delivery; there is room for important improvements to the existing public expenditure system.** Urban mobility plans supported by resource and capacity building need to be developed; they need to address institutional fragmentation and accountability; and align expenditure and revenue to facilitate a more unified approach to expenditure planning. Expenditure on roads needs to at least double to around 1.5 percent of regional GDP in the short- to medium-term to avoid choking off economic growth. In the longer term, further increases, consistent with institutional capacities will be needed to effectively plan and manage transport infrastructure assets; efficiency improvements will also be required. The existing funding scheme for the urban transport sector is severely constrained, and the government, particularly the subnational governments need to review, refine and leverage the types of

funding instruments to support different components of urban transport. Table 6.10 below, summarizes the main issues and policy recommendations of the review.

Table 6.11: Summary of policy options and recommendations

Subject Area	Issues and Gaps	Policy Options & Recommendations
Administrative and Fiscal Decentralisation	Fragmented responsibilities and weak accountabilities for urban transport, especially roads.	Review the practical operationalisation of the decentralisation achieve a clearer distribution of responsibilities and remove the potential for duplication and dual-reporting lines.
	Misalignment between service delivery responsibilities and financial capacities.	Refine fiscal decentralisation to achieve a better alignment between expenditure and revenue assignments; examine the use of matching capital transfers from the Union level as a way of incentivizing regional governments.
Allocative and technical efficiency of expenditure	Little evidence that urban transport expenditure is being prioritized despite the rapidly growing needs and policy statements.	Take the lead from the PER work, Regional Governments should adopt a comprehensive view of urban transport expenditure to facilitate a more unified approach to expenditure planning.
	The evidence for assessing the technical efficiency of expenditure on urban transport is extremely weak; service delivery is given inadequate attention.	Institute more systematic collection and collation of data on volume and quality of outputs from public expenditure on urban transport, as a starting point for a stronger efficiency orientation.
Urban transport financing	Current spending on urban transport is not enough to meet high demand for transport service delivery in Yangon and Mandalay	Increase public spending on urban transport, particularly in Yangon where the road network is already under stress from growing congestion, while at the same time making efficiency improvements in spending
	Need for systematic appraisal of urban transport projects before making a funding decision.	Institute formal procedures and rigorous analytical methods for appraisal of all investment projects, irrespective of source of funds.
	PPPs can help to leverage financing, but risks related to such transactions should be carefully considered when deciding and designing PPP projects.	Regional Governments should ensure that appropriate institutional arrangements and technical capacities are in place before embarking on PPPs. Adoption of PPPs should first be piloted, and a process should be set up for monitoring fiscal risks.
Urban transport revenues and funding	Demand for urban mobility and transport services is rapidly growing in Yangon and Mandalay, while the fiscal capacity and commitment earmarked to urban transport of the government, both at union and subnational levels are extremely constrained.	Develop and implement resource mobilization plans for urban transport; review types of funding instruments in place to support different urban transport system components; maintain a focus on revenue level, financial and transport sustainability, and type of beneficiary.

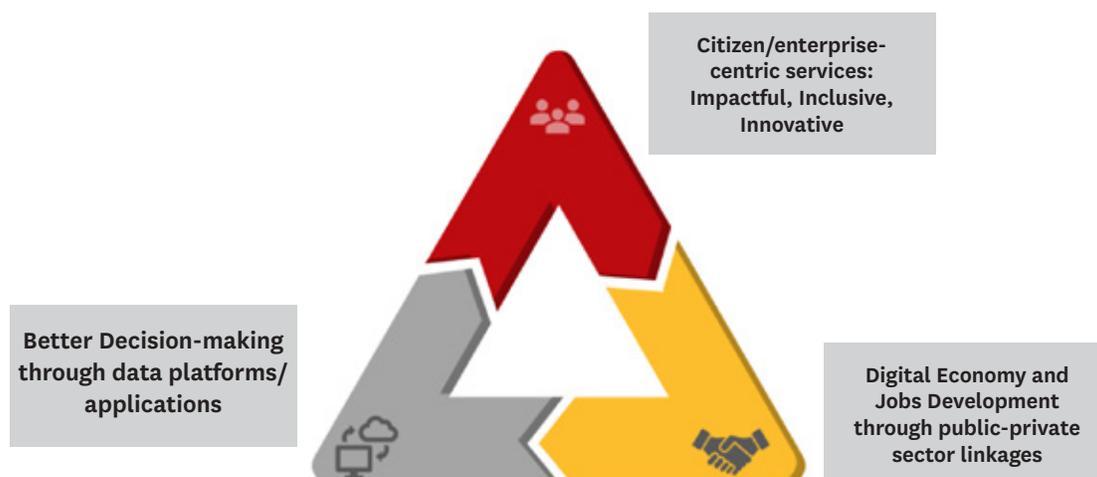
Subject Area	Issues and Gaps	Policy Options & Recommendations
Public Transport Service Delivery	<p>In Yangon City, different authorities have control over different public transport schemes. As a result, public transport service delivery is fragmented, mainly, between rail-based transport (overseen by Myanmar Railways) and road & water buses (overseen by YRTA).</p>	<p>Define a Yangon Regional Transport Forum, chaired or coordinated by YRTA and integrated by delegates from YRG, UCDC, YRTA Myanmar Railways and key non-government stakeholders. The forum's mission will be to oversee the planning, implementation and management of an integrated public transport network that meets the needs of commuters in an efficient, cost-effective and sustainable manner</p>
	<p>YRTA has limited regulatory power over Yangon Bus Service operators, with limited oversight capacities and no control over system revenues, branding or other business strategies.</p>	<p>YRTA's regulatory roles should be complemented with a commercial focus and a business-like approach to maximize revenue and to minimize costs within the framework of strategic policy set by the YRG. YRTA should be capable of advancing with the proposed implementation and management of a unified fare collection system, centralizing revenue collection and payment to operators; technically setting fares; defining performance-based contracts, indicators, payments and penalties; designing and licensing advertisement business schemes on buses and stations.</p>
	<p>In Mandalay, there is no formally-established public transport authority; service provision is mainly informal and limited.</p>	<p>Establish an integrated urban transport authority in Mandalay; develop an urban mobility strategy to improve public transport services</p>

7 DIGITAL GOVERNMENT

A. Objective

- 7.1. **Digital technologies and data are beginning to impact the way subnational governments work in Myanmar.** The objective of this chapter is to identify the extent to which selected subnational governments in Myanmar, starting with Mandalay and Yangon, are leveraging digital data for better service delivery, and decision-making. The chapter frames the value of digitization and digital government data - whether tabular, geospatial, or wider types of big data - in terms of how it is currently applied in the functioning of subnational governments. The chapter reviews subnational digital government practices and resource allocation, and identifies prospective medium-term results trajectories, including those associated with technology infrastructure/platform trends for Myanmar.

Figure 7.1: Key digital government results areas



Source: WB GovTech, authors

- 7.2. **The Myanmar government is putting significant emphasis on leveraging technology for development outcomes.** The Myanmar Sustainable Development Plan (MSDP) 2018-2030 is one such policy that highlights the role that technology can play in citizen engagement, taxation, and global competitiveness.¹ The document flags concerns about lagging behind in tech adoption and embracing the Fourth Industrial Revolution (“IR 4.0”).² The extent to which technology is being leveraged at the subnational level is one means of assessing where and how traction is being gained in practice, and what factors could enhance public expenditures towards these ends. Tangible examples are given to showcase digital data and processes that lead to enhanced and more responsive public services and decision-making³ (e.g.,).

1 Strategy 1.5: Increase the ability of all people to engage with government: The presence of a vibrant public sphere is a fundamental prerequisite for enhancing the role of the public in shaping policy dialogue around key issues facing individuals, communities and the nation. The ability of the GoM to communicate effectively is not only vital to the health of our democracy but also important in addressing public grievances and mitigating the risks of communal tension and civil conflict. Hence, it is imperative that enhanced engagement and greater understanding be facilitated through the use of modern communication strategies and technologies (including electronic means), across all levels of the government, within and between ethnic nationalities, and all other stakeholders.

2 “use of modern technology to make it easy for taxpayers to file tax returns and pay tax online”

3 In terms of planning, budgeting, regulations, or better prioritization and delivery of services.

Data-driven decision-making can also lead to better service delivery, as it caters to diverse user needs. Given that Myanmar's digital government and economic development are at an early stage, examples of innovative engagements with local digital economy enterprises remain limited. This chapter sets priorities for how Myanmar's subnational governments could lead the way towards a more whole-of-government approach in managing their digital government transitions, including through fit for purpose technology services procurements.

- 7.3. **The prevailing impacts and prospects of digital subnational government need to be gauged by what data actually exists and how it is being used.** Significant effort continues to be devoted to various forms of digital readiness and systems assessments,⁴ and this chapter reviews those digital assets that SNGs in Myanmar are currently creating, accessing, managing, sharing, and above all, applying. This chapter also aims to identify local data⁵ and global resources⁶ e.g., that have value or could generate value, with the premise that improvements to the value of digital data are best generated through user/use case-centered applications that strategically integrate local and global digital data assets. High-level commitments and improvements to network communications infrastructure across Myanmar serve as the foundation for SNGs to modernize government, starting with urban and peri-urban areas.
- 7.4. **The pace of recent improvements in internet connectivity and mobile use in Myanmar is perhaps one of the most dramatic in the region.** Mobile ownership rose from 4.8 percent in 2010 to 82 percent in 2017, and fixed and mobile infrastructure networks are poised to further improve over the coming years (see World Bank 2018). The review serves to provide a framework for thinking about digital assets and capabilities at the subnational level in Myanmar and is elaborated using case studies.⁷ At one level this means that efforts to highlight how existing digital data, whether locally or globally sourced is already impacting developments on the ground. Understanding which data have gained traction, and which have not will indicate how digital technologies can work better for responsive government.
- 7.5. **This chapter reviews Myanmar's digital government prevalence and prospects at city- and state- level government in Mandalay and Yangon.** It provides a framework for identifying gaps and opportunities that could be used to strengthen digital government and data use. While the primary audience is subnational leadership, finance, and planning authorities, it also looks at the enabling environment for how to better leverage digital technologies for local decision making and for basic public service delivery. The chapter will map out a basic results-chain for cross-cutting information. The chapter will also bring a spatial lens to service delivery and public investment resource allocation, something which has proven visually and analytically compelling to stakeholders in other subnational engagements in the region.
- 7.6. **Subnational governments in Myanmar are at a nascent stage of their digital transformations, but we could see rapid developments over the short and medium term.** The transition from paper-based processes to computerized workflows is just emerging in core administrative domains (PFM, HR, revenue mobilization and administrative services), and online services. Digital infrastructure, specifically: (i) mobile and fixed internet access, (ii) payments mechanisms, and (iii) cloud-resources are rapidly maturing across the country. The recent uptick in the use of smartphones across Myanmar shows the pace and real impacts that technology can have.

4 The World Bank has a number of tools to assess digital data "readiness", including the National Spatial Data Infrastructure (NDSI) and the Open Data Readiness Assessments (ODRAs) and Digital Government Readiness Assessment (DGRA). These have been applied in the EAP region, in settings as diverse as Malaysia, the Philippines and Vietnam. While drawing on these experiences, the chapter will be anchored by the results chain and priority metrics for revenues, expenditures, and service/delivery demand emerging from the PER dialogue with counterparts.

5 For example, from administrative systems, smartphones or sensors.

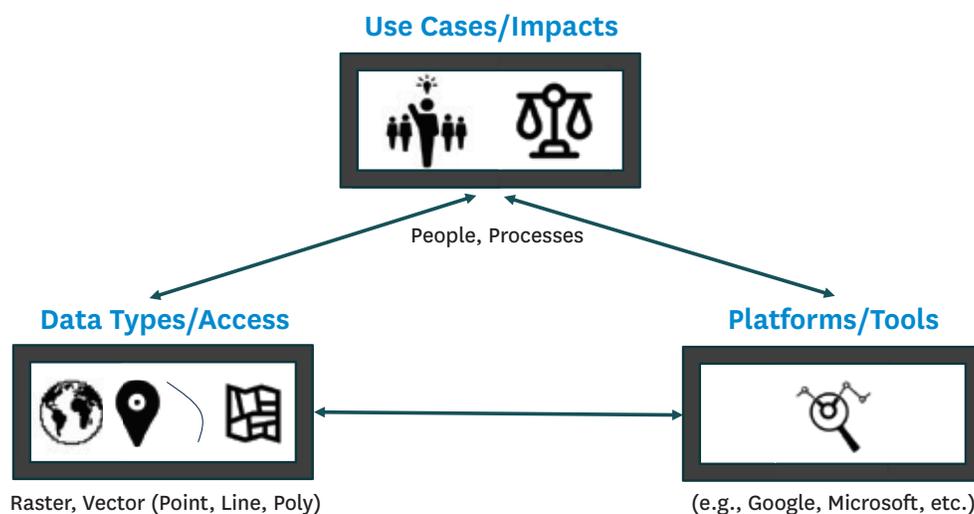
6 For example, satellite imagery feeds and image processing.

7 While "foundational" IT infrastructure/systems underpinnings are important to digital government, "functional" aspects will hinge on how effectively there are deployed in the prevailing institutional context. Or as the 2016 WDR already notes, digital success rests on analogue complements.

- 7.7. **The success of digital government in terms of decision-making and service delivery depends upon alignment of people, process, and platform technology.** Overall success in digital government hinges on human capacity and on the prevailing mindset and culture; also essential is an enabling environment with clear policy and regulations, a solid infrastructure, connectivity, and targeted incentive systems. Digital use cases and asset strengthening should also serve to consolidate digital and connectivity systems, and to guard against any fragmentation.⁸ “Digital dividends” stand or fall on the extent and quality of *de facto* data assets, as such, emphasis on digital assets in government should be consistent with core principles of good data governance, including “single source of truth”, privacy, cybersecurity, and data interoperability across systems and vendors.

Figure 7.2: Digital dividends

Digital Dividends Triangulate Applications, Platforms/Tools, and Data



- 7.8. **With a set of rapidly diffusing technologies for governance, Myanmar’s SNGs can make quick gains, and potentially, even digital government leapfrogs in certain areas rather than wait for large IT projects.** A systematic strategy of pursuing digital dividends that are fit for context and purpose promises to yield the most tangible gains. An opportunistic and holistic approach to digital capabilities is likely to deliver clear, sustainable impacts more quickly. Versatile and potentially cost-effective technologies such as cloud applications, coupled with a more coherent collection and use of data from smartphone, satellite and sensor applications will be most effective for this. The emphasis is not on sophisticated technologies, but those that have the minimum technical and institutional viability to deliver impacts in Myanmar’s current decentralization context.
- 7.9. **The chapter lays out a baseline approach, presents findings, and provides recommendations for strengthening digital impacts in Myanmar’s decentralization.** It proceeds in four sections. Section B sets out a framework, key issues, and metrics for evaluating the extent of “revealed digital government”

8 ITU and DIAL. (2019). SDG Digital Investment Framework - A whole-of-Government Approach to Investing in Digital Technologies to Achieve the SDGs, <http://handle.itu.int/11.1002/pub/812df924-en>, pp. 136 make a strong case for ensuring that individual use cases should leverage more common platforms. Technology is a means that will enable governments to share data assets and aim for interoperability more effectively. But technology alone won’t lead to interoperability; policy and regulatory will also be key, and strong incentives for stakeholders across government.

at the subnational levels. Section C analyses the geographic and service delivery “footprint” of Mandalay and Yangon Regions, and respective CDCs. It summarizes the key findings, and makes reference to the national enabling context for subnational digital government. Section D suggests recommendations to boost the value of digital processes and data in terms of public services, data-driven decision making, and digital economy engagement.

B. Approach

- 7.10. **Timely, accessible, transparent, and fit for purpose digital data is increasingly seen as integral to making subnational governments work better.** More cohesive digital workflows and information can strengthen the ability of national and subnational policy makers to better meet challenges and achieve priority results. Digitized processes and data are key for gaining feedback about the needs and preferences of citizens and enterprises at the subnational level. Unlike physical infrastructure, and barring intellectual and privacy concerns, relevant data can be re-used and combined for multiple purposes.
- 7.11. **The revealed use and emerging impact of digital technologies in Mandalay and Yangon can inform application opportunities and current limits in Myanmar.** Good digital public sector governance is defined here as the ability to leverage IT technologies, especially information and insights, to progressively support sector delivery and cross-cutting Public Financial Management (PFM). Better digital information can be used for enhanced expenditure, regulation, and taxation functions; governments need to get a grounded sense of the actual technologies and systems that are being used (e.g., Excel or more sophisticated), and there is a strong need to frame digital data as an increasingly important asset that can be leveraged for public sector performance. The prevailing *de jure* and *de facto* institutional roles responsibilities, and capabilities of generating, and applying/sharing digital data across government (“G2G”) need to be clearly understood; the same applies in the context of citizens and the private sector (G2C, G2B).⁹
- 7.12. **Making digital government work at the subnational level in Myanmar will require a set of foundation technology infrastructures, coupled with stakeholder adoption.** Where appropriate, the chapter will also assess the extent to which selected disruptive or “leapfrogging” technologies could enhance decision-making opportunities for the authorities (see Development Committee 2018, Gates Foundation 2018). This includes leveraging systems (PFM or other), smartphones, satellites, sensors, etc. Recognizing the very early stages of digital developments in Myanmar at national and subnational levels should show how subnational counterparts view potential medium to longer term eGov/eServices trajectories (see EU 2016 and UN 2018).
- 7.13. **The PER’s digital government baseline assessment looked to capture the prevailing access and use of tabular, textual, image, and geospatial data in Mandalay and Yangon.** This focused on two subnational levels: the respective municipalities (CDCs) and the region governments. Traditional tabular/relational digital data and associated systems were examined first, with a focus on the extent and quality of Public Financial Management, Human Resources (HR), and public related data; it widened to include a systematic look at geospatial data. The growing prominence of consumer-based technologies such as Google Earth, smartphones, and ride-hailing services has brought a whole new sense of place to the lives of bureaucrats, business, and the general public, and geospatial data (e.g., satellite imagery, the location of clinics, or transport activity) now provides rich opportunities for integration and cross referencing. The geospatial lens describes how the capability, cost, and complexity of certain technologies have changed for consumers and governments in the last ten years or so, Geospatial Information Systems (GIS) were largely the preserve of trained experts ten years ago, now this is commonplace technology.

9 Kosak et. al. (2018) used network analysis of agency websites and hyperlinks among them of the 50 states in America to summarize their digital footprint in terms of service delivery.

Digital government results & assets

- 7.14. **Digital data and digital systems would ideally be fit for purpose in terms of delivering tangible results.** The baseline PER digital assessment therefore sought to understand the existence of digital assets along a results chain, aligned to the three results areas as set out in public services, data-driven decision making (including better citizen engagement and feedback), and private sector engagement. Table 7.1 sets out a possible state of progression along each of these three areas. Table 7.2 further breaks these three results areas into the standard results chain progression of: (i) inputs, (ii) outputs, (iii) outcomes, and (iv) impacts. This was not carried out to evaluate the results chains themselves, but rather, to understand to what extent we could detect a “digital government footprint” along each of the cells.

Table 7.1: Digital data applications progressions

	Basic	Advanced
Public Services	Online posting of basic information	Single service window portals covering full range of subnational services, coupled with proactive user engagement
Decision-Making	Standalone digital data for specific issues (e.g., flood risk planning)	Continuous data feeds are captured and integrated into impact planning, budgeting and implementation at subnational level
Digital Economy Linkages	Nascent local start-up scene	Dynamic and diverse market for government technology services

Table 7.2: Digital data: Results chain progressions

Experiences/ Expectations	Inputs	Outputs	Outcomes	Impacts
Responsive Public Services	Systems investments, financial & human resources	Online services experiences (sites, platforms)	Services uptake (impact, inclusiveness, and innovation), with measurable convenience impacts	Local human capital and economic development impacts
Data-driven decision making	Systems investments, financial & human resources	Planning & prioritization documents/decisions	Better policies and programs	Transparent, responsive and accountable government
Effective Private Sector Engagement	Procurements/ partnerships	Enhanced instances of public services and data-driven decision making	Deepening of local digital economy providers offering fit for purpose/frontier technologies	Enhanced local human capital and economic development including creation of more digital economy jobs

7.15. **The digital government data assessment combined a set of different checklists to gain a more systematic picture of the Mandalay and Yangon contexts.** Table 7.3 sets out a number of guiding questions for digital government pursued across the four basic stages of the results chain, with the view to identifying and strengthening public finance and other mechanisms. One international starting point for digital government has been the UN’s biennial global eGov survey, last completed in 2018. Given Myanmar’s global rankings for eGov in the third quartile of the index score¹⁰, fully-fledged eServices were not anticipated, and the aim was to understand the *de facto* digital presence of governments in the case study. A further set of data checks was driven by such frameworks as the Public Expenditure and Financial Accountability (PEFA) framework. These scores build on an understanding of whether subnational governments are classifying/budgeting, recording, and reporting expenditure and revenue transactions along generally accepted good practices, particularly in electronic formats. The PFM scope included core government systems (financial management, tax, human resources, and key asset registries (including land)).

Table 7.3: Results chain of digital assets

Results Chain	Illustrative Questions	Options & Recommendations
Inputs	<ul style="list-style-type: none"> • What is the level of digitization of financial management data at the respective subnational levels? • How are prevailing reporting standards/charts of accounts (administrative, functional, economic, geography, frequency) aligned with priority objectives? • Are wage expenditures linked to human resource deployment data? 	<ul style="list-style-type: none"> • Subnational Financial Management System Modernization • Data architecture and integration priorities
Outputs	<ul style="list-style-type: none"> • Successful existing examples of digital output tracking and service delivery? • What existing budget execution/delivery outputs are currently disclosed online? • How mature are asset registries (infrastructure, public properties, cadasters)? 	<ul style="list-style-type: none"> • Action plans • Emerging technology options
Outcomes	<ul style="list-style-type: none"> • Successful existing examples of digital output tracking and beneficiary impacts • What are the top ten indicators tracked by authorities and citizens? Can they be regularly benchmarked against other subnational governments? • Does the spatial dimension matter? 	<ul style="list-style-type: none"> • Action plans/Feedback mechanisms • Emerging technology options • Basic analytics & visualization capabilities • International examples (sub-national, sub-national benchmarking)
Impacts	<ul style="list-style-type: none"> • Results chain frameworks, assessment and evaluation design 	<ul style="list-style-type: none"> • Medium-term budgeting/financing prioritization. Program budgeting

Notes: Drawing on MSDI Framework, and PFM-sector assessments

7.16. **Digital data asserts and workflows operate within the institutional context of the prevailing legal and policy framework under which the local governments operate.** It was therefore important to uncover the extent to which national and subnational legal and regulatory frameworks (e.g., public finance acts/budget laws) enabled or encouraged government transitions from paper to digital. A cross-cutting question for the baseline review was whether the national and/or subnational institutional context

10 https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2018-Survey/E-Government%20Survey%202018_FINAL%20for%20web.pdf

enabled or proactively mandated digital government. To structure our focus on geospatial information, the PER applied the Municipal Spatial Data Assessment (MSDI) to both levels of government, the MSDI covers systematic questions about the enabling environment for geospatial data, and also looks at targeted questions about core data used by national and subnational governments across the world.¹¹

- 7.17. **The PER digital assessment also looked to capture the general level and periodicity at which key data sources were being produced and applied.** One dimension set out in Table 7.4 is whether the data is generated at the national or subnational levels. Such source mapping can help understand how value can best be generated by encouraging data sharing across and within various levels of government. For example, if a local aerial survey requests a one-off resource,¹² unless exploited in a timely fashion and repeated, its value for public decision making or service delivery will be diminished over time. Other sources, like subnational PFM transactions systems, generate continual data over monthly, quarterly, and annual cycles. A growing number of satellite image data sources now provide daily coverage for any place on the planet, offering potential value to subnational governments if they can tap into these resources in a practical and cost-effective manner.
- 7.18. **Each of the digital information “assets” can be assessed in a more specific manner, including for fit for purpose integration with other sources.** In the language of bit data, which would include the 3 Vs: volume (how big the data is for a given subnational), velocity (how quickly it changes), variety (how well it is structured, ranging from neat tables to rich social media feeds). There may also be many other relevant factors like veracity (how reliable it is), suggesting the need to understanding the origins and governance of different data assets. Finally, from an institutional perspective it is important to understand whether data fragmentation across government is hampering the prospective value of digital government. The factors that create and make data silos persist across governments are organizational, and to some extent technical.¹³

Table 7.4: Digital data typologies

	Periodicity		
		One Off/Periodic	Recurrent/ Transactional
Source Coverage	Sub-National	Survey, Aerial Survey	Financial Management System, IoT
	National	Survey	Financial Management System, IoT
	Global	Survey	Satellite Feed, Social Media

Digital government expenditure analysis

- 7.19. **Strengthened prioritization and sequencing of digital government resource allocation requires realistic and progressive objective setting, and adequate recurrent data.** Global experience in building digital government suggest that while adequate financing is available, it is also critical to ensure that the requisite capabilities and business processes to leverage digital platforms and data are also in place. A significant innovation and skills aspect for digital government is likely to reside in the private sector, including start-ups and small and medium scale (SME) providers. To modernize, governments at all levels must find effective ways of procuring ICT solutions from within the technology sector, including through public private partnerships.

¹¹ UN (2018) also conducted a pilot appraisal of 40 cities, but no cities in Myanmar.

¹² This has recently been conducted for parts of Yangon.

¹³ So-called infonomics studies for the private sector shown that the biggest payoffs typically come from integrating and leveraging fit for purpose data (see Laney 2018). But the key to achieving this value depends on identifying relevant applications proposition and executing on them.

- 7.20. The ability to capture resource allocations to digital government depends on how subnational governments record pertinent expenditures, as well as what they disclose.** At the transactions level this will depend on the current chart of accounts, and the extent to which accounting has been put on an electronic footing. One digital government expenditure review therefore needs to assess how prevailing economic, administrative, and functional classifications map to digital government investment and recurrent expenditures, and often what is recorded as capital versus recurrent expenditures may vary by context.¹⁴ The difficulties of classifying budget items highlighted in Chapter 3 also extend to digital government expenditure (see Chapter 3 , Box 3.1) and make it difficult to assess the true size of digital investments, for example, donors may constitute a significant part of digital government expenditures, which may not be on the budget. In terms of mapping results chains, a basic first approach would include establishing what data is available in terms of digital government inputs and outputs as per Table 7.2 while presenting a results narrative of what types of outcomes and impacts would be expected from these resource allocation processes.
- 7.21. Technological change may also impact how digital government expenditures are tracked.** ICT expenditures analysis may end up focusing on capturing capital investment expenditures in hardware and systems software, but the emergence of cloud-based services, and associated offerings such as Infrastructure, Platforms, or Software (IaaS, PaaS, SaaS) means that governments may also move into more service-oriented models to achieve digital government results. Foundational investments in networks, computing power and data warehouses will likely be important, as will major software systems purchases; recurrent services may also be an increasingly important aspect of successful digital government, particularly at the subnational level.¹⁵ Similarly, governments may partner with the private sector in exchange for data access, thereby generating value without explicit expenditure outlays.¹⁶ Outside of self-generated administrative data, access to external data (e.g., aerial or satellite imagery) may be another important aspect of digital government expenditures, including subscription services. Aggregating demand can help lower cost for all. Practical mechanisms for sharing digital resources between union and state levels should be identified and implemented around a set of priority use cases for states and regions. This could also focus on the benefits of aggregating demand, for example for satellite imagery, and is very important for low capacity, small SNGs.

Drivers and enablers

- 7.22. Local governments are typically at the frontline of citizen and business engagement, but depend on the national enabling digital government policy and infrastructure context.** Counterpart interest in urban areas for data for decision making has in part manifested itself in the growing popularity of ‘Smart City’ initiatives. Local champions, often with the support of development partners, can be drivers for digital government innovations. The most tangible subnational digital government innovations are likely to be those that address a concrete challenge, others may focus on cross-cutting services such as taxation or basic regulatory service delivery, like licenses. Significant improvements in local mobile network coverages may also open up opportunities for relatively low-cost public service delivery innovations, particularly in developing-country settings.

¹⁴ For example, should the acquisition of satellite imagery be considered an asset, or recurrent, expenditure?

¹⁵ We understand that several governments have setup their own private cloud. This would suggest a need to review the intergovernmental charge-back mechanism for such services and also if region governments need to procure similar items from the private sector. We understand however that there is no mechanism for union and state-level sharing of resources.

¹⁶ The private sector may be interested in leveraging public sector data (e.g., bus transit feeds). In exchange for data, private sector enterprises could then offer value adding services that promote the public transport sector without cost to the budget. Citymapper, initiated in London in 2011, is often cited an example in this regard (see Yeung 2016). These types of partnerships do require careful analysis for the risks and returns for each of the parties, including around data privacy or that a level playing field exists for business and citizens to otherwise public data.

- 7.23. **National policies can be enabling or limiting to SNG digitization and service delivery.** Key dimensions of policies include the use of digital signatures, identities, and payments. If a particular database (e.g., addresses), is housed within a national authority, the SNG may not have the authority to collect the data, even if it were to add value to local services delivery. Subnational governments may also be subject to national supervision or audits, and if these processes remain paper bound, this could circumscribe how far even the most avid local governments could move. SNGs may also not have access to digital data in machine-readable format. Determining the extent of limiting factors from the national government will therefore require analysis of cases when SNGs have made progress with digital government, as well as instances where demand appears to be high but implementation has been slow or absent. The degree of centralization of authorities as juxtaposed with subnational autonomy may also matter, some SNGs may simply progress with innovations unless explicitly forbidden to do so, whereas in others they may wait for explicit approval or instructions.
- 7.24. **At the same time the whole of digital government initiatives should be greater than the sum of its parts.** SNGs' initial basic forays into digital government are likely to involve stand-alone initiatives as skills and resources may not be available to pursue more advanced endeavours. As these initiatives mature, however, SNGs will need to avoid excessive fragmentation and siloing of legacy systems as the extent to which they need to focus on interoperability platforms and data sharing depends largely on the maturity of their digitization efforts. The objective of a digital government expenditure review would be to bring together evidence on existing results delivery, current utilization of digital government assets (not just systems but fit for purpose data), and corresponding resource allocations.
- 7.25. **Well-selected digital government case studies are critical to understanding subnational opportunities and challenges.** In tandem with the collection of cross-cutting data on results (Table 7.1), data and systems assets (Table 7.2), and expenditures (Table 7.3), and results chain indicators (Table 7.4), digital government case studies and more focused interviews should yield significant insights. The case studies identify the targeted and achieved results of the initiatives, as well as a sense of what has driven their evolution. They reveal a mix of both data discovery versus purposive digitization. Data discovery for example occurs when subnational stakeholders identify and apply data relevant to subnational governments, this could be emergent sources such as free or for fee satellite imagery. One-off spatial data investments could also be made, including through donor projects, however one-off investments may suffer from the fact that they may become outdated, for example in the context of rapid urban change. Recurrent data, including transactions-based data, would be of greater value. Our case studies reveal a mix of data types and drivers being deployed across Yangon and Mandalay regions.

C. Digital government realities

- 7.26. **Yangon and Mandalay regions confront a range of service delivery and regulatory challenges.** Straddling urban and rural, they are characterized by large and growing populations, economic development, and lifestyle changes.¹⁷ Public transport systems have deteriorated rapidly since 2012, when private vehicle import regulations were loosened. Congestion, pollution and traffic-related accidents are all rising (see Chapter 6). Urban growth has substantially increased the amount of solid waste generated by households and industries (see Chapter 5). Housing, land administration, delivery of municipal services, urban management, and regulation of businesses are all key challenges.

¹⁷ Sectoral service delivery responsibilities are largely shared with the Union (e.g., rural roads and highways, electricity, water). Only urban services and waste management are the sole responsibility of sub-nationals, and CDCs have some revenue assignments (including from property taxes, see McDonald and Hein 2017).

- 7.27. **Digital government expectations are likely to be most pronounced in urban areas.** The rapid growth of mobile adoption, now 80 percent smartphone penetration, could be one driver of increased digitization; internet access, whether fixed or mobile, is favorable relative to the rest of the country. As a whole, Myanmar's digital development lags its regional peers but is progressing rapidly (World Bank 2018b). At the outset, urban areas are likely to have the highest level of connectivity and the greatest demand from citizens with rising incomes, however, any digital transformation needs to ensure that any potential divides across state geographies and constituencies are closely monitored, and tackled proactively. Despite the limited formal expenditure mandates of state/region governments, they can play an important role in infrastructure and service delivery prioritization. SNGs also need to develop effective reporting and oversight frameworks that leverage digital data or processes; which relates directly to the policy discussion on energizing subnational coordination and oversight in Chapter 2. Budget classification challenges highlighted in Chapter 3 and the lack of a standardized classification and manual system mean that the information will not be able to undergo deeper analysis and application by the SNGs, effectively limiting the oversight function of SNGs.
- 7.28. **The national 2016-2020 eGovernance Master Plan enumerates a series of important foundational aspects for digital government.** This includes interoperability: "to provide people with comprehensive and effective services, it is important for Union Government and State/Region government departments to be able to integrate as well as exchange information....there is a mix of different technologies by different departments...Therefore, it is necessary to set up a backbone policy to integrate/exchange information among many different systems." (Article 113). The Master Plan sets out the need for an ICT council initially under the president's authority to develop policies such as Digital Signature, public-key encryption, certification authorities, and e-Government Integration Standard.
- 7.29. **Myanmar is continuing to develop its national ICT policy framework, an important element of which is how it is being manifested in the development of digital government practices at the subnational level.** The 2004 Law of Electronic Transactions (Chapter XIII) already recognizes that, "government departments and organizations shall recognize the transaction of electronic record or electronic data message as lawful for the following matters: (a) submitting, accepting or retention of documents; (b) issuing permit, license or approval; (c) claiming the required payment, paying, receiving and issuing a receipt therefor." This section proceeds to review the realities on the ground in terms of digital government across state and municipal levels, seeking to capture: the state of public services; decision-making underpinned by tabular and geospatial digital data; and finally, how these levels of government are drawing on skills and capabilities, especially from the private sector.
- 7.30. **An important barrier is the recruitment of IT professional to the civil service.** Implementation of the ICT policy framework requires highly skilled staff, yet recruiting technical specialists to work in information technology, is hampered by a number of challenges. The 2015 Labor Force Survey data show that the civil service wage rates, even after accounting for allowances, are substantially lower than the prevailing wage rate in the private sector in Yangon and Mandalay. Career advancement and professional development opportunities for technical specialists working within line departments are also likely to be limited relative to the opportunities in the private sector.
- 7.31. **Insourcing technical capacity is possible, though is not widely practiced.** The Civil Service Law (2013) permits government departments to recruit retired public sector professionals for specialized skills that are not available internally. Hiring "external experts" from the private sector is also permitted under YCDC Law, with the agreement of the region government, and it has been known to recruit a limited number of IT consultants. More generally, it is an open question whether specialist IT skills should be insourced by individual departments, which are subject to civil service rules, or recruited by a separate statutory institution, such as an IT Board, that has the authority to set contract terms, rates of remuneration and potentially provide a more collegiate ecosystem for recruits than is the case when skills are separately recruited.

- 7.32. **The overarching institutional structures for digital government in Mandalay and Yangon remain tentative.** The region governments have politicians, but not really a fully-fledged apparatus, and so lack a standalone department or team to develop and implement ICT initiatives. Existing digital government projects at the region level are being led by individual politically appointed ministers and their consultants. Similarly, at the CDC level, much of the digital government developments depend on dynamic individuals and private sector partners. The regions as such do not have a full-fledged set of agencies but appear to work mainly through the national line agencies. There is no stand-alone IT department in the state/region government, however they could have an IT department as an item in the state/region cabinet portfolio, as is the case in Yangon. The two municipalities show more of a full-fledged agency structure, but neither city committee has a dedicated unit for IT or digital development. Digital government projects are then to be vested across a number of the agencies.

Online services

- 7.33. **Online services can take on various levels of complexity and sophistication.** The most basic form of online service delivery is simply providing up-to-date information on basic services such as opening hours. A further level of services could allow users to download forms before coming into government offices, ensuring for example that administrative requirements have been fulfilled. Full-fledged online services would allow users to complete a service fully online. However, this will often require ensuring that infrastructure for digital identification and payments is in place (Andrianasy et. al. 2019). Online service delivery offerings will also depend on responsibilities by national versus subnational governments. A further form of digital service, as well as an input to better and more responsive decision making, is to provide cities with convenient channels for feedback. One example of a digital service application is the Myankon app developed by a local tech start-up now being scaled across Myanmar (see Box 7.1).

Box 7.1. Myankon application

Myankon is a computer- and tablet-based mobile application, developed by local tech-firm Koe Koe Tech in 2016, that helps municipalities to collect property taxes, utility fees and other charges. By streamlining the tax collection process, Myankon reduces paperwork and allows city officials to digitize property tax records and generate tax bills, making a revenue collection system more transparent and efficient. The application can also be used to collect water meter fees and business licenses electronically and features analytics that allow city officials to monitor tax collector performance and to forecast revenues.

Streamlining tax and other municipal fees payments is not an easy task given a deep-rooted practice of “informal payments” in Myanmar to provide public services. Digitization of the revenue collection system in municipalities across the country will take considerable time (Bissinger 2017). Revenue is currently being collected electronically in 11 townships in four different states and regions.

The application has benefited from early investments by development partners such as the Asia Foundation. Importantly, several SNGs have now begun to pay service fees to use this application. This highlights opportunities to see a rapid deepening and greater sustainability of these types of applications, especially as cities, states and regions see positive results of digital government among their peers.

7.34. **Our digital government benchmarking sought to capture the prevailing online footprint of region and city governments in Mandalay and Yangon.** In the first instance, this involved a rapid appraisal of available online services, and any feedback mechanisms. The online review followed the spirit of the United Nations (2018) biennial eGov Survey but recognizing the institutional context of at times overlapping responsibilities across different levels of government. Interviews were carried out as part of this review, in order to understand where key stakeholders saw the current state of digital service provision, and also to identify politically salient and technically feasible medium-term priorities. At present online services were still limited (see Table 7.5).

Table 7.5: Key transactions/registry data

	Yangon (Region)	Yangon (CDCs)	Mandalay (Region)	Mandalay (CDCs)
On-Line Services	YRG has a public procurement portal where business can access information about bids and download tender documents	YCDC provides online application services for various licenses, permits and for land deeds registration as per Table 7.8	Selected services as per Table 7.7	MCDC developed an online application service for various municipal licenses and permits. However, due to lack of human resources, the launch has been postponed.

Source: Authors/Renaissance Institute

7.35. **Mandalay and Yangon have established a digital presence, most significantly using social media like Facebook.** The review suggested that both Mandalay and Yangon CDCs were present in terms of dedicated sites, but also active through Facebook. The CDCs in particular, offer a range of basic services online, as well as options for online payments. The websites of Yangon and Mandalay region governments, on the other hand, only have information about public services offered by union-level agencies, such as registering companies. This reflects the limited public service delivery responsibilities of region-level governments. But in the case of Mandalay (see Box 7.2), the Mayor relies on Facebook to gain feedback on service delivery. The CDCs provided some mechanisms for online payments. However, full-fledged on-line services were limited.

Box 7.2. Mandalay mayor's facebook page

In Myanmar, Facebook has become a platform for where citizens can express their grievances and articulate their needs; government departments, including CDCs, have begun to take notice of the role that social media can play to communicate with their citizens and inform their decisions. One particular case is Mandalay Mayor Ye Lwin. Mayor Ye Lwin's Facebook account has 100,000 followers and he regularly posts content about MCDC works and his personal views. Between January and March 2019, Mayor Ye Lwin made 61 Facebook posts, 24 of them were about MCDC's infrastructure works, and the rest were public activities, such as a campaign against littering and cleaning up the city, public statements on MCDC budget, his personal views and vandalism cases. Mandalay citizens also replied with their own comments, and these were often complaints against MCDC's services. The mayor usually responds to those complaints personally and takes a swift action, thus making him one of the most popular government officials among social media users in Myanmar.

- 7.36. **Given their limited administrative footprint, the regions showed limited online service delivery presence.** Interviews suggested that where digital data can currently have the biggest service delivery impact for regional politicians is in the role of “troubleshooting and guiding functions”, specifically for citizens, and should be the basis for any subnational administration. Advancements were seen to have been made in online services, (Andrianasy et. al. 2019 forthcoming), the most basic online service was to simply offer information about the online availability of a public service.
- 7.37. **The YCDC website describes information about services provided by municipalities and the requirements for applying for a license or permit.** Online services appear to be using more ad hoc online identities, created on an individual basis (e.g., electricity subscribers), and assessments did not suggest that SNGs were looking at more cross-cutting ID applications that could be used across a number of public services online.
- 7.38. **Yangon Region Government website allows hotel occupancy to be registered online via mobile phone or computer.** The requirements and instructions for the registration process are detailed online, and the website also provides information about applying for licenses and permits, directing users to the appropriate department and describing prerequisites and other requirements for applying. Private companies can register on the website to take part in any tendering process.

Figure 7.3: Mandalay municipality facebook



Figure 7.4: Mandalay eServices

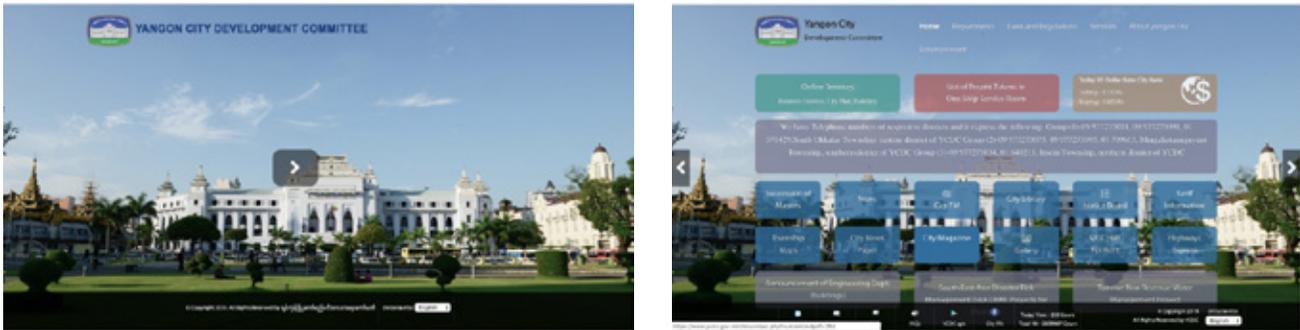


Source: <https://www.facebook.com/MCDCIT/>, <https://www.yangon.gov.mm> <http://www.emandalay.gov.mm/eservices.html>

Table 7.6: Mandalay regional government eServices

No.	Service	Agency
1.	Checking electric meter usage and charges	Mandalay Electricity Corporation
2.	Employment opportunities (Employers)	Directorate of Labor Department
3.	Employment opportunities (Employees)	Directorate of Labor Department
4.	SME Membership registration	SME Development Agency
5.	Online booking for renewing vehicle license	Road Transport Administration Department
6.	Companies registration	Directorate of Investment and Company Administration

Figure 7.5: Yangon municipality eServices



Source: <https://www.ycdc.gov.mm/>

Table 7.7: Mandalay regional government eServices

No.	Online Service	Department
1.	Applying for a business license (13 types)	Administrative Department
2.	Application forms for a building permit	Engineering Department (Buildings)
3.	Application forms for a slaughterhouse	Veterinary and Slaughterhouse Department

Digital decision making

7.39. **The use of digital information for planning, prioritization, and budgeting, as well as for management, and regulatory enforcements is still piecemeal in Mandalay and Yangon.** Table 7.8 summarizes the state of key transactions and asset registries across the four local governments. Budgeting and accounting systems are still largely manual and paper-based, and while Excel-based tools are growing in prominence, they have been applied mainly to reconcile or aggregate data (e.g., budget and execution data). As the chapters on revenue and expenditure analysis highlight, this makes consistent tracking across time and government entities a challenge. Going forward, the challenge for Myanmar’s SNGs will be to introduce better “digitally native” transactions recording systems that can provide at least a minimum level of relevant information. In line with global technology trends, cloud-based service platforms may also provide SNGs the opportunity to rapidly scale up digital functionality in a modular fashion, without sinking significant amounts of resources into protracted systems development.

7.40. **Digitization is just a starting point to extract service delivery or decision-making value from a paper legacy government.** If government records have been historically paper-based, the question is: where can the greatest value be generated from strategic digitization and demonstrated applications? On-going efforts by Yangon region to digitize land dispute records (see Box 7.3) illustrate a bottom-up, home grown application of new technologies. Over time, this type of text-based data could also be integrated with geospatial data, including from satellites. The challenge, however, remains to empower champions at the local level to take a more integrative approach to generating value from digital data, rather than have it succumb to project-based fragmentation across single use cases. The case of dynamic tracking of garbage trucks in Mandalay (see Box 7.4) shows how sensor-based technology was applied to challenges associated with the risk of corruption, and service delivery.

Table 7.8: Key transactions/registry data

	Yangon (Region)	Yangon (CDCs)	Mandalay (Region)	Mandalay (CDCs)	Comments
On-Line Services	YRG has a public procurement portal where business can access information about bids and download tender documents	YCDC provides online application service for various licenses, permits and land deeds registration.		MCDC developed an online application service for various municipal licenses and permits. However, due to lack of human resource, they postponed the launch.	
Public Financial Management (PFM)	Paper-based YRG has an assets and inventory tracker using a QR code sticker.	Paper-based	Paper-based	Paper-based	BOOST is working on standardizing submissions.
Human Resource Management (HRM)		YCDC has a HR management system. Some departments under YCDC, such as a Cleansing Department, also use fingerprint clocking system.		MCDC also uses fingerprint clocking system for Cleansing Department. (Note: Cleansing Department employs hundreds of day laborers and the system reportedly eliminated “ghost workers” fraud.)	
Document Management Systems	YRG developed an optical character recognition (OCR) system to digitize its paper records. Currently, YRG is digitizing land dispute paperwork using its OCR system.		MRG is planning to launch an electronic document management system. MRG is also digitizing land records/ deeds that were granted in 1990s.		
Domestic Revenue Mobilization (DRM)		YCDC has been using a billing and collection management system for its property taxes and utility fees. The YCDC has digital tabular data of buildings (not exactly a cadaster record),		MCDC also uses a billing and collection management for its taxes and fees; and e-tolls system to collect toll fees. MCDC is developing a similar system to that of YCDC.	Unlike some of the Box case studies, these systems are not yet mobile.
Geospatial Data	Geographic Information Management System of YRG has a publicly accessible map with administrative boundaries, statistical units and government buildings.	Recently completed LiDAR capture		MCDC recently completed a city-wide aerial mapping survey using an Unmanned Aerial Vehicle (UAV). The map already has 200+ layers.	See Annex 2 for MSDI Results

Source: Authors/Renaissance Institute

Box 7.3. Digitization of land dispute cases in Yangon region

One of the most pressing issues that the new civilian government is currently facing is a large number of complaints regarding land confiscation and land disputes. In Myanmar, most of the existing land disputes concern rural farmland that was confiscated by various ministerial departments and the military for different purposes during the previous military rule. The immediate purpose of YRG's digitization of land documents is to assist the ongoing dispute resolution on these confiscated lands.

There are about 10,000 pending cases under the jurisdiction of Yangon Region Government. In order to streamline the investigation process and assist in resolving those cases, YRG has been digitizing the case files, and has generated descriptive analytics, such as the number of cases for each department and each township. These case files are being digitized using software with an optical recognition algorithm, funded by YRG and developed by a group of local tech experts. YRG aims to harness the potential of its homegrown digitization software to further digitize government-related paperwork.

Box 7.4. MCDC's fleet management system for garbage trucks

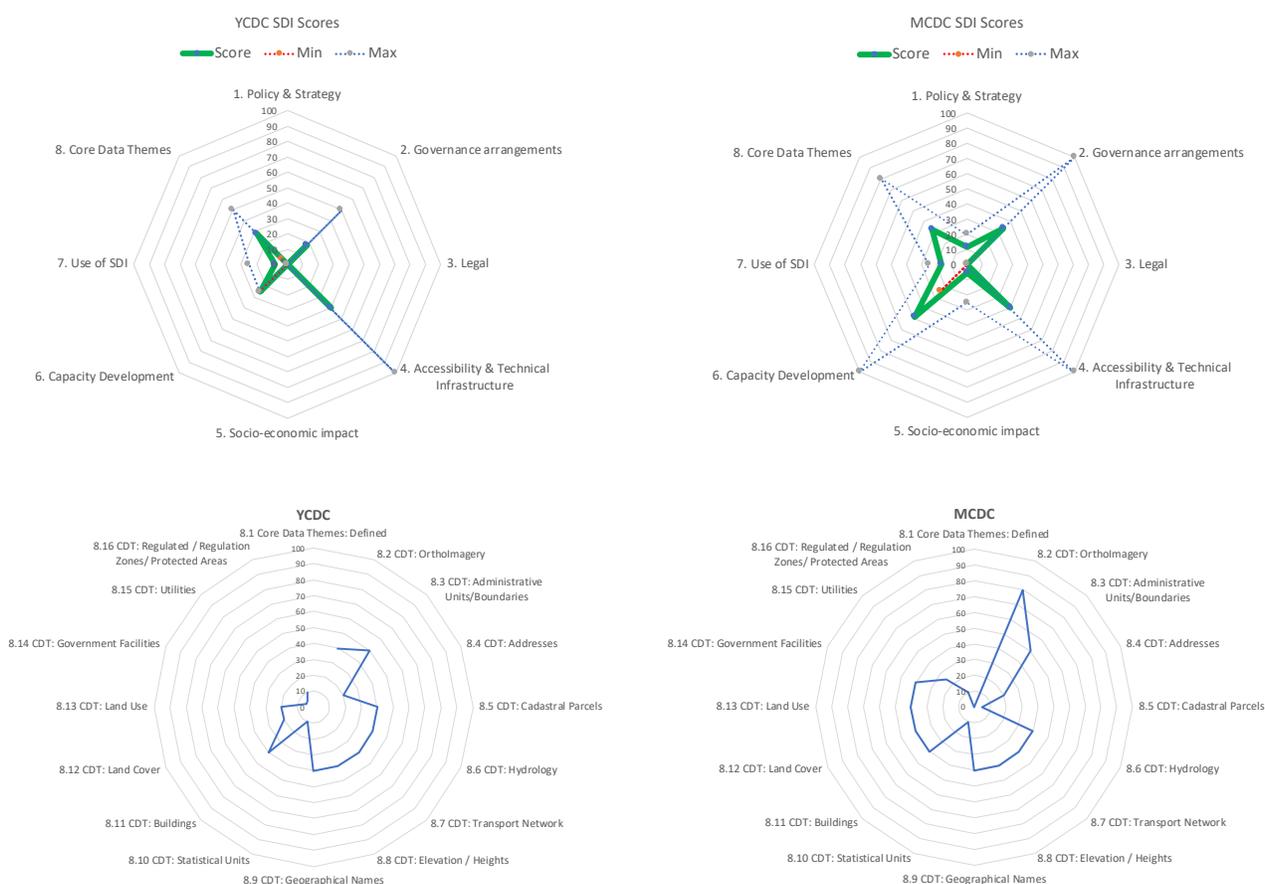
One of the most pressing issues that the new civilian government is currently facing is a large number More than 250 garbage trucks from the Mandalay City Development Committee are being tracked and monitored by the city's new fleet management system. By using IoT sim cards, the system, which was installed in early 2019, allows MCDC to track its garbage trucks on a real time basis to ensure that trucks are driving on their designated routes and arriving at dump sites on time. The system also monitors fuel usage and provides valuable analytics. The fleet management system also has an alarm system that sends a warning message via a messaging app if it finds any wrongdoing by a garbage truck, such as speeding.

The truck fleet is run by MCDC's Cleansing Department. The tracking technology was procured from an established local tech firm for an estimated cost of 126 million Kyats (USD 83,000) and monthly service fees of 12 million Kyats (USD 790) after the first year. Monitoring the fleet of garbage trucks reduces the operating cost, checks fuel embezzlement, and improves collection capacity.

- 7.41. **Geospatial information initiatives are largely restricted to urban CDC levels.** The subnational Spatial Data Information (SDI) Diagnostic Tool provides a rapid baseline to access the use of geospatial data. The diagnostic questionnaire is divided into two major modules, within which there are sections/questions scored from 0-100 to assess the prioritization and maturity of a given city's SDI. Sections 1-7 focus on cross-cutting issues, including linkages with the national policy framework. These sections are composed of multiple questions, for the final scores are represented by averages, as well as minimum and maximum scores. Section 8 focuses on particular geospatial data layers, and itemizes 15 core data layers that every city will typically be expected to have and to use. Section 9 allows for the itemization of layers based on special city needs (e.g., flood risks). The digital layers are assessed based on completeness and quality. The completion of the MSDI, combined with targeted dialogues around priority information layers, also provide a tangible way to explore opportunities to better leverage new technologies (cloud/on-line services, satellite/smartphone/sensor data). This reflects clearer subnational autonomy and exclusive mandates for CDC, like property tax collection and service delivery.

7.42. The results of the Municipal Spatial Data Assessment suggest that Mandalay is the most advanced on the geospatial information infrastructure front, but that national platforms could be strengthened. Figure 7.6 summarizes the overall results. The upper panel highlights the policy environment, while the lower panel summarizes the status of the main geospatial assets. But the push for digital government is also strongly driven by individuals. The challenge remains how to convert geo-spatial information into timely impacts on the ground. Both Mandalay and Yangon have geospatial technical centers at the local universities, but these appear to be poorly linked to day to day public sector applications.¹⁸

Figure 7.6: Municipal SDI results Mandalay and Yangon



Source: Renaissance Institute and World Bank (2019)

7.43. Mandalay and Yangon municipalities are now able to draw on recent high-resolution baseline aerial imagery for decision making. In 2018, Mandalay CDC commissioned a UAV to image a covered area of about 40,000 acres (about 161.87 km²), and the digital topographic map is at a scale of 1:5000. The map covers all 7 townships of MCDC. So far, there hasn't been any policy decision/initiative taken based on the digital topographic data. However, there are a number of ongoing discussions to change household addresses and reform property tax. With development partner support, an aerial LiDAR mapping of large

¹⁸ At the national level, the One Map Myanmar: Initiative is mandated and managed under the auspices of the recently formed Central Committee for the Land Resource Management, under the President's office <https://portal.onemapmyanmar.info/omm/home/index.html>. National initiative to ensure that everyone is sharing, including new LiDAR data (see Box 5).

parts of Yangon municipality is available. In both cases, however, the decision-making value of these digital assets remains to be seen. Neither resource appear to be associated with a clear data sharing policy, including in terms of how other actors and private sector could leverage these resources. This suggests that investing in private and academic stakeholders to exploit these resources could yield high returns. Showing value from these recent data acquisitions could also pave the way for more systematic business case analysis for future digital data acquisitions by SNGs (starting with what could currently be achieved with free satellite imagery). In Yangon, the recent LiDAR project represents a significant digital resource (see ANNEX 5: Yangon LiDAR Insights).

- 7.44. **The wider spatial footprint of state and region governments should drive the fit for purpose and cost-effective use of digital mapping information.** Public infrastructure and service delivery challenges will necessarily straddle a range of urban to rural contexts. Given constrained financial resources and the spatial and temporal granularity of statistical data, SNGs may wish to see whether new earth observation technologies (including cloud-based infrastructure) provide for more dynamic opportunities for revenue and resource allocation prioritization. This will mean identifying priorities and opportunities, as well as investing wisely in the right digital assets and insights.
- 7.45. **One practical challenge for Myanmar localities will be to identify fit for purpose spatial imagery, but above all identify application capabilities and workflows.** Even as Mandalay and Yangon may enjoy relatively higher capacities in the Myanmar context, any technology solutions would need to be simple and cheap enough to use for stakeholders across Myanmar. This means that design, as experienced by users cannot be excessively complex or sophisticated, but rather must deliver on useful minimum functions. By way of examples of geospatial data (see ANNEX 5), functional digital government decision making should allow SNGs to progressively apply such digital assets on a repeated or continual basis, specifically as aligned to the annual budget preparation cycle. The recent Mandalay UAV and Yangon LiDAR applications may run the risk of being one-off projects, with limited learning spill-over impacts for day to day public sector management. The traditional acquisition of high-resolution commercial satellite imagery can reach above USD 25 per square kilometre. Open access satellite imagery, coupled with cloud-based machine learning, now provides options for continual monitoring of land use changes along the brown (built up areas and infrastructure), green (natural assets and agriculture) and blue classifications (waterways and floods).
- 7.46. **Public expenditures for digital government prove challenging to track, especially if expected results are framed in terms of a wider subnational government modernization program.** Subnational budget data in Myanmar is presented along various economic, administrative and sometimes functional classifications.²⁰ As Chapter 3 notes, consistently tracking public expenditure trends and associated results metrics (outputs, outcomes or impacts) is challenging. In the case of digital government, a further challenge is to avoid focusing on traditional “hardware” spending, but to assess the extent to which a range of “hard infrastructure” and soft investments function in practice²¹. The challenge was therefore to assess the extent of IT projects as such, but also the wider range of digital government expenditures, including the types of procurement modalities found across SNGs. To-date SNGs, especially CDCs, have prioritized procuring hardware, such as computers and data centers.
- 7.47. **The budget documentation outlines a number of digital government programs, but limited evidence is available to indicate what the counterparts saw as the key outcomes.** The 2017/18 and 2018/19 data provide some sense of the scale of digital government expenditures at the decentralized level. Table 7.9 presents expenditure highlights for Mandalay municipality, and Table 7.10 for Yangon municipality. For

20 The assessment team was able to draw on detailed data for 2017-18 and 2018 interim budget data. 2019 budget data was not yet available. See https://docs.google.com/spreadsheets/d/1Z5ZWnUG_vQ4xTV13y1PwaoSH6SBtnLsfwvefoPDAkA4/edit?usp=sharing

21 Process streamlining, digital skills literacy in and out of government, data acquisition and use.

MCDC, projected eGov expenditures for 2018 almost tripled to just over USD 600K. This spending was spread across almost 20 self-standing projects. The largest project for 2018 focused on toll collections at USD 170K. Budget data however does not reveal whether these were single or multi-year projects, or how the operations and maintenance of the identified systems would be resourced in subsequent budget years. The Yangon municipal budget only identified a lump sum of USD 200K for eGov. Some of the major geospatial data investments seem to be lodged in the USD 4.4 million allocation for the disaster risk management project.²² This represents an increase from 0.4 to 1.2 percent of MCDC budget and suggests growing prioritization of e-governance investments. In Yangon, e-governance investments were budgeted at 300 million Kyat (0.1 percent of YCDC budget) in 2018/19.

Table 7.9: Mandalay municipal digital expenditures

MCDC E-government expenditure (2017-18)			
Type of work	Quantity	Kyat	USD
CCTV installation	1	1,623,220	1,082
Financial Management System	1	9,871,000	6,581
Employee approval using flingerprint system (Phase-1)	1	9,900,000	6,600
Electronic Document Management system (Phase-1)	1	9,713,000	6,475
Office 365 Software (for seven users)	1	540,975	361
Weighing scal and ysstem for the waste management	1	169,800,000	113,200
Water meter fees collection system and bill payment gateway	1	12,534,000	8,356
Production printers for printing tax bills	1	55,000,000	36,667
CCTV installation at asphalt plant	1	1,720,230	1,147
CCTV installation at Pyay-gyi-mmingalar trucks terminal	1	9,880,000	6,587
Traffic lights installation at Pyay-gyi-mingalar trucks terminal	1	9,100,000	6,067
ANDPR camera installation at 60th street used car retail park	1	5,109,000	3,406
RRID toll system at 60th street used car retail park	1	5,200,000	3,467
Total		299,991,425	199,994

MCDC E-government expenditure (6-month interim budget 2018)			
	Units	Kyat	USD
CCTV installation at the gemstone market	1	9,153,000	6,102
RFID insallation in vehicles for RFID toll collection system	1	66,000,000	44,000
Installation of parking fee collection system at bus terminals	4	190,600,000	127,067
Sensor and system for toll collection	5	256,000,000	170,667
Business Process Analysis	1	15,000,000	10,000
Network Analysis	1	46,877,042	31,251
External Stand for video wall	1	3,400,000	2,267
Digital map and building records	1	91,035,000	60,690
GIS software + UAV + Aerospace University (180+190+260)	1	63,000,000	42,000
Billing system for tax	1	38,000,000	25,333
Online Business Registration System	1	17,000,000	11,333
Visitor control system	1	16,000,000	10,667
Terminal server	1	23,870,000	15,913
Computers and accessories	1	29,945,000	19,963
CCTV installation at vehicles department	1	9,176,500	6,118
Mobile phones and power banks	30	5,078,400	3,386
Fuel Management system	1	34,000,000	22,667
ANDPR camera installation at 60th street used car retail park	1	5,109,000	3,406
RRID toll system at 60th street used car retail park	1	5,200,000	3,467
Total		914,134,942	609,423

22 The data does not clarify the extent to which this is financed by development partners. During the 2018 interim budget, the national government apparently restricted capital projects with more than a six-month duration.

Table 7.10: Yangon municipal digital Gov expenditures

YCDC 2018/19 BE - capital expenditure		
Type of work	Million Kyat	USD
Building broker's sales centers, parking lot, warehouses, butchery houses	6,452.51	4,301,675
Building markets	3,210.00	2,140,000
Asphalt road, concrete road	57,513.88	38,342,587
Garbage tank, building cemetery	4,746.60	3,164,400
Gardens, playgrounds	1,821.53	1,214,353
Offices, building/maintaining staffs houses	17,275.68	11,517,120
Water supply	150,334.90	100,223,267
E-government project processing	300	200,000
Disaster management project	6,631.33	4,420,887
Purchasing operational used vehicles, machineries	13,621.13	9,080,753
Purchasing office used devices/mechanism, furniture	103.103	68,735
Purchasing office used vehicles	875	583,333
Office used miscellaneous	14.736	9,824
Others (land compensation)	8,119.61	5,413,073
Total Capital Expenses	271,020.00	180,680,000

7.48. **The extent of vertical and horizontal coordination for Mandalay and Yangon digital government could be clarified.** Public reports for example suggest that Mandalay region would invest USD 1.2 million for surveillance cameras and other security equipment for use in Mandalay's "Safe City" plan (see Phyo, 2019). The initiative would be prioritized to heavy crime parts of the city. The interviews did not suggest how region and municipal level information was being coordinated. In addition to gaining a more comprehensive and systematic picture of the use cases and technology services that sub-national and national agencies are pursuing, strategic digital government decision making could benefit from strengthened peer learning platforms. Examples from the chapters are further highlighted in the conclusion, but span tax and services in urban transport and waste management. These platforms could expose local stakeholders to both relevant global and regional experiences, as well as learning by doing, that could be replicated across state, region and municipal governments. One example could include approaches to exploiting open access satellite imagery to inform geographic resource prioritization on a more recurrent basis, for example aligned to annual and medium-term budget cycles.

Private sector engagement & skills

7.49. **Local private sector engagement is increasingly being framed in terms of opportunities for making governments work better, as well as developing the wider digital economy.** The traditional *modus operandi* of government may be more geared towards purchasing equipment rather than achieving technology results. Across the world, traditional IT procurement strategies still present a barrier to bringing greater digital government innovation to the public sector (Hugill and Ramraj, 2019). Both Mandalay and Yangon are characterized by some depth by a local tech services sector. Each region revealed a handful of projects that were functioning effectively, both cities also have technical universities, including departments for geospatial information systems. Collaborations between these academic centers and government seemed to be restricted largely to individual projects.

- 7.50. **The early stage of development partners promising digital initiatives will now need to be increasingly scaled and sustained across localities.** One such service is a Myotaw municipal application recently developed by a private company.²³ The application provides a platform for urban citizens to communicate with the CDC and vice versa and allows them to pay municipal taxes and utility fees. As of now, only two cities are using the application, applied in some small townships. The readiness of the large townships for digital process reform will depend on local leadership, but also the extent to which the prevalence of informal taxation can be tackled. Another initiative is One Myanmar,²⁴ which is mandated by the Union Government Central Committee for the Land Resource Management and funded by the Swiss development agency. The national initiative aims to consolidate all government-held land and related spatial data into a unified platform that can be accessed by government agencies and the general public. While this might address vertical data sharing across levels of government, or access by locals to national layers, the platform does not seem to address data interoperability at the level of the state and municipal government.
- 7.51. **None of the local governments had cross-cutting entities responsible for eGov.** However, Yangon Region had hired a private sector consultant for special initiatives. This articulated both a strategy of boosting basic digital literacy and skill in the administration, as well as cleaning up priority data (see Box 7.3 Yangon Land Claims). Mandalay was represented by a strong individual champion of digitization. Pending the establishment of cross-cutting bodies, digital government initiatives are likely to be executive mainly at project level. At the initial phase, this existing modality will show impacts, but the finance sector, and digital economy constituencies will increasingly need to come together to draw greater synergies across these initiatives.

D. Recommendations

- 7.52. **The subnational governments of Mandalay and Yangon have begun making some forays into deepening digital government.** Core local PFM and HR systems have only been partially digitized. Social media platforms such as Facebook are providing one avenue for local government outreach and feedback, alongside a more standard web presence, but digital data, including geospatial data, is beginning to make inroads into how local governments work. In both municipalities, recent aerial imagery provided policy makers with a more granular, bird's eye view of their cities. A mix of bottom-up and top-down drivers will likely drive digitization opportunities, going forward. Higher levels of government may begin to demand better quality tracking of SNGs given their expenditure shares, while local stakeholders aim to seize opportunities afforded by digital development. At the same time a number of development partners have sought to spur the adoption of technology in government, including as part of an early effort to boost local digital economy development.
- 7.53. **The review sought to provide some tangible examples of how digital resources are and can be applied within Myanmar's decentralization context.** This approach has differed somewhat from other digital government assessments, seeking to capture what the actual digital prevailing footprint and composition is of a select number of local governments. We have sought to nest this "revealed baseline" against a set of three key results areas: public services, decision making, and private sector engagement. By including both an assessment of "tabular" and richer geospatial data, we have used this to frame the

23 A TED talk by Koe Koe founder Michael Lwin, titled "How Myanmar Can Embrace the Fourth Industrial Revolution", underscores the catalytic role that can be played by development partners in this area. But ultimately mainstreaming will depend on how national and local governments engage with local startups in particular to innovations and solutions <https://www.youtube.com/watch?v=fl4BcB6UL4o>.

24 <https://portal.onemapmyanmar.info/omm/home/>

extent to which the prevailing legal and policy structures stand ready to enable a transition from paper to increasingly digital-based government. This has also set the context for seeing how a set of increasingly mature and ubiquitous technologies (e.g., smartphones) could work alongside newer technology developments (cloud, satellites, sensor data) could work together with more traditional systems building (e.g., accounting systems). Our emphasis has been on fit for purpose and minimum effort solutions that are viable and could meet local needs, rather than risk pursuing sophisticated systems with unclear prospects.

- 7.54. **The incomplete state of decentralization in Myanmar means that digital applications understandably appear piecemeal.** In terms of basic service delivery and some revenue mobilization, the scope of efforts and expectations is most clear for the municipalities. More systematic local tax mapping and workflows have emerged as one area for modernization. Mandalay has moved to introduce CCTV networks for public security functions, making early forays into “Smart City” technology. Beyond a set of reform champions, the extent to which incentives and capabilities exist for both widening and deepening digital transitions at the municipal and state level presents itself as mixed. But the rapid expansion of foundational ITC infrastructure, most explicitly witnessed in popular mobile access, means that opportunities, together with potential pitfalls, merit close scrutiny.
- 7.55. **The nascent stage of Myanmar digital government coupled with rapid global disruptive technology developments mean that early trajectory-setting actions now matter.** Lack of foresight could needlessly stall or delay supporting digitally enabled results or averting some of the pitfalls highlighted by international experience. Allowing digital government to succumb to a series of fragmented IT systems exercises could risk poor data generation, sharing and use. Traditional IT procurement practices risk missing opportunities for building towards a more programmatic, agile and innovative approach to building digital government at decentralized levels. For example, subnational government agencies may be tempted to pursue stand-alone systems, rather than access shared services, which would allow start-ups and SMEs to build up services. If no clear policy and regulatory guidelines are in place to access national and other local cloud resources, the risk of system fragmentation will increase. Rather than seek to stop projects that don’t conform to abstract compliance standards, national and subnational governments can focus on ensuring that SNGs, especially in lower capacity settings, can access cost-effective and effective cloud-based services. A key aspect of this will need to be putting digital technologies and platforms to proper use in order to make local government work better, rather than just to have the technology itself.
- 7.56. **While subnational digital government expenditures in Kyat may be limited, if done right, they can be transformational.** Over the coming years, basic fixed and mobile internet access across the country promises to improve significantly. Expanded national digital IDs could also increase opportunities for improved online services. The cloud-based services revolution would help enable local governments to cost-effectively deploy services and decision-making platforms, without the costs and delays of significant up-front physical IT investments. In some cases, this will allow SNGs some leeway to leapfrog in technological terms, rather than spending time replicating cumbersome paper-based processes on computers. The most tangible impact of this new generation of infrastructure will come from how SNGs can leverage these opportunities for service delivery, decision making, and local digital economy innovation. If digital government can work to better manage real physical assets (e.g., infrastructure, land, natural resources) across local jurisdictions, this could be transformational for the country as a whole. The cost of most backbone IT infrastructure investments will be borne at the national level.

Programmatic digital government applications budgeting & asset management

- 7.57. **Decentralized digital government development in Myanmar would benefit from being framed and measured using a results-based approach.** As resource transfers to SNGs increase, the risk remains that this would lead to a growing number of stand-alone IT projects, including across sectors. Three public financial management strategies could help local and national leaders manage these risks more effectively by intervening early to strengthen institutional processes. The first is to build early awareness and to place emphasis on digital assets rather than systems. This perspective would emphasize the value to service delivery decision-making, and the local digital economy of various forms of digital data, as illustrated in the PER baseline analysis. The second is to define early, but very pragmatic entry points, for more programmatic financing for digital government. Finally, subnational digital government development should be approached early on from the perspective of inter-governmental transparency and accountability, especially as roles and responsibilities are still to be formalized.
- 7.58. **The preparation and communication of the annual digital government and “state of digital assets” report for subnational leadership can build awareness of where value and gaps lie.** Building on the baselines provided by the PER to tabular and geospatial data, state/region governments could issue their own annual “digital assets” balance sheets. For example, subnational governments could highlight which aerial or satellite imagery has been secured through either development partner or own source funds. Private and academic stakeholders who exploit these resources could yield high returns. If these are not automatically disclosed on open platforms, governments would not if a restricted or a charge-based access is in force. These would highlight how digital assets have evolved over the past year, what investments were made, and what the outlook for the next year is. Progressive subnational governments could also highlight where the policy, legal and regulatory details undermine public digital assets transparency and value generation. The value of digital government should not be communicated with reference to systems in the first instance, but should discuss the impacts that were achieved. From a technology point of view, the question is whether these experiences also allow for more rapid diffusion, particularly with effective digital services and open source applications. Above all, the assessments should explore whether any data analytics have been deployed that can speak to the signal and integrity of these systems. Above all, owners of the different data should be asked to communicate what value in terms of service delivery, decision-making or local digital economy engagements these assets have provided.
- 7.59. **Annual and medium-term budgeting processes can encourage subnational finance officials to link anticipated results with adequate annual and medium-term financing.** As part of the annual budget process, line agencies should be asked to identify indicators of how resource allocations for digital government (whether hardware, data acquisition, or capacity strengthening) would lead to particular outputs, outcomes or impacts. Ideally these would be articulated in terms of service delivery and data-driven decision making. Given the need for basic, good PFM practices across subnational governments in Myanmar, the pursuit of a fully-fledged budgeting program is premature. The gaps in basic budget tracking for digital government identified here suggest that such an initiative needs to be kept practical, above all, averting the risk of abstract program budgeting exercises. Early efforts to advance a digital government program statement would encourage local stakeholders to articulate short-and-medium-term objectives for digital assets as they are applied to decision-making and delivery of services.
- 7.60. **The intergovernmental dimensions of digital data merit early emphasis, with a pragmatic view to building an effective information architecture for the future.** While a traditional emphasis of subnational PER’s has been on fiscal transfer design, the roles and responsibilities for different levels of government to provide key data will benefit from setting good principles and practices at the outset. The risk may be that higher levels of government begin asking for more and more data on financial and physical outturns.

Rather than digitize paper-based processes, effective design should look at emphasizing digitally native data and interoperability. If subnational governments are able to ensure that key transactions and registry systems with “minimum functionality” migrate early to cloud based architectures, this will provide options to have early demonstration of more regular 24-7 practices of data sharing, including through such mechanisms as Application Program Interfaces (API). The role of public finance professionals is not to get lost in these technologies, but to understand and help lead them to greater efficiency in public resource allocation. This includes digital government resourcing itself, but more importantly the overall effectiveness of decentralized systems.

- 7.61. **Subnational digital dividends can be achieved in cross-cutting and sector-specific functions, but governments must also consider wider issues associated with principles and practices for deepening digital societies.** Table 7.11 provides some highlights of digitization and digital dividends from the preceding chapters. These positive aspects should be encouraged to help align the people, process, and platform technology and data aspects of these results. Where possible, states and regions should be able to draw on shared resources (including cloud services) to achieve these results, and should make an effort to avoid fragmentation of effort and systems. Cross-cutting topics like disaster and climate resilience, or environmental sustainability, could also be used to galvanize national and subnational government innovation with the support of new technologies. Peer learning platforms can serve to exchange the what and the how of achieving tangible results. This includes identifying sharable platforms, cost-effective services and consolidated data purchases. Focusing on digital dividends has clear utilitarian benefits, but more thought needs to be given to how digitization will impact issues of wider societal value and power relationships. Box 7.6 illustrates key issues and risks in this area which will need to be managed with foresight across government, civil society, and business stakeholders.

Table 7.11: Expenditures, revenues, waste management and transportation in the digital context

PER Focus	Digitization	Digital Dividends
Expenditures	Budgeting and expenditure transactions recording on digital footing	Enhanced PFM controls, including budget credibility
Revenues	Tax collection records (individual, corporations, property) put on digital footing Tax payers have ability to file, review and pay electronically	Enhanced revenue mobilization (levels, integrity) Greater customer satisfaction
Solid Waste	Tracking of solid waste collection vehicles (asset registry) On-line billing Monitoring of waste “stress spots”	More efficient operations, longer asset lives Better public service delivery, public health impacts
Urban Transport	Tracking of buses Urban infrastructure asset mapping	Improved service delivery, better urban infrastructure management

Digital skills, public-private partnerships, and fit for context technologies

- 7.62. **Deepening decentralized digital government in Myanmar will require a convergence of awareness and skills, with leaders who can drive forward with strong initiatives.** The PER baseline analysis has shown that while nascent, a number of effective and innovative digital government manifestations are developing. The drivers and revealed impacts of these developments vary. At one level, Mandalay and Yangon are the most advanced states and regions in Myanmar, but in other cases, such as local tax services and mobilization, other municipal governments are taking applications and practices further. With this growing set of emergent experience, mechanisms such as peer innovation could help trigger adoption and evolution of new technologies across a wider set of governments. Coupled with cloud-based technology platforms in particular, these can bring together other SNGs across a wider set of governments. The PER analysis of digital government underscored that while allocations were only around one percent of expenditures, how these investments were delivered operated and maintained at the local level was critical to their success.
- 7.63. **Build selected modern digital capabilities:** The report has shown that digital technology applications do not need to be costly or complex. A shift away from traditional capital expenditure with an IT focus to services/operating expenditures provides a more agile environment for SNGs. Drawing in local universities and digital enterprises can contribute to creating a more dynamic digital landscape, and these linkages could be amplified by peer learning.
- 7.64. **Engage in national and regional peer learning by doing:** SNGs in Myanmar can learn from leading peers in-country, and also across the region. For example, Yangon can learn from locations such as Ho Chi Min City in Vietnam around concrete experiences and case studies in enhancing urban governance.
- 7.65. **Promote an Enabling National Legal Framework:** Frontrunner experiences at the subnational level can serve to show where the national framework requires modernization or clarification.
- 7.66. **Create Prototypes:** While governments may be tempted to plan their digital transformation strategies, the inclination should be to plan less and prototype more in many cases. The CAPEX to OPEX transitions means that efforts can be trialed at a lower cost of “failure.”
- 7.67. **Partner for Impact:** Prototypes will also quickly reveal those partnerships across government and the private sector that are likely to have the most impact. Governments may wish to focus on managing some key risks (including vendor lock-in), but, most important is having a dynamic discussion around what constitutes success.

Fit for purpose digital

- 7.68. **Build and Implement Interoperability Frameworks Early:** The biggest value from digital assets often comes from combinations. When linking local to global digital resources, interoperability of data proved to be critical. Rather than thinking in project or sectoral silos, SNGs will need to consider practical roles, responsibilities and results that can be gained from more integrated digital government architectures. Simple, open source frameworks are now making interoperability simpler than ever.
- 7.69. **Leverage “for free” global spatial information feeds (SIFs):** Whether for questions of land use or forest cover, satellite “spatial information feeds” can now provide SNGs with continuous and cost-effective means to manage their jurisdictions. These SIFs reveal an early indicator for cloud-based services and

machine learning and can serve to anchor spatial data from other sources (e.g., land registries and infrastructure).

- 7.70. **Nurture feedback mechanisms:** Satellite SIFs provide an increasingly accessible information feed, but value only comes from anchoring these in the local context. Building digital feedback loops, including through the use of smartphones, is one element to better integrate this technology for local purposes. The urban change platform demonstration shows how this type of feedback can improve SIFs, as well as improve links to decision-making processes.

Box 7.5: Sub-national eGov benchmarking

The growing emphasis on digital service provision, participation, and decision-making at subnational levels has led to a growing number of subnational benchmarks. The UN's eGov 2018 index covered 40 "global" cities in 2018.

"Yardstick" competition across subnational governments is likely to be most tangible across decentralized settings in a common national context. Examples of such benchmarks are Vietnam's PAPI framework. The initiative has tracked governance across Vietnam's 53 provinces on a long-standing basis, but has recently strengthened its measurement of eServices and eParticipation. These indicators are then available on a user-friendly website (papi.org.vn), where data can be presented and downloaded in tabular or map form.

The preparation of credible subnational benchmark indicators requires a lot of effort in terms of design and recurrent data collection. For the context of nascent digital government in Myanmar these types of indicators could highlight attempts to engage good practices, they could also accelerate diffusion of good practices and principles. More systematic benchmarks could provide a national public good to better align efforts and practices across subnational governments, as well as supporting development partners.

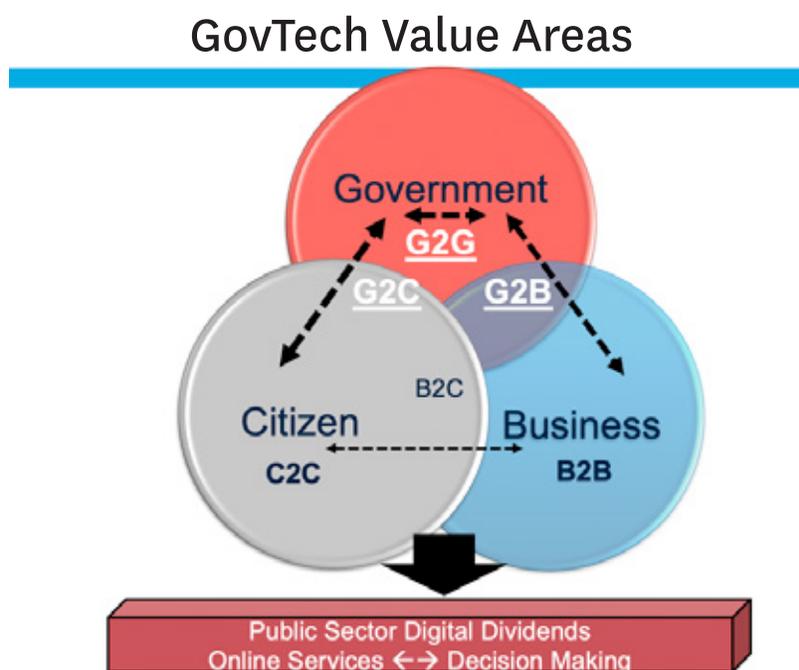
Before considering the creation of subnational governance or digital government indicators, Myanmar stakeholders could more closely review the experiences and metrics of other countries in the region, including Vietnam. This would provide a better sense of how the indicators have impacted subnational behavior, and what the costs have been for data collection and dissemination with these efforts in practice.

Box 7.6: Digital transformation: value and power

The increased prevalence of digitization and digital transactions across countries is leading to increased attention on the impacts of these transitions, and also their impacts in terms of voice and power. The potential for improving public services for citizens and businesses in Myanmar, and accelerating data-driven decision-making capabilities are at a nascent stage, however, developments among some of its neighbors strongly suggest that these improvements may accelerate.

Figure 7.7 shows how digitization can change the relationships across and within stakeholder groups; within government, digitization could affect the dynamics of top-down oversight versus bottom-up feedback between central and subnational governments. Citizens may be empowered to be more vocal about their opinions as they get the opportunity to express their greater collective voice to government, including through social media. The public needs to keep in mind that social media could also amplify or be manipulated to exacerbate dynamics of exclusion and inequality.

Figure 7.7: GovTech value areas



- 7.71. The emergence of developments such as AI is increasingly raising issues of data privacy. The power of corporations and actors that control data, cybersecurity, and the fairness and transparency of AI associated decision-making also need to be at the forefront of digital planning. While these issues may seem secondary for some, given Myanmar's nascent state of digital development, we argue that they should be considered early in terms of the policy and legal dialogues occurring across government, business and civil society. It is also essential in terms of greater awareness of wider digital literacy and safeguards.

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ANNEX

This annex provides supplementary tables and figures for some chapters of the report.

Annex for chapter 1

Table A1.1: Constitutional authority of states and region governments in Myanmar

Executive Powers (Schedule 2)	Revenue Power (Schedule 5)
<p>1. Finance and Planning Sector</p> <ul style="list-style-type: none"> (a) The Region or State budget; (b) The Region or State fund; (c) Land revenue; (d) Excise duty (not including narcotic drugs and psychotropic substances); (e) Municipal taxes such as taxes on buildings and lands, water, street lightings and wheels; (f) Services of the Region or State; (g) Sale, lease and other means of execution of property of the Region or State; (h) Disbursement of loans in the country from the Region or State funds; (i) Investment in the country from the Region or State funds; (j) Local plan; and (k) Small loans business. <p>2. Economic Sector</p> <ul style="list-style-type: none"> (a) Economic matters undertaken in the Region or State in accord with law enacted by the Union; (b) Commercial matters undertaken in the Region or State in accord with law enacted by the Union; and (c) Co-operative matters undertaken in the Region or State in accord with law enacted by the Union <p>3. Agriculture and Livestock Breeding Sector</p> <ul style="list-style-type: none"> (a) Agriculture; (b) Protection against and control of plants and crop pests and diseases; (c) Systematic use of chemical fertilizers and systematic production and use of natural fertilizers; (d) Agricultural loans and savings; (e) Dams, embankments, lakes, drains and irrigation works having the right to be managed by the Region or State; (f) Fresh water fisheries; and (g) Livestock breeding and systematic herding in accord with the law enacted by the Union. 	<ul style="list-style-type: none"> 1. Land revenue. 2. Excise revenue. 3. Water tax and embankment tax based on dams and reservoirs managed by the Region or State and tax on use of electricity generated by such facilities managed by the Region or State. 4. Toll fees from using roads and bridges managed by the Region or State. 5. (a) Royalty collected on freshwater fisheries. (b) Royalty collected on marine fisheries within the permitted range of territorial water. 6. Taxes collected on vehicles on road transport and vessels on inland waterway transport, in accord with law, in a Region or a State. 7. Proceeds, rent fees and other profits from those properties owned by a Region or a State. 8. Fees, taxes and other revenues collected on services enterprises by a Region or a State. 9. Fines imposed by judicial courts in a Region or a State including Region Taya Hluttaw or State Taya Hluttaw and taxes collected on service provision and other revenues.

Executive Powers (Schedule 2)	Revenue Power (Schedule 5)
<p>4. Energy, Electricity, Mining and Forestry Sector</p> <p>(a) Medium and small-scale electric power production and distribution that have the right to be managed by the Region or State not having any link with national power grid, except large scale electric power production and distribution having the right to be managed by the Union;</p> <p>(b) Salt and salt products;</p> <p>(c) Cutting and polishing of gemstones within the Region or State;</p> <p>(d) Village firewood plantation; and</p> <p>(e) Recreation centers, zoological garden and botanical garden.</p> <p>5. Industrial Sector</p> <p>(a) Industries other than those prescribed to be undertaken by the Union level; and (b) Cottage industries.</p> <p>6. Transport, Communication and Construction Sector</p> <p>(a) Ports, jetties and pontoons having the right to be managed by the Region or State;</p> <p>(b) Roads and bridges having the right to be managed by the Region or State; and</p> <p>(c) Systematic running of private vehicles within the Region or State.</p> <p>7. Social Sector</p> <p>(a) Matters on traditional medicine not contrary to traditional medicine policies prescribed by the Union;</p> <p>(b) Social welfare works within the Region or State;</p> <p>(c) Preventive and precautionary measures against fire and natural disasters; (d) Stevedoring;</p> <p>(e) Having the right of management by the Region or State, the following:</p> <p>(i) preservation of cultural heritage;</p> <p>(ii) museums and libraries.</p> <p>(f) Theatres, cinemas and video houses; and</p> <p>(g) Exhibitions such as photographs, paintings and sculptures.</p> <p>8. Management Sector</p> <p>(a) Development matters;</p> <p>(b) Town and housing development; and</p> <p>(c) Honorary certificates and awards.</p>	<p>10. Interests from disbursed by a Region or State.</p> <p>11. Profits returned from investment of a Region or State.</p> <p>12. Taxes collected on extraction of the following items from the forests in a Region or a State:</p> <p>(a) Taxes collected on all other woods except teak and other restricted hard woods;</p> <p>(b) Taxes collected on firewood, charcoal, rattan, bamboo, bird nests, cutch, thanetkha, turpentine, eaglewood and honey-based products.</p> <p>13. Registration fees.</p> <p>14. Taxes on entrainments.</p> <p>15. Salt tax.</p> <p>16. Revenue received from the Union Fund Account.</p> <p>17. Contributions by development affairs organizations in a Region or State concerned.</p> <p>18. Unclaimed cash and property.</p> <p>19. Treasure trove</p>

Annex for chapter 2

TABLE A1.2: Economic and demographic trends in East Asia, 1990-2015

	Popula- tion 2016 (millions)	GNI per capita 2016, Atlas method (current US\$)	Compound annual rates of growth, current/constant PPP			Urban population, % of total population		Urbanization rate		
			1984- 1994	1995- 2005	2006- 2016	2000	2016	1990- 1995	2000- 2005	2010- 2015
World	7,442	10,308	4.1/1.3	4.1/2.2	4.4/2.4	47.1	54.3	2.34	2.13	2.05
Cambodia	16	1,140	-	7.3/5.4	7.5/5.5	16.9	20.9	5.61	2.40	2.65
China	1,379	8,250	10.9/7.9	9.5/7.6	10.3/8.3	35.8	56.8	4.36	3.98	3.05
Indonesia	261	3,400	7.3/4.4	3.0/1.2	5.8/3.9	42.0	54.5	4.96	3.23	2.69
Philippines	103	3,580	2.1/-0.7	3.6/1.7	5.4/3.5	58.5	44.3	2.21	1.43	1.32
Thailand	69	5,640	9.7/6.8	3.8/1.9	4.7/2.9	31.1	51.5	1.40	4.57	2.97
Vietnam	93	2,060	7.3/4.8	7.1/5.2	6.8/4.9	24.3	34.2	3.79	3.23	2.95
Lao PDR	7	2,150	--	5.9/4.0	7.5/5.6	22.0	39.7	5.12	5.84	4.93
Myanmar	53	1,190	--	10.5/8.5	10.0/8.0	27.0	34.7	2.23	2.11	2.49

Sources: World Bank Development Indicators Database; United Nations World Urbanization Prospects 2014 <https://esa.un.org/unpd/wup/> (File 6); Urbanization rate calculated as average annual rate of change of the urban population.

Annex for chapter 3

TABLE A3.1: Organizations under subnational budgets

Administrative Organizations	State/Region Government (Cabinet) State/Region Hluttaw Office of the Supreme Court Office of the Attorney General Office of the Auditor General
Ministry of Home Affairs	General Administration Department Bureau of Special Investigation Department of Fire Service
Ministry of Information	Myanmar Motion Picture
Ministry of Agricultural Livestock and Irrigation	Department of Agriculture Department of Fisheries Livestock Breeding and Veterinary Department Co-Operative Department Small Scale Industries Department
Ministry of Natural Resources and Environmental Conservation	Forest Department Dry Zone Greening Department Environmental Conservation Department Mining Department
Ministry of Electric & Energy	Electricity Supply Enterprise
Ministry of Health & Sports	Department of Sports and Physical Education
Ministry of Planning and Finance	Planning Department Central Statistical Organization Budget Department
Ministry of Construction	Road Department (Department of Highways) Department of Urban and Housing Development
Central Inland Freight Handing Committee	
Yangon City Development Committee	
Mandalay City Development Committee	
Development Affairs Organizations	

TABLE A3.2: Subnational recurrent expenditure by economic categories in million Kyat

	2014-15	2015-16	2016-17	2017-18	2018-19
	Act.	Prov. Act.	Prov. Act.	Revised estimate	Budget estimate
	(billion Kyat)				
Yangon					
Salaries	27	36	37	42	49
Maintenance	25	27	33	38	47
Purchase of goods and services	52	33	46	56	64
Other	22	17	9	10	10
Shan					
Salaries	21	27	29	33	40
Maintenance	34	26	37	37	37
Purchase of goods and services	80	7	9	11	11
Other	43	15	18	16	16
Mandalay					
Salaries	19	26	26	29	36
Maintenance	34	68	61	61	45
Purchase of goods and services	29	22	19	25	27
Other	12	10	10	11	15

Annex for chapter 4

Box A4.1: Intergovernmental transfer formula

The allocation formula can be presented as follows:

$$R_{i,t} = \frac{G_i}{\sum_{j=1}^{14} G_j} \quad G_{i,t} = \frac{\frac{s_i + p_i + a_i}{3} + \frac{3}{t_i + g_i + u_i}}{2}$$

$$S_{i,t} = (S_{i,t-1} + R_{i,t} * P_t)$$

where:

$S_{i,t}$ is State or Region i 's Kyat amount in year t

$R_{i,t}$ is a computed Reasonable Percentage Index for State or Region i in year t

$G_{i,t}$ is State or Region i 's grant index in year t

P_t is total Kyat amount added to the transfer common pool.

Development (Fiscal) Needs:

s_i is State or Region i 's total population relative to national average (Source: 2014 National Census)

p_i is State or Region i 's poverty index relative to national average (Source: CSO, IHLCA 2010)

a_i is State or Region i 's total area relative to national average (Source: 2014 National Census)

Fiscal (Capacity) Constraints:

t_i is State or Region i 's per capita tax collection relative to national average in year $t-1$ (Source: Budget Department, MoPF)

g_i is State or Region i 's per capita GDP relative to national average in year $t-1$ (Source: Planning Department, MoPF).

u_i is State or Region i 's ratio of urban population relative to national average (Source: 2014 National Census)

Commercial tax (CT) is levied as a turnover tax on: local production and sale of goods; import of goods; trading; and provision of services. The commercial tax applies to all service transactions unless they are listed as exempt. 86 goods are exempt from CT (the majority are agricultural goods and related products) and 30 types of exempt services. Taxpayers are responsible for charging, collecting and paying CT to IRD if the monthly revenue from taxable activities in the cooperative and private sector exceeds 50 million Kyat. Commercial tax rates are given below.

Table A4.1: Commercial tax rates

Activity	Commercial Tax Rate
Sale of domestic goods	5%
Sale of imported goods	5%
Importation	5%
Trading	5%
Domestic services	5%
Exported electricity	8%
Exported crude oil	5%
Sale of building	3%
Sale of jewelries made from gold	1%

Source: Taxation of the Union Law, 2018

*Rates are applied unless exempted in Chapter VI of the Taxation of the Union Law, 2018

Annex for chapter 5

Table A5.1: Summary expenditures and income Mandalay cleansing department (FY 2017-2018)

	MMK	Corrected MMK	USD
Expenditures			
OPEX	3,356,949,784	5,314,069,784	3,542,713
CAPEX	1,153,204,015	1,153,204,015	768,802
Income			
Waste collection	869,973,686	869,973,686	579,982
Total	3,882,902,962	3,882,902,962	2,588,600
Surplus (OPEX)	525,953,178		350,635
Deficit (OPEX)		1,431,166,822	954,111
Deficit (OPEX+CAPEX)	627,250,837	2,584,370,837	418,167/1,722,914

Table A5.2: Summary of operational cost estimates in Yangon

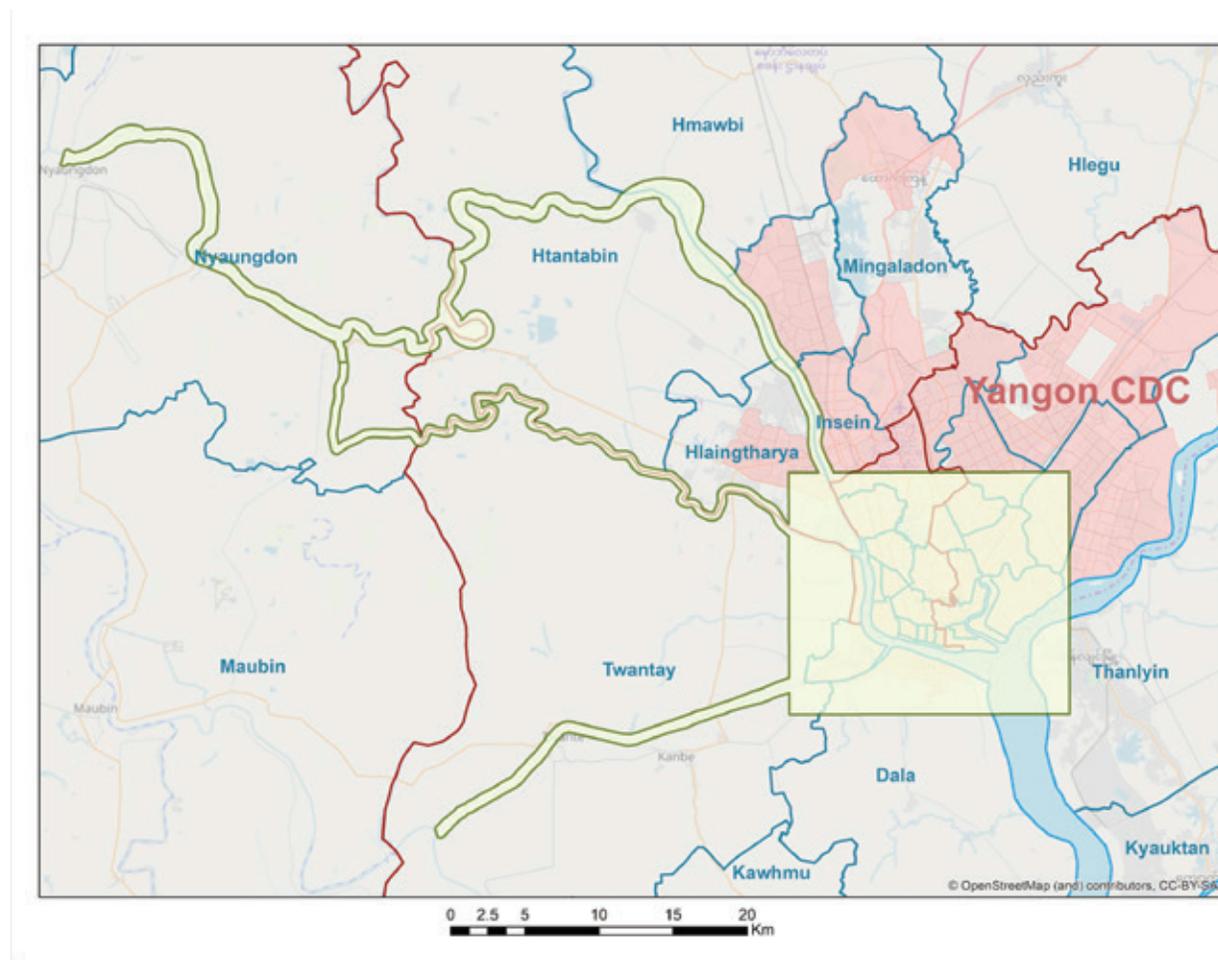
Activity	MMK (x million)	USD	%
Collection and transport:			
-compactor 5-9m ³ truck	2,850	1,906,452	
-compactor 14m ³ truck	2,831	1,887,472	
-industrial waste	22.0	14,600	
-tricycle/tipper collection	552.0	367,906	
transport	269.0	179,100	
-hook lift	233.0	155,240	
-dump truck	114.0	76,290	
Sub-total	6,871	4,355,530	58
Street cleaning:			
-pushcart collection	2,631	1,754,000	
-transport hook lift	718	478,689	
-transport dump truck (drainage)	1,030	686,606	
Sub-total	620	413,130	37
Landfills (two)	620	413,130	5
Grand total	11,870	7,687,955	
Cost/ton	14,672	9.8	

Annex for chapter 6

Leveraging Yangon's aerial LiDAR mapping

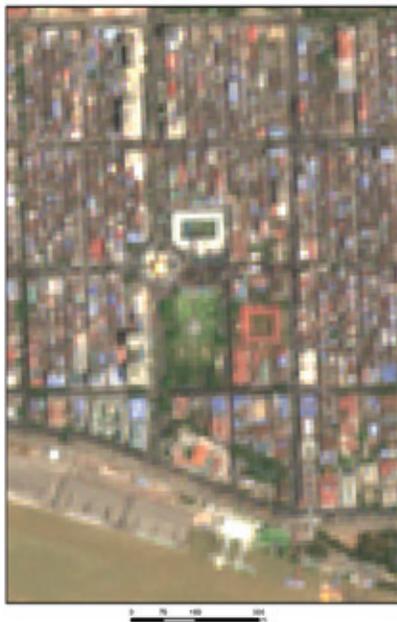
With a focus on flood risk mapping, 374 km² at the heart of Yangon were mapped by aerial Light Detection And Ranging (LiDAR) in October 2018 (see World Bank 2018, Asia Air Survey 2018). The images have a spatial resolution of about 10cm, about three times what the highest commercially available resolution in satellite imagery currently provides. While LiDAR image acquisition comes at a higher cost and requires dedicated project resources to get planes to fly, it captures a rich set of information about the state of affairs on the ground and being able to create 3D models of building footprints, it also allows for planning flights to avoid cloud cover.

Figure A7.1: Yangon LiDAR coverage

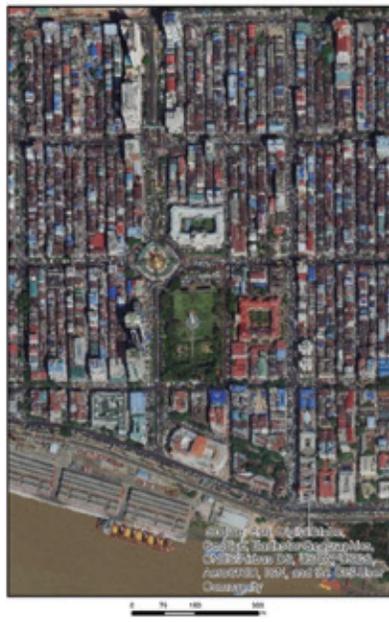


The Yangon LiDAR imagery is a good example of a digital asset. Beyond the terms of the data capture and initial data analysis by the contracted firm, it provides potential value for a range of other potentially public interest purposes. But in the context of a rapidly evolving city, its value for public sector management insights may diminish rapidly, unless distilled in a compelling and timely manner. This value analysis can take two dimensions. First, exploiting the “baseline” data itself of a particular use case (e.g., tax or cadastral mapping). Second, to use this as a steppingstone to leveraging other aerial (e.g., UAV) or satellite imagery across the sub-national government’s wider footprint.

Figure A7.2: Yangon imagery comparisons



Sentinel
(10 m/free access)



Digital Globe
(30 cm/commercial access)



LiDAR
(10 cm/special commissions)

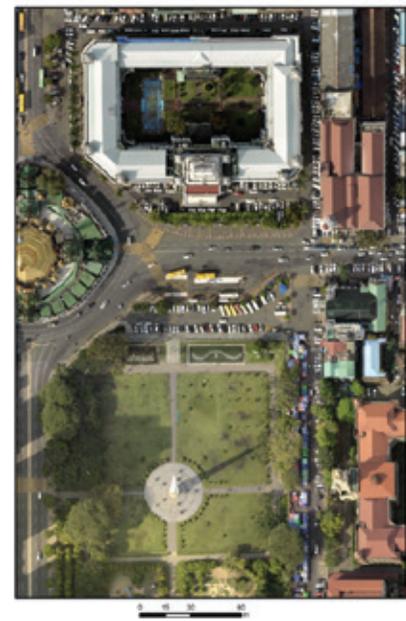


Figure A7.2 provides a sample of the spectrum of the types of imagery resources (known as raster or pixel-based imagery) currently available to local decision makers in Myanmar. The Sentinel imagery on the left at 10-meter resolution (and one-week revisit rates) can be accessed for free. The 30-centimeter Digital Globe World View commercial satellite imagery has revisit rates of every couple of months or can be purchased based on ordered captures. These types of imagery may be familiar as being shared on such public platform as Google Earth, but with varying vintages and restrictions to use. Distilling value for any of these sources requires some technical capabilities. But above all, generating value

requires an understanding of what the local business case is for applying these data. Part of this will emerge from greater awareness by local stakeholders and empowering these stakeholders to apply them to their particular challenges.

To demonstrate local stakeholder use case value avenues of this data, we recast the data in terms of administrative lenses. This mean overlaying the pixel-based imagery presented in Figure A7.4 and A7.5 with boundary vector files of Yangon Region’s 45 townships. The analysis suggests that 35 were at least partially covered by the LiDAR, and 22 were fully covered. For example, Kyauktada Township, where the World Bank Office is located, covers 9 wards. While Figure A7.3 may be visually attractive for some purposes, it provides limited decision-making value for municipal and township officials interested in tax potential planning.

Figure A7.3: Yangon LiDAR building footprint visualization



The illustrative application then allows the data to be presented in ways that can be relevant for tax potential or zoning planning. While a legal basis exists, property tax mobilization in Myanmar’s urban areas remains limited (McDonald and Hein 2017). Each city is unique in its composition of property tax and the tax rates applied. The report makes a number of recommendations to promote property taxation, including efforts to promote the digitization of cadastral records. For example, the LiDAR parcels could be linked to tabular property records. It also suggests paying closer attention to increased building heights.¹ The table below presents the LiDAR data in terms of base building coverage, as well as that of additional floors. The ratios, for example, confirm the prevalence of multistory buildings in Kyauktada and highlight its relative densification and vertical build. Location valuation maps could quickly generate tax potential estimates.

¹ McDonald and Hein (2017) argue for an “increase the number of floors considered in property valuations. As cities grow, larger buildings and high-density living will become more normal. At present, smaller cities place a maximum on the number of floors that are considered in valuation calculations. Adding more floors to the existing property classification system will more accurately value larger properties and allow valuation systems to evolve with cities’ development.”

While this analysis suggests one avenue to generate public investment value from the LiDAR geospatial imagery digital asset, a number of factors are likely to keep Myanmar's sub-national governments from realizing the potential of this data. First, awareness of how different data sources could be used in a fit for purpose/context may be limited. This can only be addressed by enhancing exposure among possible users, rather than technical specialists. Second, data may not be shared in a timely and user-friendly manner across or beyond government. Finally, skills and computing resources may not be aligned locally to secure value from these digital assets. To address this, government and development partners can increasingly look towards more accessible and cost-effective cloud-based solutions.

Figure A7.4: Yangon LiDAR building footprint visualization

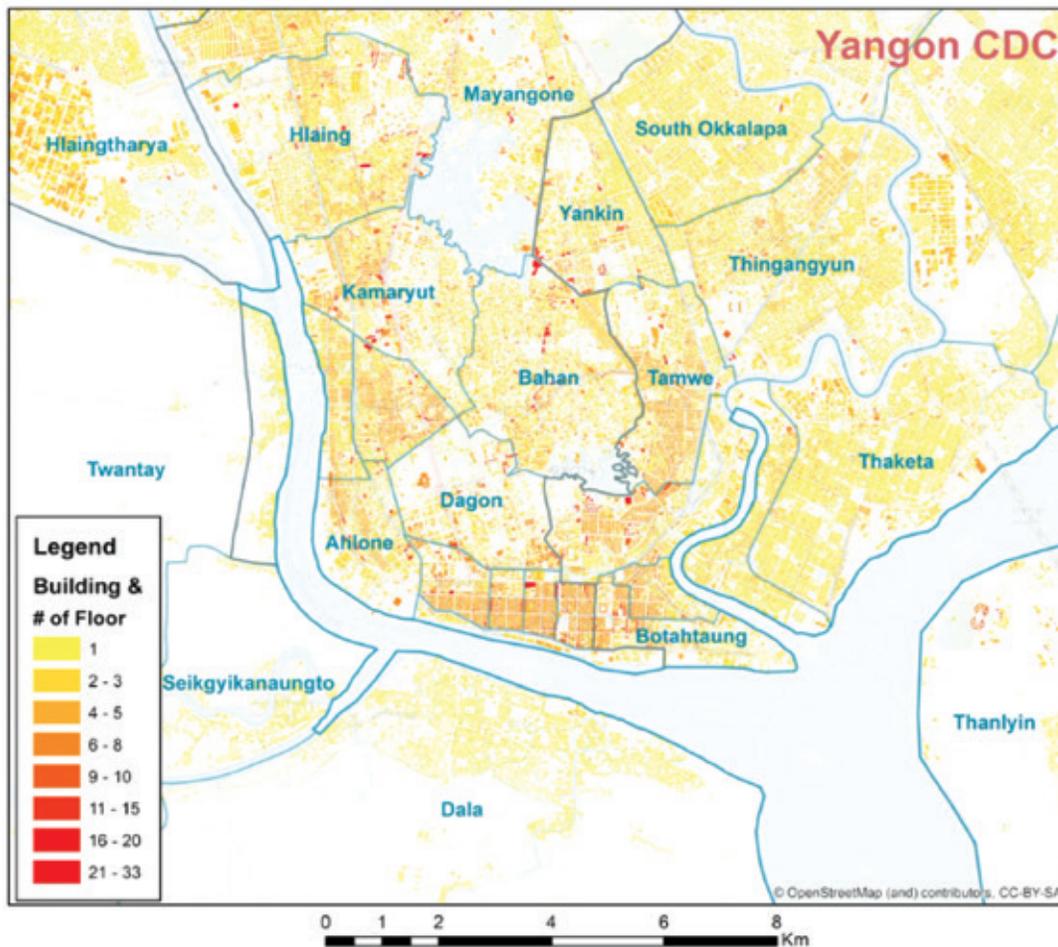
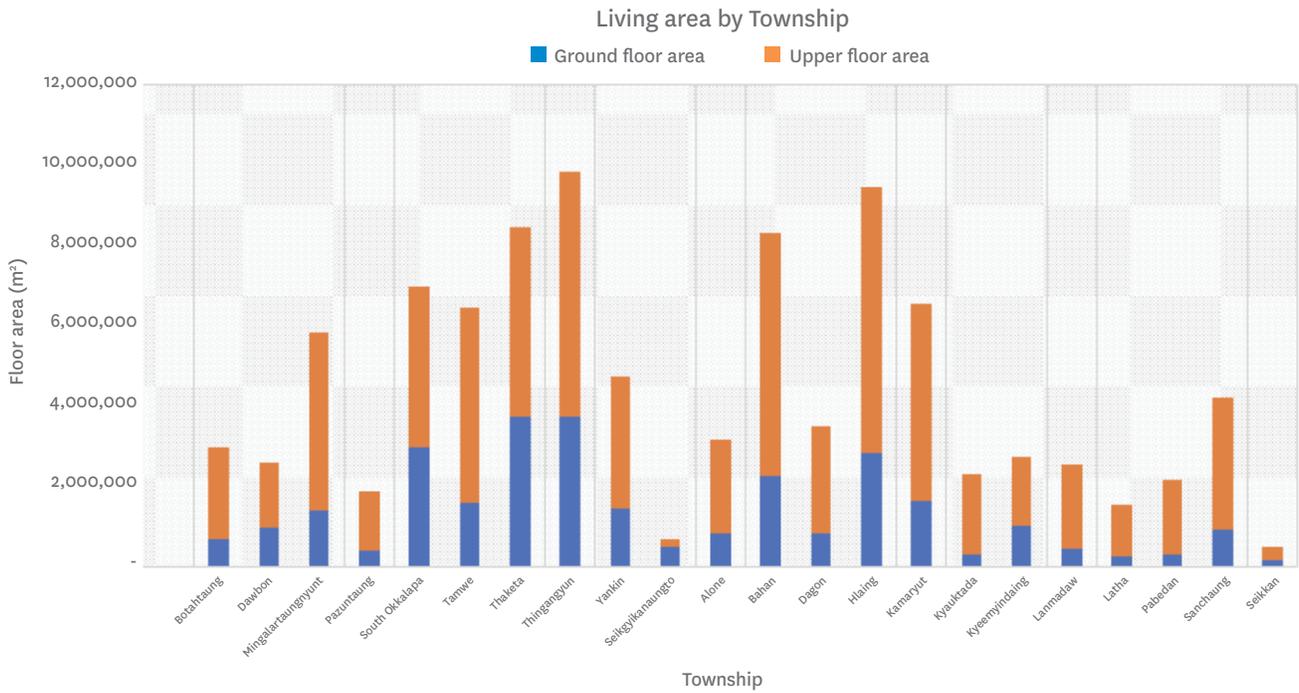
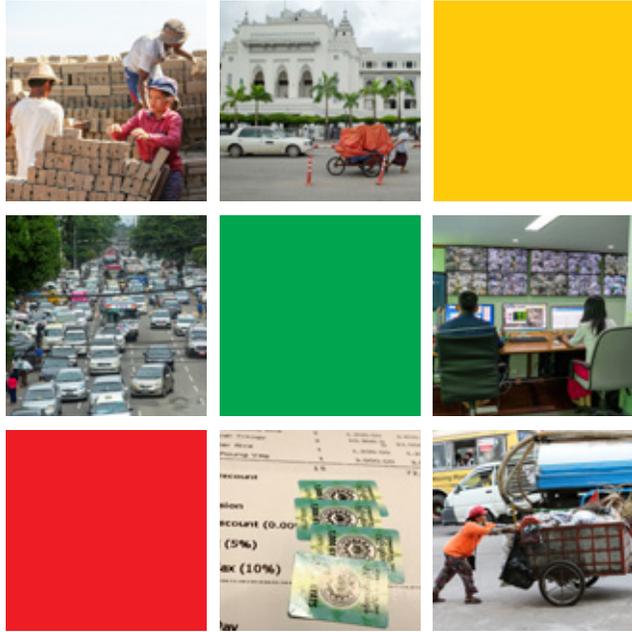


Figure A7.5: Yangon LiDAR coverage





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