Property Tax Diagnostic Manual

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Table of Contents

Annexes

Figures

Tables

Boxes

Acronyms

ARV	Annual Rental Value
BP	Business Process
CAMA	Computer Assisted Mass Appraisal
CLR	Collection Ratio
CV	Capital Value
CVR	Coverage Ratio
DAAI	Detailed Analysis and Action Identification (Property Tax Diagnostic Framework)
GDP	Gross Domestic Product
GIS	Geographic Information System
HH	Household
HLSA	High-Level Situational Analysis (Property Tax Diagnostic Framework)
IT	Information Technology
LG	Local Government
OECD	Organisation for Economic Co-operation and Development
OSR	Own Source Revenues
PFM	Public Financial Management
PPIAF	Public-Private Infrastructure Advisory Facility
PTDF	Property Tax Diagnostic Framework
RGDP	Regional Gross Domestic Product
SA	Strategic Assessment (Property Tax Diagnostic Framework)
SIP	Strategic Implementation Plan (Property Tax Diagnostic Framework)
SOP	Standard Operating Procedures
TA	Tax Administration
TLR	Tax Liability Assessment Ratio
TOR	Terms of Reference
TP	Tax Policy
VR	Valuation Ratio

All dollar amounts are U.S. dollars unless otherwise indicated.

Introduction

Purpose of the Manual

Why Property Taxation?

Reform Contexts in Property Tax Systems

I.

Purpose of the Manual

This Property Tax Diagnostic Manual (hereafter "Manual") provides guidance on how to analyze and assess immovable property tax systems, diagnose the strengths and weaknesses of such systems, and develop a property tax intervention strategy where needed. Its higher objective is to support increasingly fair and stable tax systems in low- and middle-income countries, with significant potential for sustainable improvements in achieving key revenue, equity, and efficiency objectives.

This Manual focuses specifically on the recurrent, immovable property tax. It does not address other land-based property taxes such as property transfer taxes, capital gains taxes, and one-event property revenues (land sales, leases) or personal taxes on movable property such as boats, airplanes, and motor vehicles. Although these other property taxes are not directly addressed, successful reforms for the recurrent, immovable property tax must take into account the interactions that exist between the immovable property tax and these other forms of property taxation.

The Manual is primarily designed to assist practitioners from governments, development partners, and civil society practitioners to identify, analyze, and develop potential property tax reforms. The Manual lays out an analytical approach that can help identify property tax performance potential, challenges and opportunities, evaluate remedial property tax policy and administrative reform measures, and design a strategic action plan to implement those recommended interventions. A conceptual framework for the property tax, its policy and administration components, and reform strategy options are provided along with numerous examples of international experience.

The remainder of this Manual is organized as follows:

Part II: The Property Tax Diagnostic Framework presents a four-step diagnostic process to assist in assessing and designing appropriate strategic action plans for improving property tax performance. As Figure 1 illustrates, the diagnostic process comprises four steps:

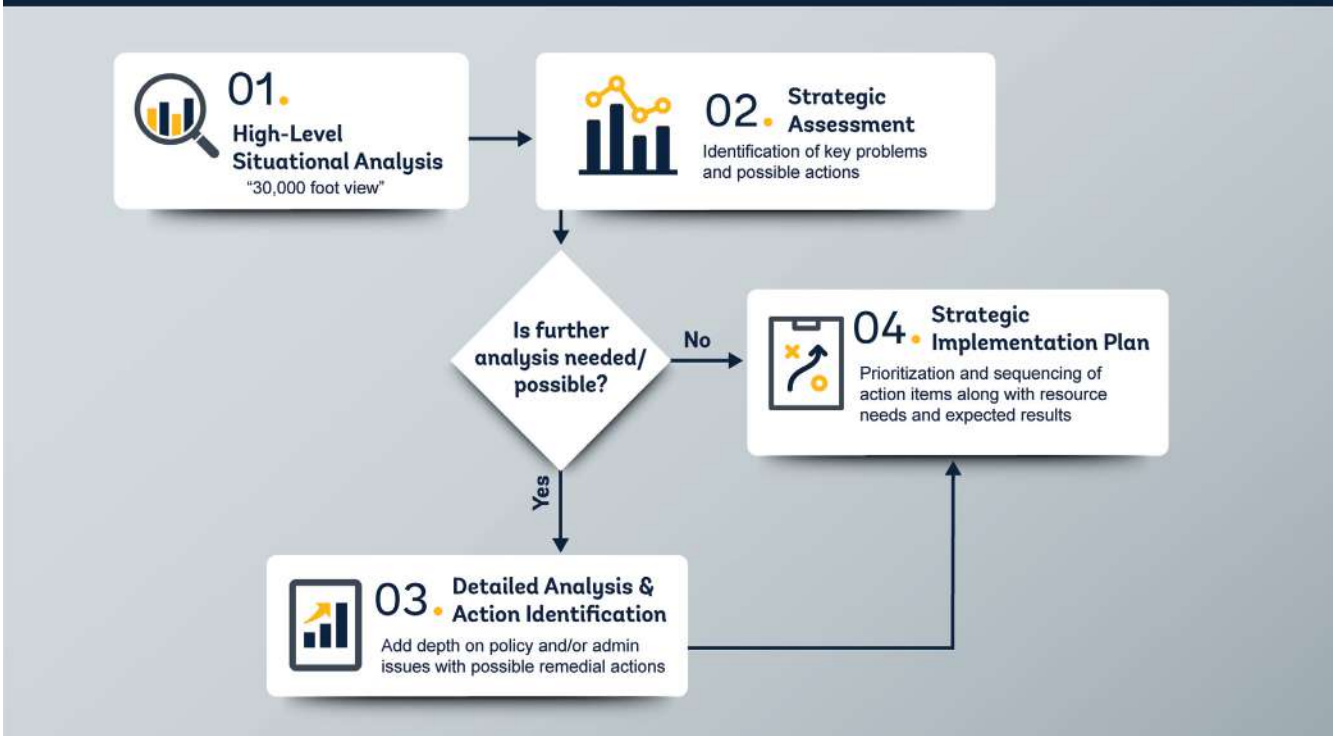
Step 1: High-Level Situational Analysis (HLSA) for reviewing the property tax revenue performance, the underlying policy and administration factors, and the institutional environment. Then, based on the findings from this situational analysis:

Step 2: Strategic Assessment (SA) is made to identify the key challenges and priority areas for broad areas of possible remedial action.

Step 3: Detailed Analysis and Action Identification (DAAI) follows the SA if further analysis is deemed necessary and possible. Further analysis can help in better understanding the policy and administration challenges and the institutional environment in order to identify more detailed remedial intervention alternatives.

Step 4: Strategic Implementation Plan (SIP) emerges from the combined analysis of the preceding steps. The SIP prioritizes and sequences reform remedial interventions and identifies the resources and timing needed for implementation. During the development of the SIP, it may be necessary to review the strategic assessment and undertake additional analysis and action identification as appropriate.

Figure 1 | Property Tax Diagnostic Framework (PTDF)



Source: Roy Kelly 2020.

Part III: Implementing the PTDF explains the implementation of the technical analysis, which focuses on understanding property tax revenue performance, the underlying property tax policy and administration variables, and the institutional environment, which can affect overall property tax revenue yield, equity, and efficiency.

The technical analysis is structured around a **property tax revenue equation** (Figure 4) that shows that property tax revenue yield is a function of interacting policy and administration variables. The key policy variables relate to the tax base and tax rates while the key administration variables relate to tax base coverage, property valuation, tax liability assessment, and revenue collection. These policy and administration variables, operating within a political-institutional environment, interact to influence property tax revenue yield, equity, and economic and administrative efficiencies.

Following a description of the revenue equation components, the technical analysis explores property tax performance, providing metrics to measure and benchmark the revenue performance across countries, metropolitan areas, and cities over time. This performance analysis is followed by a technical analysis of the underlying policy and administrative factors affecting that performance, including an approach to understand the political-administrative and institutional environment.

> **This Manual is designed as a flexible toolkit that can be applied to the context-specific nature of those requests.**

Part IV: Remedial Strategies focuses on identifying possible remedial interventions, prioritizing those with the highest expected returns and tractability, and sequencing those interventions within a strategic, sustainable implementation plan. The accompanying Annexes are split into different elements of Tax Policy (TP) and Tax Administration (TA) and come with indicative Terms of References that can facilitate the procurement of specialized expertise to help implement the Property Tax Diagnostic Framework, as needed.The section on General Reform Considerations summarizes high-level considerations that practitioners should keep in mind while working on property tax reforms.

Given the diversity of reform contexts and the underlying challenges and opportunities within a "taxing jurisdiction" (at the level of national, state, or local government), this Manual is designed as a flexible toolkit that can be applied to the context-specific nature of those requests. It is not designed as a prescriptive document, but rather one that outlines a common set of analytical approaches, commonly-used metrics to benchmark performance, a range of policy and administration options with discussion on international practices and experiences, along with strategic considerations for prioritizing and sequencing an action-oriented implementation plan.

While this Manual provides a general diagnostic process, analytical tools, and implementation road map, it not a substitute for technical experts. It is designed to help practitioners—governments, development partners, and civil society—manage their specialist resources. The creative, adaptive application of these tools and knowledge, combined with effective utilization of specialized technical experts, can enable the development of innovative and effective property tax reforms.

Why Property Taxation?

The recurrent, annual property tax has tremendous potential for mobilizing own-source revenues, primarily for local governments. The property tax generates about 0.3–0.6 percent of GDP for low- and middle-income countries, 1.1 percent in higher-income (OECD) countries. In some countries, it generates up to 2–3 percent of GDP, for example, in the United States, Canada, and the United Kingdom. Although property tax may account for only about 1–2 percent of total government taxes, it contributes between 15–40 percent of total local taxes across all countries (see Table 1). This international benchmarking suggests a high potential for significant increases in property tax revenues, along with improvements in equity and efficiency, especially in low- and middle-income countries.

Table 1 | Property Tax Revenue Contribution to GDP, General Taxes and Local Taxes, 2010

	% of GDP	% of Total General Taxes	% of Total Local Taxes
High-Income Countries	1.1%	4.5%	37.7%
Middle-Income Countries	0.6%	2.1%	35.5%
Low-Income Countries**	0.3%	<1%	15–20%

Source: Adapted from Norregaard 2013, combined with data from OECD and GFS (2009–10).
*** Low-Income country data is not systematically available through the GFS statistics, thus estimated from various reports including Kelly 2013a, Bahl and Martinez 2008, Bird and Slack 2004, Franzsen and McCluskey 2017.*

Countries and cities with poorly performing property tax systems will need to identify and implement the appropriate set of policy and administration reforms to improve tax base coverage, property valuations, billing, collection, enforcement, and taxpayer services. Doing so can help countries realize potential property tax revenues in a more equitable and efficient manner. **Tax policy reforms** typically focus on defining the tax base and its assessment basis, setting the tax rate structure, along with appropriate policy changes linked to abatement/tax relief, collection, and enforcement. **Tax administration reforms** typically focus on improving the tax base coverage, valuations, tax liability assessment, and collection, along with taxpayer service.

Developing such reforms requires an understanding of the specific property tax challenges, the surrounding socio-political and institutional reform environment, and the array of appropriate policy and administration interventions. Therefore, property tax reforms must be designed and implemented cognizant of the socio-political, legal and institutional structures, government capabilities, and political will. Successful tax reforms will need to be situation-specific, adapting any appropriate international good practices to each unique reform environment. An in-depth analysis of the specific property tax policy and administration challenges can help identify, diagnose, prioritize, and sequence possible remedial interventions needed to achieve the revenue, equity, and efficiency objectives.

Why is Property Tax so Important for Local Government?

Theory and international best practices identify that property taxes on land and improvements are the ideal tax for funding local government level services for a number of reasons:

- Property-related taxes have a strong potential for revenue mobilization, especially in rapidly urbanizing areas. In fact, urbanization is a wealth-creating process, causing rising land values, which, if appropriately captured, can provide funding for much-needed urban infrastructure and services.

- The property tax base is immobile, which minimizes economic efficiency implications and is considered the least distortive tax instrument followed by consumption taxes, personal income taxes and corporate income taxes, respectively (Johansson, Heady, Arnold, Brys and Vertia 2008).

- Due to its immobility, the property tax base captures the value of location-specific capital investments and benefits from government programs and services not captured otherwise through various fees, user charges, and other taxes. This allows the property tax to operate as a form of "benefits tax," allocating the tax burden across properties with differential benefits as reflected in differential property values. The immovable property tax base also makes it relatively easier to identify and capture the tax base and allows the property itself to be natural collateral in case of tax nonpayment.

- The property tax base also tends to fall more on those with the "ability to pay," as immovable property is often a primary repository of wealth.

- Finally, as a highly visible and politically sensitive revenue instrument, the property tax base can encourage more responsive, efficient, and accountable local governance and public service delivery.

Recurrent property taxes are justified primarily as "benefit taxes" or as "quasi-user charges" for local public services received. This "benefit principle" in public finance argues that the tax/charge amount should be paid by those benefitting from government-provided services. For many government services (such as water supply, public transportation such as buses, and solid waste collection), it is technically possible to use a set of direct user charges linked to the benefits that can offset the costs of those public services. However, there are many government services for which direct user charges are not appropriate and/or difficult to administer (such as local roads and street lights, fire protection, and security as well as social services such as education and health).

> **When people perceive this connection between taxation and services, they are typically more willing to pay their property taxes.**

Those public service benefits not properly charged and captured through user charges are often reflected ("capitalized") in property values. Thus, public infrastructure improvements and other public services (such as location-specific social services), are typically captured in increased property values as residents are willing to pay higher property prices for properties with improved accessibility, drainage, school options, medical facilities, street lights, and security, among others. Thus, there is a connection between local, location-related services, and property values—which is why property taxes are typically assessed on an ad valorem or value basis.

When people perceive this connection between taxation and services, they are typically more willing to pay their property taxes. In one sense, the property tax can be seen as simply a payment for local level public services, similar to purchases of goods and services within private markets, thus helping to improve the efficiency link between the costs and benefits of public services. In addition, the property tax is an excellent tax to improve the governance "accountability" linkage between local-level governments and their local residents.

Despite its many benefits, it is worth noting that the property tax tends to be a politically-sensitive tax. As a direct tax, it is visible; tax payments can be quite "lumpy" and often bear little direct relationship to public service delivery. Tax administration can become costly, involving property information management, valuation, billing, collection, and enforcement, while the property tax liability largely falls on the property owner, and can also raise possible problems of asset-rich, cash-poor situations. Effective property tax reform must, therefore, be designed and implemented to address these concerns through effective taxpayer/citizen engagement programs, linking revenues collected to improved services, reducing compliance and administrative costs, and adopting measures to ensure equity, efficiency and transparency.

Link between Property Taxes and Local Government

Throughout the world, property taxes are largely assigned to the local government level, typically by assigning the tax base itself to the local government. Theory argues that local governments should rely on revenue sources that are linked to the "benefits principle," such as user charges on local-level public services and on immovable tax bases (such as land) to minimize economic welfare inefficiencies. Similarly, central governments should focus on the broad-base taxes levied on income, consumption, and trade, largely based on the "ability to pay principle" of public finance and due to the mobile nature of these tax bases.

Consistent with this, the property tax base is typically designed as a local own-source revenue (OSR), assigned to local governments who levy and administer the property taxes within the policy and administration framework set by the central/state government. However, there are several countries where the property tax remains structured as a central-level, shared tax (including Lithuania, Chile, Vietnam, and the United Kingdom for its non-residential property taxes). As a central-level shared tax, tax policy and administration remain under central government control, with the majority of revenues typically apportioned to the local government budget. As a shared tax, the property tax has the characteristics of an intergovernmental revenue transfer (grant) rather than an accountable local government OSR.

Arguments are made for a centrally-shared tax approach for administrative reasons, arguing that local governments do not have the administrative capacity to manage the property tax system. Even in countries where the property tax base is given to the local government, higher-level governments often may co-administer the property tax to overcome capacity constraints, take advantage of economies of scale, and/or ensure equity in administration. For example, the central or state government may be responsible for fiscal cadastre maintenance and valuation, while local governments may be responsible for property tax billing, collection, and enforcement.

The main difference is which tier of government "levies" the property tax—that is, which tier is responsible and accountable for determining the amount of property tax assessed and collected from its residents. If the local government has the power to determine the level of tax to be paid, it must be able to justify the link between the taxes paid and the quality of provided local services, thereby increasing the level of local accountability.

Generally, the degree of local government discretion on tax rate level and structure is set by the central level legal framework. Countries vary in the degree to which they grant local government discretion for setting the tax rate (and tax base) structure, balancing the need for local autonomy, and discretion against the need to ensure an equitable and efficient revenue environment within the country.

Reform Contexts of Property Tax Systems

It is important to understand the type of reform context practitioners typically encounter and respond to. Typically, there are two reform contexts.

1. The first reform context, although less common, is one where there may be no property tax system, and the taxing jurisdiction wants to establish one. In such situations, practitioners face the challenge of advising the taxing jurisdiction on how to build a property tax system from the ground up, which would likely include tax policy and administration design, legislative/regulatory support, identification of institutional arrangements and implementation structures with adequate capacity/training and investment in relevant hardware/software.

   A crucial intervention in this reform context is to mobilize broad stakeholder awareness and socialization, as a transition from no system to a new property tax system will require a cultural change at the political and technical/administrative levels, as well as with the taxpayers and the general public within the taxing jurisdiction. The most recent case of this type of reform was the introduction in Seychelles in 2019 of an annual tax on immovable property owned by non-Seychellois (Charalambous 2019).

2. The second reform context is the most common wherein there is an existing property tax system that is underperforming in terms of revenues, equity impacts, and/or efficiency. Although such property tax systems benefit from basic infrastructure that is in place, they may need significant effort to identify the various bottlenecks and opportunities to propose a Strategic Implementation Plan (see Property Tax Diagnostic Framework for details).

   The challenge in such a situation is to accurately diagnose the underlying problems and identify the right mix of remedial policy and administration interventions that are most likely to be tractable, followed by the design and implementation of an appropriate strategic plan to achieve the reform objectives within the taxing jurisdiction.

   In some cases, for example, there may be a perceived need for a major policy review to potentially redefine the tax base, reduce inappropriate exemptions, and rationalize the tax rate structure, perhaps leading to drafting a new law. In other cases, the policy framework may not be the major constraint to improving property tax performance. Still, there may be a critical need for administrative reforms to expand tax base coverage, improve property valuations, enhance tax collection and enforcement, and/or improve taxpayer service. In other cases, there may be a need for a mixture of such policy and/or administration interventions, thus requiring prioritization and sequencing of the right set of tractable, remedial interventions to address the key challenges and binding constraints.

Examples of this reform context are numerous. Annex 4 presents case studies on: (a) Quezon City in the Philippines, which focused on administrative reforms, introducing a collection-led strategy to improve property tax collections; (b) Punjab Province in Pakistan, which invested in a GIS-based system to improve property tax base coverage; (c) India which developed GIS-enabled databases, expanded the tax base coverage and simplified tax assessment calculation rules; and (d) Zanzibar, a semi-autonomous region of Tanzania, which used drone technology and GIS systems for mapping along with field data collection to expand the potential tax base coverage.

Other examples of this reform context include: (a) Slovenia, which developed a mass valuation system (Grote, Borst and McCluskey 2015; Zibrik 2016); (b) Rwanda, which introduced a revised local government property tax law in 2018 along with various administrative reforms (MINECOFIN 2020); and (c) Indonesia, which rationalized its property tax policy, introduced a comprehensive Land and Building Tax law in 1986, adopted administration innovations, including a successful payment point system, and most recently, enacted a separate Law No 28 (2009) to devolve their urban and rural property tax to district level governments (Kelly 2004, 2012).

Understanding the nature of the reform context requires close consultations to clarify the underlying stakeholder intentions, primary and secondary goals, key stakeholders, political and institutional issues, performance expectations, deadlines, and expected resources.

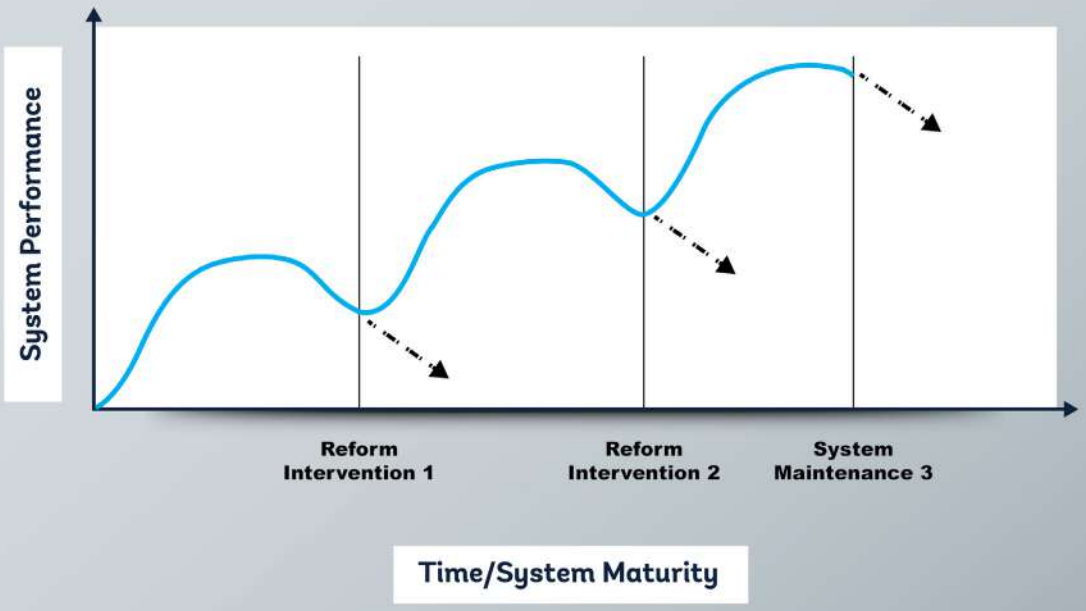
As illustrated in Figure 2, system performance can be depicted over time. As property taxes and related reforms are implemented, it is possible to measure basic performance metrics, typically defined as property tax revenues. As expected, there is a lag between the reforms and the increase in revenues, as there is a need to allow any intervention to work through the system to generate the intended increase in property tax collection.

The overall system performance is dynamically affected by a set of exogenous and endogenous variables, including political, legal, operational, institutional, and fiscal aspects. Experience shows that system performance can also tend to deteriorate over time unless the systems are maintained and adjusted as appropriate to ever-changing situational environments. These various reforms can include a mix of policy changes, such as expanding the tax base definition, eliminating tax exemptions, and/or changing tax rates, and administration changes linked to improving property tax base coverage, valuation, revenue collection, and/or taxpayer service. These are illustrated in Figure 2 as Reform Interventions 1 and 2, although the exact number of appropriate reform interventions may vary depending on the specific situation in the taxing jurisdiction.

Although mature property tax systems may not need major reform interventions, they must maintain steady implementation of their policies and administration, illustrated as System

Maintenance 3 in Figure 2: an example of system maintenance would be the updating of property registries and property database valuations to reflect changes in ownership, property development, and property values.

Figure 2 | Reform Dynamics: Performance over Time



Source: Roy Kelly and Aanchal Anand 2020.

Reform of property tax systems may start with an initial policy and administration framework, for example, using an area-based assessment basis. To ensure achievement of the objectives, the taxing jurisdiction must ensure effective administration by implementing high levels of tax base coverage and revenue collection. Improving these administration ratios will gradually improve efficient and equitable revenue performance to the extent possible. Once the administration is operating close to full performance, further property tax performance improvement will require changes in tax policy. For example, tax rates can be increased, tax base definitions can be broadened, and/or tax base exemptions can be reduced.

This is because for any given level of property tax policy, the only way to improve system performance is to improve the effectiveness of the underlying administration factors. But once a taxing jurisdiction is performing at capacity on administration factors (for example, coverage, valuation, tax liability, and collection), then the only way to improve performance

(revenue and equity) would be through a change in one of the policy variables (for example, reduction of exemptions/relief schemes, shift from area to value assessment basis, and/or change in property tax rates).

To further improve property tax performance, a taxing jurisdiction could make a policy decision to move from an area-basis to a value-basis for its property tax. This could be achieved by adjusting incorporating factors affecting differential values such as property location, building construction materials, and depreciation. As will be discussed, there are various approaches on how best to shift to a value-based property tax system depending on the real estate markets, available market value information, and valuation capacity. A policy shift to a value-based property tax has the potential to increase revenues, revenue buoyancy, equity, and efficiency—if carefully coordinated with other tax base and tax rate-related policy changes, and if accompanied by the effective administration of revenue collection, tax base coverage, property valuation, and tax liability assessment.

It is important to note that improvements in policy and administration factors can be implemented simultaneously and that, in some cases, particular interventions may be needed or become feasible only in the context of previous interventions. For example, the ability to shift from an area-based system to a value-based system depends on the level of property market development, data, and capacity within a taxing jurisdiction. Similarly, introducing a GIS-based system to improve property tax coverage, or a mass valuation system to improve property values, may realize revenue and equity performance only if the revenue collection system is operating well.

Annex 4 presents four case studies that illustrate the types of requests practitioners receive and the types of remedial strategies that are deployed to address the underlying issues and improve revenue performance.

The Property Tax Diagnostic Framework

Step 1: The High-Level Situational Analysis

Step 2: Strategic Assessment

Step 3: Detailed Analysis and Action Identification

Step 4: Strategic Implementation Plan

II.

The purpose of this Property Tax Diagnostic Framework (PTDF) is to provide a diagnostic tool that enables practitioners to identify, assess, and address issues with the performance of property taxation. This particular section gets into the details of the diagnostic framework and presents its different components through the lens of the process that is typically applied when addressing property tax problems.

The PTDF is designed to be comprehensive, starting with the high-level situational analysis and concluding with a strategic implementation plan. The PTDF involves four steps that may be wholly or partially used depending on the reform context, the issues the practitioner is addressing, and resource constraints that may exist. Though presented sequentially, it is important to note that the components can be applied in a non-linear manner to best address the demand for the request.

As Figure 3 illustrates, the four steps of the PTDF are: (a) **High-Level Situational Analysis**, (b) **Strategic Assessment,** (c) **Detailed Analysis and Action Identification (**if needed or possible), and (d) **Strategic Implementation Plan**.

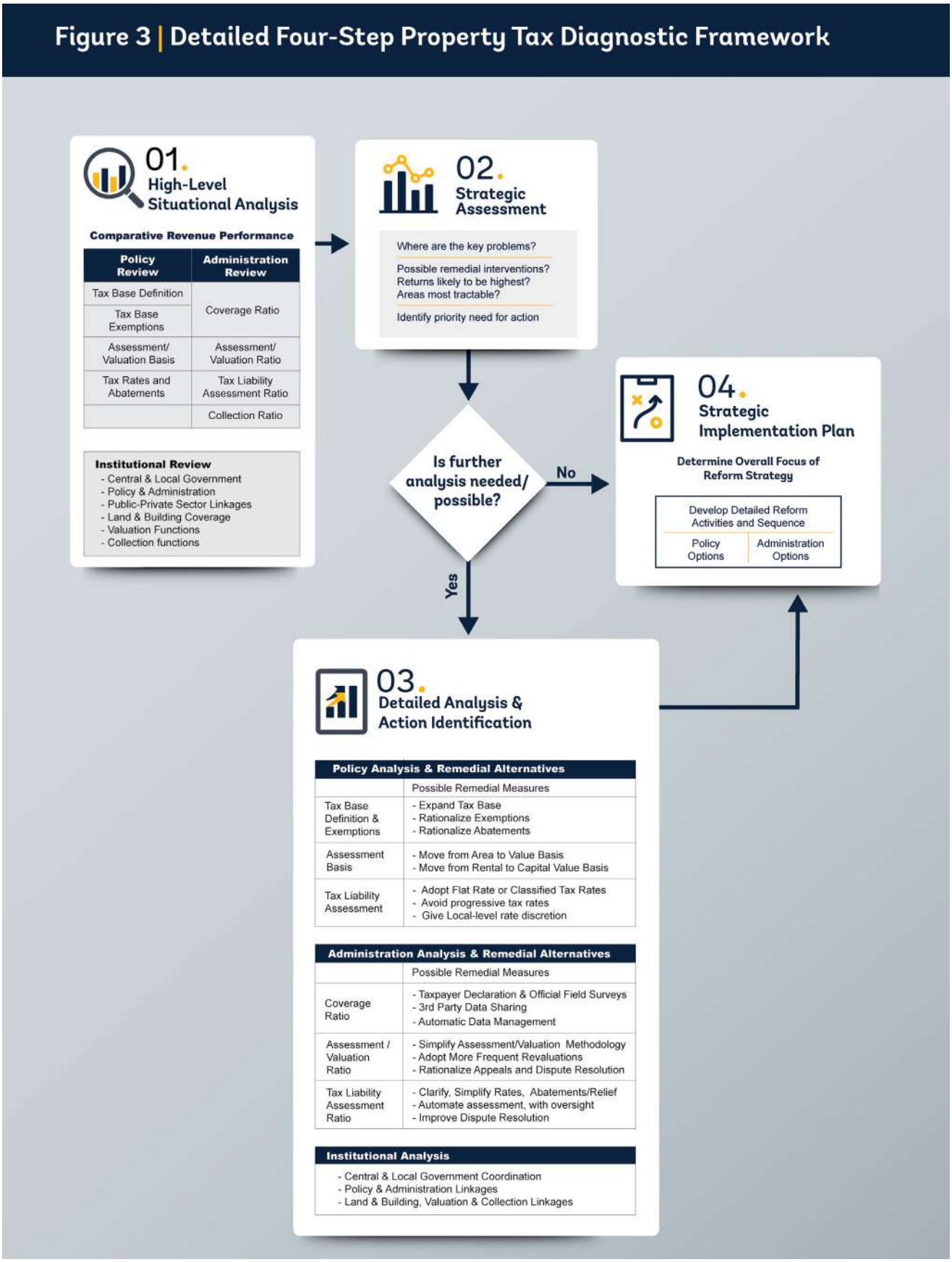
For example, if the PTDF is applied in a context where previous dialogue on property tax issues may have already identified a broad strategic direction for possible remedial policy and administration interventions, then the practitioner can tailor the PTDF to focus on the Detailed Analysis and Action Identification or on the Strategic Implementation Plan. Even within the detailed analysis, the practitioner may find it appropriate to narrow the analysis to a particular subset of either the policy and/or administrative variables, perhaps choosing an appropriate subset of those variables to analyze further. Therefore, the PTDF is designed not as a prescriptive tool but as an agile instrument that enables practitioners to respond quickly and systematically to property tax problems they are addressing.

Explanation of PTDF Steps

The diagnostic and reform-design work outlined in the PTDF typically begins with a driver for change, most often the need to enhance property tax revenue yield. The issue that needs to be addressed can come from either a national or local level, focusing on the property tax system within the country more generally, and/or within a local level taxing jurisdiction more specifically. For simplicity, the PTDF will refer to the area where the practitioner is working as the taxing jurisdiction.

Close consultations with relevant stakeholders are essential to help clarify the exact nature of the request, the reform goals, the specific concerns, and related expectations. Specifically, these consultations should clarify the reform's overarching objectives, primary and secondary goals, political and institutional issues, key stakeholders, performance expectations, deadlines, and expected resources. At this early stage, existing reports and project and reform documents can provide important input to these consultations, helping identify areas

Figure 3 | Detailed Four-Step Property Tax Diagnostic Framework



Source: Roy Kelly 2020.

of priorities for further diagnostic analysis and strategic planning. It is also important to reach out to fellow practitioners who may have experience in the taxing jurisdiction and could provide valuable information for the initial analysis.

Step 1: High-Level Situational Analysis

This **High-Level Situational Analysis (HLSA)** is initiated with the intent to understand the underlying factors behind the reform context, focusing on property tax revenue performance, along with an initial analysis of the underlying policy, administration, and institutional structure. Property tax revenue performance can be analyzed with respect to benchmarks, such as contribution to GDP, total government revenues, total local government revenues, and local government taxes, as well as to per urban capita, per household, and per property basis, adopting a cross-sectional and time-series perspective to the extent possible. It is also important to reach out to fellow practitioners who may have experience in the taxing jurisdiction and could prove to be a valuable source of information for the initial analysis.

Initially, the performance problems would be diagnosed and analyzed from a high-level, "30,000 foot" perspective, in close consultation with the relevant stakeholders to understand the property tax revenue challenges and explore the underlying policy, administrative, institutional, legal, and socio-economic factors.

This analysis should specifically focus on a

- **Policy Review** such as those related to tax base definitions (what is included), exemptions (what is excluded), the assessment basis (area or value, and if value, rental or capital value), and the tax liability assessment (the level and structure of tax rates and tax abatement/relief schemes);
- **Administration Review** of tax base coverage, property assessment/valuation, tax liability assessment and collection/enforcement, as well as the extent to which administrators are accountable and have resources to carry out their responsibilities; and
- **Operating Environment Review**, that is, an analysis of the socio-political, legal and institutional issues, including considerations of culture, government, institutions, politics, geography, economy, and market development.

These analyses can be benchmarked across international- and national-level comparative experience to understand the specific property tax challenges better and suggest possible areas for remedial action. Step 1 would conclude with an initial problem assessment. The technical issues to be reviewed when conducting the HLSA process are discussed in Part III of the Manual, specifically sections 3.2 - 3.5.

> **The purpose of the Strategic Assessment is to identify and understand the underlying performance challenges while also applying this understanding to identify areas for possible remedial interventions.**

Step 2: Strategic Assessment

Using the HLSA findings, the **Strategic Assessment (SA)** begins to prioritize issues based on reform goals and areas of tractability, identifying appropriate interventions most likely to succeed. As with the HLSA, the Strategic Assessment is best conducted in close consultation with the relevant stakeholders who can help identify the key performance problems, the reform priorities, political economy considerations, and implementation capabilities.

The purpose of the SA is to identify and understand the underlying performance challenges while also applying this understanding to identify areas for possible remedial interventions. Once these possible interventions have been identified, they can be evaluated in terms of their "costs and benefits" to be able to select those interventions which may generate the best return on investment or impact (for example, revenues, equity, and efficiency) in the short-, medium-, and long-term.

Decision Point

In some cases, the SA can proceed directly to the development of a Strategic Implementation Plan (SIP) under Step 4. For example, there may be situations where the stakeholder request is focused specifically on an analysis of the legal and policy framework or other situations where the reform context may be broader. Due to time and resource constraints, there may be a need to develop an initial Strategic Implementation Plan quickly. On the other hand, there may be other situations where further analysis is essential, along with the necessary time and financial resources, to allow for additional in-depth analysis before developing the SIP.

Step 3: Detailed Analysis and Action Identification

Depending on whether it is necessary or possible, a **Detailed Analysis and Action Identification (DAAI)** could follow the initial strategic assessment. This more detailed analysis enables further analysis of the property tax policy and administration challenges and opportunities. This deeper dive should build on the previous two steps while adding additional depth and realism to the types of reform interventions most likely to succeed in the taxing jurisdiction.

In other words, this further analysis enables a better understanding of the property tax policy and administration challenges alongside the operating environment issues. The deeper insight can help identify, craft, and stress-test more specific, tailor-made remedial interventions, evaluate their expected impact, and also suggest a more realistic prioritization and sequencing of actions.

The detailed policy, administration, and operating environment analysis would focus more deeply on the underlying challenges and opportunities facing the taxing jurisdiction and identify and refine possible alternative remedial policy interventions that may enable the realization of the intended revenue, equity, and efficiency objectives. As with other steps, this in-depth analysis and action identification should always be undertaken cognizant of the specific legal, cultural, political, and institutional environment facing the taxing jurisdiction, and in close consultation with the relevant stakeholders.

The following paragraphs illustrate how the three steps work to develop the SIP (Step 4). For example, if the high-level analysis points to property tax revenue underperformance due to coverage and collection issues in a certain taxing jurisdiction, the Strategic Assessment may identify the drivers of the two issues, for example, outdated cadastre records and a high degree of tax evasion, along with possible policy and administration interventions. However, if the taxing jurisdiction is entering an election period and reform strategies related to reducing tax evasion may not be tractable at that time, the SIP may need to focus on the coverage issues, presenting good practices tailored to the context of the taxing jurisdiction.

However, if a DAAI is possible, the practitioner can go further in-depth on the coverage issues and weigh the effectiveness of different remedial strategies, for example, accessing third-party property information, conducting field surveys, digitizing and updating records, purchasing a new orthophoto, or conducting 3D modeling of areas with high-value properties (for example, commercial centers). If improving tax collection was identified as a priority, once again, a DAAI would allow for a deeper dive into considering options the right set of incentives, sanctions, and penalties to improve current collections and reduce arrears.

In short, while it may not always be possible to do a DAAI given time or resource constraints, it is the PTDF step that allows for the most granular analysis and, therefore, enables identification and proposal of remedial actions that are most likely to work in and meet the reform objectives of the taxing jurisdiction. The DAAI covers the same technical issues as the HLSA, but in a lot more detail. These technical issues are discussed in Part III of the Manual, specifically sections 3.2-3.5.

Step 4: Strategic Implementation Plan

As previously illustrated, all roads lead to the **Strategic Implementation Plan (SIP)**, which is Step 4 of the PTDF. The findings and actions developed in Steps 1–3 enable the development of the SIP. Once again, as with other PTDF steps, SIP, too, is best developed in close consultation with relevant stakeholders to ensure maximum buy-in. Depending on the unique context of the reform and any resource constraints, this SIP could be developed directly following the HLSA (Step 1) and SA (Step 2); or, perhaps more commonly, following the DAAI (Step 3). In general, while the SIP can be developed through different steps, the more depth the preceding analysis has, the more depth the SIP can be expected to have.

In line with best practices, the SIP would identify and prioritize possible remedial interventions, suggest a sequencing strategy and timing for those interventions, along with an estimation of the required resources for implementation and the expected impact.

Next Step: Implementing the PTDF

This four-step PTDF process provides a diagnostic tool to identify, assess, and strategically address the issues hampering property tax performance. Part III of the Manual goes into the implementation of the PTDF and provides guidance on the property tax policy and administration variables that together determine property tax revenue performance. These are the factors that need to be studied under the High Level Situational Analysis and Detailed Analysis and Action Identification (if one is needed/possible). Part III (specifically sections 3.2-3.5) identifies these variables and shows how to analyze them.

A set of indicative Terms of Reference (TOR) are included in Annexes 1 and 2 to assist in implementing the Property Tax Diagnosis. The TOR in Annex 1 is designed to support the implementation of PTDF Steps 1 and 2, namely the **High-Level Situational Analysis** and the **Strategic Assessment**, while the TOR in Annex 2 is designed to support the implementation of the **Detailed Analysis and Action Identification** and the **Strategic Implementation Plan**.

Implementing the Property Tax Diagnostic Framework

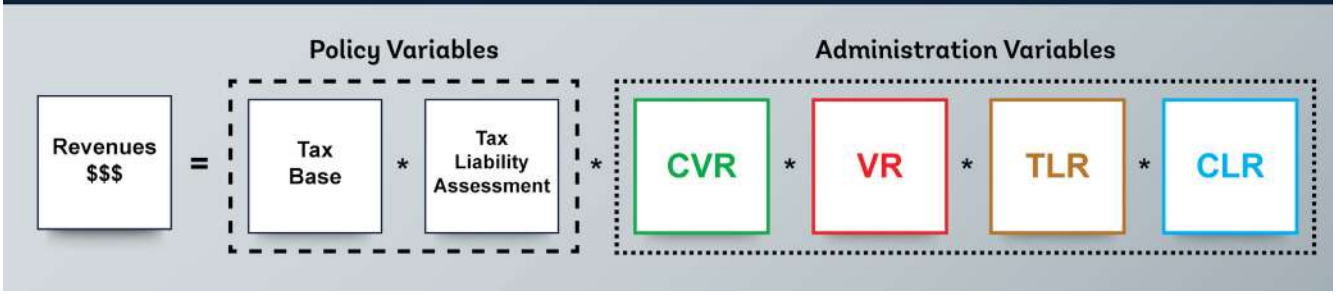
III.

Part II of the Manual outlined the PTDF, which provides a systematic approach to diagnose a property tax system using a High-Level Situational Analysis, Strategic Assessment, and Detailed Analysis and Action Identification in order to develop a Strategic Implementation Plan. Part III is the technical section that outlines the policy and administration variables which may require investigation during the HLSA and DAAI, and it provides guidance as to how to examine them. The section begins by describing the overall property tax revenue equation (Figure 4) and then delves into the technical aspects to show how the analytical work can be conducted.

3.1 The Property Tax Revenue Equation

As illustrated in the indicative property tax revenue equation in Figure 4, property tax performance is determined by policy factors that define the tax base and the tax rates and four administration factors affecting coverage, valuation, tax liability assessment, and collection which ultimately realize the property tax revenue yield and related equity and efficiency (Linn 1980, Kelly 2010, 2013a). These policy and administration factors all interact within, and are affected by, the specific legal/institutional and socio-political environment in which the property tax system operates.

Figure 4 | Property Tax Revenue Equation



Source: Roy Kelly 2020.

Where:

a. In government policy, the **Tax Base** is defined in terms of what is included (for example, land and/or improvements) and what is not included (such as tax base exemptions), and the assessment basis on which the property tax will be levied (that is, area and/or value).

b. The **Tax Liability Assessment** includes the tax rate applied to the tax base, along with the policies linked to tax abatement and tax relief, which together affect the tax liability levied on the property tax base. Tax rates are defined in government policy to be the tax amount per property value under an *ad valorem* system or the amount per property unit under a pure area-based rating system affected by the determined tax rate structure and level. Tax abatements or tax relief schemes are typically defined in law as consisting of fractional assessments, valuation deductions, and credits, among others.

c. The **Coverage Ratio** (**CVR**) is defined as the number of taxable properties captured in the tax registry divided by the total number of taxable properties in a jurisdiction. This ratio measures the completeness of the tax roll information and is affected by the administrative efficiency of identifying, capturing, and updating property data and ensuring the correct application of legally approved exemptions.

d. The **Valuation Ratio** (**VR**) is defined as the value on the valuation rolls divided by the real market value of properties on the valuation roll. This ratio measures the accuracy of the property valuation level (that is, percent of the market value captured through the valuation process). The valuation ratio level is affected primarily by the frequency and accuracy of the property valuation process.

e. The **Tax Liability Assessment Ratio** (**TLR**) is defined as the amount of the tax being levied on a taxable property divided by the legally mandated tax liability assessment. This ratio measures the accuracy of the tax administration to properly levy the legally mandated tax rates and apply the tax relief or adjustment policies.

f. **Collection Ratio** (**CLR**) is defined as the annual tax revenue collected over total tax liability billed. This ratio measures collection efficiency on both current liability and tax arrears, determined largely by taxpayer compliance, taxpayer service, the effective use of incentives, sanctions, and penalties, and political will.

The potential property tax revenue is determined by multiplying the property tax base by the property tax rate, adjusted for the tax abatement/tax relief schemes, all defined as policy choices through law. This revenue potential is then influenced by the quality of tax administration as captured in the coverage, valuation, tax liability assessment, and collection ratios. Although tax policy choices determine the potential revenue yield, equity, and efficiency, the achievement of these objectives can be realized only according to the quality of tax administration.

The **coverage ratio** and **valuation ratio** reflect the government's ability to identify, collect, manage and update the property tax-related information as captured on the property valuation roll. The **tax liability assessment ratio** reflects their ability to levy the legally-defined tax liability on those properties, while the **collection ratio** reflects the government's ability to collect the potential property tax revenue and realize the intended revenue, equity, and efficiency objectives.

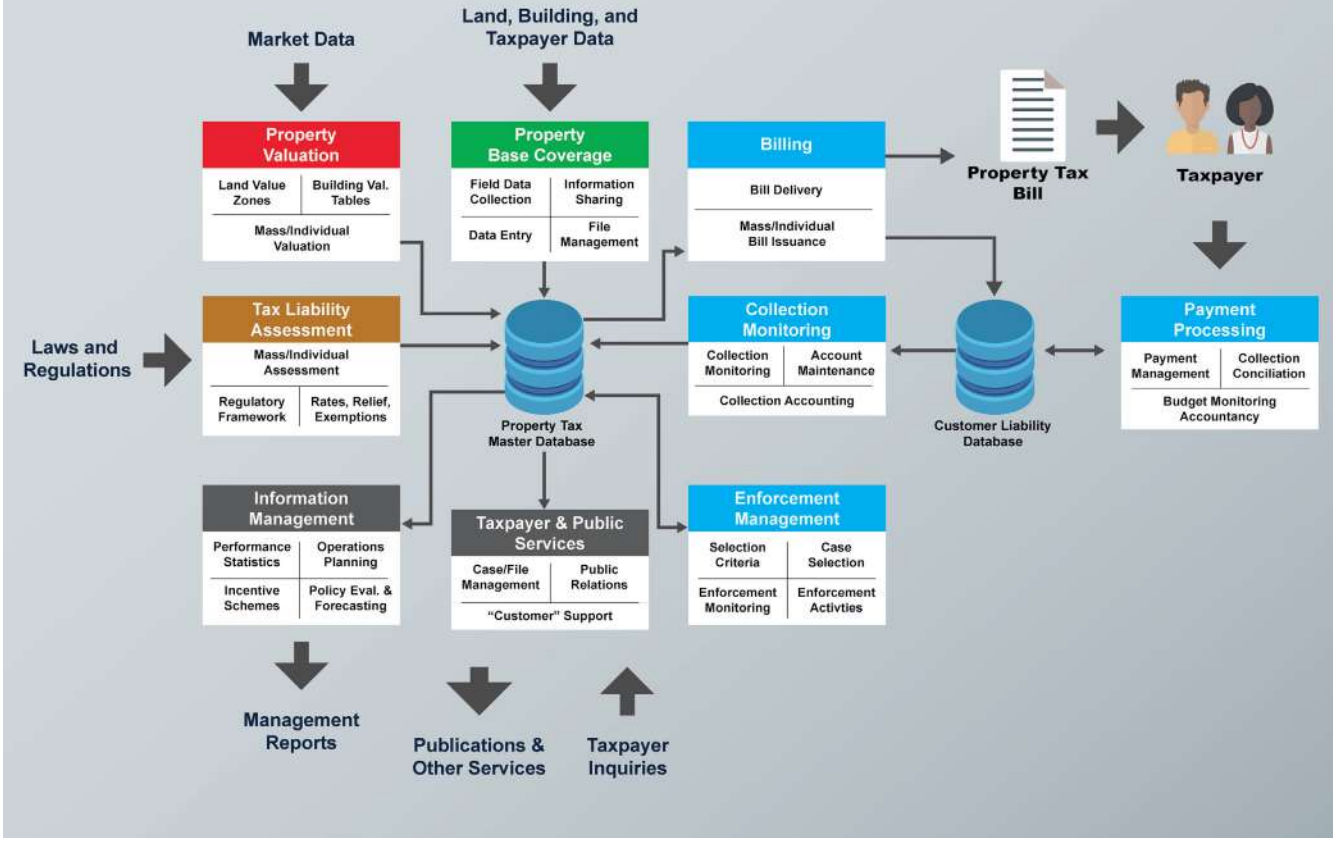
As shown in Table 2, this technical analysis section will now focus on the variables identified in the revenue equation shown in Figure 4. The property tax revenue performance will be measured using several benchmarks linked to GDP, government revenue, and other disaggregated measures using cross-sectional and trends analysis. These measures will help benchmark past, current, and expected property revenue performance. The technical analysis then focuses on understanding the underlying policy and administrative variables affecting this performance and a broader institutional review/analysis. Additional details on these policy and administration variables can be found in Annexes TP-1 through TP-5 and Annexes TA-1 through TA-5.

Table 2 | Property Tax Policy and Administration Variables

Variables		Specific Objective	See Sections	Details in Annexes
Property Tax Revenue Performance			**3.2**	
Revenue to GDP Ratio		Benchmarks property tax revenue to GDP	3.2.1	
Revenue as a Proportion of Government Revenues		Benchmarks property tax revenue as a percentage of government revenue (central and local)	3.2.2	
Property Tax Revenue Disaggregated Analysis		Benchmarks property tax revenues by household, per capita, type of property, size of tax liability, and others	3.2.3	
Property Tax Policy Variables			**3.3**	
Tax Base	**Definitions**	Defines what will be taxed	3.3.1	TP-1: Tax Base Definitions
	Exemptions	Defines what will not be taxed	3.3.1	TP-2: Tax Base Exemptions
	Assessment Basis	Defines assessment basis for allocating tax burden	3.3.1	TP-3: Tax Assessment Basis
Tax Liability Assessment	**Tax Rates**	Defines level and structure for tax rates	3.3.2	TP-4: Tax Rate Levels and Structure
	Tax Abatement/ Relief Schemes	Defines abatement/relief schemes	3.3.2	TP-5: Tax Abatement and Tax Relief
Property Tax Administration Variables			**3.4**	
Tax Base Coverage		Captures defined tax base on property registry roll	3.4.1	TA-1: Coverage Ratio (**CVR**)
Tax Base Assessment/ Valuation		Captures accurate property value on assessment/valuation roll	3.4.2	TA-2: Valuation Ratio (**VR**)
Tax Liability Assessment		Captures application of tax policy provisions on exemptions, assessment basis, tax rates, abatement/tax relief on the tax roll	3.4.3	TA-3: Tax Liability Assessment Ratio (**TLR**)
Property Tax Collection		Ensures proper application of revenue collection provisions, including for enforcement	3.4.4	TA-4: Collection Ratio (**CLR**)
Institutional Review / Analysis			**3.5**	

As Figure 5 illustrates, property tax administration involves a combination of property database maintenance, property valuation, liability assessment, billing and payment processing, collection and enforcement management, as well as taxpayer and public services. The efficiency of these administrative functions can be captured in the **coverage**, **valuation**, **tax liability assessment**, and **collection** ratios, the combination of which ultimately affects the realization of any intended property tax policy objectives.

Figure 5 | Property Tax Administration System



Source: Adapted from Kelly 2013b.

The interaction of an appropriate policy framework and effective administration can individually and/or collectively improve property tax revenue, equity, and efficiency. Successful property tax improvement strategies must identify, prioritize, and sequence an appropriate combination of policy and administration interventions while recognizing the legal, socio-political, and institutional context.

As the revenue identity in Figure 4 illustrates, property tax revenue performance depends on the policy and tax administration variables and how those interact within the broader operating environment defined by the underlying legal, political, and institutional issues. Understanding these variables and the broader reform environment is critical in helping identify, design, and implement appropriate remedial property tax interventions.

Prior to a detailed analysis of these variables and the institutional environment, the practitioner should undertake a review of property tax performance, specifically focusing on the revenue collected, the structure and trends of that collected revenue, and the possible implications for equity, administration, and political acceptability.

The revenue performance can be benchmarked against other countries, against the disaggregated revenue profile within a country and/or across taxing jurisdictions within a country. These comparative analyses can be done on a cross-sectional basis as well as on a time series basis to understand trends over time.

3.2 Property Tax Revenue Performance

A property tax system may be generating a low revenue yield, and/or facing a lack of property tax revenue growth (buoyancy) with respect to economic growth, urbanization trends, and/or the nominal and real costs of public service delivery.

Revenue performance should, therefore, be analyzed in absolute and relative terms to economic growth (for example, GDP for a country or RGDP for regions, if available), general and local government revenues and taxes, respectively, and in regard to urban population growth, service delivery costs, and affordability. These ratios should be calculated for several recent years to reveal revenue trends. In addition to the absolute revenue performance, it is equally important to estimate its buoyancy with respect to GDP growth. (See Box 1 for further details on revenue buoyancy.)

3.2.1 Revenue to GDP Ratio

At the country level, the property tax revenue can be benchmarked against a country's GDP to gauge the overall property tax revenue contribution. As Table 1 indicated, OECD countries typically have a property tax to GDP ratio of about 1.1 percent, with Canada, the United Kingdom, and the United States reaching up to 2.5 to 3 percent of GDP. Middle-income countries typically collect about 1 percent of GDP. Low-income countries may collect up to 0.5 percent of GDP, although many collect less than 0.1 percent of GDP. A similar revenue performance ratio can be calculated against regional indicators of economic development, such as a regional gross domestic product (RGDP), if available.

In addition to the static revenue performance measurement, the practitioner should consider the buoyancy of the property tax revenue with respect to economic growth (see Box 1 on revenue buoyancy). Typically, property tax buoyancy is quite low; the long-term buoyancy is estimated at 0.71 and the short-term buoyancy at 0.05 for OECD countries. These buoyancies are expected to be considerably lower in non-OECD countries due to policy and administrative constraints (IMF 2014). This means that for every 1 percent increase in GDP, property tax revenues are expected to increase by 0.71 percent in the long term, but only 0.05 percent in the short term. In non-OECD countries, the buoyancy would typically be much lower.

This low-revenue buoyancy can be attributed to tax policy design and administration. The basic problem is that property taxes are often levied on incomplete property tax registers, typically levied on estimated property values, which are only periodically updated. Thus, in addition to an incomplete tax base coverage of properties, the tax base value lags behind the market. Revenue buoyancy can also be affected by a narrowly-defined tax base, excessive exemptions, and/or ineffective collection and enforcement mechanisms.

Box 1: Revenue Buoyancy

Tax revenue growth responsiveness, typically known as buoyancy can be calculated as percent change in property tax revenue/percent change in GDP.

Tax buoyancy captures the various policy changes (such as changes in the tax base definition, increases in tax rates or changes in the tax rate structure) and administration changes (for example, changes in tax compliance strategies to include seizure and auction of properties, tax base coverage improvement programs, and revaluations).

Ideally the practitioner would want to estimate tax elasticity, which is the underlying responsiveness of the tax system, excluding ad hoc changes in tax policy and administration; however, this calculation is virtually impossible given data constraints.

Addressing these tax base definitions, improving collections, and increasing the frequency of property revaluations linked to market values would increase the property tax buoyancy. Some countries use indexation to keep their property values adjusted for inflation (Brazil, Colombia and Jordan) between the periodic property revaluations (Bahl and Vasquez 2007). Note that although indexation can help maintain the absolute property values used for taxation purposes, it does not capture changes in relative value, which largely determines the equity of a property tax system.

Action items:

- ✓ Calculate the property tax revenue to GDP ratio for the most recent year, as well as for several prior years to understand the revenue trends.
- ✓ Calculate the buoyancy of the property tax revenue with respect to economic growth (see Box 1 on revenue buoyancy).
- ✓ Calculate a revenue performance ratio against regional indicators of economic development, such as a regional gross domestic product (RGDP), if available.

Questions to Consider:

- How does property tax as a percentage of GDP compare to other benchmark countries?
- How has this percentage changed over time?
- Has the property tax revenue been buoyant over time, outpacing GDP annual growth, or has the growth in property tax revenues been stagnating over time?
- What are some possible underlying policy and administration variables that may be generating/influencing those results?
- Are there changes in policy and administration that could potentially address any possible revenue underperformance?

3.2.2 Property Tax Revenue as Proportion of Government Revenues

Property tax revenues can also be benchmarked against total government revenue or taxes and subnational level government revenues/taxes. As Table 1 earlier indicated, property taxes represent about 2–4 percent of total government tax revenue in high-income countries and 1–2 percent in low- and middle-income countries. And property taxes account for the major source of municipal own-source tax revenues, contributing about 40–60 percent in high-income countries and about 20–40 percent in low- and middle-income countries.

Central governments may be interested in all of these comparative revenue measures, while local governments may be more interested in the impact on their local own-source revenues and/or taxes. These key benchmark indicators can be used to compare revenue performance across similar clusters of comparable local governments.

An example of comparative property tax revenue measures across a select group of metropolitan areas can be found in Table 3. As Table 3 shows, the property tax contributes between 20–60 percent of total city revenues and between 25–50 percent of local tax revenues in a number of select metropolitan cities.

Revenue performance varies by local governments and across time depending on a wide variety of social, urban, and economic characteristics of the taxing jurisdictions, and the profile of their overall revenue and tax structure as well as the specific characteristics of their property tax profile. The revenue profile and the various revenue trends, and implications behind the relative contribution of property tax revenues, should be evaluated for each taxing jurisdiction, with relevant benchmarks chosen for comparative purposes.

Action items:

- ✓ Benchmark property tax revenues against total government revenue or taxes and against subnational level government revenues/taxes. Compare the country calculations against the international benchmarks found in Table 1.
- ✓ Compare revenue performance across similar clusters of comparable local governments across or within the country using these key benchmark indicators. See Table 3 for an example of metropolitan cities across countries.
- ✓ Evaluate the revenue profile, the various revenue trends, and the implications behind the relative contribution of property tax revenues for each taxing jurisdiction.

Questions to Consider:

- What percent of total government revenue and/or tax revenue comes from the property tax?
- What percent of local government revenue and tax revenue is attributed to the property tax?
- What is the distribution of property tax revenues collected from certain property classes (for example, commercial, industrial, residential, others)?
- Which classes of property appear to be underperforming?
- Are there underlying policy and administration variables within each property category that may be affecting this performance?
- If so, what are some possible remedial interventions that could address these issues?

Table 3 | Property Taxation in Select Metropolitan Cities

Metropolitan Cities	Population (millions)	Percentage of Total City Revenue		Percentage of Local Tax Revenue	
	2009	2005	2010	2005	2010
Sao Paulo (BRA)	18.8	27.2	24.8	35.0	31.0
Metro Manila (PHI)	16.3	27.0	28.0	43.0	54.0
Rio de Janeiro (BRA)	12	21.8	17.5	34.5	25.0
Kuala Lumpur (MYS)	7.1	68.4	44.9	92.0	93.0
Johannesburg (RSA)	4	19.9	16.3	30.0	43.8
Durban (RSA)	3.5	27.9	21.6	40.5	41.1
Cape Town (RSA)	3.4	22.6	20.5	33.1	41.1
Pretoria (RSA)	2.4	20.4	19.4	28.4	42.8

Source: Adapted from McCluskey and Franzsen 2013.

3.2.3 Property Tax Revenue Disaggregated Analysis

Property tax revenues can be further evaluated on a cross-sectional and time-series basis to gain important insights into the property tax performance across taxing jurisdictions within a country. To the extent possible, information should be collected, analyzed, and disaggregated in various ways to develop a deeper understanding of the property tax profile within the taxing jurisdiction.

This property tax-related information should be disaggregated by the administrative/taxing jurisdiction (for example, at the provincial, district, and local government level), by type of property (for example, residential, commercial, industrial, agricultural, exempt), and by other characteristics, as appropriate. The analysis should also focus on important trends (in nominal and real terms). Although long-term trends may be of interest, trends over the last 5–10 years are the most important. To the extent possible and necessary, the cross-sectional information should also be analyzed over time to identify emerging strengths and weaknesses along with areas needing policy and administrative reform interventions. Graphs can be used to help illustrate the various trends.

Tables listing the per capita or per household property taxes may provide a useful benchmark when comparing property tax revenue performance across countries and cities. However, while the per capita property tax revenue is an easy, quick benchmark comparator to calculate, the results must be interpreted carefully to understand the underlying structural and institutional aspects as well as the property policy and administration impacts. See Box 2: Using Per Capita Property Tax Revenue Benchmarks.

City-level per capita property tax revenues can be affected by such factors as level of economic development, revenue structures, adopted property tax policy, and administrative structure as well as the taxable property profiles. Revenue collections can also be affected by the political, institutional, and technical will and the capacity to carry out the administrative functions related to coverage, valuation, tax liability assessment, and collection.

Although property tax performance is not directly linked to city size, using such benchmarks, such as shown in Table 3 and Table 4, can help identify some rough, useful benchmarks if followed up with a more in-depth analysis of the underlying factors affecting those benchmark figures.

Table 4 illustrates such trends in per capita property tax revenues in select metropolitan areas from 2006 and 2009, while Table 5 illustrates per capita property tax revenues from only one year, but from a wider, selected set of large and small cities from Latin America, Southeast Asia, Africa, and India.

Box 2. Using Per Capita Property Tax Revenue Benchmarks

As Table 3 illustrates, there is substantial diversity of per capita property tax revenue across and within countries, and it is important to understand the underlying factors that may be affecting these differences.

For example, although Johannesburg (population: 4 million) and Dar es Salaam (population: 3.6 million) have similar population size, their property tax per capita has a hundred-fold difference, perhaps largely explained by the variations in levels of economic development. The economic structure of the city, rather than population, may also have a major impact. For example, Miraflores, one of the most affluent cities in Peru with a population of around 900,000, collected USD 143 per capita in 2010, among the highest levels in Latin America. Similarly, Makati City in the Philippines, with a population of around 500,000, collected around USD 70 per capita, which is considerably higher than its counterpart cities in the Philippines. Both cities are from exclusive residential and upscale shopping districts with a relatively higher portion of commercial properties, thus perhaps explaining their higher revenue performance.

Additional explanations are also required in the case of India's two largest cities, Delhi, and Mumbai. The two cities have similar populations, but Delhi collected less than half of the property tax revenue collected in the Greater Mumbai Area in 2015. Differences in economic structures, policies and administration may largely explain the differences, while recent reforms in Mumbai, shifting from the annual rental to the capital value system, along with various other administrative reforms may also have contributed to the difference.

Table 4 | Trends in Per Capita Property Tax Revenues in Select Metropolitan Areas (USD)

Metro/City	2006		2009	
	Property Tax (millions)	Property Tax per Capita	Property Tax (millions)	Property Tax per Capita
Sao Paulo (BRA)	1,087.81	61.46	997.64	53.07
Metro Manila (PHI)	317.60	21.46	288.71	17.71
Rio de Janeiro (BRA)	430.66	39.88	395.42	32.95
Bengaluru (IND)	56.95	8.38	137.31	17.16
Kuala Lumpur (MYS)	174.74	25.32	178.38	25.12
Johannesburg (RSA)	364.13	98.41	321.52	80.38
Cape Town (RSA)	285.76	89.30	319.94	94.10
Porto Alegre (BRA)	61.82	22.08	71.83	19.41
Pretoria (RSA)	202.62	92.10	222.62	92.76

Source: McCluskey and Franzsen 2013.

Table 5 | Per Capita Property Tax Revenues in Selected Cities

Cities	Population (millions)	Per Capita Property Tax (USD)
Africa*		
Johannesburg (RSA)	4.00	80.38
Dar es Salaam (TAN)	3.60	0.85
Durban (RSA)	3.50	109.63
Nairobi (KEN)	3.36	7.93
Pretoria (RSA)	2.40	92.76
Kinondoni (TAN)	1.85	0.97
Kiambu (KEN)	1.62	1.42
Kampala (UGA)	1.40	6.65
Ndola (ZAM)	0.55	5.47
Arusha (TAN)	0.42	1.63
Median Value	**2.13**	**6.06**
Mean Value	**2.27**	**30.77**
Range	**3.58**	**108.78**
India**		
Mumbai (IND)	18.40	16.82
Delhi (IND)	16.30	10.58
Bengaluru (IND)	8.50	30.80
Pune (IND)	5.05	40.14
Jaipur (IND)	3.04	0.11
Ranchi (IND)	2.91	1.64
Vishakhapatnam (IND)	1.72	30.89
Dehradun (IND)	1.69	2.12
Chandigarh (IND)	1.05	2.73
Bhubaneshwar (IND)	0.88	3.84
Median Value	**2.98**	**7.21**
Mean Value	**5.95**	**13.96**
Range	**17.52**	**40.04**

Cities	Population (millions)	Per Capita Property Tax (USD)
Latin America and the Caribbean**		
São Paulo (BRA)	11.50	218.20
Bogotá (COL)	7.36	82.40
Buenos Aires (ARG)	3.02	111.00
Guayaquil (ECU)	2.47	4.95
Goiania (BRA)	1.30	86.03
Kingston (JAM)	0.68	6.06
Joinville (BRA)	0.55	74.62
Ibarra (ECU)	0.19	7.46
Miraflores (PER)	0.09	143.68
Sololá (GTM)	0.05	0.24
Median Value	**0.99**	**78.51**
Mean Value	**2.72**	**73.46**
Range	**11.46**	**217.97**
Southeast Asia ****		
Manila Metro (PHI)	16.30	17.71
DKI Jakarta (IDN)	9.61	22.11
Kuala Lumpur (MYS)	7.10	25.12
Kota Surabaya (IDN)	2.77	13.73
Quezon City (PHI)	2.76	13.72
Kota Tangerang (IDN)	1.80	9.38
Kota Palembang (IDN)	1.46	3.44
Makati City (PHI)	0.52	72.41
Muntinlupa City (PHI)	0.45	16.60
Kota Palopo (IDN)	0.15	0.90
Median Value	**2.28**	**15.17**
Mean Value	**4.29**	**19.51**
Range	**16.15**	**71.51**

Notes: City populations are provided by various report authors or selected from https://www.citypopulation.de/.
** Property tax data in Africa is based on various fiscal years from 2009–17; population data also ranges from 2009–17.*
*** Property tax data in Latin America is based on various fiscal years from 2009–13; population data also ranges from 2009–13.*
**** Property tax data in India is based on fiscal year 2015–16, while population is based on census in 2011.*
***** Property tax data in Southeast Asia is based on fiscal years 2009–10; population also ranges from 2009–10. Sources: Claudia 2010; Farvacque-Vitković and Kopanyi 2013; Mathur et al. 2009; McCluskey and Franzsen 2013; McCluskey and Franzsen 2017; Norregaard 2013.*

As an indicator of property tax affordability, per capita and per household property taxes can be benchmarked against average per capita/per annual household income or against a common commodity (for example, a loaf of bread or pack of cigarettes). For example, the average annual property tax collected in most jurisdictions in Myanmar is equal to about 2–3 cups of tea (McLachlan and Hein 2017). These practical indicators can capture a tangible sense of the average potential property tax burdens.

In addition to the raw numbers, various ratios as shown in Table 6 can help summarize the property tax performance, improve understanding, and facilitate communication of key findings (for example, ratio of tax collections/tax liabilities, arrears/current liabilities, taxable properties/total properties, taxable property value/total property value, assessed value/market value).

Table 6 | Revenue Performance Metrics

Measures	Comments
Property tax revenue collections as % of GDP	Evaluate against international benchmarks
Property tax revenue collections as % of total government revenue	Evaluate against international benchmarks
Property tax revenue collections as % of total government tax revenue	Evaluate against international benchmarks
Property tax revenue collections as % of total local government revenue	Evaluate against international benchmarks
Property tax revenue collections as % of total local government own tax revenue	Evaluate against international benchmarks
Property tax revenue collection per urban population	Evaluate across taxing jurisdictions
Property tax revenue collections per urban HH	Evaluate across taxing jurisdictions
Property tax revenue per property	Evaluate across taxing jurisdictions
Average tax liabilities by quartile of tax liabilities	Profile of potential tax bills
Average property tax collections by quartile of tax liabilities	Profile of collected revenue by tax bills

Source: Roy Kelly 2020.

Action items:

- ✓ Evaluate property tax revenues on a cross-sectional and time-series basis to gain important insights into the property tax performance across taxing jurisdictions within a country.

- ✓ To the extent possible, collect and analyze the information, and disaggregate and tabulate such as the following:
  - Number of properties
  - Number of taxable properties
  - Valuation basis of those properties
  - Property value as captured on the tax rolls
  - Billed tax liability
  - Collected amount on current tax liabilities
  - Amount of arrears and amount collected on tax arrears
- ✓ Disaggregate this information by administrative or taxing jurisdiction (for example, provincial, districts, and local government level), by type of property (for example, residential, commercial, industrial, agricultural, exempt), and by other characteristics, as appropriate.
- ✓ Conduct these analyses by taxing jurisdiction as well as on a per property, per capita, and per taxpayer basis. This will help in understanding and comparability across jurisdictions, property types, and taxpayers. Focus the analysis on important trends (in nominal and real terms). Although long-term trends may be of interest, it is most important to look at trends over the last 5–10 years.
- ✓ To the extent possible and necessary, analyze the cross-sectional information over time to identify emerging strengths and weaknesses and areas needing policy and administrative reform interventions. Use graphs to illustrate various trends.

Questions to Consider:

- What are the collected revenues per capita or per household across various local governments, while accounting for policy and administration differences and differences in the underlying property values across taxing jurisdictions?
- What is some indication of tax payment affordability expressed as a percentage of household income and/or calibrated against a common benchmark, such as a cup of tea, bowl of noodles or rice, pack of cigarettes?
- How concentrated is the collected revenue from the highest value properties, disaggregated by class of property?
- Are there policy, administrative, or institutional factors that may be affecting the differential revenue performance across taxing jurisdictions?
- Are there any possible best practices that could be explored, codified, and replicated?

3.3 Property Tax Policy

Tax policy analysis should begin with a review of a country's property tax policy, as codified in the laws and regulations. The analysis should begin with the Constitution, as the supreme law of the land, which typically provides a general or even specific references to tax and revenue instruments and usually sets the overall fiscal policy/decentralization framework.

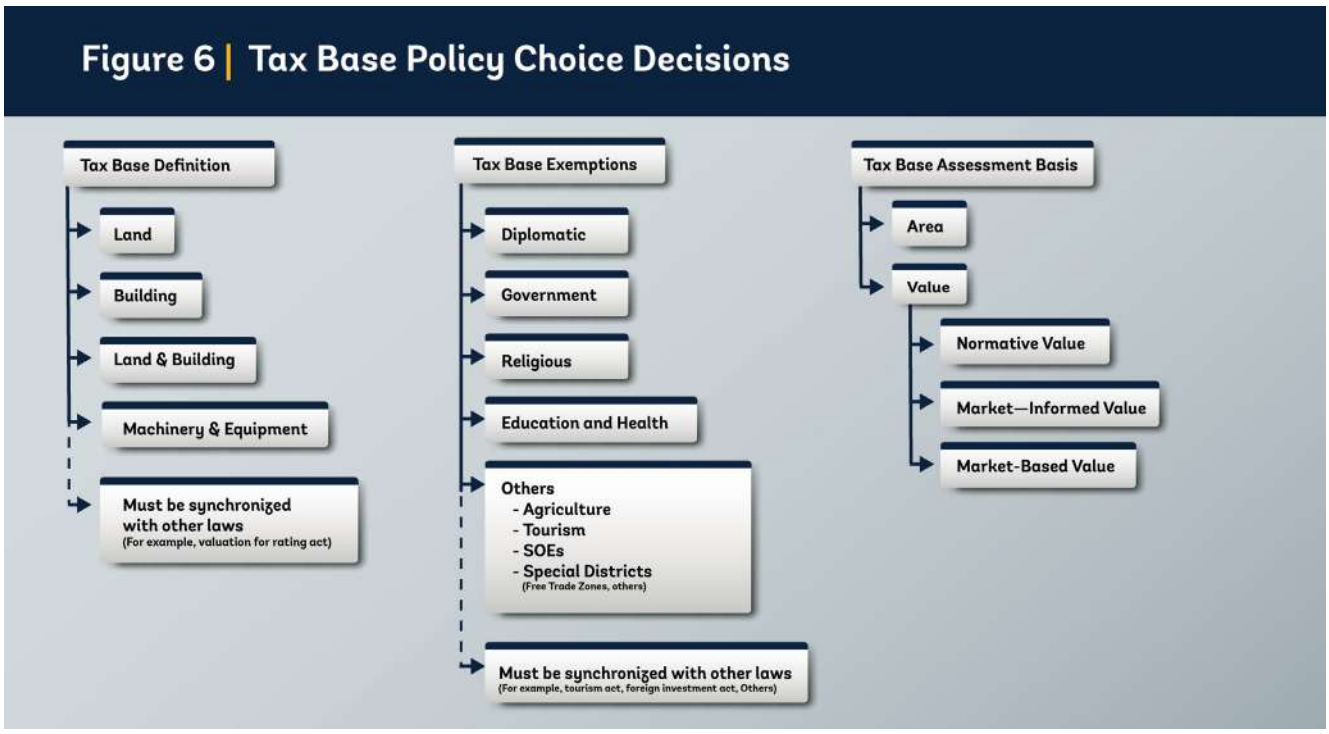
The specific property tax legal framework may be found in the local equivalents of the General Tax Code, the Local Government Act/Local Government Finance Act, or Property Tax Act/Rating Act, and/or their related regulations. There may also be relevant legislation found in local equivalents of the Land Registration Act, Land Valuation and Stamp Duty Act, Housing Acts, Valuation for Rating Act, Registration and Regulation of Valuers Act, and/or related regulations that govern property tax coverage and valuations.

In addition to the central/state-level legislation and regulations, the policy analysis should also examine any local government level policy and by-laws as local governments often have some policy discretion in such areas as providing tax exemptions and abatement/relief schemes and in choosing tax rates.

The policy review would focus largely on: (a) tax base definition, exemptions, and the assessment basis, and (b) the tax liability assessment (tax rates and abatement/relief schemes). Such a legal audit will help identify the existing policy parameters as well as identify areas of possible legal challenges when designing and implementing policy and administration remedial interventions.

3.3.1 Tax Base Definition, Exemptions, and Assessment Basis

As Figure 6 shows, there are a several policy choices affecting the tax base. Policy decisions must define what is included in the tax base, what is excluded, and ultimately what the assessment basis for the tax base will be—that is, do we tax the property based on area or value. The theory and international practice for each of these policy choices are discussed in detail further in Annexes TP-1 and TP-2.



Source: Roy Kelly 2020.

Tax Base Definition: Property taxation policy begins with the definition of the tax base, identifying what is to be included in the tax base. While most countries include both land and improvements (which includes buildings), there are some countries which only tax land (for example, Jamaica, Kenya, Vietnam), while others only tax buildings (for example, Ghana, Haiti, Tanzania).

For those taxing both land and buildings, some countries tax land and buildings as one economic unit under one property tax law, while others tax land and buildings as separate units under two different property tax laws. Some countries also include machinery and equipment, although these are usually taxed as assets under the corporate income tax. There are theoretical and practical advantages and disadvantages to each tax base definition, as discussed in Annex TP-1.

While there may be a political impetus to introduce a change to the tax base definition, it is always important to carefully evaluate the rationale and the expected impact, implications, and tradeoffs from introducing such a choice, specifically on revenue yield, equity across taxpayers, efficiency implications, and administration costs.

If the policy objective is to increase revenues, a detailed analysis may show that it would be more cost-effective to raise additional revenue through increasing the tax rate and/or improving property tax administration rather than expanding the tax base definition. If the policy objective is to improve taxpayer equity between those who only own land and those who own both land and buildings, a detailed analysis would be able to estimate the possible shift in tax burden distributions.

The analysis must also explore where the legal responsibility for paying the property tax lies, for example, with the person (most common) or with the property (in rem, which is rarely used). The answer to this question has important implications for other property tax design features such as the definition of the tax subject as well as in collection and enforcement.

The subject of the tax can be defined as placing the tax liability on the owner, occupant, both the owner and the occupant, either the owner or the occupant, the property, and/or beneficiary, as determined by the tax department. The law should be structured to make the tax "jointly and severally liable," meaning that the tax can fall on one or any combination of those defined as the subject. A broad definition of the tax subject can be important in those countries with unclear or disputed property ownership systems.

In general, as explained in Annex TP-1, international best practice suggests to broadly define the tax base to include all land and/or building (improvements) unless specifically exempted in law.

Action Items:

- ✓ Review the legal definitions of the immovable property tax base.
- ✓ Explore where the legal responsibility for paying the property tax lies, on the property itself (in rem), which is rarely used, or on the person (in personam), which is more common.
- ✓ Identify the subject of the tax—is the tax liability on the owner and/or occupant/beneficiary? Is the law structured to make the tax "jointly and severally liable"?

Questions to Consider:

- What kind of property is taxed?
- Does the tax base include land only, buildings/improvements only, and/or a combination of land and buildings/improvements?
- If land and buildings/improvements are taxed, are they taxed together as one economic unit under one law or as separate units with two different tax laws, one taxing land, and the other taxing buildings/improvements?
- Are machinery and equipment included in the property tax base?
- What are the defined use classes of immovable property (for example, agriculture, residential, non-residential, industrial, commercial, government, or others), which may affect exemptions, tax rates, and administration aspects?
- Are other defining categories for taxable properties, such as only those within municipal boundaries, "gazetted" land only, those "declared" as taxable, others?

Note:

- ➤ See Annex TP-1 on Tax Base Definition for further details.

Tax Base Exemptions: Property tax policy then includes decisions on what is not included in the tax base, that is, what should be exempted from taxation. These tax base exemptions vary by country, although most countries typically include a combination of diplomatic, government, religious, education, and health-related properties. Some countries also provide exemptions for agriculture, tourism, state-owned enterprises, and others.

All exemptions can be structured as either a full exemption from the tax base or as a partial exemption, for example, by allowing a portion of the property area and/or value to be exempted from taxation. These explicit exemptions are often restricted by both ownership and use. For example, an exemption granted for religious properties is often defined as being given to property owned by a recognized religious organization and also used for religious purposes. While a religious exemption may apply to the house of worship, it may not apply to properties used for commercial purposes (lodging houses, bookstores).

Property tax exemptions may also include implicit exemptions. Implicit exemptions are those derived from the legal definition of what is included in the various laws. Some laws may define taxable properties only as those within areas declared/gazetted by the government as taxable. Other laws may define taxable properties as only those which are valued under a separate Valuation for Rating Act, where that act implicitly defines those properties which will be tax-exempt under the property tax law. Implicit exemptions also emerge from the choice of the tax assessment basis: for example, vacant land is typically taxed under property tax systems based on Capital Value (CV) but is exempt under the Annual Rental Value (ARV) assessment basis.

As explained in Annex TP-2, tax base exemptions are equivalent to a subsidy to a property, being granted on the basis of the property ownership (tenure) and/or on property characteristics such as property use, location, size, and value. This does not mean that all property tax exemptions reflect bad policy as there may be rational reasons for providing subsidies to certain properties and/or property taxpayers. For example, health and education-related properties may be providing positive social externalities thus should be encouraged. However, it should be remembered that exemptions do generate a loss in revenues collected, causing either a reduction in the level of services that can be provided through property taxation or an increased tax burden on non-exempt property taxpayers, holding everything else constant.

A policy question therefore would be to what extent should a property owner and/or use be subsidized. Should the property receive a 100 percent exemption, or should the property receive only a 50 percent exemption? Should the subsidy be in the form of a reduced tax base (for example, through a property valuation deduction) or, as discussed later, as a reduction in the tax rate (for example, through a 50 percent tax rate reduction)?

As Annex TP-2 further explains, there are a large number of different property tax exemptions, each with implications on revenue yield, equity, efficiency, and administration, as well as political acceptability. These subsidies, also called tax expenditures, should be carefully evaluated and designed to achieve the intended government objective while minimizing economic, administration, and compliance costs. Some property tax systems require a "tax expenditure" report which would identify and quantify the impacts of all property tax exemptions, with this report to be submitted annually as part of the budget process.

In general, as explained in Annex TP-2, international best practice suggests keeping the property tax exemptions to a minimum, carefully reviewing the intended objectives and their actual costs and benefits. A systematic review and rationalization could lead to a reduction and/or an elimination of inappropriate or outdated exemptions, which may lead to an increase in potential property tax revenue yield, equity, and efficiency. Reducing/eliminating some exemptions could be considered a "quick win" for any property tax reform.

Action Items:

- ✓ Review and identify the implicit and explicit exemptions, their rationale, and any estimates on the revenue, equity, efficiency, and administration costs of those exemptions.

Questions to Consider:

- What are the implicit and explicit tax base exemptions?
- What is the rationale for granting such exemptions?
- What is the estimated number of properties affected by the exemptions category?
- What are any revenue loss, equity, efficiency, and administrative cost implications from these exemptions by category?
- Are there any unusual categories of properties or owners that are eligible for exemptions? If so, these should be identified with their rationale and any estimates on the number and value of such exempt properties.
- Do local governments have any discretionary power to introduce additional exemptions?
- If local governments provide additional exemptions, how are these accounted for in determining the allocation of intergovernmental transfers?
- What are the political drivers, and who are the related stakeholders behind these exemptions?

Notes:

- These property tax exemptions and/or tax abatement/relief schemes can be found in a wide variety of central and local laws and regulations linked to economic and regional development, urban, land and housing development, tourism, and hotel development, among others.

- See Annex TP-2 on Tax Base Exemptions for further details.

Tax Base Assessment Basis: As part of the tax base definition, countries must define the assessment basis to be used for the property tax. As explained in Annex TP-3, the assessment basis is either defined based on the area or the value of the property. This simple dichotomy, however, is misleading and confusing, as most so-called area-based property taxes make adjustments for location, property use, construction, and building characteristics, among others. These adjustments, if calibrated to notional or market-based value information, implicitly allow an area-based system to take on attributes of a value-based system of property taxation.

The choice of the assessment basis depends heavily on the level of the property market activities, the availability of related value information, and the capacity of the taxing jurisdiction to provide an estimate of a property value for tax purposes. Even in emerging, nascent property markets, taxing jurisdictions will typically choose their property tax assessment basis on at least a notional value, which, if calibrated properly, can improve the equity of the property tax system along with potential tax revenues. In some taxing jurisdictions, agricultural property may be assessed based on area, while urban property may be assessed on a notion of value.

Area-based systems are easy to administer but typically create inequity across properties. Under an area-based system, a property of equal size would be taxed at the same level regardless of its location. Such a property located in a desirable location with many urban services would pay the same as a property located in a more remote location with fewer urban services. For this reason, most property tax systems make some adjustments, at least for location, to reflect the relative value of a property to improve revenues, efficiency, and equity.

Value-based systems include those using notional values (also called normative values) and those using market-informed values (also called market-based values). The quality of a value-based system depends largely on the degree to which there exists an active property market, easily available market value information, and the capacity to analyze and develop appropriate market-based valuations. As property markets, information and capacity develop, property tax systems should be able to better capture and reflect the relative and absolute market values on the valuation and tax rolls.

Shifting to a value-based system has the potential to improve property tax equity and revenue buoyancy, depending on property markets, market data availability, and administration capacity. However, in some cases, a deeper dive may lead to a conclusion to keep the tax system based simply on area or on a notional value due to policy, administrative, and institutional reasons. Under some circumstances, such a simple area-based system or a simple notional value system may be implemented in a more equitable manner than a more complex market-value assessment system.

Within these value-based systems, a policy choice must be made as to whether to use the capital value (the price at which a property can be bought and sold) or the rental value (the price at which a property can be rented). These two values can be shown to be mathematically equivalent in well-functioning markets, under certain circumstances. Under the income approach to valuation, the expected capital value for commercial property is often estimated as the capitalized value of the expected flow of net rental income.

Although rental value systems are typically found in countries within the Commonwealth of Nations, most other countries use a capital value system. Most recent property tax reforms are shifting to capital value systems as they provide for the capture of the highest and best-use values and avoid challenges presented by rent control policies.

Under value-based property tax systems, a policy choice must be made to identify the valuation standards to be used for estimating the property values for tax purposes. A highest and best-use standard would allow a taxing jurisdiction to better capture the potential property value, while the current use standard would only allow the taxing jurisdiction to use a property value that reflects current use. Many countries adopt a current use standard for agricultural land, for example, to provide a subsidy for agricultural property, discourage the transformation of agricultural land for urban purposes, or protect often-poor agricultural property taxpayers.

Another policy choice has to be made to define the valuation methodologies. Many countries define a specific valuation method or methods in law and/or regulation, while other countries provide an option to choose from among the standard cost, income or comparable market value approaches. As explained in Annex TP-3 on the Assessment Basis, countries with limited market information often specify an additive valuation model that combines the use of zonal land values for land along with the cost approach for buildings. Some countries specify the valuation methodology to include the cost, income, and comparable (market) approach as determined in government regulation, while other countries provide choice discretion to the taxing jurisdictions (Kenya).

Action items:

✓ Review the assessment basis of the property tax.

Questions to Consider:

- Are the property taxes being assessed based on area and/or value?
- If using property value:
  1. Is the value assessment basis using a capital or a rental-value approach?
  2. Are values based on notional or market-informed/market-based values?
  3. What is the valuation standard being used (current use and/or highest and best use)?
- Are assessment standards and methods defined in law as policy or implemented as administration through regulations?
- Does the legislation prescribe the interval between valuations? Is this uniform nationally, or is there discretion given to the various taxing jurisdictions?
- Do local governments have discretionary options to choose the assessment basis used depending on local circumstances?
- Does legislation allow for indexation of property assessments between the revaluation intervals?

Note:

➤ See Annex TP-3 on Tax Assessment Basis for further details.

3.3.2 Tax Liability Assessment (Tax Rates and Abatement/Relief Schemes)

Using the property registry/valuation roll information, the government must levy the tax liability. The tax liability assessment function involves calculating and levying the property tax amount to be paid for each property by correctly applying the legally mandated tax rates and abatement/relief schemes.

As discussed in Annex TP-4, the detailed analysis would further explore the current property tax rate structures, which can range from a single flat rate to ever-increasing complex systems of classified rates and/or progressive rates. The detailed analysis would also focus on the important policy debate concerning the appropriate degree of local government tax rate discretion. The various tax abatement and tax relief schemes should also be included in this analysis to better understand possible alternatives in light of the revenue, equity, efficiency, and administration considerations.

Tax Rates. As Figure 7 illustrates, there are a number of policy choices for setting the tax rate structure. These policy choices are defined in laws and/or regulations. Typically, these are set by the central/state government. Some property tax systems allow discretion to local governments, some setting a maximum rate while others set minimum and maximum rates. Experts typically recommend that some bounded tax rate discretion be given to local governments to encourage more efficient revenue/expenditure decisions and improved government-citizen accountability.

Tax rate structures can vary by country and within countries, some quite simple and others more complex. Some use a flat uniform tax rate for all properties. Others use a classified tax rate structure that applies different tax rates to different types of properties, while some use a progressive rate structure that applies increasingly higher tax rates on properties based on their size or value.

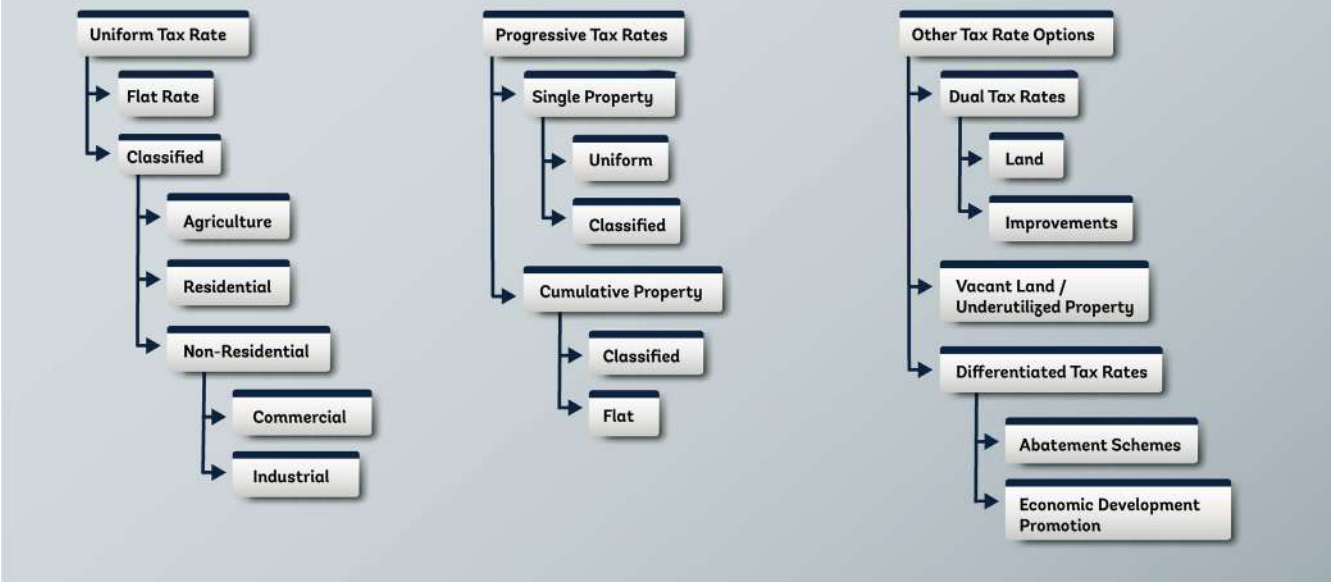
As indicated in Figure 7, there are a variety of other rate structures. For example, some taxing jurisdictions apply a dual-rate system where the tax law allows one tax rate to be applied to the land component with a different tax rate applied to the improvements/buildings. In contrast, some countries provide for two different property taxes under separate laws—one law as a land tax with one rate structure and a separate law as a building tax with a different rate structure.

> **“Tax rate policy choices must recognize the distinction between statutory tax (those defined in law) and effective tax rates (those “felt” by the taxpayer).”**

Taxing jurisdictions are often allowed to tax vacant land/property at a higher rate to encourage the development and use of underutilized real estate. Differential tax rates can also be applied to provide partial exemptions, abatement and relief schemes for political, social, and economic objectives. Commonly lower tax rates may be applied to agricultural property, owner-occupied residential housing, properties used for social objectives, and/or to promote economic/regional development.

Some countries allow a mixture of these tax rate structures across their taxing jurisdictions.

Figure 7 | Tax Rate Policy Choice Decisions



Source: Roy Kelly 2020.

For simplicity, a flat uniform rate should ideally be levied with the differences in property tax paid being dependent on the relative differences in property value. If a classified structure is chosen, the number of rates should be few, for example, perhaps only for agriculture, residential, and non-residential property for revenue, efficiency, equity, and administrative purposes. Experts typically agree that progressive tax rates should be discouraged for property tax and be largely limited to progressive income taxes at the central government level. Although rare, there are some countries in Latin America that apply progressive property tax rates to individual properties. The Republic of Korea (South Korea) is perhaps the only country that has successfully applied a progressive property tax rate with respect to an individual's total property value within the country.

Tax rate policy choices must recognize the distinction between statutory tax (those defined in law) and effective tax rates (those "felt" by the taxpayer). Although the statutory rate is important, the effective tax rate ultimately determines revenue yield, efficiency, and equity. Effective tax rates are calculated as the amount of actual tax paid as a percentage of property market value.

Property tax systems often provide for some transitional relief to make the property tax reform more gradual and palatable to citizens when there may be a sudden increase in property tax burden. For example, when a taxing jurisdiction introduces an updated valuation roll, the tax rate may be adjusted downwards and/or there may be a phasing in of the revised valuations.

Action items:

✓ Review the property tax rate structures and applicable tax abatement/relief schemes.

Questions to Consider:

- What is the tax rate structure (flat, classified, progressive, and/or others)?
- How is the tax rate determined (fixed in legislation, indexed, needs-based, other)?
- Do local governments have any discretion in setting the tax rate structure and rate levels?
- Is there a prescribed minimum and/or a maximum tax rate?
- What are the conditions which allow local government rate discretion?
- Aside from tax rate limits, are there other measures in legislation or imposed by a higher-level government that constrain property tax rates? (for example, percentage limits on rate changes, or revenue changes)
- Are "fractional assessments" used prior to levying the tax rate?
- If fractional rates are used, are they uniform or differentiated by property use, location, or ownership? Are these set in legislation? Is there local level discretion?
- Are there any measures designed to provide a disincentive, such as vacant land or underutilized housing/properties tax? If yes, describe them.

Note:

➤ See Annex TP-4 on Tax Rates for further details.

Tax Abatement/Tax Relief Schemes: Effective tax rates often differ from statutory rates due to policy decisions linked to exemptions, valuation deductions, valuation assessment ratios, differential tax rates, and tax credits as well as by the quality of the tax administration in terms of coverage, valuation, tax liability assessment, and collection. In the Philippines, for example, the legal tax rate is 2 percent, but due to the use of fractional assessment, deductions, credits, and administration challenges, the effective tax rate has been estimated to be as low as 0.07 percent (Guevara, Gracia, and Espano 1994, as quoted in Bird and Slack 2004).

Tax abatement and tax relief schemes must also be considered under the tax liability assessment function. These abatement and relief schemes are policy choices made to reduce the amount of tax liability to be levied on an individual property owner through the use of tax base valuation deductions and tax credits, and differential tax rates, often targeted for social/equity objectives.

Property abatement/relief schemes vary by country and taxing jurisdictions. Some typical abatement/relief schemes are targeted for veterans, owner-occupied housing, and lower-income groups. These schemes are structured to reduce the effective tax rate on a property by providing valuation deductions, credits, and/or differential tax rates. Schemes targeted for low-income property owners are designed to offset the perceived progressivity of the property tax.

As with the property tax rate structure, countries vary in the level of discretion given to local governments in determining the abatement/relief schemes.

As explained in Annex TP-4, countries which provide local government discretion on tax rates and abatement/relief schemes should be careful to ensure that any intergovernmental transfer formulae are based on local level property tax potential, assuming standard rates with no special discretionary abatement/relief schemes.

Action Items:

- ✓ Examine the tax abatement/relief schemes, structures and their rationale
- ✓ Estimate their implications on revenue loss, equity, efficiency, and administration costs to the extent possible

Questions to Consider:

- Do local governments have any discretionary power to provide additional tax abatement/tax relief schemes?
- If local governments provide these abatement/relief schemes, what are the implications for intergovernmental fiscal transfers?
- Aside from (or in addition to) tax rate differentials, are categories of residential property or their occupants eligible for reduced assessments or taxation? If yes, describe any such relief, noting eligibility criteria, application requirements, and whether there is any means-testing. Often, homesteads (primary residences) are completely or partially exempt; relief may also be accorded to the elderly, the poor, and veterans.
- Aside from (or in addition to) tax rate differentials, are categories of agricultural residential property (or their occupants) eligible for reduced assessments or taxation? If yes, describe.
- Are there any categories of exemptions or other relief measures that are designed to provide an incentive for preservation, rehabilitation, or new development and/or economic development investment? If yes, identify them, including their purpose, relief mechanisms, and duration.

- Are there any measures designed to provide disaster relief (for example, earthquakes, floods, droughts in the case of agriculture) If yes, identify them, including their purpose and other details.

Note:

- See Annex TP-5 on Tax Abatement/Relief Schemes for further details.

3.4 Property Tax Administration

All policy choices have administration implications. In fact, in a real sense, "Tax Administration is Tax Policy" (Casanegra de Jantscher 1990), as tax policy is implemented and only realized according to the quality of tax administration. As such, there will be a need for further detailed analysis of the key administrative variables to fully understand the administrative challenges and identify and design effective interventions.

Tax administration analysis would also begin with a review of the laws, regulations, and administrative procedures and systems affecting the key administrative functions linked to tax base coverage, valuation, tax liability assessment, and collection/enforcement. The analysis should also cover the legal and cultural aspects of property, the availability of up-to-date property records, including the extent of the property cadastre, as well as the institutional capacity related to property information management.

The property tax administration variables focus on capturing the tax base coverage, improving the absolute and relative property valuations, ensuring proper application of tax liability assessment policies, and enhancing revenue collection. While the policy variables determine the potential revenue yield, equity, and efficiency, governments can only realize these potential results through effective property tax administration.

In fact, property tax revenues can be substantially improved by improving the coverage, valuation, tax liability assessment, and collection ratios alone. Without any changes in tax policy, tax administration can improve the coverage ratio by more effectively capturing and updating property information from taxpayers, third parties, and/or through field survey work. If a taxing jurisdiction was only capturing 50 percent of the taxable properties but is now capturing 60 percent, the potential revenue to be collected will have gone up by 20 percent [(0.6 **CVR**-0.5 **CVR**)/0.5 **CVR**], holding everything else constant.

Improvements in tax administration alone can dramatically improve revenue yield. That is, while individual improvements in each administration ratio can directly affect revenue performance, improving multiple ratios, even with small changes, can make a dramatic impact on property tax performance. For example, a property tax system which was only capturing 50 percent of the taxable properties, 50 percent of their market value, and 50 percent of their billed tax liabilities would only be capturing 12.5 percent of the potential property tax revenues (that is, 0.5 **CVR** * 0.5 **VR** * 0.5 **CLR**). If the tax administration could improve each administration ratio to a 60 percent efficiency by introducing incremental improvements in the coverage, valuation, and collection ratios, the taxing jurisdiction would be able to collect 21.6 percent (that is, 0.6 **CVR** * 0.6 **VR** * 0.6 **CLR**) of the potential revenue yield, an increase of 72.8 percent (21.6 percent−12.5 percent)/12.5 percent)!

> **“Improvements in tax administration alone can dramatically improve revenue yield!”**

As outlined in Annexes TA-1 to TA-4, there are a number of administration considerations and options which can help improve these key administration ratios. Understanding better the current situation within the taxing jurisdiction of concern will enable the practitioner to identify possible remedial actions to overcome the administrative challenges.

3.4.1 Tax Base Coverage

While tax base policy choices define the potential property tax base and its assessment basis, it is through property tax administration where this property tax base potential is identified, captured, recorded, and maintained.

The administration review would include a broad look into the processes linked to identifying, capturing, updating, and maintaining the property information affecting the property tax base coverage. The tax base coverage function provides the foundation of the property tax registry, also known as the fiscal cadastre. This property tax registry consists of two key sets of information, namely, (a) taxpayer information such as name, address, and relevant taxpayer characteristics and (b) the property’s physical characteristics such as location, size, land and building use, building structure, construction materials, age, and condition, among others. The specific taxpayer and property characteristics to be included depend on the policy structure within each jurisdiction.

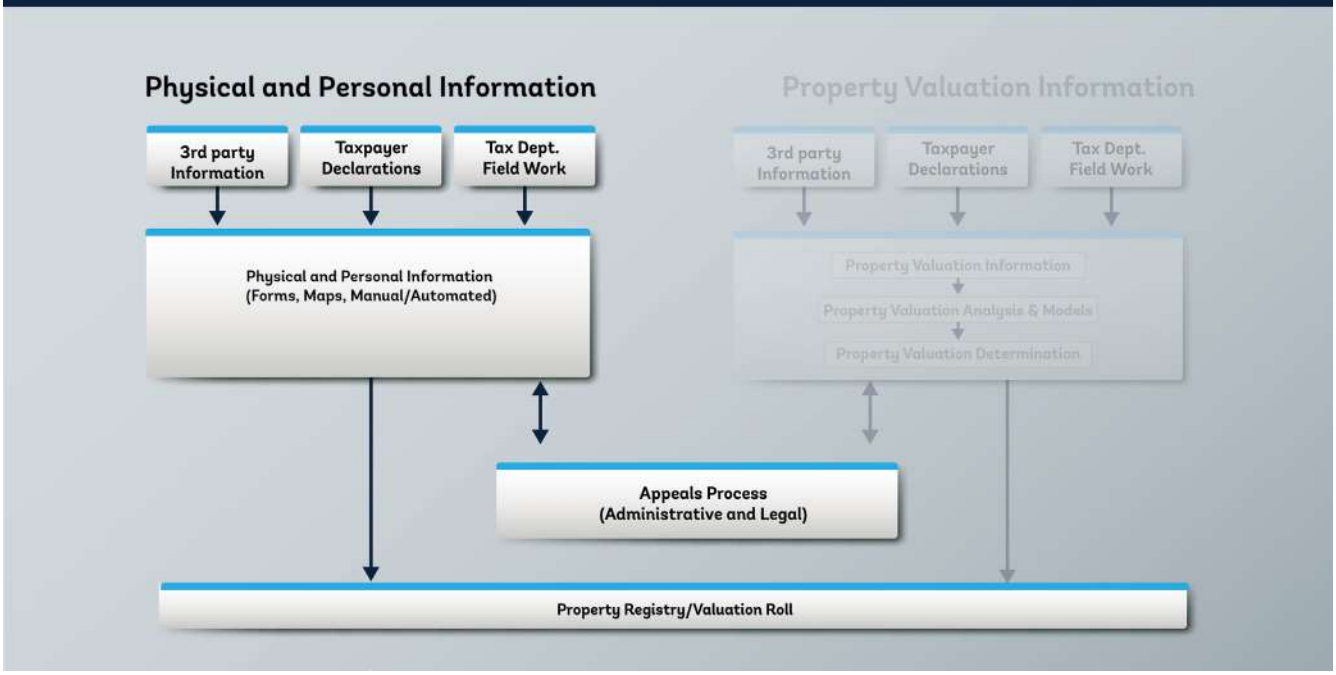
The key objective is to identify the major challenges and opportunities to enable all properties, defined as taxable under the existing property tax policy, to be captured on the property tax registry, also known as the property tax roll. The information on the tax roll is typically assembled through a combination of approaches, relying on the taxpayer to periodically submit a property declaration form, tapping into third-party property information (such as from the property registry, banks, notaries, and others), and from proactive government fieldwork to audit these data and capture and update other property data. These data can include both alphanumeric and spatial/graphical data (for example, maps and photographs) and are managed either manually or through automated systems.

Tax base coverage involves the capture and maintenance of basic property tax base information. As shown in Figure 8a, property tax administration gathers this information from taxpayers, third parties (such as other government departments, banks, notaries, and others) and/or field exercises, and produces a taxable property registry. The information can include a mixture of alphanumeric and spatial information on the taxpayers and the physical property location and characteristics such as land and building area, land and building use, building characteristics (including construction materials and quality of construction), utilities and other amenities. These are normally collected using physical forms or on a digitized tablet, with all information maintained either manually or in an appropriate computer-based property information management system, which often includes a Geographic Information System (GIS) component.

The tax administration objective is to ensure a comprehensive property tax registry that contains all taxable properties in the jurisdiction, with the necessary taxpayer and physical characteristics to enable each property to be assessed and levied the proper amount of property tax. This involves the identification of the property, the capture of the required information, and the management of that information to ensure that the information is kept up-to-date and accurate. While some property tax systems are maintained manually, most property tax systems increasingly rely on computer systems to manage and maintain at least the alphanumeric property information. While increasingly maps are being managed and maintained through GIS systems, there are still many property tax systems that rely extensively on paper maps.

Further details on the challenges and opportunities for improving the coverage ratio can be found in Annex TA-1 on Improving the Coverage Ratio (**CVR**).

Figure 8a | Property Tax Base Administration



Source: Roy Kelly 2020.

Action items:

- ✓ Use a business process analysis to trace through the cadastre coverage process, identify the process inefficiencies, and suggest remedial interventions for improved property tax base coverage.
- ✓ Estimate the level of completeness and accuracy of the property information on the property roll.
- ✓ Estimate the number of properties that are not captured on the tax roll.

Questions to Consider:

- Are there published standard operating procedures (SOPs) for property tax-related data collection and data management? If yes, review SOPs to explore ways to streamline and improve efficiency, data accuracy, and integrity.
- What taxpayer and physical information is being collected and maintained for property tax purposes?

- How is the property information being collected, maintained, and managed?
- To what extent is this property-related information being maintained manually or managed through computerization? Is GIS embedded in the system, or is spatial/mapping information being managed manually?
- What is the level of completeness and accuracy of the property information on the property roll? What is the estimated number of properties that are not captured on the tax roll?
- Are taxpayers required to submit property declarations? If so, describe the process, requirements, procedures, and forms?
- What are the third-party sources for tax base coverage-related information? Are they required to share that data for property tax administration purposes? Are information sharing agreements/protocols in place?
- What is the government process and experience for their audit and updating of the property tax-related information, including estimated costs?
- Has the private sector been contracted for field data collection? What is the experience to date, costs, accuracy of information?

Improving the Property Tax Base Coverage (CVR)

Case studies in low- and middle-income countries suggest that the coverage ratio for the property tax may range from 40–80 percent (Bird and Slack 2004, Kelly 2000, De Cesare 2012, UN-HABITAT 2011). The extent of the low tax base coverage depends on the speed of property market changes and building construction rates as well as on the administrative system, procedures, and capacity to capture these changes on the property roll. The administrative challenge is to ensure that this basic property information is complete, up-to-date, and accurate—that is, to maintain the coverage ratio as close to 100 percent as possible to capture the total potential tax base.

Action items:

- ✓ Roughly estimate the Coverage Ratio (**CVR**). The **CVR** can be estimated by identifying a sample of zones within the taxing jurisdiction, taking a census of the properties within those zones, and comparing the data on the tax roll record with what is found in the field. Ideally, the focus should not be on counting the number of properties per se, but rather on identifying the types of properties and data quality in terms of area and property characteristics used to estimate the property tax base. The important

coverage ratio is not the number of properties missing, but rather the amount of the property tax base coverage that is missing.

✓ Calculate other coverage-related ratios to more fully estimate the property coverage problem. Although there are no international benchmarks for the following ratios, these may be useful when compared across taxing jurisdictions within a country:

- Number of Taxable Residential/Commercial Properties per Urban Population by taxing jurisdictions. This number can be compared to the ratio between population and average household size in a specific country and across taxing jurisdictions.

- Number of electricity connections (residential and commercial) compared to the number of recorded residential and commercial properties on the tax roll. Note that the electrical connections may be overestimated, as there may be more than one electricity meter per taxable property; they may also be underestimated in areas with low electricity coverage.

- Number of commercial and residential water connections compared to the number of commercial and residential properties. Note that this may also be an underestimate as there may be many taxable properties without municipal water connections.

Notes:

➤ See Annex TA-1 on Improving the Coverage Ratio (**CVR**) for further details.

As shown in Table 7 below, variations of these approaches were used to estimate the rough property tax coverage ratio in Myanmar in 2017.

Table 7 | Coverage Estimates using Fiscal Cadastral Records & Electricity Connections (Myanmar)

	Hpa-An	Taunggyi	Insein township (YCDC)	Pazundaung township (YCDC)	Hlaing township (YCDC)
Fiscal Cadastral record (2017)	**8,494**	**33,656**	**20,145**	**2,125**	**11,884**
Urban population (2014)	75,884	266,490	305,283	48,455	160,307
"Urban" households (2014)a	16,055	57,709	61,676	10,306	32,837
Officials' estimate (2017)	13,000b	45,000c	–	–	–
Electricity connections (2017)	31,000 (approx.)	37,401d	52,264	15,723	43,000 (approx.)
Coverage gap % based on officials' estimates (lower bound)	35	25e	–	–	–
Coverage gap % based on electricity connections (upper bound)	73	37	61	87	72

a- "Urban" households for Hpa-An and Taunggyi are an estimate based on the number of households reported in the Census for the entire township, scaled by the percentage of the urban population; 100 percent of reported households in YCDC townships.

b- Midpoint of a range of estimates based on the number of properties according to ward-level census data and the average household size for Kayin State. Corroborated in interviews with the local Township Development Affairs Committee. Does not include commercial properties.

c- From interviews with DAO officials. Includes properties in the sub-townships where the DAO spends money.

d- Only for 22 wards of Taunggyi City and so should be compared with the 23,516 records on the digital cadastre.

e- A count of properties from satellite imagery of the smallest ward in Taunggyi (located downtown and likely to be one of the more well-covered areas with relatively little inward migration) revealed a coverage gap of around 20 percent.

Sources: Ministry of Electricity and Energy, DAOs, YCDC, authors (as quoted from Lachlan and Hein 2017, 26).

3.4.2 Tax Base Assessment / Valuation

Under an area-based property tax system, the property tax liability can be determined based on the physical characteristics of the property, namely the size of the property. However, under a value-based property tax system, the properties must be valued. This requires establishing property values to be applied to the various properties captured on the property registry.

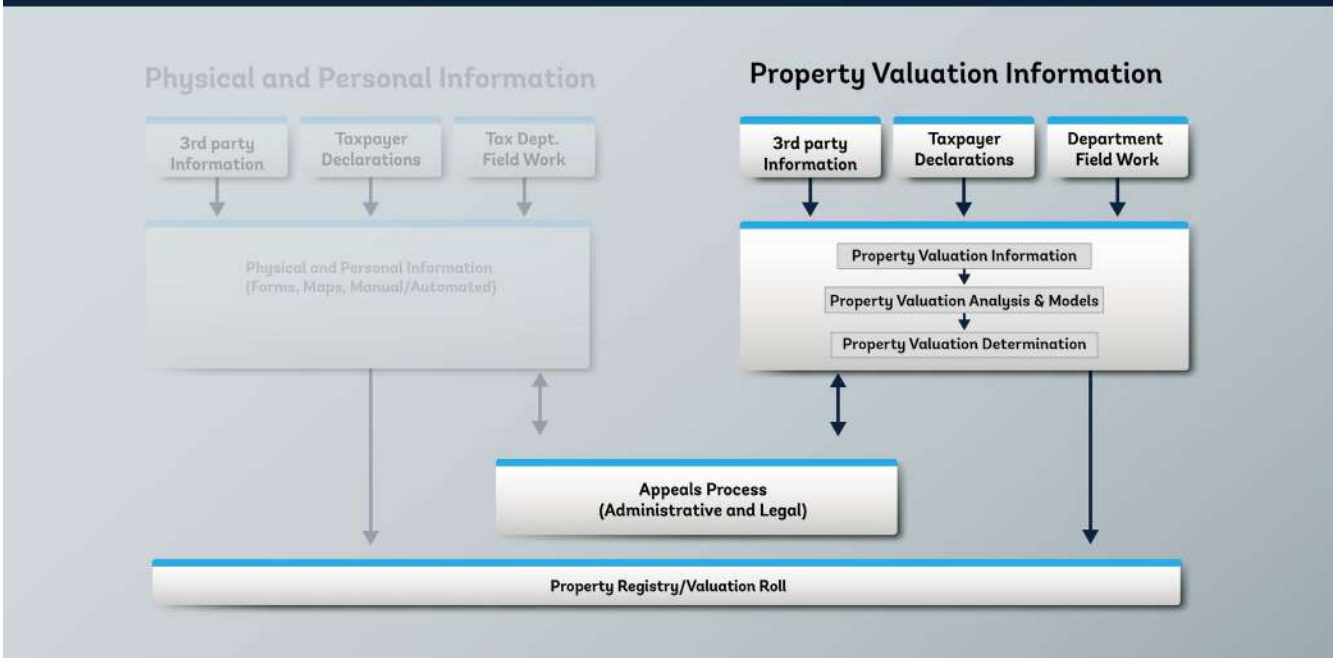
Property valuation systems vary considerably across countries, some largely based on notional values and others based more on market-informed or market-based values. Estimating these property values requires the taxing jurisdiction to gather and analyze market information/ evidence and develop valuation models that can link property market-related information to determine appropriate values to be used for property tax purposes.

As Figure 8b illustrates, these market value data can come from taxpayers, third parties such as notaries, banks, housing agents and developers, and/or from such government agencies dealing with land, housing, public works projects, and taxation. These market-related data would include sales, rents, listing prices, declared valuations for the transfer tax, construction cost tables, bank valuations for housing loans, among others. These property valuation data must be collected, managed, and analyzed. This information is then applied to the property information contained on the property registry to create a valuation roll. That valuation roll is then used by the taxing jurisdiction as the basis for applying the tax rates, adjusted for various abatement and tax relief schemes, to determine the tax liability owed by each property.

Value-based systems include an appeals process to provide taxpayers an opportunity to seek clarification, justification, and possible adjustments of the estimated property values used for taxation purposes. These appeals systems typically include an administrative and judicial appeal process with details in laws and regulations. The appeals process may result in correcting taxpayer and property physical characteristics on the property tax registry as well as possibly adjusting the estimated property value to be included on the valuation roll.

In practice, the property tax base coverage and property valuation functions are closely integrated, as the estimated property valuations must be applied to specific properties as captured on the property registry. As illustrated in Figure 8c, these two functions are often administered jointly to produce the valuation roll, although perhaps by two different subgroups within the property tax department. In some property tax systems, the valuation function may be carried out by a separate property valuation department, even at a different level of government, while the property information on the taxpayers and the tax properties may be carried out by the tax department at the local government level.

Figure 8b | Property Valuation Administration



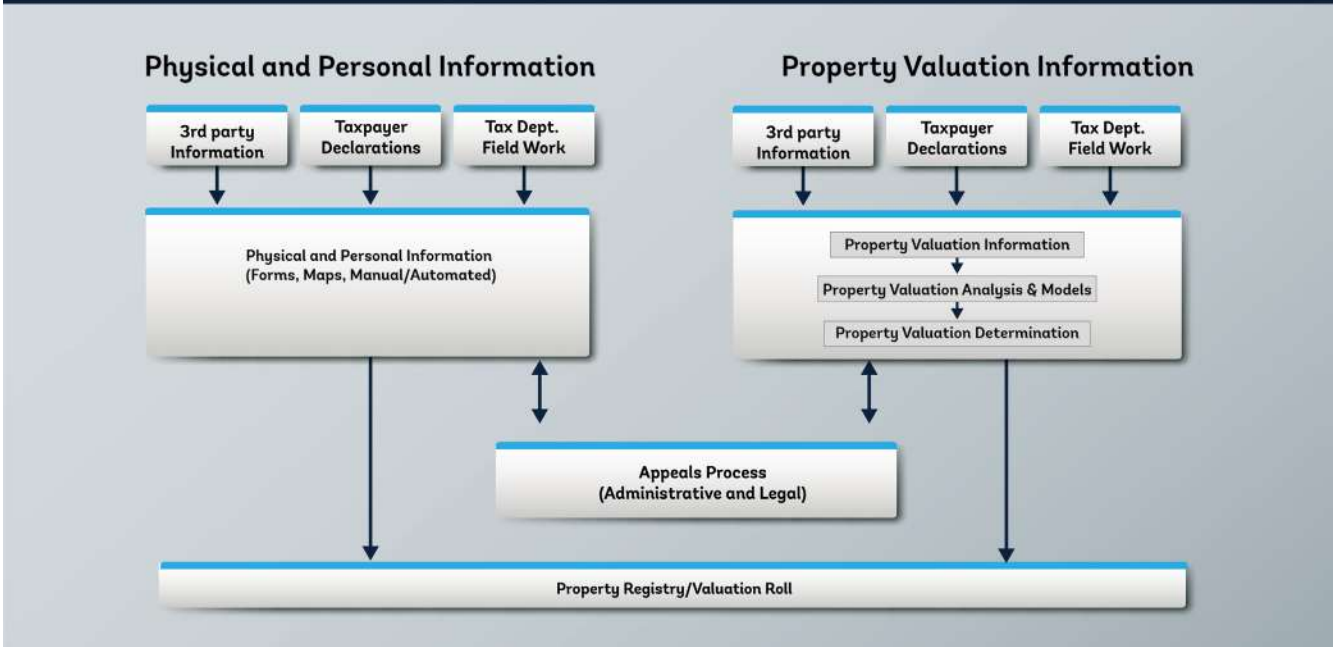
Source: Roy Kelly 2020.

The coverage and valuation information are closely linked and interconnected as the property characteristics largely determine the property values. Using these sources of information, appropriate valuation models can and should be developed and applied in a cost-effective, mass-valuation approach. These valuation approaches range from using simple land value zones and cost tables for buildings in many low- and middle- income countries to more complicated, statistically-based models used in several higher-income countries.

Although these two cadastre functions (for example, tax base coverage and valuation) are often jointly administered, international best practice is to always separate these two cadastre functions from the treasury (tax liability assessment and collection) functions to improve transparency and avoid the impression of possible collusion/conflict of interest between the property valuers, tax collectors, and taxpayers. It also helps ensure objective, independent, and equitable property valuations and transparent and accountable tax collection.

Property valuation appeals processes are an integral part of the assessment/valuation system to ensure quality, transparency, and accountability. Appeals systems need to provide opportunities for speedy, economic, and responsive taxpayer appeals while simultaneously recognizing the legitimate interests of the tax administration. Typically, appeals systems include both administrative and legal appeals. Appeal systems designed for other taxes may not be workable in property taxation.

Figure 8c | Property Tax Base and Valuation Processes



Source: Roy Kelly 2020.

Action items:

- ✓ Gather information on the valuation roll accuracy, updates and revaluation, recordkeeping, and other administrative aspects to analyze property valuation operations.
- ✓ Examine the assessment/valuation appeals process.

Questions to Consider:

- Are there published SOPs for property assessment/valuation? If yes, review SOPs to explore ways to streamline and improve efficiency, equity, and integrity.
- What are the government processes, procedures, and experience for property tax assessment/valuation, including estimated costs?
- Is the current property tax assessment/valuation roll up to date? If not, when is the most recent assessment/valuation roll dated? What are the possible reasons for the delay in updating the valuation roll (political, capacity, funding, other)?
- What are the relative and absolute accuracies of the assessment/valuations across properties? To the extent possible, estimate the absolute valuation ratio and the relative equity of the assessment/valuation process using a sample of properties.

- Are property taxpayers allowed to self-value their properties? If so, what are the audit/oversight procedures to ensure relative and absolute accuracy?
- Has the private sector been contracted for property valuation purposes? What is the experience to date (and estimated costs)?
- What is the assessment/valuation appeals process? For example, what are the administrative and judicial appeals process, procedures and timelines?
- Can third parties also challenge property assessment/valuations? Is there an independent valuation tribunal for administrative appeals? What is the role of the courts?
- What were the number of appeals/objective during the last revaluation process? What were the results from those appeals in terms of property assessment/valuations adjusted?

Estimating the Valuation Ratio (VR)

Case studies, especially in low- and middle-income countries, suggest that the valuation ratio for properties may be no more than 30–40 percent, with large variations in the accuracy of the relative valuations (Bird and Slack 2004, Kelly 2000, De Cesare 2012, UN-HABITAT 2011). Although valuations may be relatively more accurate when first produced, this accuracy erodes over time due to shifts in relative and absolute market values. These low valuation ratios and the variation across property values create efficiency and equity distortions, which subsequently impact the compliance level and the revenue yield from the property tax.

Estimating the valuation ratio requires collecting market-value information on a set of representative properties and comparing the values captured on the property valuation rolls with those market values. The market value information can come from a variety of sources, including market transactions, rental contracts, notary reports, bank loan information, property foreclosure information, housing and property development reports, official and unofficial property valuers, and sales agents.

Another source of property value can come from information as recorded under a stamp duty, property transfer tax, or capital gains tax. Unfortunately, high tax rates often used for property transfer taxes and stamp duties encourage dramatic under- and inconsistent reporting of potential market value information, while income tax secrecy laws may restrict the use of property value information available under the capital tax system. Regardless of the information source, caution should be applied in validating the market information to the extent possible, recognizing the inherent biases of each source.

Action items:

- ✓ Estimate the valuation ratio (**VR**) to determine the level of overall under/over valuation of the tax base that will affect the revenue yield.
- ✓ Estimate the relative consistency of the valuation ratio across property types to ascertain the extent of property valuation consistency that will affect the equity.

Notes:

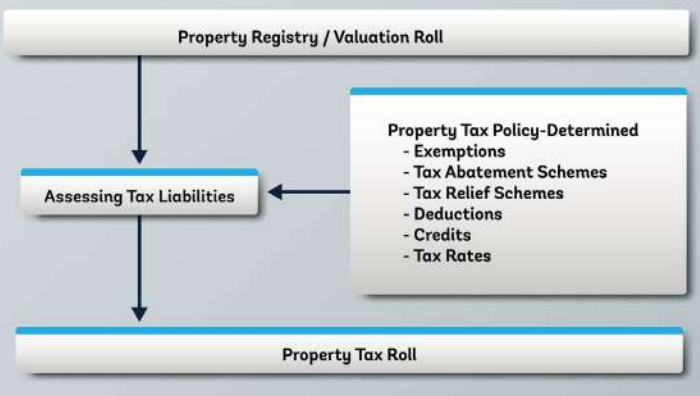
- ➤ See Annex TA-2 on Improving the Tax Base Valuation Ratio (**VR**) for further details.

3.4.3 Tax Liability Assessment

As illustrated in Figure 9, the tax liability assessment process involves applying the tax rate and abatement/relief scheme policy choices to the previously prepared property registry/valuation roll. The quality of the tax liability assessment process is highly dependent on the complexity of the rate structure and abatement/relief schemes, the quality of the tax administration staff, and the level of oversight.

The simpler the rate structure and abatement schemes and the higher the quality of capacity and oversight, the more accurate will be the calculation of the tax liabilities. Having a clear, simple set of policy guidelines, along with computer-assisted tax liability calculations and proper oversight, can dramatically improve tax liability calculations.

Figure 9 | Tax Liability Assessment Process



Source: Roy Kelly 2020.

The Tax Liability Assessment Ratio (TLR), as shown earlier in the property revenue equation in Figure 4, measures the accuracy of the property tax administration in correctly applying these policies to calculate the individual tax liability for each property. Further details can be found in Annex TA-3 on Improving the Tax Liability Assessment Ratio (TLR).

Action item:

- ✓ Review the tax assessment liability process to understand the application of the tax exemptions, tax abatement schemes, tax relief schemes, deductions, credits, and tax rates.

Questions to Consider:

- Are there published standard operating procedures for tax liability assessment? If yes, review SOPs to explore ways to streamline and improve efficiency, accuracy, and integrity.
- What is the process for applying the various tax policy parameters to determine the tax liabilities (for example, differentiated tax base exemptions, factional assessments, deductions, credits, and tax rate structures)?
- Is the tax assessment liability process automated or manual?
- What is the system of oversight and appeals/dispute resolution on the tax assessment liability?

Estimating the Tax Liability Assessment Ratio (TLR)

The TLR measures the quality of the administration of the tax liability assessment process, namely the application of the proper tax rate, deductions, and credits per the law and regulations. Estimating this ratio would require taking a random sample of property tax bills to gather the assessed tax liabilities along with the information needed to calculate such liabilities. The ratio of the actual tax bill liability as a percentage of the appropriate tax bill liability would be an estimate of the TLR.

Action item:

- ✓ Estimate the Tax Liability Assessment Ratio (TLR).

Note:

- ➤ See Annex TA-3 on Improving the Tax Liability Assessment Ratio (TLR) for further details.

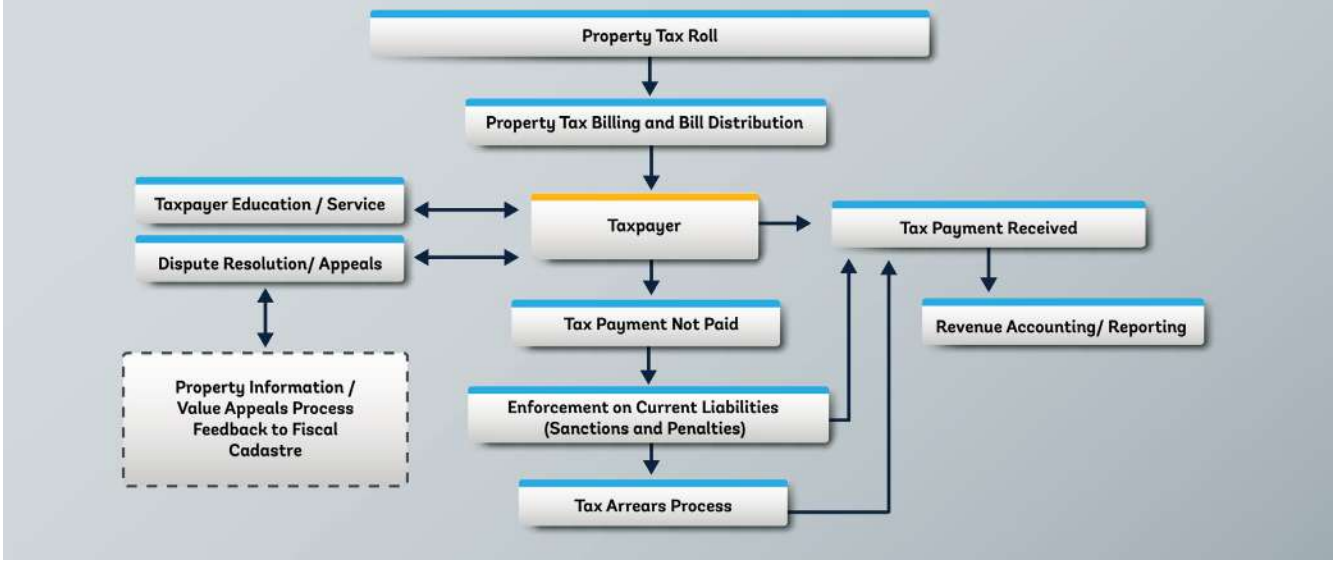
3.4.4 Tax Collection

Property tax collection processes and procedures must be analyzed to understand the challenges and opportunities to improve revenue collection of current liabilities and arrears. Revenue collection administration is the key to turning potential property tax revenue as captured on the property registry, valuation roll, and tax roll into realized property tax revenue.

Using the property tax roll information, the taxing jurisdiction must notify taxpayers of their tax liabilities, informing them of the specific tax amount to be paid and the payment process. Along with taxpayer education and service, the government must encourage voluntary taxpayer compliance while being ready to take action against noncompliance. Ultimately, the property tax amount must be collected to transform the potential property tax revenue, equity, and efficiency objectives into reality.

As Figure 10 illustrates, the property tax collection process begins with notifying taxpayers of their tax liability. While providing taxpayer education and service and resolving disputes and appeals, taxpayers are encouraged to pay their taxes. Delinquent taxes are then subject to sanctions and penalties to encourage the collection of arrears. Most countries, for example, require all outstanding property taxes to be paid prior to the legal transfer of property titles. All collections should be accounted for in a timely and transparent manner.

Figure 10 | Property Tax Collection Process



Source: Roy Kelly 2020.

Priority should be placed on encouraging voluntary compliance. Voluntary compliance can be encouraged through providing taxpayer education and service to ensure taxpayers understand the rationale for property taxation and its connection to funding essential public services as well as their responsibilities and rights under the property tax law.

As Box 3 shows, property tax collection administration involves four major steps. Taxpayers must be notified of tax liability, they must be convinced to pay, tax payments must be received and properly accounted, and those taxpayers in noncompliance must be encouraged or forced to pay.

Taxpayers must be notified of their tax liabilities, typically through individual bills, although some countries also rely on collective public notification. Tax bills can also include information on payment procedures and often will provide information to taxpayers on how their tax monies are being spent. Tax bills are typically distributed through a combination of manual and postal systems. Technology adoption and system modernization are also leading to easier access to tax payment information, including viewing and downloading tax bills, through mobile- and web-portals.

Taxpayers must be convinced to pay their taxes. This requires an active taxpayer/public education campaign that will inform citizens on the role of property taxation, how the money is collected and spent, and taxpayer rights and obligations under the law. A key concern is how to reduce the compliance costs to the taxpayer, making it as easy as possible to pay and ensuring the professional behavior of the tax administration to deliver equitable and transparent treatment of all taxpayers.

Along with proactive taxpayer education/service, property tax systems also have policies and procedures to handle disputes and appeals. Some disputes and appeals relate to the accuracy of the property taxpayer information, which may require updating names and addresses, while some may relate to the property's physical and value information, which may need to be handled by the property valuation appeals process. There may also be disputes regarding the tax liability assessment process, which would require a review to ensure that the appropriate tax rates and abatement/relief schemes were properly applied to the specific property.

Voluntary compliance can be encouraged through improved administration linked to simplified payment procedures and related incentives, sanctions, and penalties. Payment procedures must be clear regarding payment options, payment locations, the number of installments, and deadlines. Taxing jurisdictions may also offer payment incentives such as discounts for early and full payments. Incentives can also be designed to encourage tax department collectors to improve their performance (Khan et al. 2016). In cases of noncompliance, sanctions are usually imposed, such as withholding building permits, the right to transfer property, and/or the inability to access other location-specific local government services. In addition, penalties for non-compliance typically include late payment fees and/or interest payments on outstanding arrears as well as seizure and auction of movable and immovable property.

Box 3: Steps in Property Tax Collection

1. Taxpayers must be notified of tax liability

- Prepare tax notification: individual bills and/or public notification
- Use tax liability notification to provide feedback to taxpayers
- Bill delivery options (manual, postal, third parties)

2. Taxpayers must be convinced to pay tax liability

- Improve public relations and show improved public services
- Improve taxpayer service, resolve disputes and handle appeals
- Reduce compliance costs
- Use combination of incentives, sanctions, penalties

3. Tax payment must be received and properly accounted

- Improve tax revenue accounting and transparency
- Minimize compliance and administrative costs
- Use payment points (banks, town hall, internet, mobile banking, other)
- Allow installment option, with incentives

4. Taxpayers in noncompliance must be encouraged/forced to pay the tax liabilities

- Use public relations to encourage compliance
- Apply late payment penalty & interest on unpaid liabilities
- Apply risk management strategies to target compliance activities
- Use combination of sanctions and penalties, including tax liens and tax clearance certificates
- Recover arrears/debts through seizure and sale or movable immovable property

Source: Adapted from Kelly, 2013b

Property tax payments received must be properly recorded, managed, and audited to ensure transparency and accountability. Ideally, most payments would be made through the banking system, including the use of ATM machines, e-payments, and m-payments. All cash payments manually received by field collectors should be deposited to the property tax collection accounts within 24 hours. The tax payment system must include a system of issuing taxpayer receipts and using deposits slips to ensure proper accounting of all collections. Accounts should be able to identify those collection amounts from current liabilities and those from arrears to inform appropriate policy interventions.

In cases of nonpayment, the tax administration creates a delinquency list upon which various sanctions and penalties are applied as defined in law and regulation. The collection and enforcement policies, procedures, and strategies, although linked, are typically different from those applied to current liabilities and those applied to delinquent or accounts in arrears.

Action items:

- ✓ Review the property tax collection process and procedures to understand the challenges and opportunities to improve the revenue collection, both on current liabilities and arrears.

Questions to Consider:

- Are there published SOPs for revenue collection, including enforcement? If yes, review SOPs to explore ways to streamline and improve compliance, efficiency, and equity.
- What is the tax liability billing/notification process, and how is the tax liability assessment and billing/notification system linked to the fiscal cadastre/valuation roll?
- What are the tax payment processes and procedures? These could include tax due dates, payment options/locations, number of installments, and taxpayer service.
- What type of incentives, sanctions, and penalties are provided to encourage timely compliance?
- Which agency or agencies are responsible for revenue collection and enforcement?

Estimating the Collection Ratio (CLR)

Property tax collection levels vary considerably across countries. Collection rates in most OECD countries are close to 100 percent, while in most non-OECD countries, collection ratios are estimated to only range between 30 and 60 percent (Bird and Slack 2004; Kelly 2000, 2012; NIUA 2010; Youngman and Malme 2001; Mohanty 2016).

These low collection ratios are due largely to a mixture of political, cultural, and administrative factors, requiring intentional changes to encourage voluntary compliance and taking action against non-compliance. It is, therefore, critical to diagnose the collection processes, especially those related to the revenue administration policies, systems, and procedures.

The collection ratio is calculated as the amount of revenue collected as a percentage of total billed current tax liabilities for a specific year. Under this definition, the revenue collected would include revenues collected from current liabilities and revenues collected from outstanding arrears. Thus, many taxing jurisdictions calculate two collection ratios—one with current collections over current total billed liabilities and one with revenues collected from arrears over the total stock of arrears. The first ratio focuses on current collections, while the second focuses on collections on delinquent accounts.

In addition to the average collection ratio, as shown in Table 8, the analysis could include further examination of the collection of current liabilities and arrears by property type (residential, commercial, industrial), by size of tax payment liability, by location (neighborhood, political subdivision), and by the combination of those characteristics.

These revenue collection indicators would provide a sense of the revenue collection problem. To understand the underlying causes of these revenue collection challenges, it is essential to begin with a review of the legislation, system, and procedures related to collection and enforcement.

Action items:

- ✓ Calculate the average collection ratio on current liabilities.
- ✓ Calculate the average collection ratio on delinquent accounts (arrears).
- ✓ Estimate collection rates of current liabilities and arrears by property type, by the size of tax payment liability, by location, and by the combination of those characteristics.

Notes:

- ➤ See Annex TA-4 on Improving the Tax Revenue Collection Ratio (**CLR**) for further details.

Table 8 | Property Tax Collection Ratio Analysis

Measures	Details	Comments
Total property tax revenue collection efficiency	Total revenue collection over total annual liabilities	
Property tax revenue collection (current liabilities) efficiency	Actual current liabilities collections/annual taxable billed liabilities	
Property tax revenue collection (delinquent/arrears) efficiency	Arrears collections/ outstanding stock of arrears	
Outstanding arrears per annual current liabilities	Ratio of property tax arrears to current liabilities	To identify the magnitude of arrears and need for an arrears compliance program
Ratio of arrears collection to outstanding arrears		To identify the collection rate against arrears
Age of arrears 30, 60, 90, and over 180 days		Arrears profile
Revenue collection on outstanding arrears	Percent of revenue collected by arrears/ outstanding arrears	According to the TADAT Field Guide (2015), for example, the best practice would be to have the core arrears/total core tax collections for a fiscal year at less than 10% for which they would get an A. They would get a B for a ratio between 10-20%, a C for a ratio between 20-40% and D if that ratio would be greater than 40%.
Cost to collection ratio	Total budget costs of tax administration department as a percentage of collected property taxes	Full budget costs would be full costs of fiscal cadastre (coverage and valuation) plus a small % of the treasury office costs to cover the estimated overhead costs
Marginal cost to collection ratio	Marginal cost of collection (printing & delivering tax bills, collecting and accounting for tax revenue, noncompliance administration costs)	To calculate the threshold for exempting individual tax bill collections

Source: Roy Kelly 2020.

3.5 Institutional Review / Analysis

Understanding the broader political economy, the political, administrative, and fiscal decentralization framework, and role of municipal and local governments is critical as these broader structural characteristics are often both part of the problem and part of the solution.

Understanding the institutional structure is critical—knowing which agency is responsible for which property tax functions and activities, as well as their interconnectivity, interactions, and linkages. In addition, a stakeholder analysis should be conducted to identify the primary and secondary stakeholders, their interests, power, and influence, which will later be useful in designing and implementing reform recommendations. This macro perspective will also include an analysis of ongoing reforms such as those linked to taxation, PFM, fiscal decentralization, urban and rural development, agriculture, land and housing, and community development.

Understanding the specific institutional structure involved with property tax policy and administration is also important. Various countries and taxing jurisdictions organize their functions differently, often based on political, historical, and cultural legacy, the level of decentralization, and administrative capacity factors, among others. An institutional analysis should take stock of the existing structures and capacity, undertake an activity mapping exercise to possibly "unbundle" administrative functions based on economies of scale and possible institutional spillover factors.

In some countries, the property tax is essentially structured as a shared tax, with the policy and administration fully under the control of the central government, with the collected revenues shared with local governments, often even at 100 percent (Cambodia, Chile, Vietnam). In other countries, the property tax may be "co-administered" between the central and local governments (although the property tax base and revenues are allocated to the local government) or even completely administered on behalf of local governments by central government revenue agencies (Rwanda, and most recently, in Tanzania).

While there may be stated reasons of economies of scale and/or lack of local capacity, there may be other political reasons for centralizing property tax administration. While centralizing property tax administration may improve revenue collections, it may also result in lower levels of revenue collection due to a lack of central level priority to collect revenues going to a different level of government. Each case should be evaluated carefully to ascertain the pros and cons of how best to structure and evolve the property tax administration to ensure long-term, sustainable property tax revenues and its impact of enhanced governance and improved service delivery.

In most countries, the property cadastre, and especially the valuation functions, are kept separate from the treasury functions of billing, collection, and enforcement. This is to ensure the independence of the valuation function to avoid conflict of interest during revenue collection and enforcement and to establish a well-functioning appeals system. As explained in Annex TA-2, the fiscal cadastre/valuation function is sometimes a responsibility of a different level of government. For example, in North America, the property valuation may be the responsibility of the state or county government, while the treasury collection functions are the responsibility of the local government.

The quality of institutions depends heavily on the quality of staffing and resources as well as organizational, administrative, technical, and ethical aspects that allow for efficient, accountable, and transparent design and implementation of property tax systems.

The institutional analysis should also review areas of central-local government coordination, institutional responsibilities, capacity and performance related to land, buildings, property information, valuation, collection and enforcement, automation and computer technology, and possible public-private sector linkages that would help identify possible remedial interventions for inclusion into the strategic action plan.

Action items:

- ✓ Conduct an institutional analysis to assess the challenges and opportunities facing the agency or agencies responsible for the following functions:
  - Developing and approving property tax policy recommendations, developing policy papers, laws, and regulations
  - Collecting and maintaining the property tax-related data used to classify (and value properties, if applicable), and create the property registry or property valuation roll
  - If applicable, for (a) developing valuation models or tables and (b) applying those to assessable properties or occupancies
  - Determining and finalizing the tax liability assessments
  - Collecting property tax revenues and enforcing compliance
  - Handling and processing the disputes and valuation appeals

- ✓ Examine the inter-institutional linkages and information flows, including their legal and regulatory framework, challenges, and opportunities
- ✓ Review other institutional reforms such as those related to taxation, PFM, decentralization, urban and rural development, agriculture, land and housing, and community development.

Notes:

- ➤ See Annex TA-5 on Information Technology (IT) for Property Taxation for further details.

Remedial Strategies
(Developing a Strategic Implementation Plan)

4.1 Reform Strategy

4.2 Identifying and Prioritizing Remedial Interventions

IV.

As described in Part II, Step 4 of the PTDF involves identifying, prioritizing, and sequencing an appropriate set of recommended policy, administration, and institutional interventions into a possible SIP using the findings from the high-level situational analysis, the strategic assessment, and/or the detailed analysis and action identification. This SIP would include an estimate of the required resources and timeline for implementation.

> **"All policy choices have administration implications. In fact, in a real sense, "Tax Administration is Tax Policy", as tax policy is implemented and only realized according to the quality of tax administration."**

These recommendations would need to be context-specific, understanding the operating environment and the strategic policy and administration parameters. The specific recommendations should be integrated into an implementation strategy that provides short-term intervention opportunities for quick wins while enabling longer-term systemic reforms needed for sustainable property tax improvements in revenue yield, equity, and efficiency.

Development of the SIP will require extensive consultation with the related stakeholders to review underlying data, analysis and interpretation, consistency with government reform objectives, as well as relevance, tractability, and sustainability of possible interventions. This consultative dialogue process will help facilitate open discussion, brainstorming and sharing of insights, and a synergy of ideas with those closely involved with the policy and administration and those with a deep understanding of the operating environment.

Close collaboration with the relevant stakeholders can help in developing buy-in, prioritizing reform interventions, and developing a plan for further action. It will only be through a problem-driven interactive approach that will make it possible to successfully identify, prioritize, and sequence the priority policy, administrative, and institutional reform intervention into a SIP for the taxing jurisdiction.

4.1 Reform Strategy

One major challenge for property tax reformers is in identifying the most appropriate reform strategy. Based on the HLSA, SA, and DAAI, the reforms should comprehensively integrate and strategically sequence the suggested policy, administrative, and institutional interventions needed to improve revenue in an equitable and efficient manner. The reform strategy should create synergy across policy and administration to overcome obstacles and lay the foundation for sustainable property tax reform.

International experience suggests two stylized strategies that are typically followed in developing countries: valuation-led and collection-led (Kelly 1993, 2000, 2013a). Many reforms have been designed to emphasize updating the property tax valuation roll to improve potential property tax revenues, equity, and efficiency rather than placing priority equally on the collection functions which are required to realize any improvement in actual property tax revenues, equity, and efficiencies.

The valuation-led focus has been largely shaped by the experience in Canada, the United States, the United Kingdom, and other OECD countries where cadastre systems and tax collection function relatively well. Therefore, property tax administration reform priority in these countries typically focuses on improving the valuation ratio. The major opportunity for improving property tax performance in these country environments is the implementation of improved, cost-effective, accurate estimation of the market values used for property tax purposes.

However, property valuation in most non-OECD countries may not be the binding constraint. Rather, these countries face major obstacles in overall property tax administration. Basic property tax coverage is low with inaccurate, incomplete, and out-of-date information, often with contested and unresolved property rights. Property valuations also are low and inconsistent with major implications on potential revenue yield and horizontal and vertical equity. But perhaps most importantly, these countries face low actual revenue collection levels because of a lack of political will, administrative capacity, and ineffective billing, collection, and enforcement.

Unlike most OECD countries, where coverage and collection ratios may be close to 100 percent, low- and middle-income countries typically have coverage ratios estimated to range from 40 to 60 percent and collection ratios estimated to range from 30 to 60 percent. Therefore, property tax reforms in these taxing jurisdictions cannot afford to focus solely on property valuation; instead, while expanding the fiscal cadastre coverage and improving property valuations, they also need to focus on establishing accountable, fair, and efficient revenue collection and compliance systems. Property tax reforms must include discussion with all stakeholders to ensure that the problems and possible solutions are not single-focused but

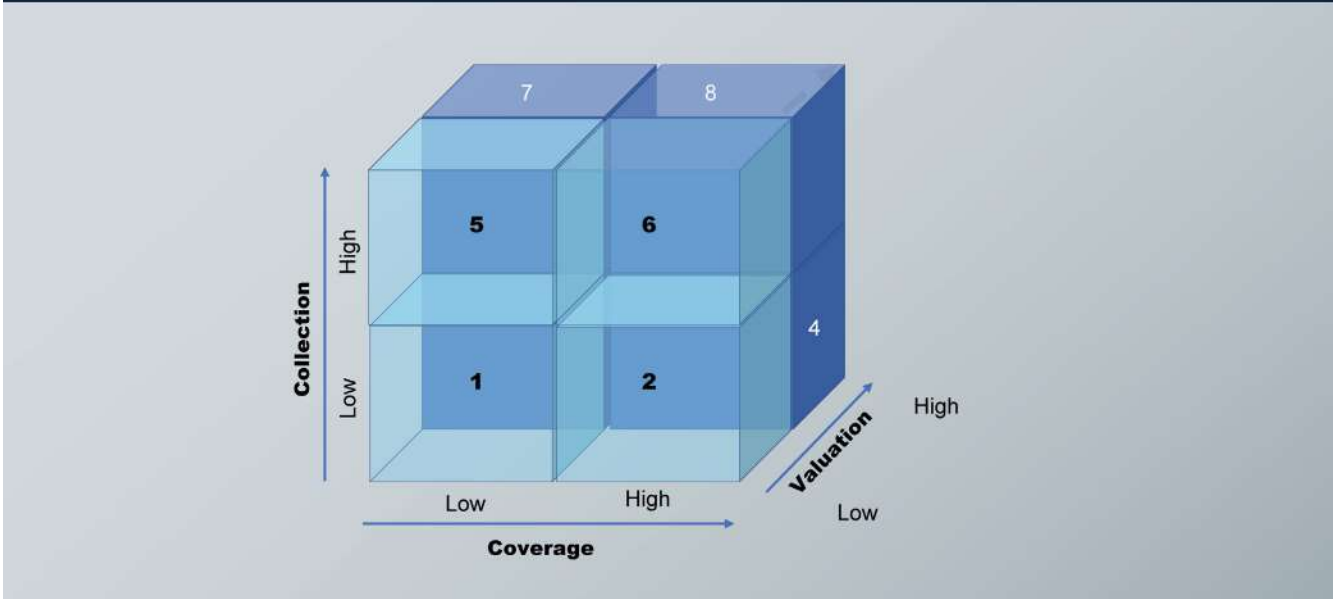
include the appropriate interventions which are prioritized and sequenced to address the specific situation in order to ensure sustainable property taxation.

A stylized collection-led approach recognizes these challenges, understanding that in the absence of a credible tax collection system, investing in major improvements in property tax coverage and valuations will likely only improve the potential property tax revenue, but may make little difference to improving actual property tax revenue yield, efficiency and/or equity. Under this collection focus, the initial priority would be creating an enabling framework for efficient, equitable, and accountable revenue collection and enforcement while phasing in improvements on tax base coverage and property valuations. (Indonesia from 1988–94; Quezon City, the Philippines from 2001–present; Kampala, Uganda from 2004–16) (Kelly 2013a; Kopanyi and Franzsen 2018).

Ultimately, sustainable property taxation will require a comprehensive approach that can ensure revenue collection and enforcement while expanding tax base coverage and improving the quality of property valuations. The challenge is how to properly diagnose the actual situation and then design a SIP which can identify, prioritize, and sequence policy and administration remedial interventions, including appropriate use of technology to improve overall property tax revenue, equity, and efficiency performance.

Figure 11 provides a conceptual illustration to help visualize possible alternatives using three dimensions linked to tax base collection, coverage, and valuation. As illustrated, these three property tax parameters generate a cube with eight octants. At the cube base are the coverage and valuation ratios, either low or high, while the height of the cube reflects the collection ratio, either high or low. Thus, an ideal property tax system would find itself operating within the upper right corner (8) with high collection, coverage, and valuation ratios.

Figure 11 | Property Tax Reform Implementation Strategies



Source: Roy Kelly 2020.

Table 9 | Indicative Sequencing for Reform Interventions

Octant	Coverage	Valuation	Collection	Strategic Approach
1	L	L	L	Improve collection system, coverage and valuation, move sequentially to Octant 5 to 6 to 8
2	H	L	L	Improve collection system then improve valuation levels, move to Octant 6 to 8
3	L	H	L	Improve coverage and collection system, move to Octant 7 to 8
4	H	H	L	Maintain high levels of coverage and valuation, while improving collection, move to Octant 8
5	L	L	H	Improve coverage ratio then valuation ratio, while maintaining high collections, move to Octant 6 to 8
6	H	L	H	Maintain collection and coverage while improving valuation, move to Octant 8
7	L	H	H	Maintain high levels of collection and valuation, while broadening coverage, move to 8
8	H	H	H	Maintain high levels of collection, coverage and valuation

Source: Roy Kelly 2020.

Based on the eight octants shown in Figure 11, Table 9 identifies a property tax system as falling into one of eight hypothetical situations (octants), depending on the collection, coverage, and valuation situation and suggests possible sequencing strategies on how best to move to Octant 8.

Many property tax systems may be operating in Octant 1, with low coverage, valuation and collection ratios, generating low levels of revenue. Under Scenario 1, where all three ratios are low, it will be important to review, analyze, design, and implement a combination of property tax policies and administrative measures which can establish an effective revenue collection system framework before (and/or as) reforms are implemented to expand coverage and improve valuation ratios. A logical strategy may be to move from Octant 1 to Octant 5, Octant 6, and then towards Octant 8.

Some systems may be operating in Octant 2, with relatively high tax base coverage, but with relatively low levels of valuation and collection rates. In these cases, reform interventions need to be adopted to improve the collection ratio before (and/or as) reforms are implemented to improve the valuation ratio. Thus, one logical strategy may be to move from Octant 2 towards Octant 6 and then towards Octant 8.

Some systems may be operating in Octant 5 with higher revenue collection rates but from a small tax base, as a result of incomplete coverage and low valuations, thus generating low revenue yields with inequity and inefficiency. In this situation, the reform priority should be on expanding the property tax base coverage—and possibly revaluing this tax base while maintaining and strengthening the revenue collection system (depending on the specific situation as identified in the high-level review and detailed situational analysis conducted under the PTDF).

As illustrated, situations may vary considerably across taxing jurisdictions, thus, developing a SIP must be tailored based on the challenges, constraints, and opportunities identified during the previous PTDF steps. The identified remedial alternatives must be prioritized based on their tractability and to where returns are likely to be the highest. While major changes in tax policy may provide for a more ideal property tax system, it may require significant time and political capital. In contrast, there may be changes in tax administration within the existing tax policy framework, which may generate quicker returns for improved property tax revenues.

The “best return” remedial options must then be evaluated on their tractability, that is: Which of the options are most likely to be politically acceptable and adopted, operationally acceptable and implemented, and socially acceptable, with taxpayers being more willing to pay their property taxes? Tractability must be evaluated in the short, medium, and long term. Some reform interventions may have short-term appeal, leading to quick adoption and implementation but carry a high likelihood for a strong, emerging opposition, leading to an

equally quick loss of momentum due to insufficient buy-in by politicians, administrations, and/or taxpayers. Other reform interventions may take longer to design and implement, but they may have longer sustainability with greater potential to generate more robust revenue, equity, and efficiency gains.

Identifying those remedial interventions with the highest returns and tractability will require a broad understanding of the fundamentals of property tax policy and administration, tax and administration theory, international best practices, and a deep understanding of the operating environment in which these alternative remedial intervention options must be adapted, adopted, and implemented. The SA must understand the dynamic nature of reform, anticipating possible changes in the reform environment, and the need for a flexible, problem-driven iterative adaptation approach to the possible reform design.

The SA may lead to several different alternative remedial interventions. For example, depending on the policy analysis, there may be options for some "quick wins" such as reducing or eliminating a tax base exemption, allowing for an increase from a low tax rate, among others. While legal reforms may take time to adopt and implement, there may be some "quick returns" involving small changes in regulations and procedures. There may be even more opportunities for designing and implementing some "quick wins" under the tax administration.

Based on the analysis of the various administrative ratios, it may be apparent that improving the coverage ratio may broaden the tax base, bringing in properties not currently paying any property tax or underpaying their property tax because of incomplete and out-of-date property information. Similarly, extremely low and inconsistent valuations may suggest a need to improve the quality of valuations to improve the potential property revenue and equity goals. A low collection ratio may suggest that attention should be given to improving the realization of the potential property tax revenues by strengthening taxpayer education and service to encourage greater voluntary compliance and/or introducing a mixture of sanctions and penalties to encourage the actual realization of improved property tax revenues, equity, and efficiency.

Consideration should also be given to understanding the "binding constraints" to property tax improvement. For example, although there may be a desire to change the property tax law, the question is whether a legal change is the "binding constraint" for improving property tax revenue, equity, and efficiency; or is the major binding constraint the lack of political will and administrative capacity to collect and enforce against noncompliance? If the latter, then spending the time and effort to change the tax law will not necessarily lead to significant improvement in achieving the revenue, equity, and efficiency objectives. Rather, it would be important to focus priority on remedial actions that can help mobilize political will and administrative capacity for property tax collections.

4.2 Identifying and Prioritizing Remedial Interventions

Within this strategic approach, specific remedial policy and administration interventions must be identified and prioritized. The policy options, discussed further in Annexes TP-1 through TP-5, and the property tax administration options, discussed further in Annexes TA-1 through TA-4, are outlined in Figures 12 and 13. Depending on the specific reform environment identified in PTDF Steps 1 through 3, some of the possible remedial interventions may be adopted and implemented in the short- to medium-term, while others may require a medium- to long-term perspective. Some illustrative case studies outlining the approaches from Quezon City (the Philippines), Punjab Province (Pakistan), India, and Zanzibar (Tanzania) are discussed in Annex 4.

4.2.1 Policy Remedial Interventions: As previously identified in the property tax revenue equation (Figure 4), there are two policy variables that determine the property tax revenue, equity, and efficiency, namely policies affecting the tax base and those affecting tax liability assessment. As Figure 12 indicates, these policy choices must define what is taxed, what is exempted, and what is the assessment basis for the property tax.

Tax Base Definitions, Exemptions, and Assessment Basis Policies: While taxing jurisdictions vary in terms of the desire to change the tax base definition, all countries typically face a broad array of property tax exemptions, some of which may be appropriate, but many may need restructured to be more targeted, reduced to allow only partial exemption and/or altogether eliminated. Typically, there are opportunities to generate immediate improvements in revenue, equity, and efficiency, as well as simplifying administration complexities. Streamlining exemptions may be the "low hanging fruit," assuming the ability to effectively mobilize political and operational will. Streamlining the property tax exemptions should be approached as a short- to medium-term intervention.

Changes in tax base definition, on the other hand, are typically more complex and require more lead time for adoption, design, and implementation. Although there may be political pressure to expand the tax base definition (for example, from one based on land only to one based on both land and buildings), it may take two to three years to pass the required laws and regulations—and even longer to collect the additional required property information, value the newly-expanded tax base, handle possible valuation appeals, conduct a taxpayer information/engagement program, assess the new tax liability, issue and deliver the new tax bill, collect the revenue, and enforce against non-compliance. Changing the tax base definition should be approached as a medium- to long-term intervention.

As property markets develop, taxing jurisdictions have opportunities to improve property tax equity, revenue buoyancy, and efficiency by moving from an area-based to a value-based assessment for the property tax. Even in nascent property markets, using simple valuation systems, taxing jurisdictions can move incrementally toward a value-based system through incorporating value-based adjustments to an existing area-based system. These value-based adjustments would include such factors as location, land and building use, building structure and construction materials, utilities, and condition. Moving toward a value-based system should be approached as a short- to medium-term intervention.

Similarly, a policy choice could be made to shift from an annual rental value to a capital value-based system. As discussed in Annex TP-3, there are strong advantages to such move, and this is the trend in recent property tax reforms. As this would require a legal change, it is best to consider this as more of a medium-term intervention.

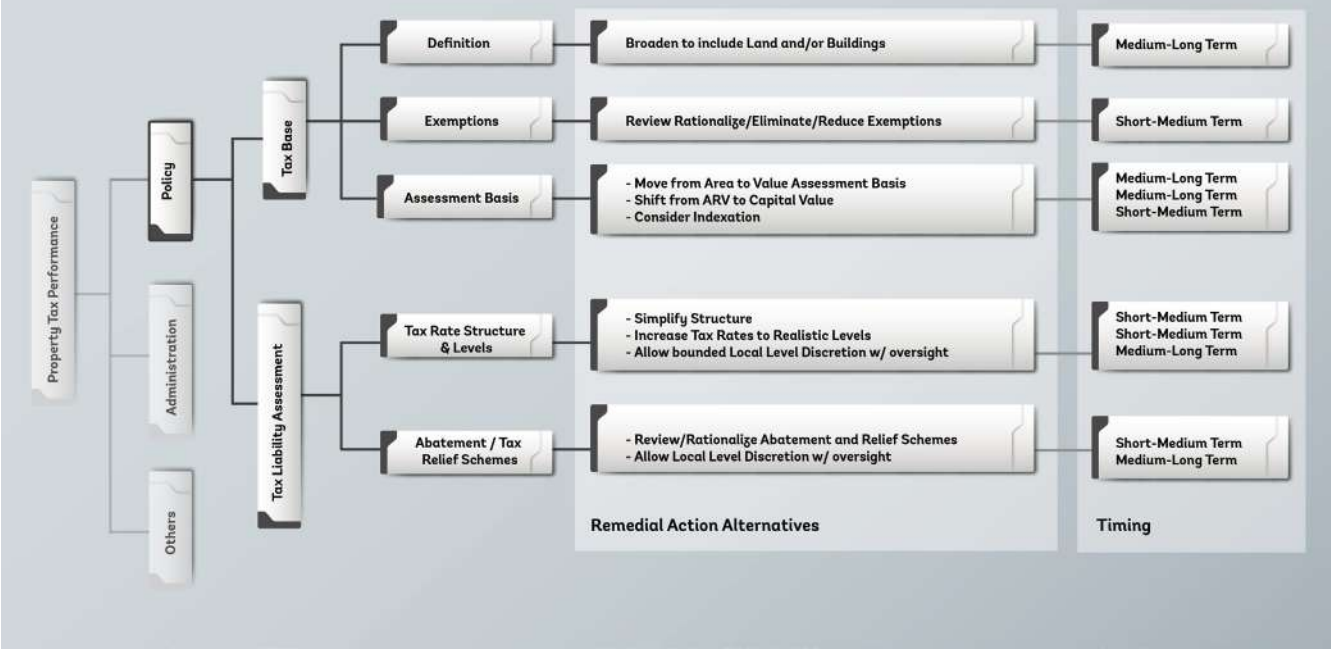
A final policy choice related to the tax base would be on whether to adopt tax base indexation. Such an indexation approach, as discussed in Annex TP-3, would allow a taxing jurisdiction to capture a possible increase in property value between the standard periodic revaluations. Indexation could potentially improve equity as well as help to maintain the real value of tax revenues. This intervention could be considered for adoption in the short- to medium-term.

Tax Liability Assessment Policies: Policy choices related to tax liability assessment should also be considered. As Figure 12 illustrates, there are options focused on changes to the tax rate structure and those policy choices concerning tax abatement and tax relief schemes.

As discussed in Annex TP-4, there are various options to choose among tax rate structures. Reforms are typically designed to simplify and rationalize the tax rate structure rather than to increase complexity. One important policy decision relates not to the structure but to the level of the tax rate, and to the level of possible tax rate-setting discretion given to local governments. While the tax rate structure may be a possible short-term intervention, typically granting greater discretion to local governments should be approached as a medium- to longer-term intervention, as this may require extensive consultation and coordination with the overall fiscal decentralization structure.

Similar to the review and rationalization of tax base exemptions, a review and possible rationalization of the tax abatement/tax relief schemes can also improve equity, efficiency, and affect the revenue yield while reducing administration complexities. Streamlining these abatement/relief schemes should be approached as a short to medium-term intervention.

Figure 12 | Selecting Policy-Related Remedial Interventions



Source: Roy Kelly 2020.

4.2.2 Administration Remedial Interventions: As previously identified in the Property Tax Revenue Equation (Figure 4), there are four administration variables that influence property tax revenue, equity, and efficiency. These include administration actions linked to the coverage, assessment/valuation, tax liability assessment, and collection ratios.

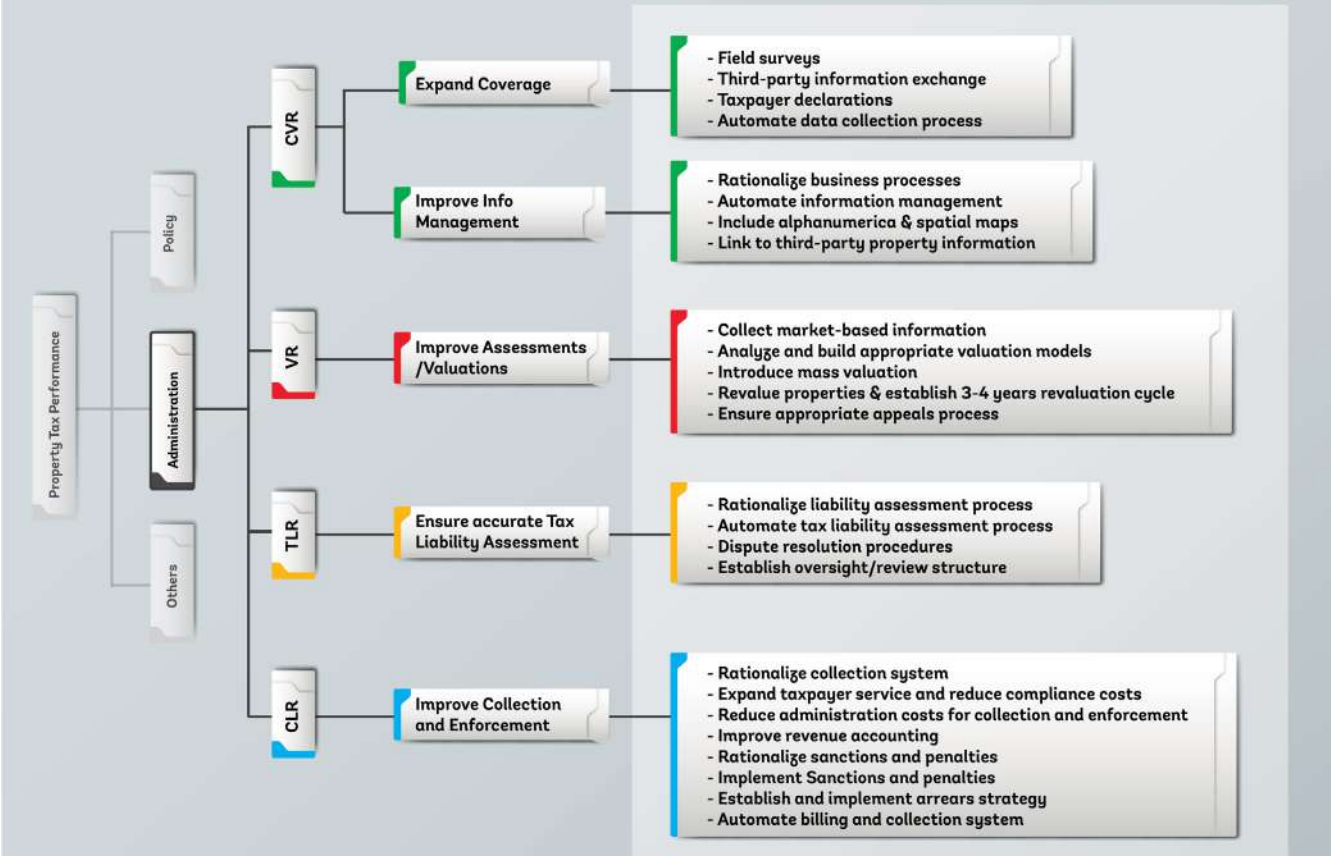
As Figure 13 illustrates, and as discussed in Annexes TA-1 through TA-4, there are a number of possible remedial interventions to improve these administration ratios. Improvements in tax administration, even in the absence of policy changes, can substantially improve property tax revenue, equity, and efficiency. The choice and prioritization of remedial interventions is situation-specific, largely influenced by the challenges and opportunities identified during the HLSA (PTDF Step 1) and the DAAI (PTDF Step 3). Depending on the specific situation found, there will be property tax administration remedial interventions which will be more short-, medium-, and longer-term options.

As discussed in 4.1, the exact sequencing of the policy and administration remedial interventions will be dependent on the situational analysis and adopted reform strategy, as previously illustrated in Figure 11 and Table 9. Subject to the findings from the situational and detailed analysis, the general rules of thumb for developing a Strategic Implementation Plan would include the following considerations in order of priorities:

1. **Focus on administration over policy**, if there is scope to improve, as there is generally extensive scope for improving tax administration before policy changes are required. In some situations, there may also be incremental policy changes that could be introduced to expand the tax base coverage. For example, it may be possible to streamline/eliminate an ineffective and unneeded exemption, introduce mass valuation options to improve property valuation transparency, equity, and efficiency in a cost-effective manner, and/or empower local governments with discretion to levy increased tax rates to enhance local-level accountability and efficiency.

2. **Focus on ensuring efficient, equitable and accountable revenue collection**, as it is only the collection function that realizes (or achieves) the potential revenue, efficiency, and equity goals of property taxation. As outlined in Annex TA-4, this can be accomplished through encouraging voluntary compliance by improving taxpayer education/taxpayer service, providing incentives, sanctions, and penalties and enhancing tax administration capacity and professionalism, among others.

Figure 13 | Selecting Administration-Related Remedial Interventions



Source: Roy Kelly 2020.

3. **Focus on improving the tax base coverage ratio** by capturing unregistered properties and improving the quality of information on currently registered properties. Expanding the coverage ratio will improve potential revenues, equity, and efficiency, generally with less resistance from current taxpayers. Coverage expansion affects potential property tax revenues by bringing in taxable properties that previously were not paying any taxes or by improving the quality of information on those already-registered properties. These base coverage expansion effects will incrementally increase revenues from those who were previously not paying the property tax, rather than increasing the taxes paid by those already paying the property tax. As outlined in Annex TA-1, this can be done by capturing and maintaining property information through a combination of efforts involving taxpayers, third parties, and tax administration field surveys, among others.

4. **Focus on improving property valuations**, both relative and absolute valuations. Increasing the accuracy of property valuations will improve the equity of the tax system, but can also impact revenues in cases where tax rates are fixed. As outlined in TA-2, this can be done by shifting from area to notional value systems, improving value data capture and analysis, using simplified mass valuation systems, and having a transparent and efficient appeals process, among others.

5. **For all administration reforms, focus on the 80:20 rule.** In many situations, the majority, about 80 percent, of the tax revenue can be collected from 20 percent of the taxpayers. Similarly, the majority of the tax base, including in the number of properties and in the valuation of those properties, are heavily concentrated in a small number of properties. Thus, governments should focus on efficiently allocating their administrative resources in a cost-effective manner.

6. **On the policy side, focus on reviewing and streamlining exemptions and tax abatement/ relief schemes.** Focusing on whether a tax base should include land only, or land and buildings, is typically not the binding constraint. Regardless of the tax base chosen, there is tremendous potential for streamlining tax exemptions to ensure that the intended public policy objectives are being achieved at least cost. See Annexes TP-2 and TP-5 for more details on steps for consideration.

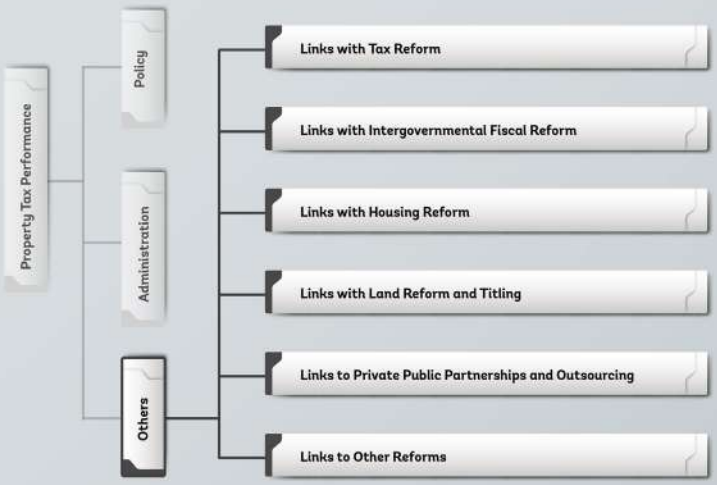
> **“In many situations, the majority, about 80 percent, of the tax revenue can be collected from 20 percent of the taxpayers.”**

7. **On the policy side, review the tax rate structure and levels.** Tax rate structures should be kept simple to encourage transparency and accountability along with minimizing potential adverse effects on revenues, equity, and efficiency. Tax rate levels should be set to a reasonable level. See Annex TP-3 for more details on steps for consideration.

The SIP should include the contextual background laying out the reform challenges, constraints, and opportunities as identified in the first three steps of the PTDF. The identified remedial options should be identified and prioritized, along with a recommended sequence for adoption and implementation. The SIP should also identify the required resources and timing for implementation.

As shown in Figure 14, the SIP should be developed cognizant of the broader reform linkages to other ongoing reforms, such as those in taxation, intergovernmental fiscal, housing, land reform and titling, public-private partnerships, and others.

Figure 14 | Integrating with Other On-Going Reforms



Source: Roy Kelly 2020.

As emphasized earlier, this SIP must be developed in close consultation with the relevant stakeholders. This close interaction will help to ensure access to information, feedback on the diagnostic analysis and conclusions, and buy-in for subsequent adoption and implementation.

4.3 General Reform Considerations

The property tax has tremendous potential for increasing revenues, along with enhancing governance accountability, efficiency, and equity. As discussed throughout the PTDF, theory and experience suggest important lessons when designing and implementing successful property tax reforms. At a minimum, successful reform requires a thorough understanding of the situation/problem, identifying appropriate remedial reform interventions, and prioritizing and sequencing those reforms in a strategic manner. In addition, successful property tax reforms should be developed cognizant of the following considerations:

- **The impetus for property tax reform can vary**, emanating internally from within a local government or tax department to address revenue, equity and/or efficiency concerns or from concerns emanating from within a broader public sector management reform effort. Ultimately successful property tax reform must be designed to respond to and to leverage political and administrative reform momentum effectively. To the extent possible, for example, the property tax strategic plan should be linked to ongoing reforms that are improving transparent and accountable governance, citizen participation, and public services to help mobilize broad stakeholder support and link tax revenue mobilization and improved public services, both of which are important ingredients for encouraging voluntary compliance.

  It also may allow property tax reform to take advantage of the broader reform momentum, along with needed political, technical, and popular support, and access to human and financial resources. Property tax reforms can also be, in turn, a catalyst for and support towards the implementation of reforms in land and housing, public infrastructure, urban services, and broader taxation and governance.

- **The appropriate policy should be adopted.** Based on a solid diagnosis, policy choices should be designed and implemented, cognizant of institutional and administrative constraints, and recognizing the need for policies to evolve over time in line with improvements in the reform environment and administrative capacity. However, major policy changes can often require considerable time, political and operational resources to change laws, regulations, administrative systems, and procedures and institutions; therefore, it is important to carefully consider the efficacy and tractability of each policy reform. Therefore, reforms should consider placing a priority on improving tax administration before considering major changes in policy.

  Policy reforms should make tax base and tax rate choices, always bearing in mind the need for simplicity to facilitate implementation. Policy reform should rationalize exemptions to limit tax expenditures, reduce excessively generous tax breaks, and target tax relief more effectively to reduce revenue loss, inequities, and inefficiencies. Tax rate structures should be kept uniform to the extent possible. Classified tax rate

systems, if adopted, should be limited to few categories, such as residential, non-residential, and agricultural properties. Progressive property tax rates should be avoided, and governments should focus on realizing property tax equity, efficiency, and revenue policy objectives largely through improvements in administration.

- **Property tax administration should be prioritized.** Legal changes in policy can be effective but can require time and face delays in adoption; thus, priority could focus initially on improving tax administration, which alone can realize significant improvements in revenue, equity, and efficiency. In this regard, property tax administration should aim for coverage, valuation, tax liability assessment, and collections ratios closer to 100 percent. Property tax systems should adopt: (a) simplified data capture, data management, and tax mapping procedures to improve the fiscal cadastre coverage; (b) appropriate, simplified valuation methodologies to improve the level and relative equity of the valuation roll; (c) simplified tax rates and transparent tax liability assessment procedures to improve the accountability and accuracy of the tax liabilities; and (d) simplified and accountable revenue collection mechanisms, and effective enforcement systems to reduce compliance and administrative costs. Administrative procedures should be integrated into an appropriate computer-assisted administration system.

- **Reform choices must be tailored to the local context.** The optimal choice of policies and technical interventions should be developed in accordance with what is appropriate to the local organizational, capacity, and technical context. For example, choosing a complex data-driven mass valuation system would only be possible in an environment with an active and transparent property tax market, with available property transaction data and valuation capacity. Similarly, computerized property tax registries, with or without digitized GIS systems, would need to be tailored to the taxing jurisdiction's environment, taking into account the costs and benefits of different interventions. There is a need for a combination of technical expertise and local knowledge/understanding to design the appropriate transitional, incremental approach to phase in these reforms tailored to the absorptive capacity of the political policymakers, tax administration, property-related third parties, and the taxpaying public.

- **Property tax reforms should be implemented in a comprehensive yet strategic manner.** Property taxation is ultimately a revenue instrument, which should generate revenues as efficiently and equitably as possible while minimizing economic, administrative, and compliance costs. While analyzing the property tax system comprehensively, all countries must identify the specific areas of reform intervention and sequence those interventions to ensure the best results. While improved property tax base coverage and the quality of the property assessment/valuation can increase the potential, only improved collection ultimately allows the potential to be transformed into realized revenue, efficiency, and equity objectives. Each situation requires an appropriate

balance and sequencing of coverage-, valuation- and collection-related interventions.

- **Property tax reform is a long-term process.** Property tax policy can be changed overnight by passing a law and/or changing policy regulations. However, successfully implementing those policy changes into "realized" policy success requires sustained political will, operational and technical capacity, systems and procedures, funding, and time. These reforms are dynamic; thus, through an iterative adaptation approach, the government should be able to systematically monitor and periodically adjust the policy and related administration options to achieve expected revenue, equity, and efficiency objectives. International experience suggests that nationwide property tax reforms can take from 5 to 15 years to realize sustainable results. A Strategic Implementation Plan, when designed well and implemented systematically, can assist the taxing jurisdiction in incrementally achieving its intended goals of improved revenues, equity, and efficiency.

ANNEXES

Annex 1: Sample TOR: Property Tax Diagnosis and Strategic Assessment

This TOR provides an indicative scope of work to undertake a High-Level Situational Analysis, a Strategic Assessment and a Strategic Implementation Plan. The outlined activities should be adjusted to reflect the specific needs facing the property tax within a taxing jurisdiction. Based on the priority areas identified, the relevant activities from the Scope of Work contained in this Annex would be selected to develop the appropriate TOR for the specific situation.

I. Background

Insert background information relevant for the TOR, including information on country-specific and local government reform background and intentions of the property tax reform. For example, the overall objective of this work is to provide a sound basis to enable the government to design and implement the proposed property tax reform over a X-year period from 20XX–20YY.

II. Scope of Work

1. Consult with the relevant stakeholders to clarify the request, specific concerns, and related expectations, such as intentions, primary and secondary goals, performance expectations, deadlines, and expected resources.

2. Review available property tax policy and administration reports, laws and regulations, and other materials on ongoing activities related to tax reforms, fiscal decentralization, local government finance, public financial management, urban and rural development, and land titling, among others. Identify areas of intersection with property taxation, possible synergies, and opportunities for mutual support and/or conflict.

3. Analyze property tax revenue performance, establishing comparisons with relevant benchmarks across relevant taxing jurisdictions. Performance indicators should include cross-sectional and time-series trend analysis to identify potential challenges and opportunities for improvement. Specifically, the consultant will gather information, as available, to create a table of revenue performance indicators that includes property-related tax and fee revenues for last five years, of the amount of collected property tax revenues as a percentage of GDP total government revenue, total government taxes, and total local government taxes, among others. To the extent possible, the consultant will analyze property tax trends, focusing on the immovable,

recurrent property taxes over time as well as cross-sectional analysis on different categories of property tax (for example, agriculture, residential, commercial and industrial) across various local governments within the country of concern. Revenue performance statistics should also be calculated, such as property tax revenue per capita and per household. These analyses should try to estimate the revenue collection profile of current liabilities and arrears.

4. Analyze property tax policy and administration to identify potential challenges and opportunities for improvement. This analysis should focus on tax base coverage (what is included and excluded), tax base assessment (area or value, and if value, rental or capital), tax liability assessment (tax rates and tax abatement/relief), and tax collection and enforcement in [insert country/taxing jurisdiction]. Estimate the coverage, valuation, and collection/enforcement administration ratios.

5. Although the primary focus is on the immovable property tax, depending on the reform context, the diagnostic analysis would cover policy instruments linked to property transfer taxes, capital gains, vacant land taxes, and those linked to "land value" capture (for example, betterment taxes, development charges, and impact fees).

6. Identify relevant international experience with property tax policy and administration, linked to those same components of tax base coverage (what is included and excluded), tax base assessment (area or value), tax liability assessment (tax rates and tax relief), and tax collection and enforcement.

7. Develop a Strategic Assessment identifying the key challenges and opportunities. This strategic assessment should identify possible remedial interventions prioritized by likely tractability and highest returns, leading to a recommended reform intervention strategy for [insert country or taxing jurisdiction name].

8. Develop a draft program for further action to be undertaken with the government over the period of [insert dates].

Annex 2: Sample TOR: Detailed Analysis, Action Identification & Strategic Implementation

This TOR provides an indicative broad scope of work which could be incorporated into Detailed Analysis and Action Identification of the property tax policy and administration leading to the development of a Strategic Implementation Plan. Based on the priority concerns identified during the High-Level Situational Analysis and Strategic Assessment, the relevant activities from this indicative Scope of Work should be selected to develop the appropriate TOR to reflect the specific needs facing the property tax within a taxing jurisdiction.

For example, if the High-Level Situational Analysis identified specific concerns about low revenue collections and mounting arrears, the follow-up Scope of Work could include those sections which focus on revenue collections. Similarly, if there were specific concerns about the lack of taxpayer service, incomplete property information or out of date property valuations the follow-up Scope of Work could focus on those specific issues.

Based on the priority areas identified, the relevant activities from the Scope of Work contained in this Annex would be selected to develop the appropriate TOR for the specific situation.

I. Background

Insert background information relevant for the TOR, including information on reform background and environment, intentions of the property tax reform, and relevant details from the reports produced under PTDF Steps 1 and 2. For example, the overall objective of this work is to provide a sound basis to enable the government to design and implement the proposed property tax reform over the X-year period from 20XX–20YY.

II. Scope of Work

To support the design and implementation of the proposed property tax administration reform effort, the scope of work will focus on the following [practitioner to choose relevant activities for inclusion in this TOR based on priorities identified under Step 3 Strategic Assessment]:

1. **Property Tax Base Coverage:**

   a. Review and evaluate the property tax data management system and procedures, including the parcel-based numbering system, taxpayer property declaration form and procedures, third-party information forms and procedures, mapping and spatial data management, and tax department field forms and procedures, among others.

b. Review and evaluate these property tax data management "business processes" (BP) to identify options to streamline operational procedures to collect, record, verify and analyze the data (both alphanumeric and spatial) and the flow of documents in a timely, efficient and transparent manner. [This BP analysis for property tax coverage should be integrated and synchronized with the BP analysis for the entire property tax administration management system (coverage, valuation, liability assessment, and billing, collection and enforcement, and taxpayer service)].

c. Propose improvement to the property tax data management system and procedures to ensure comprehensive tax base coverage and accuracy of taxpayer registers for the property tax. This system should enable significantly improved collections and more accurate property tax revenue forecasting.

d. Document the improved property tax data management system and procedures into a property tax data management manual for training and operational purposes.

e. Disseminate the property tax data management manual and, using the manual, train administration staff on the new streamlined procedures related to data collection and data management. This will require designing an appropriate training program for data collectors and data managers.

f. Hold consultations with third-party property tax information-related stakeholders to identify implementable steps for third-party data sharing (for example, Ministry of Lands, Ministry of Housing and Public Works, Ministry of Finance, agencies responsible for information technology (IT) and the local-level equivalent agencies, banks and housing finance institutions, notaries, Office of Deeds and Land Titles, among others).

g. Design and conduct taxpayer education/socialization on property information reporting/declaration responsibilities, synchronized with improving taxpayer service functions.

h. Design a field data collection strategy and conduct exercises to systematically collect and/or update property tax information on the physical property and the taxpayers. This involves developing the timeline and costing as appropriate.

i. Identify institutional options for maintaining comprehensive, up-to-date property tax-related information in a sustainable and accountable manner.

j. Monitor and adjust the property tax base coverage support as needed.

2. Property Tax Assessment/Valuation:

a. Review and evaluate the property tax valuation system and procedures, including the appropriateness in valuation approaches chosen, the sources of available market transaction information (sales, rents, construction costs), the institutional framework, and human resource capacity.

b. Review and evaluate these property valuation "business processes" (BP) to proposed streamlining of the operational procedures to collect, record, verify and analyze market

transactional information in a timely, efficient and transparent manner. This BP analysis for property valuation should be integrated and synchronized with the BP analysis for the entire property tax administration management system (coverage, valuation, liability assessment, and billing, collection and enforcement, and taxpayer service).

c. Design operational manuals to be used to estimate property values for property tax purposes. These manuals can be used to guide and monitor the property tax valuation process and for training property tax valuers.

d. Design and conduct a property valuation and/or revaluation strategy and conduct exercises using the property tax information contained in the property tax information management system (also known as the fiscal cadastre, property tax registries, or tax rolls) along with the property valuation information and models. This can involve developing the timeline and costing as appropriate.

e. Identify institutional options for maintaining sustainable, cost-efficient property tax-related valuations (for example, the central-level independent valuation unit, the valuation unit within the Ministry of Finance, Lands and Construction, or the valuation unit at the local government level).

f. Monitor and adjust the property valuation support as needed.

3. Property Tax Liability Assessment and Tax Billing

a. Review and evaluate the tax liability assessment system and procedures, including the effectiveness of the tax liability assessment methods chosen (such as self-declaration, self-valuation, or self-assessment) and the institutional and human resource capacity.

b. Review and evaluate the tax billing system and procedures, the appropriateness of the methods chosen, and the institutional and human resource capacity.

c. Design property tax liability assessment and tax billing manuals to be used for determining the tax liability and billing process. These manuals would be used to guide and monitor the tax liability assessment and billing process and for training responsible staff in implementing the procedures.

d. Identify institutional options for ensuring sustainable, cost-efficient assessment and billing processes, and their links with the collection and enforcement operations.

e. Monitor and adjust the tax liability assessment support as needed.

4. Property Tax Revenue Collection and Enforcement

a. Review and evaluate the tax collection and tax payment methods and procedures (for example, due dates, installment options, payment locations, notices, and receipts), the efficiency and effectiveness of the methods chosen, and the institutional and human resource capacity.

b. Review the available incentives and discounts provided for timely and complete payment, including taxpayer education and outreach efforts. Evaluate their effectiveness and appropriateness and explore options for enhancing improved taxpayer compliance initiatives to improve voluntary compliance.

c. Review available enforcement measures (sanctions, penalties). Evaluate their overall effectiveness and appropriateness and explore options for enhancing enforcement measures against the tax object and the tax subject. Options could include: the imposition of late fees with interest, requiring tax clearance certificates, garnishing rents and wages, seizure and auction of movable goods, the imposition of tax liens on the property titles, seizure and auction of immovable property, linking property tax collection to location-specific services.

d. Review and rationalize enforcement measures against noncompliance in consultation with the court system and law enforcement to ensure justice and transparency, protecting the interests of the government, taxpayers, and third parties. Design procedures for collecting outstanding accounts in cooperation with collection agencies and/or lawyers.

e. Review and evaluate these property collection and enforcement "business processes" (BP) to develop recommendations for streamlining operational procedures for revenue collection and enforcement in a timely, efficient, and transparent manner. This BP analysis for collection and enforcement should be integrated and synchronized with the BP analysis for the entire property tax administration management system (coverage, valuation, liability assessment, and billing, collection and enforcement, and taxpayer service).

f. Design operational manuals for revenue collection and compliance management (enforcement). These manuals can be used to guide, monitor, and train responsible staff in implementing the procedures.

g. Explore options for instituting a shared property tax revenue policy and administration mechanism to allow a portion of the property tax revenue to be retained at lower government levels to encourage revenue mobilization.

h. Monitor and adjust the revenue collection and compliance management support as needed.

5. Taxpayer Service, Appeals and Dispute Resolution

a. Review and evaluate the level and types of services provided to taxpayers, including points of services, the efficiency of procedures, institutional and human resource capacities.

b. Review and evaluate the property valuation appeals process and taxpayer dispute resolution procedures, including administrative and legal options.

c. Review and evaluate these taxpayer services, appeals, and dispute resolution "business

processes" (BP) to recommend options for streamlining the operational procedures for providing such services in a timely, efficient, and transparent manner. This BP analysis for taxpayer services, appeals and dispute resolution should be integrated and synchronized with the BP analysis for the entire property tax administration management system (coverage, valuation, liability assessment and billing, collection and enforcement, and taxpayer service).

d. Design operational manuals to be used in determining the taxpayer service, appeals and dispute resolution procedures. These manuals can be used to guide, monitor, and train responsible staff in implementing the procedures.

e. Identify institutional options for ensuring sustainable, cost-efficient and effective taxpayer service and appeals, and dispute resolution processes.

f. Monitor and adjust the processes as needed.

6. Property Tax Administration System/Information Technology

(Note: this could be a standalone project, which would involve an analysis of the business process (BP) for each property tax administration, designing and implementing the Tax Administration Integrated Operations Management System. A more extensive TOR will be needed to address this IT development component, which would include some of the following.)

a. Review and evaluate the existing information technologies for the entire property tax administration management system (coverage, valuation, liability assessment and billing, collection and enforcement, and taxpayer service).

b. Conduct a BP analysis (or use the BP analysis conducted previously) for the various property tax administration components to rationalize and streamline the property tax administration management process.

c. Identify options for automating the property tax administration components, evaluating appropriate structure, information technology options (for example, off-the-shelf, custom-made, web and cloud-based options, centralized or distributed structure), including resource requirements (investment, operations, and maintenance, HR capacity needs and timing).

d. Identify options for integrating the proposed system with other related systems for land and housing, title registration, urban planning, among others.

e. Following the decision on the way forward, implement the chosen system, developing the system, supporting operations and technical manuals documenting the system, and ensuring proper staffing and institutional support to ensure a sustainable, cost-efficient and effective property tax administration management system.

f. Design operational manuals and ongoing training efforts to guide, monitor, and train responsible staff for implementing the relevant IT systems.

g. Monitor and adjust the process as needed.

Annex 3: Illustrative Questions of Inquiry for the Property Tax Diagnostic Framework (PTDF)

Category	Area of inquiry
I. Property Taxation Situation Context	
Government Structure	1. What is the governmental structure of the taxing jurisdiction?
	For example, unitary, federal, hybrid.
Power to Tax	2. Within the above structure, where is the locus of the power to tax property?
	For example, the central government, regional government, local government, a mix.
Property Taxes	3. What are the various property taxes and fees imposed in the country?
	Name the taxes and briefly describe those such as the following: immovable/ recurrent property taxes, property transfer taxes/stamp duties, property rental income taxes, land rents/ground rents, development fees and charges such as exactions/impact fees, betterment taxes, land use change fees, others. Are these central or local level taxes/fees? What is the revenue yield to show relative magnitude to the recurrent property tax?
Recurrent Taxes on Property	4. Is there more than one tax on immovable property imposed in the country?
	Name the taxes (such as land tax, building tax, land and building tax, tax on improvements) and indicate which is under review. Depending on the situation, the following questions may have to be answered for each tax.
Revenue Recipients	5: Which governments receive revenue from recurrent property taxes, and what are the (approximate) shares of the revenue from each tax?
	For example, “central only” or “local only.” Statistics should be collected on the importance of the taxes to the governments involved and on the amount of taxes per property or taxpayer.
Local Autonomy	6. Do the government levels with the power to tax, delegate it in any way?
	If yes, describe which powers are delegated and to whom. For example, the authority to impose a tax, specify the base, set rates, grant exemptions.
	7. Do those high-level governments place any constraints on lower-tier governments’ authority?
	Identify and describe the constraints (general oversight is covered later). For example, upper and/or lower rate limits or reduction in equalization grants for governments that are overzealous in granting exemptions.

Category	Area of inquiry
Other Fiscal Issues	8. Are there other fiscal issues, such as compensating for limitations on local tax capacity, such as making equalization grants and "tax-base sharing" (a reallocation of a tax)?
	Describe any such limitations, policies, and procedures.
Culture, Geography, Economy, and Institutions	9. What are the implications of a country's culture, geography, and economy on the design and administration of a property tax?
	For example, governance and credibility/trust between tax payments and services, ability to pay and institutional capacity.
II. Institutional Review	
Institutional Aspects	1. Which agency/agencies at the central, regional, or local governments are responsible for property tax policies?
	Parliament/Legislature/Councils; Executive Departments such as Ministry of Finance, Ministry of Local Government, Ministry of Interior/Home Affairs, Ministry of Natural Resources and the Environment, Ministry of Construction, Revenue Authority, Valuation Agencies, Tax Departments, Cadastre Agencies, Treasury Departments, others; Judicial institutions, Courts, others.
	2. Which agency/agencies are responsible for property tax administration?
	Understand agencies and links between agencies responsible for property tax base coverage (collecting, updating and managing the property roll), assessment and valuation (for the valuation roll), tax liability assessment and billing (tax liability assessment), revenue collection and enforcement, taxpayer service, appeals and dispute resolution).
Property Tax Base Coverage	3. Which agency is, or agencies are, responsible for collecting, updating, and managing the property registry that contains the needed property-tax related information on the taxpayers (tax subjects) and properties (tax object)?
	Identify them by the level of government. Collect as much information as available on funding and staffing involved in supporting the property tax functions. What type of information do they collect? Taxpayers? Land? Buildings? Which agency/agencies assign the property identification numbers? Assess support that agency/agencies provide to property tax functions and the capacity of the staff necessary.
Assessment/ Valuation Functions	4. If applicable, which agency is, or agencies are, responsible for (a) developing valuation models or tables and (b) applying those to assessable properties or occupancies.
	Name agency or agencies and describe at a high level what they are responsible for and what they do (which could be virtually nothing). Assess their capacity and effectiveness.
	5. Which agency is, or agencies are, responsible for finalizing assessments?
	Identify the agencies and describe their responsibilities. Assess their capacity and their effectiveness

Category	Area of inquiry
Collection and Enforcement Functions	6. Which agency is, or agencies are, responsible for the collection and enforcement of tax revenues?
	Identify the agency or agencies. Assess their capacity and effectiveness.
	7. What are the responsibilities of taxpayers (beyond) paying taxes promptly?
	Providing the information needed to assess the tax is most common; the least common (except for movable property) is computing or making the valuation upon which the taxes are based. Look for taxpayer responsibilities to declare property sales prices and terms, declare rents and rental income and expenses, and describe or verify the description of their properties.
Role of Private Sector and Other Governmental Agencies	8. What functions, if any, are or can be performed by the private sector or governmental corporations?
	Bureaucratic obstacles can sometimes be overcome via contracting for services and creating independent organizations to provide cadastral, valuation, and collection services.
	9. What information flows from other governmental functions are crucial to the success of the property tax, and does the needed information flow freely and timely?
Other Institutional Issues	10. What policies and practices concerning taxpayer and stakeholder engagement do the main agencies adhere to?
	Areas of inquiry might include information access, information confidentiality, efforts to explain taxes, and tax administration.
Monitoring Agency/ Agencies Performance	11. To what extent is the performance of property tax agencies monitored and supervised?
	When policy setting and administration are decentralized, credible oversight is crucial. A few countries (OECD) have effective oversight functions. In addition to administrative oversight, ongoing legislative oversight/reviews are useful. Merely compiling statistics on revenues is not sufficient.
III. Property Tax Policy Review	
3.1. Tax Base Definition	
Taxable Property (the object that should be assessed or valued, even if it is later exempted)	1. What kind of property is taxed?
	For example: • Immovable property, movable property • Of immovable property, land only, buildings (and structures) only, land & buildings (as the sum of two quantities or as an economic unit) • Defined use classes of immovable property (such as agriculture, residential, non-residential, industrial, commercial, government, others). If movable property is taxed, usually only defined classes are taxed) • Other defining categories, such as within municipal boundaries

Category	Area of inquiry
The Subject of the Tax (taxpayer)	2. Where does the legal responsibility for paying the property tax lie?
	For example, with a person (the most common) or with the property (in rem, which is rarely used). The answer to this question has important implications for other design features, especially on the definition of the tax subject (see question 2b) and in property tax revenue collection and enforcement.
	3. Who is the subject of the tax?
	For example, the owner, occupant, both the owner and the occupant, either the owner or the occupant, the property, and/or beneficiary as determined by the tax department; is the law structured to make the tax to be "jointly or severally liable"?
3.2 Tax Base Exemptions	
Exemptions	4. What properties are excluded (exempted) from the tax base?
	Identify them, and try to estimate the revenue, equity and efficiency considerations.
	5. Are there any unusual categories of properties or owners that are eligible for exemption?
	If yes, identify them and provide any available data on the number and value of such exempt properties.
3.3. Tax Assessment Basis (Area or Value)	
Assessment Basis	6. What is the basis of the tax?
	For example: • Non-value—usually some area measurement, and areas or tax rates, usually adjusted for various location, use, and other factors such as construction type • Value—does the system rely on notional, market informed, market-based values? • Is value based on an annual rental value or capital value basis? • What is the value standard used (current use and/or highest and best use), and for which reasons (often the current-use value is used as the standard for agricultural and forest land)? • Others?
Assessment Approaches	7. Are assessment/valuation approaches/methods prescribed in law and regulation? If yes, describe approaches and options available. Do individual taxing jurisdictions have flexibility in choosing among these methods?
	For example: Are there policy stipulations requiring individual inspection of properties for assessment/valuation purposes? • Are their policy stipulations requiring individual parcel-based valuations, or are more cost-effective mass valuation approaches allowed? • Are assessment/valuations approaches mandated as uniform across all taxing jurisdictions, or is their local discretion allowed? Under what circumstances?

Category	Area of inquiry
Assessment Intervals and Adjustments	8. Does legislation prescribe the interval between revaluations? Is this uniform nationally, or is there discretion given to various taxing jurisdictions?
	9. Does legislation allow for the indexation of property assessments/valuation between the revaluation intervals?
3.4. Tax Liability Assessment	
Tax Rate Structure	10. What is the tax rate structure?
	For example: • Flat rate • "Classified" rates (if classified, how many, what are the property use classes, and why?) • Progressive rate (structure and rationale) • Others (two-rate)
	11. How are tax rates determined?
	For example, as a fixed rate in legislation, indexed, needs-based, other.
	12. What is the level of local discretion in setting the rates?
	For example: If discretion, how is this structured? Minimum or maximum? Higher-level oversight and approval? Requires citizen referendum override?
	13. Aside from rate limits (question 10), are there other measures in legislation or imposed by a higher-level government that constrain property tax rates (such as percentage limits on rate changes, revenues changes)?
Fractional Assessments	14. Are "fractional assessments" used before levying the tax rate?
	If used, describe if they are uniform or differentiated by property use, location, or tenure. Are these set in legislation, is there local level discretion? For example, use of a legally-determined percentage of value to reduce estimated property value to taxable property value, for example, using only 60 percent of estimated market value as the taxable value upon which to apply the tax rate.
Abatements and Tax Relief Schemes	15. **Residential Relief:** Aside from (or in addition to differentials [question 9]), are categories of residential property or their occupants eligible for redced assessments or taxation?
	If yes, describe any such relief, noting eligibility criteria, application requirements, and whether there is any means-testing. Often, homesteads (primary residences) are completely or partially exempt; relief may also be accorded to the elderly, the poor, and veterans.
	16. **Agriculture Property Relief:** Aside from (or in addition to differentials [question 7]), are categories of agricultural residential property or their occupants eligible for reduced assessments or taxation? If yes, describe.

Category	Area of inquiry
Incentives & Disincentives	17. **Investment Incentives:** Are there any categories of exemptions or other relief measures that are designed to provide an incentive for preservation, rehabilitation, or new development and/or economic development investment?
	If yes, identify them, including their purpose, relief mechanisms, duration.
	18. Are there any measures that are designed to provide a disincentive, such as vacant land or underutilized housing/properties tax?
	If yes, describe them.
Others	19. Are there any measures designed to provide disaster relief (such as earthquakes, floods, droughts in the case of agriculture)?
	If yes, identify them, including their purpose and other details.
IV. Property Tax Administration Review	
4.1 Tax Base Coverage Ratio	
Standard Operating Procedures	1. Are there published standard operating procedures (SOPs) for property tax-related data collection and data management?
	If yes, review SOPs to explore ways to streamline and improve efficiency, data accuracy, and integrity.
Property Information Structure, Management, and Coverage	2. What information is being collected and maintained for property tax purposes?
	For example, what taxpayer information? What property physical information? What is the status of the spatial/mapping information?
	3. How is the property information being collected, maintained, and managed?
	For example, to what extent is the property tax information being managed/ maintained manually? Which aspects are being managed manually and which are being managed with IT? Is GIS embedded in the system, or is the spatial/ mapping information maintained in manual form?
	4. Ascertain the level of completeness and accuracy of the property information on the property roll? What is the estimated number of properties that are not captured on the tax roll?
Property Information Collection/ Updating Approaches	5. Are taxpayers required to submit property declarations? If so, describe the process, requirements, procedures, and forms?
	6. What are the third-party sources for tax base coverage-related information? Are they required to share that data for property tax administration purposes? Are information sharing agreements/protocols in place?
	7. What is the government process and experience for their audit and updating of the property tax-related information, including estimated costs?
	8. Has the private sector been contracted for field data collection? What is the experience to date, costs, accuracy of information?

Category	Area of inquiry
4.2 Tax Base Assessment / Valuation Ratio	
Standard Operating Procedures	1. Are there published standard operating procedures (SOPs) for property assessment/valuation?
	If yes, review SOPs to explore ways to streamline and improve efficiency, equity, and integrity.
Property Assessment/ Valuation Approaches, Status, and Accuracy	2. What is the government process, procedures, and experience for property tax assessment/valuation, including estimated costs?
	For example, how is property market value information being collected? How is this data being analyzed? How is this information being used to estimate a property value for property tax purposes?
	3. Is the current property tax assessment/valuation roll up to date? If not, when is the most recent assessment/valuation roll dated? What are the possible reasons for the delay in updating the valuation roll (political, capacity, funding, other)?
	4. Are property taxpayers allowed to self-value their properties? If so, what are the audit/oversight procedures to ensure relative and absolute accuracy?
	5. Has the private sector been contracted for property valuation purposes? What is the experience to date and estimated costs?
	6. Ascertain the relative and absolute accuracy of the assessment/valuations across properties. Use average absolute accuracy to estimate the valuation ratio, with a sample of properties to estimate the relative equity of the assessment/valuation process.
	7. What is the estimated cost of carrying out a property tax roll revaluation?
Appeals Process	8. What is the assessment/valuation appeals process?
	For example: • Describe the administrative and judicial appeals process, procedures and timelines • Can third parties also challenge property assessment/valuations? • Is there an independent valuation tribunal for administrative appeals? What is the role of the courts?
	9. In the last revaluation process, what was the number of appeals/objectives? What were the results from those appeals in terms of property assessment/ valuations adjusted?
	Appeals systems need to provide opportunities for speedy, economic, and responsive taxpayer appeals while simultaneously recognizing the legitimate interests of the tax administration. Appeal systems designed for other taxes may not be workable in property taxation.

Category	Area of inquiry
Other Assessment/ Valuation Issues	10. What ministry/agency is responsible for property tax valuation? What level of government has property tax valuation responsibility? If national, are there regional offices?
	11. What are the responsibilities of the valuation department? In addition to property valuation, do they have any responsibilities for property tax coverage and maintenance of the fiscal cadastre?
	12. Are there other valuation agencies responsible for property valuation for non-tax purposes?
	13. What is the role of private sector valuation organizations? Are they involved with valuations for property tax purposes?
	14. Are there capacity building programs in-country to provide property valuation training? Are there in-house government, university, or other training programs?
4.3 Property Tax Liability Assessment Ratio	
Standard Operating Procedures	1. Are there published SOPs for tax liability assessment?
	If yes, review SOPs to explore ways to streamline and improve efficiency, accuracy, and integrity.
Applying Tax Base Adjustments, Tax Rates, and Other Policy Measures	2. What is the process for applying the various tax policy parameters to determine the tax liabilities?
	For example: • Differential tax base exemptions, factional assessments, deductions, credits • Differential tax rate structures • Automatic or manual • Systems of oversight and appeals/dispute resolution
4.4 Property Tax Collection Ratio	
Standard Operating Procedures	1. Are there published SOPs for revenue collection, including enforcement?
	If yes, review SOPs to explore ways to streamline and improve compliance, efficiency, and equity.
Billing	2. What is the billing/notification process?
	Is there a system of individual notices, such as general notifications or other methods? How are tax bills delivered (for example, by hand, postal system)?
Revenue Payment and Collection	3. What is the tax payment process and procedures?
	For example, tax due dates, payment options/locations, number of installments, taxpayer service.

Category	Area of inquiry
Responsible Agencies	4. Which agency or agencies are responsible for revenue collection?
	For example, central or local level agencies? Role of central government revenue authority? Local revenue collectors? Banks? Post offices?
Role of the Private Sector	5. Is there any experience with contracting the private sector to collect tax revenues?
	If so, how was this structured? For current liabilities or arrears? What were the challenges and opportunities? What were the costs, and how were these structured?
Incentives and Sanctions	6. What type of incentives are provided to encourage timely, voluntary compliance?
	For example, taxpayer education, public recognition, early payment discounts, improved taxpayer service, or others.
	7. What type of sanctions are used to encourage compliance?
	For example, use of tax clearance certificates to receive local government services (such as building permits, occupancy permits, school registration, water, and utilities), use of tax clearance certifications to receive non-local government services (such as bank loans, property registration), or others.
Tax Enforcement	8. What are the enforcement provisions, processes, and procedures to address noncompliance?
	For example, late payment penalties? Late payment interest? (Is the interest rate the same as for VAT and income taxes?) Seizure and sale of movable property? Seizure and sale of immovable property? Garnishing rents? Garnishing wages?
	9. Which agency or agencies are responsible for implementing noncompliance sanctions and penalties?

Source: Richard Almy, expanded by Roy Kelly, 2020.

ANNEX 4: PROPERTY TAX CASE STUDIES

Quezon City, the Philippines
India
Punjab Province, Pakistan
Zanzibar, Tanzania

Annex 4: Illustrative Case Studies of Property Tax Challenges and Reform Strategies

The Property Tax Diagnostic Framework (PTDF) provides a diagnostic tool to enable practitioners to identify, assess, and address issues hampering property tax performance. This four-step diagnostic approach allows the practitioner to:

1. Conduct a high-level situational analysis,
2. Strategically assess reform priorities and possible remedial actions,
3. Undertake more detailed policy, administration and institutional analysis (if needed/ feasible) and
4. Develop a strategic implementation plan to improve property tax revenue, equity and efficiency objectives.

While there may be similarities across jurisdictions, each situation is unique with its own set of challenges and opportunities. The diagnostic tool should be applied in a flexible manner in accordance with these varying circumstances. To assist in the application of the PTDF, this Annex provides four brief case studies which illustrate different reform environments, challenges, and adopted strategies designed to achieve the identified property tax reform objectives.

Case Study 1: The **Quezon City (The Philippines)** case focuses on improving revenue collection through incentives to improve compliance on current liabilities and outstanding arrears, improving revenue collection accountability and the quality of the property tax base coverage. As part of the reform, Quezon City effectively shifted from a system of tax amnesties to auctions to address delinquent accounts, along with improvement in taxpayer service to improve property tax revenue performance. Quezon City also improved its property tax cadastre and computerized its property tax assessment and collection systems.

Case Study 2: The **Punjab Province (Pakistan)** case focuses on modernizing property tax administration systems. The strategy focused on improving the coverage ratio using a combination of satellite imagery and aerial photographs along with mass field-based data collection. This GIS-based computerization system incorporates information flow processes to improve transparent management for better oversight and monitoring of tax base coverage, assessment, revenue collection and strategic analysis. The systems initially implemented through a pilot project are now being scaled up across the province.

Case Study 3: The **India** case focuses on modernizing property tax administration system through a core GIS-driven solution. Through six pilot cases, the reform created a GIS mapping base, replaced the annual rental value (ARV) system with a simplified assessment system and developed an online self-assessment system, along with e-payment options. The cadastre-focused project activities have been rolled out to over 50 other cities. Computerization of the property tax system was a critical intervention and is expected to facilitate issuing demand notices and billing, monitoring revenue collections and issuing receipts.

Case Study 4: The **Zanzibar (Tanzania)** case focuses on laying the foundation for a fiscal cadastre. Using drone technology, the reform created digital building footprints for over 500,000 buildings. Field-based data collection captured detailed information on 13,232 buildings which, when valued, are expected to be used to support the piloting and subsequent implementation of a modern property tax system. The case study identifies the type of legal and institutional issues needing clarification to facilitate the adoption and implementation of a modern property tax system.

Case Study:
Quezon City, the Philippines

Jurisdiction

Quezon City, The Philippines

Property Tax Problem

To enhance property tax revenue collections efficiently and equitably.

Reform Strategy

Implemented a collection-led reform strategy, focusing on improving revenue collections with subsequent initiatives on expanding tax base coverage and improving property valuations. Quezon City initially implemented a set of incentives to encourage payment of current liabilities and a system of property auctions to encourage collection on delinquent accounts in arrears.

Key Result

Improved property tax revenues and taxpayer compliance supported by a newly implemented computerized assessment and collection system. Quezon City became the first city in the Philippines to mobilize 10 billion Philippine pesos (₱10 billion) (USD 210.2 million) in annual revenue collections.

Context

Quezon City, the largest city in the metropolitan Manila area in terms of land and population, was facing fiscal distress in 2001. Quezon City has the largest concentration of national government offices and agencies, the major radio and television stations, information technology centers, the premier universities in the country, large department stores, and other commercial properties. In 2001, the City's tax base included over 440,000 property taxpayers and 65,000 business establishments.

When the newly-elected Mayor Feliciano Belmonte Jr. assumed office on July 1, 2001, Quezon City was facing a fiscal deficit of ₱10.35 million (USD 202,170) in cash reserves in the general fund, ₱1.4 billion (USD 27.4 million) in outstanding claims from the Government Service Insurance System (GSIS), Bureau of Internal Revenue (BIR), Manila Electric Company (MERLCO) and miscellaneous suppliers and contractors, as well as a Bank Loan of ₱1.25 billion (USD 24.4 million) left by the previous administration with the Land Bank of the Philippines (Amatong 2005). The BIR alone was demanding remittances of withholding taxes collected in the last six years (Gonzalas and Calugay 2018).

To address this immediate—and many of the subsequent—City governance challenges, Mayor Belmonte established a standing Management Committee to evaluate, assess, and develop appropriate strategic implementation plans. The Management Committee was chaired by the Mayor and consisted of 11 close and trusted advisors with broad expertise in law, budgeting, accounting, management architecture, and related fields (Gonzalas and Calugay 2018).

With respect to the fiscal governance challenge, the new administration adopted a revenue mobilization strategy with a major focus on the property tax. It aimed to mobilize the necessary political will, strengthen management and technical capacity, and actively engage with taxpayers and other stakeholders to enhance the efficiency, equity, and accountability of the property tax system.

Quezon City focused its attention on mobilizing revenue collections while putting improved financial management systems in place to manage expenditures. To enhance property tax revenues, the city adopted a collection-led strategy, putting in place a set of incentives and disincentives to encourage efficient and equitable revenue collection while implementing systems and procedures to ensure stable, long-term revenues. Total own-source tax revenues rose by 110 percent from ₱2.7 billion (USD 53.4 million) in 2001 to ₱5.7 billion (USD 112.5 million) by 2006, and property tax revenues rose by 75.1 percent from ₱1.4 billion (USD 27.1 million) in 2001 to ₱2.4. billion (USD 47.5 million) in 2006 within the first five years of the reform (BLGF, 2020).

In 2002, Quezon City was able to move from a deficit budget to a surplus budget, generating a surplus of ₱262 million (USD 5 million) or 4.8 percent of the budget. In 2008 the budget surplus was even more substantial, representing 13.8 percent of the budget (Gonzalez and Calugay 2018). In 2009, Standard and Poor gave Quezon City an A+ credit rating for "solid liquidity levels and strong budgetary performance debt-free and financial flexibility" (Philippine Star 2009).

The Property Tax Situation

The property tax in the Philippines is authorized under the Local Government Code of 1991, which sets the policy on the tax base definition, the valuation rules, and the structure and limits for tax rates. The property tax base includes land, buildings, improvements, and machinery, with exemptions given to properties owned and used by government, churches, charitable institutions, cooperatives, and education, among others.

The property tax liability is determined through a combination of differentiated assessment ratios and tax rates as follows (Government of the Philippines 1991, NTRC 2016):

- The assessment ratios for land differ by land use, while those on improvements differ by land use and market value. For example, the Local Government Code provides that land for residential properties may be assessed at 20 percent of property market value, commercial property at 50 percent, while hospitals and water districts may be assessed at only 10 percent. Assessment levels on improvements can range from 0 to 80 percent. For example, residential buildings with a market value of less than ₱175,000 (USD 3,418) are exempt, while those above ₱10.0 million (USD 195,333) are assessed at 60 percent of their market value. These land and improvement valuation assessment ratios are differentiated by residential, agricultural, commercial, industrial, mineral, timberland, and special classes such as cultural, scientific, hospitals, and water districts.

- The tax rates are also mandated under the Local Government Code with local governments having discretion to set their rates up to a maximum tax rate of 1 percent for provinces and 2 percent of the assessed value of real property for cities and municipalities in Metro Manila.

Local governments are allowed to set their own assessment levels and tax rates within the parameter structure established under the Local Government Code. For example, in 2002, Quezon City set its basic tax rate at 2 percent for commercial and industrial property and 1.5 percent for residential property. Combined with the mandated valuation assessment ratios, the “effective” (statutory) tax rate would vary by property, up to a maximum of 1.6 percent (80 percent of 2 percent for commercial property). And if the actual effective tax rate is calculated (as measured by the actual tax collection over the property market value), it can be as low as 0.067 percent due to the undervaluation and low revenue collection ratios (Guevara 2004, 156).

The Local Government Code Section 271 provides that property tax collections are to be shared with the smaller local government units within the province or city. The provinces retain 35 percent of the revenue and are required to share 40 percent with the municipalities and 25 percent to the barangay (urban district) where the property is located. In comparison, cities retain 70 percent and are required to share 30 percent with the barangays, of which 50 percent is retained by the barangay where the property is located, and 50 percent is distributed equally to all component barangays within cities.

The Local Government Code requires property owners to self-declare their property information to the government once every three years. This declared information, along with other value-related information, is used by the provincial and city-level assessors to value the land based on a comparative sales approach and the improvements through a replacement cost approach, making an adjustment for depreciation. Valuation guidelines, as well as other property tax policy and administration guidelines, are provided by the Bureau of Local Government Finance located within the Department of Finance.

Tax billing, collection, and enforcement is the responsibility of local governments. Payments can be paid in one or up to four installments, either to the town treasurer, through banks, and/or online payment systems. Although some local governments may still manage the collection system manually, many have adopted computerized systems providing for payment control and timely collection reports. Local governments have the power to provide discounts for early and full payments as well as late payment penalties up to a 2 percent surcharge per month, to a maximum of 36 percent (Guevara 2004). The Code also provides for a variety of enforcement provisions, including the seizure and auctioning of delinquent properties. Guevara reports that the revenue collection ratio is 47.0 percent for cities, 54.0 percent for provinces, and 77.0 percent for municipalities.

As with many countries, the property tax in the Philippines, and within Quezon City specifically, faces a number of challenges related to low revenue collections, property valuations, and coverage ratios. The critical challenge in 2001 was how best to design a tractable strategy that could effectively address these underlying factors in a holistic, integrated way to mobilize property tax revenues in an efficient and equitable manner.

The Reform Strategy

The Mayor and his team decided to adopt a collection-led reform strategy in 2001 to address the immediate need for revenue collections in light of the fiscal crisis facing the City. They decided to focus first on revenue collections to raise revenues immediately and put a sustainable model for property tax revenue mobilization in place.

Specifics of the Solution

The property tax reform strategy was designed and implemented to:

1. Enhance Taxpayer Service and Payment Incentives
2. Enforce against Tax Delinquencies
3. Improve Collection Accountability, and
4. Improve Coverage Information

Priority 1: Enhancing Taxpayer Service and Payment Incentives

Enhancing taxpayer service and providing taxpayer incentives were critical elements put in place to improve taxpayer compliance on current liabilities. Following the examples from Manila and San Juan, Quezon City provided a 10 percent discount incentive for property tax payments made complete and on-time on a quarterly basis. Quezon City provided a 20 percent discount for payments made in full in one instalment during the first quarter. In 2002, about 30 percent of taxpayers took advantage of these incentives, while by 2005, 60 percent of taxpayers were paying their property tax bills in one instalment (Amatong 2005).

In addition to the tax incentives, the City improved the tax payment experience at City Hall by providing air-conditioned lounges, free coffee and tea, and the use of telephones. They introduced an electronic numbering system such as that used in banks and airports to provide service in a prompt, "first come, first served" manner (Amatong 2005, Endriga 2003, Gonzales and Calugay 2018). In 2005, the City passed Ordinance 1508 (S-2005) to allow the Treasurer to accept payments through internet banking, automatic teller machines, and over-the-counter in accredited banks. Since 2013, property tax payments can be made through "mobile money" using mobile phones (Manila Standard 2013).

To promote voluntary compliance, the City also annually identified and publicly recognized the top 10 outstanding taxpayers for property tax payment, presenting a plaque to recognize their contribution to the City. This practice continues today.

Priority 2: Enforcing Against Tax Delinquencies

The property tax reform strategy then focused on promoting compliance for delinquent properties with outstanding arrears. As of December 31, 2002, Quezon City's accrued receivables from delinquent property tax accounts were ₱10.7 billion (USD 207.4 million) (Amatong 2005). Historically Quezon City, as with several other local governments in the Philippines, had relied on the practice of issuing periodic tax amnesties to encourage payment on those properties in tax arrears. However, a review undertaken on the annual tax amnesties granted from 1996–2001 showed an erratic pattern of tax collection which had yielded only a 1 percent increase in tax receipts; thus, the reform team decided to shift strategies to proactively seize and auction properties to recover these delinquent arrears (Amatong 2005).

The first step was the establishment of a Committee on Public Auctions of Delinquent Real Properties in Quezon City with the task to devise the rules and supervise the bidding process. The Committee included the City Treasurer, the City Legal Officer, the City Assessor, and a representative from the Office of the Mayor. In accordance Section 260 of the Local Government Code, regulations and procedures were developed to cover the process of notification (Statement of Delinquency, Final Notice of Delinquency, and the Warrant of Levy) as well as the actual process of property seizure and the auction itself (including who may participate in the bidding, procedures for registration of bidders, conditions of the sale and conduct of the sale, among others) (Amatong 2005).

Information on the process and the auctions themselves were advertised extensively in various public buildings, in newspapers and on over 300 billboards throughout the city (Endriga 2003). The eight auctions held from 2002–04 brought in ₱59.6 million (USD 1.1 million) in property tax revenue, of which ₱21.9 million (USD 388,918) was earned through the auctions and ₱ 37.6 million (USD 696,350) from delinquent taxpayers settling their back taxes before auction. The City allowed for taxpayers in arrears to settle their accounts through making a 30 percent minimum down payment with the balance payable within six months. Although the actual revenue from the auctions perhaps was small, the National Tax Research Center (NTRC) suggested that the auctions were effective in encouraging up to 52 percent of delinquent property owners to settle their outstanding tax arrears (Amatong 2005).

The culture of tax enforcement through auctions, which started in 2002, continues today. There have been a few very historic seizures, including the Boracay Mansion in 2010 (Manila Standard 2010) and the Philippine Heart Hospital in 2011 (Manila Standard 2011).

In addition to establishing a culture of property auctions, Quezon City in 2015 introduced a limited tax amnesty program as part of the City's Diamond Jubilee Tax Relief Program (75th Foundation Year). This property tax amnesty program provided, if requested, tax relief to properties with five years of delinquent accounts if the five years were paid in full, along with surcharges, penalties, and interest. Upon payment, taxpayers were then allowed to pay their 2015 tax liability, bringing their accounts up to date. The tax relief program resulted in collections of ₱140.77 million (USD 3.1 million) in property tax revenues from 8,600 taxpayers who removed themselves from the delinquency list, saving themselves up to ₱186.58 million (USD 4.1 million) (Philippine Information Agency 2015). This 2015 tax amnesty program was considered more effective than the pre-2001 amnesties as it was implemented after an almost 20-year history of systematic tax auctions of delinquent properties.

Priority 3. Improving Collection Efficiency and Accountability

Improving the billing and revenue collection system was undertaken to improve revenue collection transparency and accountability. In 2002, a private firm was hired to digitize all manual records, including property declarations, business registration, building permits, and payments for the 440,000 registered taxpayers and 60,000 establishments (Gonzales and Calugay 2018). The encoding was done in the evenings so as not to impede work during the day, without the knowledge of regular employees to minimize the possibility of index card entry modifications before digitization.

Quezon City became the first local government in the Philippines to computerize the property tax assessment and collection process. With this computerization in place, the tax department was able to service 20,000 taxpayers a day, reduce individual discretion throughout the assessment and payment process, and produce a daily collection report enabling the City to monitor revenue collection performance (Gonzalez and Calugay, 2018). Computerizing

the tax assessment and billing information also reduced the non-problematic transactions related to the property tax from 3–5 hours to 30 minutes (Amatong 2005).

In addition to the computerization effort, the City also undertook several measures to improve collection efficiency and accountability such as:

- Rotating permanent employees to avoid familiarization with taxpayers;
- Setting performance standards to pursue tax-delinquent collections through requiring at least 20 delinquency letters per day per employee assigned to the Real Estate Division, as staff had sent few before;
- Automatically generating computerized delinquency letters amounting to ₱10.7 billion (USD 207.4 million),
- Issuing new official receipts with security features to identify and curb the proliferation of fake receipts; and
- Filing cases with the office of the Ombudsman against employees issuing fake property tax receipts, resulting in the dismissal of six employees (Endriga 2003, Gonzales and Calugay 2018, Talercio 2005).

Using the computerized property tax information, the City was also able to cross-check property transfer tax payments with the information at the Land Registration Authority. The law stipulated that the amount of the property transfer tax be assessed on the higher of the actual market value and/or the prevailing zonal value used for property taxation as of the date of the property transaction. To reduce transfer taxes paid, some property sellers would apparently backdate their transactions, some as far back as 1985. Also discovered were cases of counterfeit receipts on file at the Land Registration Authority. Amatong (2005) reports that 58 percent of the official receipts recorded at the Land Registration Authority were counterfeit and that only 42 percent of the transfer tax payments were accurately and truthfully made. This computerization of assessment and collection records allowed for a tighter collaboration between the two institutions to manage land transfers and the collection of land transfer taxes.

Priority 4: Improving Coverage Information

To complement the focus on taxpayer service and revenue collection, the City Assessor's Department prepared an updated inventory of taxable properties, applying a Geographic Information system (GIS) approach to the tax mapping exercise. The GIS-based tax mapping exercise was able to use aerial photographs to graphically capture the area and physical boundaries of properties and assign unique property index numbers. These tax maps are used as inputs to the City Assessor's Department for managing the property tax valuation rolls.

Various business processes were modified to facilitate the coordination of land and building information across City departments. For example, one initiative was to instruct the building department to forward building and occupancy permit information to the City Assessor's Department, stating the total value of the construction costs for the issuance of new tax declarations. In addition, the City Engineer also was instructed to forward all applications for mechanical permits to the City Assessor's Department to support new tax declarations on machinery (Endriga 2003).

Main Results

The Quezon City experience made significant short- and long-term impacts on property tax operations and performance. In the short run, the focus was on mobilizing revenues through a combination of "carrots and sticks." The "carrots" included the provision of early payment discounts, improved tax payment facilities and options, and the annual public recognition of top 10 taxpayers, while the "stick" was the proactive pursuit of delinquent accounts represented by the major shift from providing tax amnesties to property auctions of tax-delinquent properties. In addition, as part of the reform, Quezon became the first local government in the Philippines to computerize its property tax assessment and collection functions, serving as a best practice for other local governments.

The combined effort of Quezon City to improve its financial condition was impressive. Total own-source tax revenues rose from ₱2.7 billion (USD 53.4 million) in 2001 to ₱5.7 billion (USD 112.5 million) in 2006, while property tax revenues rose from ₱1.4 billion (USD 27.1 million) in 2001 to ₱2.4 billion (USD 47.5 million) in 2006 within the first five years of the reform (BLGF, 2020). Between 2001 and 2008, City revenues grew on average by 13.3 percent a year (Gonzalez and Calugay 2018). And in 2002, only one year after Mayor Belmonte assumed office, Quezon City was able to move from a deficit budget to a surplus budget, generating a surplus of ₱262 million (USD 5 million) or 4.8 percent of the budget. This budget surplus grew to 13.8 percent in 2008 (Gonzalez and Calugay 2018).

An indication of Quezon City's success was when Standard and Poor in 2009 gave Quezon City an A+ credit rating for "solid liquidity levels and strong budgetary performance debt-free and financial flexibility." As reported by the Philippine Star (2009), the S&P report cited that the built-in system and procedures which had strengthened revenue collection capacity, fiscal accountability, and discipline which enabled Quezon City to become the first local government in the Philippines to exceed ₱10 billion (USD 210.2 million) in annual revenue collections. In 2019, Quezon City collected ₱17.4 billion (USD 329.9 million) in local tax revenues, which included ₱3.8 billion (USD 72.2 million) from the real property tax and ₱12.7 billion (USD 240.3 million) from the business tax (BLGF, 2020).

Key Lessons

The Quezon City case is an example of a "collection-led" property tax reform strategy. In reaction to the 2001 fiscal crisis, Quezon City designed its reform strategy to focus on mobilizing immediate revenue by implementing payment incentives to encourage the collection of current liabilities, while proactively implementing the auctioning of properties to encourage collection against delinquent accounts with arrears.

Once there were some initial increases in revenue mobilization, the reform introduced needed systemic medium-term changes necessary to keep the momentum of revenue collection. These included the full computerization of the assessment and collection functions, the introduction of new tax receipts, and staff rotation to minimize possible collusion with taxpayers, among others.

After laying the foundations for an efficient, equitable and accountable tax collection system, the reform efforts led to improved tax mapping with information from aerial photographs, adoption of a Geographic Information System (GIS), and internal administrative procedures to improve land and building information sharing across City departments. The valuation roll was updated in 2016 to be implement under ordinance No 2556. However the updated valuation roll was later suspended under Ordinance No. 2778 (Manila Bulletin, 2019).

The success of the Quezon City experience can be attributed to a number of important factors.

First, Quezon City benefited from the strong political leadership of the Mayor, in combination with consistent management, technical and operational support from the City Treasurer, along with sustained support from the City Council and the hundreds of employees and staff of the City Government.

Second, Quezon City benefited from its innovative use of "carrots and sticks" to provide incentives to encourage taxpayer compliance to pay their current liabilities and outstanding delinquent arrears.

Third, Quezon City benefited from introducing computerization to improve the assessment and collection processes first, then incorporating the automation to managing the valuation roll. This sequence allowed any improvements in the potential property tax base coverage to be immediately incorporated into the revenue collection system to realize any potential revenue, equity, and efficiency gains.

Fourth, Quezon City benefited from being linked to the broader reform efforts undertaken by the City. The excitement generated from the broader revenue mobilization and financial management efforts as well as from the City efforts to improve local-level services (for example, garbage collection and disposal), a microenterprise lending program for the poor

(Sikap Buhay), and the Quezon City-Central Business District (known as Triangle Park) provided impetus to support the property tax reforms. (See Gonzalez and Calugay (2018) for more details.)

The Quezon City reform to date has been successful in laying the foundation for a property tax system able to mobilize revenues in an efficient, equity, and accountable manner. The key to its long-term sustainability will depend on Quezon City's ability and willingness to further mobilize and maintain continued political and operational support to further improve revenue collection while focusing on updating the quality of the property tax base coverage and implementing updated property valuations.

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Case Study: India

Jurisdiction

India

Property Tax Problem

India's property tax reforms adopted a holistic approach to address weaknesses in tax base coverage, valuation, billing, collection, and enforcement. The use of annual rental value as the basis of property taxation was the source of widespread problems with the system.

Reform Strategy

The objective of the reform was to modernize the administrative system by developing a core GIS driven solution. Pilots in six Urban Local Bodies (ULBs) were supported to (a) create a GIS mapping base to include all properties within the ULB jurisdiction, (b) replace the current ARV system with a simplified assessment approach that would be based on a minimum of property characteristics, (c) develop a self-assessment online system to allow taxpayers to declare their property data and to calculate their tax liability, and (d) facilitate easier compliance through the application of e-payment options.

Key Result

The reform project resulted in an average increase of 73 percent in the property tax base coverage in six pilot cities (World Bank 2018).

Context

Property tax is one of the most important own-source revenue (OSR) for urban local bodies (ULBs) in India. The growth in revenue from this source has not been commensurate with the revenue potential due to inadequate policies, legal problems, and inefficient property tax administration. Theoretically, the property tax should be a buoyant source of OSR as the value of properties rises over time. Legal hurdles and poor administration have made property tax revenues inelastic in most ULBs. The inability to de-link property tax from Rent Control Act has also played a crucial role in restricting revenue potential.

Building on the experience of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), the Indian Ministry of Urban Development (MoUD) implemented the World Bank-financed Capacity Building for Urban Development Project (CBUDP) to improve property tax administration. The key objectives of the reform were to:

- Improve the revenue of ULBs from property tax by identifying under-assessed and un-assessed properties along with computerization of property tax records
- Develop an online system for assessment and collection of the property tax, and
- Improve tax administration measures to support an effective collection mechanism along with an appeals system

Current Property Tax System

There are three bases for the property tax used in India:

- The annual rental value (ARV)
- Unit area value (UAV)
- The capital value (CV) methods

Historically the property tax system in India has used the concept of annual rentable value. The ARV basis—the most commonly used in India—is derived from the British system of taxing property rentals in a free market. In India, the owners of a property are liable for municipal tax payments. Most relevant legislation defines ARV as the rent at which the property might reasonably be expected to be rented out from year to year after allowances for certain deductions (such as cost of repairs and insurance). The reasonable rent can be actual rent if it is found to be fair and reasonable. In the case of unrented properties, the rental value is to be estimated on the basis of letting rates in the locality.

The rental value system has several disadvantages:

- The assessment process is non-transparent, with the assessing officers tending to have a significant degree of discretion in determining the ARV
- There is difficulty in arriving at hypothetical "rent" in the case of self-occupied properties, particularly for residential properties which have never been rented out
- There are also problems in assessing properties like educational and medical institutions, clubs and entertainment places, hotels and guest houses
- Self-assessment by the taxpayer is not possible; thus the onus of annual assessment is on the ULB, which is required to issue a demand notice every year, and
- There is no buoyancy in the property tax revenues because under the Rent Control Act—the rateable value of the properties can be increased only on account of alterations to or extension of the existing properties or on account of the construction of new properties

A further issue applicable to both the ARV and capital value is the lack of comprehensive, accurate, and up-to-date property tax registries, resulting in a large number of properties outside the tax net. The ULBs are, therefore, in favor of an alternative method of levying of property tax, which will de-link it from rent.

What was the Property Tax Problem?

Despite the property tax being the principal OSR for municipal governments, its performance has been poor; in fact, poorer than in most large, low- and middle-income economies. Past studies (National Institute of Urban Affairs 2010; Mathur et al. 2009) on India's property tax system point to its high potential as a major OSR, especially for ULBs. Studies also indicate that the actual property tax revenues fall short of its potential, on account of low coverage, low valuation, low collection, and an obsolete tax structure.

The objectives of the government reforms were to:

- Tap the full potential of property tax as an OSR for ULBs
- Remove existing inequities in the tax burden on similarly placed or similarly used properties
- Build in buoyancy and elasticity in the tax base to achieve revenue growth
- Make the property tax system transparent and simple, so that it can be easily understood by all property taxpayers

- Make the systems of assessment, collection, and information citizen-friendly
- Bring all properties into the tax net
- Eliminate/reduce subjectivity and discretion in the assessment process
- Enable property owners/occupiers to calculate their tax liability, file self-assessment forms and pay the tax, and
- Introduce efficient mechanisms for speedy grievance redressal and dispute settlement

What was the Reform Strategy?

In most Indian states, the weaknesses and deficiencies in current property tax systems do not allow for the full exploitation of property tax revenue potential. A holistic reform of the property tax system was deemed essential to strengthen the financial position of the ULBs. The reform objective was to introduce systematic improvements to increase efficiency and equity in tax administration, focusing on the entire property tax business processes, including coverage, assessment, billing, collection, enforcement, and taxpayer service.

The reform approach called for a system that was formula-based and capable of tax liability self-assessment by taxpayers. In addition, the system of assessment was intended to be objectively based on clearly enunciated valuation parameters. The valuation parameters, particularly those based on location and building and parcel sizes, were to be systematically monitored. The MoUD emphasized the need for the implementation of an online, computerized property tax system, including a proper mapping of properties using a GIS system. This approach was taken so ULBs could more easily maintain and update a full record of properties in the city and bring them into the tax base, thus generating the potential for improved collections. In the long run, this reform design supported the move of ULBs towards a more simple, transparent, and user-friendly property tax system.

Different ULBs have tried out alternative approaches to introduce a self-assessment system, including those based on a capital value-based system or a unit area system derived from multiple factors.[1] The unit area system uses certain criteria like land and building size, property use, location, and building age. One of the benefits of implementing the area-based self-assessment system has been a reduction in the number of appeals/objections and an increase in the level of transparency.

[1] Following Patna Municipal Corporation's successful demonstration on using Unit Area assessment method in 2002, other municipal corporations (such as Bangalore, Chennai, and Hyderabad) have gradually transitioned to this approach. Bangalore, for example, uses six location zones (prescribed value per square meter for land), building use (residential and non-residential, retail, offices, industrial, hotels, restaurants), three levels of building costs (owner-occupied or tenanted and depreciation rates for age). The capital market value method requires details of building costs and land prices and has been implemented using "Circle Rates" which are market-value estimates adopted for stamp duty purposes). Currently, Mumbai, Pune, and Bengaluru apply this capital market value approach.

Some of the potential benefits of using a capital value system include:

- Revenue buoyancy—tax revenue is able to keep pace with inflation and cost of living since the capital value can be revised after five years based on the market value
- Transparency and relative simplicity
- Reduction in discretion

Specifics of the Solution

The CBUDP was implemented in six pilot cities (Haridwar, Nagpur, Dehradun, Puri, Cuttack, and Chindwara) to widen the tax base and improve property tax collection by detecting under-assessed and/or non-assessed properties, digitizing property tax records, introducing online assessment and collection, and establishing an appeals system. A key project objective was to create a sustainable property tax administration system that could:

- Ensure completeness and accuracy of the property tax records
- Be regularly updated to capture any new properties or changes to existing property attributes, for example, ownership, type of construction, and use

Expanding the tax base involved capturing properties, initially through aerial imagery, and then with a physical on-the-ground inspection to create a fiscal cadaster.

Under the reform, property tax records of the cities were digitized, and property tax data was integrated into a GIS system. The project developed a GIS-based mapping of properties and created a digital database to ensure that all properties were captured in the database. In the cities where a GIS system was not in place, it was planned that the property tax data would be made compatible so that it could be easily integrated into the GIS system in the future.

Main Project Results

The property tax reform that was undertaken in six cities resulted in an average of 73 percent increase in the property tax base.

The reform was built around an information and communication technology system. This system provided the ULBs with web-based platforms for effective administration and taxpayer interface, including e-filing and e-payment. The use of technology provided the potential to play a major role in improving outcomes by strengthening property identification, automating aspects of valuation, improving data management, and reducing the scope for rent-seeking.

Table 1 illustrates the main achievements and key benefits derived from the reform project.

Key Achievements	Benefits
Computerized all existing property tax data on a single platform.	Ability to view and manage all existing demand and collection data that are available with the municipality.
Developed a GIS-enabled property database in the pilots. The GIS database created through satellite imagery was supplemented by advanced online survey methods for the collection of owner and property details (such as use, occupancy, year of construction, structure type) that are key for assessment.	Ability to help ULBs: (a) estimate and identify the under-assessed and non-assessed properties, which were significant in all the municipalities where this project has been implemented, (b) view the data spatially, and (c) provide for improving the revenue by widening of tax base.
Integrated the sample assessment data collected through the project with the existing demand and collection data fully computerized under the project.	Ability to help ULBs understand trends, gaps, and ways of improving the revenue collection efficiency for the pilot wards. This work can be later extended for the entire city during the capacity-building phase.
Provided recommendations for simplifying the tax assessment calculation rules (within the limits of the municipal act) that will eventually help reduce tax evasion and increase tax revenue.	Ability to use simplified and transparent methods of tax liability assessment to encourage taxpayers to pay property taxes more regularly, which will eventually support revenue growth.
Provided an online system for viewing the GIS-enabled property data, with options for online payment for the citizens. The system also incorporated offline payments made at the municipalities and reconciled them with all the revenue collection data.	Ability to help ULBs enhacnce collection efficiency. The online assessment and collection system will have a provision for registering the property data online for a new property or change in the details of an existing property. This will reduce the likelihood of having a number of non-assessed and under-assessed properties in the long run and keep the assessment data up-to-date. Integrating this application and data through an online portal will improve collection efficiency and impart more transparency in the system.
The online system has an option for recording grievances and address them through a well-structured and documented workflow, which otherwise is mostly done manually.	The number of objections currently handled through the manual process of hearing is expected to decrease.

Source: World Bank 2018.

Owing to its success and subsequent demand, project activities were later rolled out to over 50 other cities.

Key Lessons

The following lessons can be drawn from this case study:

- The project reforms were not accompanied by institutional strengthening measures to administer property taxes or policy changes in the legal framework that empowered ULBs to more frequently use revised property tax rates. While self-assessment is a good measure to encourage voluntary compliance through an online portal, it does not ensure accurate reporting or full coverage of the tax base.

- After the initial increase, property tax demand stagnated until the second round of policy reforms was initiated in selected states and cities. This reform included moving to a capital value-based (CV) system using circle rates[2] that yielded significant increases in revenue. Pune, for example, implemented the CV system in 2010–11 and increased its property tax revenue by 29 percent in 2011–12, while Mumbai implemented the CV system in 2011–12, which resulted in a one-time revenue increase of 49 percent that year.

- This reform was accompanied by other administrative improvements that have improved compliance and reduced appeals. These measures include: introducing a range of payment solutions including mobile-based applications, on-the-ground verification of properties, cheaper GIS solutions, outsourcing different aspects of property tax management.

- Self-assessment by taxpayers has proved to be a transparent and effective approach to improve information and tax collection. Connecting the self-assessment system with the property tax Management Information System has allowed for the detection of under-declaration of parcel/property size, use of properties, and type of construction. The process of self-assessment will be strengthened to include periodic surveys, random sampling of self-assessment forms, and cross-checking with other databases.

- This reform is still a work-in-progress. It has been scaled up to include many more cities than initially envisaged. The priority has been to improve the mapping/coverage aspects of tax administration with some support for implementing self-assessment and online payment options. Additional support may need to be considered for improving collections, enforcement, and taxpayer service.

[2] Circle rates can be defined as the minimum price at which any real estate asset has to be registered when being transferred. These rates are set by the state government and undergo periodic revision. These circle rates act as an indicator of property prices in a particular location. A buyer needs to register the property on the actual transaction price or the prescribed circle rate, whichever is higher. Usually, market prices are higher than the prescribed circle rates.

- GIS has been established as the main tool to ensure full coverage of properties. Spatially delineated maps now include unique property IDs, which allow for cross-referencing with other databases that use the same unique property ID. The longer-term objective is to create and maintain a single unified database of all properties and to link it to the existing digitized property tax collection system. Capturing all taxable properties in the database linked to the collection system is intended to facilitate revenue increases.

- Computerization of the property tax system (which is an important component of e-governance reform) was a critical intervention and has been facilitating the issuance of demand notices, billing, collection, and receipts.

- In India, self-assessment was a core activity linked to improvements in tax compliance. Self-assessment, along with enhanced, user-friendly taxpayer service, can help increase taxpayer compliance. The introduction of various digital platforms for online payment of property tax can lead to a significant increase in online collections. This can be done by providing e-payment gateways through the banking system, hence allowing for increased flexibility.

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Case Study: Punjab Province, Pakistan

Jurisdiction

Punjab Province, Pakistan

Property Tax Problem

To improve the administration of the urban property tax, which suffered from outdated manual processes, paper-based records, poor collection, and low tax base coverage.

Reform Strategy

The reform of the Urban Immovable Property Tax (UIPT) was driven by the Urban Unit, a Punjab provincial government-owned enterprise, and the implementing agency for the World Bank-funded Punjab Cities Governance Improvement Project (PCGIP). The modernization of the UIPT involved broadening the tax base and moving from manual processes to automated systems. The Urban Unit provided customized training to staff from the Excise and Tax Department (E&TD) on the Geographic Information System (GIS) system delivered by the project. A successful pilot project tested the new system along with processes to conduct mass data collection. The next step was to scale the new approach to provincial level. Significant training was undertaken to provide the E&TD staff with the skills necessary to administer the property tax.

Key Result

The tax base coverage was expanded by half a million units. UIPT revenue collections improved from an average annual nominal increase of 5.1 percent (during the five years prior to the project) to 5.8 percent (during the project).

Context

The World Bank has been supporting the government of Punjab Province's efforts to improve the administration of the UIPT since 2012. An objective of the 5-year PCGIP (2012–18) project was to increase OSR, improve governance and transparency, and increase accountability to its taxpaying citizens. Due to the political circumstances, it was agreed that PCGIP would focus on property tax administration reforms only, postponing the more politically difficult property tax policy reforms to be undertaken at an appropriate time later.

The PCGIP developed the new GIS-based property tax administration system and implemented it in five of the largest cities in Punjab (Lahore, Faisalabad, Rawalpindi, Gujranwala, and Multan), which contribute roughly 80 percent of UIPT collections. The Punjab Public Management Reform Program (PPMRP: 2013–19) helped cover the remaining cities in the province. Both projects included administrative improvements to the urban land record system and, therefore, directly contributed to improving the province's own-source revenue (OSR) performance, including the UIPT.

The reform supported the digitization of maps and the complete automation of the UIPT system in the five cities, as well as a pilot study in Sialkot. This automation process entailed: (a) the scanning and digitization of property maps as well as ownership and taxation data, (b) field surveys to validate and electronically update the records and add missing properties, and (c) the development of a Management and a Geographic Information System (MIS and GIS respectively) that are now being used by the E&TD for UIPT administration and collection.

Prior to this property tax administration reform, the UIPT administration was heavily reliant on a largely paper-based system and manual interventions by E&TD staff. Valuations were made for blocks of adjacent properties, with all properties in a block assigned to a value class between A and G (highest and lowest, respectively), according to an estimate of their rental value. E&TD staff could use significant discretion as there was limited formal checking and quality assurance. The UIPT revenue was not only a small portion of local government revenues, but it was also largely static due to the lack of buoyancy, as the valuation tables were somewhat dated. Collection was inefficient, and there were several exemptions.

The strengthening of the UIPT administration through a more efficient billing and collection system was expected to increase property tax revenue. The new system developed by the Urban Unit was to enable a more efficient way of printing bills and tracking payments and arrears.

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[1] The objective of the PPMRP for Pakistan was to improve transparency and resource management of targeted departments of the Province of Punjab.

The Current Property Tax System

The UIPT was introduced in 1958 and is largely a variant of the colonial British property tax system (rates), by which properties are valued at their estimated rental value (both land and buildings) in a rating area. The UIPT Act (1958) states that the tax is levied annually and based on the gross annual rental value (GARV) of the property. GARV is defined as the gross annual rent at which such land or building might be expected to be rented out from year to year, after any deductions for repair and maintenance.

The GARV is calculated from valuation tables prepared by the E&TD. For tax base assessment purposes, four major factors are taken into account: use, quality, location, and size. The GARV is assessed for residential, commercial (trade, hotel, business), and industrial properties. The tax base is assessed in a banded system based on the provincially-set valuation tables that define nearly 400 floor-based unit values for the different property categories. The property located is reflected in one of seven value categories (A-G) which indicate market value zones from the highest value location for Category A to the lowest value location for Category G. Each class is further subdivided by the road type where the property is located—"main road" (over 30-feet wide) and "off-road"—as well as by owner-occupied and rental categories. Finally, GARV unit values are provided for 11 land-size and 10 building-size categories.

The design and administration of the UIPT are implemented by the provincial E&TD, which controls provincial tax policy matters, including preparing/amending GARV tables, revaluations, and setting rules for reliefs and exemptions. On administration matters, the E&TD also conducts property inspections and surveys, delivers bills, and collects the property tax. 85 percent of revenues from the property tax are shared with local governments after deducting a 15percent cost of collection and service charge.

There are generous exemptions in the UIPT regime, most of which apply to residential properties and social circumstances. One such exemption relates to houses on a plot size of fewer than five marlas (125 square yards i.e roughly 104.5 square meters). This exemption applies regardless of the market value of these properties, resulting in many valuable properties being left outside of the tax base. Vacant land is also exempt along with properties owned and administered by federal, provincial, and local governments. These exemptions, taken cumulatively, constitute a considerable loss in potential UIPT revenues.

Rented commercial properties are assessed at five times the rate of owner-occupied properties. The tax differential for owner-occupied residential property to rented properties is ten times (1:10); in other words, a residential property that is rented pays ten times more property tax than a property that is owner-occupied. Following the 2014–15 revaluation, the differential was revised to 1:5 for residential, commercial, and industrial properties where rented properties paid five times more in property tax than owner-occupied ones. Alongside

this revaluation, the government also reduced the uniform tax rate from 20 percent to 5 percent. The decrease in the tax rate was to reflect the increases in the unit values within the valuation tables, which had remained unchanged for about 12 years.

Another issue is that large areas of land and properties are under the jurisdiction of the Defence Housing Authority (DHA), an agency of the armed forces. The DHA is responsible for managing the areas it develops, including the provision of local amenities and municipal services, and collects its own fees or charges from property owners in its area. The governments of the province or local bodies have no jurisdiction to tax the properties in DHA areas. These are high-value properties and, hence, represent another source of revenue loss.

What is the Property Tax Problem?

The need to improve the UIPT regime in Punjab has been a subject of long-standing debate supported by a number of national and international reports and recommendations. Numerous policy weaknesses, as well as administrative inefficiencies, have constrained property tax revenue potential.

A critical weakness of the UIPT was the low tax base coverage given that there was no urban land or fiscal cadastres in Punjab Province. The property tax was restricted to cover only those urban areas that were declared by the local government as “rating areas” so that a significant number of urban properties located in undeclared rating areas were not part of the property tax base. Failure to notify new rating areas and extensions in existing rating areas has resulted in approximately 300,000 out of 750,000 properties remaining untaxed in Lahore alone (Bahl, Wallace & Cyan 2008).

UIPT administration was largely based on manual processes and dated IT systems that relied heavily on paper records. In addition, the system had a high cost of compliance as the traditional methods of payment used were time-consuming and largely cash-based.

Additionally, the property tax structure continues to be riddled with exemptions and preferential treatment, which erode the tax base. One such policy is the preferential treatment of owner-occupied property that results in a loss of revenue equal to nearly a quarter of current receipts.

Other much-needed reforms to creating a modern value-based UIPT include the need to: (a) incorporate undeveloped land within the tax base, (b) commit to more frequent (once in three years) revaluation cycles, (c) provide local discretion over tax rates and relief measures, and (d) remove the 5-marla exemption (and other significant exemptions).

What as the Reform Strategy?

The focus of the reform was to support the Punjabi government in delivering full automation of the UIPT. There were four key components underpinning the reform approach:

- A more efficient administration approach based on IT solutions and a geographic information system
- Enhanced automation of procedures with less reliance on subjective processes
- Improved voluntary compliance
- Tax policy reforms

A major effort was required to improve the UIPT tax base coverage through improving property discoverability, developing the fiscal cadastre, undertaking a mass data collection exercise, digitizing the UIPT tax base and integrating it into GIS platform, and integrating the automation of administrative procedures to achieve better voluntary compliance and fewer opportunities for rent-seeking.

To test the development of a GIS-based administration platform along with mass data collection, the government undertook a pilot project in Sialkot, which was selected because it is a medium-sized city with a concentration of export-oriented industries. The pilot project tested the introduction of the GIS-Integrated UIPT system, a computerized property tax system developed by the Urban Unit designed to administer all facets related to the UIPT. The business processes included the scanning and digitization of paper records, data entry, mass field surveys, data verification, integration of the MIS with the GIS, and training of ET&D staff.

Specifics of the Solution

An early recommendation of the project was to re-engineer how property information was stored, accessed, collected, and applied for property tax purposes. The pre-reform administration processes were largely manual with property records in paper format contained in large books. The Urban Unit developed the GIS-Integrated UIPT System for use by the E&TD, which was a major step forward in terms of modernizing and streamlining the administration of the property tax (Urban Unit a).

An important initiative in the reform was to undertake a pilot project. The Sialkot pilot involved the digitization of 55,000 paper-based UIPT records. Overall, there was a 10 percent increase in the total number of properties captured in the system, which translated into an approximate

4 percent increase in taxable properties and a 15 percent increase in potential UIPT revenues. The positive experience gained from Sialkot provided confidence in the new GIS Integrated UIPT System (GIS-IUIPT) and the data collection processes.

UIPT modernization also addressed the need to provide automation of the billing and collection system (Urban Unit b). This intended to facilitate the compliance of taxpayers by creating a web-based interface to view property valuations and allow online tax assessments and enable electronic payments.

Following the Sialkot pilot, the reform was scaled up to the five largest cities in Punjab to include Lahore, Multan, Faisalabad, Gujranwala, and Rawalpindi. This involved the setting up of about 400 survey teams to undertake field inspections and data collection. Over 700 data entry operatives were recruited. Based on aerial imagery, parcels and buildings were digitized, with each property being allocated a unique reference number.

The GIS-IUIPT required the development of technological solutions to build new data based on satellite imagery and aerial orthophotographs. In terms of data collection, there was a paradigm shift from manual to an automated system. This required significant effort in changing institutional structures, training, and building capacity within the E&TD.

The digitization of UIPT tax base records captured not only more (undetected and un-assessed) properties but also allowed for updating of under-assessed values, land-use changes (from residential to commercial), and revision of numerous inaccurate exemption decisions. The development of GIS-based spatial maps facilitated property identification and, thus, improved tax base coverage. The development of a digitized fiscal cadastre and ongoing automation of billing and collection records increased the capacity for enhanced collection efficiency.

Main Project Results and Impact

Following the completion of the project, the UIPT administration was fully automated with the development of GIS-IUIPT. In addition, E&TD staff were provided with training to fully administer the UIPT within the new system. The GIS-IUIPT resulted in increased revenue collections, accurate identification of properties, standardized calculation of the assessed value, and higher taxpayer confidence in the property tax administration system.

Significant improvements were made to improve the collection process. Tax bills were produced through the system and then manually delivered. The system was able to track the delivery of bills and monitor payments. Changes to the assessed values could now be made within the system, which allowed for electronic checks and approvals. The electronic tracking

also made it possible to identify who made the change and for what reasons. The revenue impact of the change could also be calculated and recorded.

The UIPT's outdated manual records were digitized and fully spatially geo-referenced within both the GIS system and the MIS for the five largest cities and Sialkot. Based on the results achieved, the Punjab Government agreed to scale-up the system across the province.

In 2008, prior to the commencement of the UIPT modernization project, there were 2.69 million properties within the E&TD property rates system. Following the process of digitizing the UIPT paper records (by 2016) along with the mass field survey, the number of properties increased by half a million to 3.19 million.

Prior to the modernization of the UIPT, revenue generated was very low, mainly because of a low tax base, poor record-keeping, weak manual collection approaches, and inappropriate valuation of urban immovable property.

The main achievements of the project have been the digitization of records and the introduction of automation of property tax administration (including electronic payments). The digitization of records, automation of systems, and field surveys to validate records added over half a million new taxable units to the tax base. UIPT collections have improved with average annual increases of 5.1 percent (in nominal terms) in the five years prior to the project, reaching 5.8 percent during the project years.

Despite these major achievements, several key reforms remain. A comprehensive review of the UIPT Act needs to be undertaken with particular attention to the definition of "Rating Area," as along with a review of the valuation methodology for high-value specialized properties. There is also a need for strengthening the enforcement provisions by adding additional powers and enhancing current enforcement regulations and procedures. A policy review of exemptions needs to be undertaken with a view to rationalize them, with particular attention paid to size-based exemption (the "5 Marla" exemption), federal government exemptions, the reimbursement of foregone revenue, the definition of "places of public religious worship," exemptions for widows, and exemptions for retired civil servants.

One important issue pointed out above is that provincial tax authorities do not have jurisdiction over DHA areas. These have expanded—especially in Lahore—and have become posh areas within the large cities. While it may be difficult to implement politically, some options could be explored; for example, the provincial authorities could have a revenue-sharing arrangement with those authorities.

Key Lessons

The following lessons can be drawn from this case study:

- The successful implementation of any project critically depends on the capacity and skills of human resources involved in planning, execution, and management of operations. Therefore, the capacity building aspects of such a reform should be prioritized.

- UIPT revenues were very low prior to the project because of poor record-keeping and inappropriate valuation of urban immovable property. The automation of the property tax administration system enabled the expansion of the tax base and added half a million new units to the UIPT.

- The property tax revenue gains in this case mainly came from IT enhancements to property tax administration and GIS/MIS solutions. Sustained capacity for keeping the GIS up-to-date will be important. A major positive was the ability of the system to provide automated unique property IDs at the provincial level, which supported interoperability with other systems.

- The reform focused on property tax administration issues and skirted the more difficult policy issues e.g. changes to the law, valuation method changes, revisiting exemptions, and truly empowering local governments to determine property taxes. While this was understandable given the political circumstances, ideally, the reform should be broader and address policy aspects in addition to administration issues.

- An important achievement of the reform was to address the problematic interface between property tax inspectors and taxpayers. The GIS-IUIPT System reduced opportunities for tax inspectors to use discretion in assessments. The system incorporated information flow processes to permit improved transparent management for better oversight and monitoring of property tax base coverage, assessment changes, and strategic analyses.

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Case Study: Zanzibar, Tanzania

Jurisdiction

Zanzibar, semi-autonomous region of Tanzania

Property Tax Problem

The current property tax regime is largely ineffective, with low tax base coverage and incomplete implementation of the property tax legislation, leading to poor collections.

Reform Strategy

The reform strategy has centered on building out a fiscal cadastre (tax base) with the use of drone technology. However, major policy, legal, and institutional issues remain to be addressed.

Key Result

The creation of a potential fiscal cadastre. Some 500,000 building footprints across Zanzibar's two islands were spatially identified using drone technology to create the base map. Of these buildings, individual property information on 13,232 buildings was collected through field data collection and on-the-ground inspections. This was a notable achievement given that the current property tax system under the 1934 Ordinance had only 1,370 buildings on the tax roll.

Context

Zanzibar is a semi-autonomous region of Tanzania. It has a population of roughly 1.5 million and is visited by over 500,000 tourists per year, who contribute to the archipelago's economy but also strain its infrastructure. The capital Zanzibar City has a population of about 300,000 and is home to Stone Town, the oldest part of Zanzibar and a major tourist destination. The Zanzibar Municipal Council (ZMC) oversees Zanzibar City and is responsible for many statutory functions, such as local road maintenance, solid waste management, flood mitigation, and disaster risk planning. The Revolutionary Government of Zanzibar contributes about 45 percent to ZMC's budget with the remainder coming from ZMC's own-source revenues (OSR) (ZUSP 2014). As fiscal pressure on the regional government has grown, there has been increasing pressure on ZMC to further increase its OSR.

To address this concern, the World Bank-financed Zanzibar Urban Services Project[1] (ZUSP) was designed to strengthen ZMC municipal finance, with specific components to improve the potential for increased property tax revenues, as well as to support improved local service delivery. Another multi-stakeholder project called the Zanzibar Mapping Initiative[2] (ZMI) was implemented at the same time to support the drone mapping of Zanzibar's two main islands, Unguja and Pemba, thus providing high-resolution imagery and base maps.[3] These two projects together were expected to provide the foundation for creating a fiscal cadastre upon which to improve property taxation in Zanzibar.

Using the base maps produced under ZMI, ZUSP undertook field data collection to physically collect individual information on 13,232 buildings located in Stone Town and Matemwe-Kiwengwa (East Coast). Currently, effort is underway to value those buildings to create the valuation roll needed to levy and collect property tax revenues under the 2008 Property Tax Act (PTA). Without these valuations, it is not possible to fully implement the 2008 PTA. While progress has been made toward creating a fiscal cadastre, this case study illustrates that Zanzibar continues to face several legal and institutional challenges that need to be addressed in order to use this upstream property tax cadastre-related work for increased property tax collections.

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[1] *The original World Bank-financed project ran from 2011 until 2016, and additional financing extended it until December 2020.*

[2] *ZMI is a joint initiative of the RGoZ, Commission for Lands, Commission of Science and Technology, Zanzibar Revenue Board, the State University of Zanzibar, and the ZMC. Funding was provided by the World Bank's Digital Development Partnership, the Republic of Korea's Korea Green Growth Trust Fund, the U.K. Department for International Development (DFID), and the African-Caribbean-Pacific-EU partnership.*

[3] *Source: Open Data for Resilience Initiative (OpenDRI) page for Zanzibar, https://opendri.org/project/zanzibar/*

What is the Property Tax Problem?

The property tax reform effort in Zanzibar is faced with a number of challenges. In addition to a number of legal and institutional issues, there is a need to improve the coverage and quality of the tax base information, adopt an appropriate property valuation system, and effectively link the emerging fiscal cadastre information to the assessment, billing, and collection systems in order to capture the needed property tax revenues.

The property tax in Zanzibar is based on buildings, structures, and improvements on land. The land parcel itself is excluded from the property tax as all land is state-owned. This approach to only tax buildings is similar to that applied in mainland Tanzania.

On the legal side, there are three laws that are critical to understanding Zanzibar's property tax system: the 1934 Rating Ordinance, the 2008 PTA, and the more recent 2014 Local Government Authority Act (LGAA). The 1934 Rating Ordinance was restricted to Stone Town, with no property located outside Stone Town being assessed for property rates.[4] With the passage of the 2008 PTA, the power to make or levy a property tax passed to the Zanzibar Revenue Board (ZRB), effectively taking it out of ZMC control. In 2014, the Government passed the Zanzibar Local Government Authority Act (LGAA) which states under Article 70 that local governments may generate revenue from a "council property tax". The relationship between the property tax levied under the 2008 PTA and the council property tax mentioned under the 2014 LGAA is yet to be clarified.

Under the 2008 PTA, there are a number of policy issues related to the tax base, especially the wide range of exemptions, which may need to be reviewed. Some of the exemptions are common, including religious properties, hospitals, schools, public buildings (museums and libraries), government buildings, and embassies. However, other exemptions extend to owner-occupied residential properties and to buildings that have a value less than 50 million Tanzanian shillings (roughly USD 21,500). Such exemptions severely narrow the tax base.

What is the Reform Strategy?

Recognizing the need to improve the property tax system, two simultaneous efforts have taken place. First, ZMI has produced high-resolution drone imagery of Unguja and Pemba. While ZMI was not scoped with the intention of supporting the property tax reform, ZMI's work led to the creation of a comprehensive digital map for the two islands and ZUSP financed the follow-on mass data collection, both of which have been instrumental in creating base

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[4] *According to the 1934 Rating Ordinance, property tax is referred to as property rate.*

maps and provided the detailed information on the buildings located within Stone Town and Matemwe-Kiwengwa needed for implementing the property tax under the 2008 PTA.

Second, in addition to the field survey work to collect the individual building information, ZUSP has been supporting the work on developing a valuation system and the strengthening of municipal finance by modernizing the IT infrastructure through the introduction of the Local Government Revenue Collection and Information System (LGRCIS). Once fully implemented, LGRCIS is expected to bring transparency and citizen-focus to improve ZMC's OSR administration.

Together, the imagery from ZMI as well as field work and IT infrastructure financed by ZUSP have laid the foundation for improved property tax administration by expanding the property tax base coverage ratio. Another World Bank activity associated with ZUSP has been supporting the development of a new valuation methodology that, once approved and adopted, would be available for building valuations. It is expected that the underlying property building information, once valued, will be able to produce the property tax valuation roll upon which the property tax can be levied and ultimately collected under the 2008 PTA.

Specifics of the Solution

Zanzibar Mapping Initiative

The key objective of ZMI was to provide low-cost geospatial data for 2,500 square kilometers of the two islands that comprise Zanzibar, namely, Unguja (1,300 square kilometers) and Pemba (1,200 square kilometers). The preferred solution was to use civilian unmanned aerial vehicles (UAVs) or drones over traditional options such as satellite imagery and aerial photography. The base map was to be configured into some 421 zones of 9 square kilometers each (239 zones in Unguja and 182 in Pemba). With this zoning, flight paths were developed and automated, and the data capture work took off with the use of fixed-wing drones.

The ZMI project laid the foundation for the building of the fiscal cadastre. The drone flights captured 500,000 buildings across the two islands. These building footprints were digitized through a three-step process that began with feature extraction, followed by building classification (whether the buildings were complete, incomplete, or a foundation), and culminated in building numbers assigned to each building footprint captured through the drone flights.

Zanzibar Urban Services Project

ZUSP's property tax strengthening is a combination of technical assistance for survey, data collection, integration of database with LGRCIS, establishment of valuation methodology,

institutional capacity building, administrative functions for valuation, billing, collection and enforcement, and community engagement and awareness raising.

Using ZMI's base maps, ZUSP undertook a follow-on mass data collection initiative. Locally-trained inspectors and university students were hired to capture on digital tablets core physical data on buildings (such as building use, condition, construction materials, or amenities). Out of the 500,000 buildings that have been captured under the drone project, roughly 3 percent of the buildings (13,232) were externally inspected in the pilot areas of Stone Town and Matemwe-Kiwengwa. These pilot areas were selected largely on the basis that they have a large number of high-value buildings. The expectation is that these two areas will be the first to be levied under the anticipated full implementation of the 2008 PTA.

The inspection process also gathered information on tenure and ownership details, which are important for tax billing. The output of the mass data collection was advanced the foundation for a fiscal cadastre for use in assessing the tax liability of each taxable building. The digitized maps proved to be essential as they gave the precise location and the unique reference number of each building. The overall aim of this project was to assess the property tax potential based on 13,232 inspected buildings.

Under a World Bank analytical activity associated with ZUSP, the Korea Appraisal Board (KAB) was contracted to provide technical assistance to: (a) review of property tax legislation, (b) conduct core data collection of properties for taxation, and (c) develop a new valuation methodology for property taxation. The new methodology will be based on simplified mass appraisal approaches in terms of the valuation of the buildings (on cost) and an assessment of land value. This new methodology has been proposed to the government counterparts and is currently under review and discussion. At the same time, it is fairly advanced and has been tested in the pilot areas.

ZUSP has used the imagery from ZMI, the building data collected in the field, along with building valuation estimates to conduct pilots in Stone Town and Matemwe-Kiwengwa to test their revenue potential. The pilot testing revealed that the number of non-exempted, thus taxable properties, turns out to be very small due to the widespread exemptions defined in the PTA 2008. This suggests that the estimated revenue generated from property tax would be too limited to become a meaningful source of financing public services, unless modifications are made to the PTA 2008 to expand the tax base. The pilot indicated that improvements in property tax administration alone may not be sufficient and that it is equally important to also address the underlying issues with the property tax policy as well as legal and institutional aspects.

Separately, ZUSP has been supporting the development and adoption of LGRCIS. LGRCIS is modeled after the system piloted under the World Bank-financed Tanzania Strategic Cities Project, which had demonstrated substantial success. For example, when a similar LGRCIS

was implemented in Arusha on mainland Tanzania, it led to a 260 percent increase in property tax revenue in the first 6 months of its operation (ZUSP 2016). Zanzibar's LGRCIS is being built on a Geographic Information System (GIS) platform that can use the geospatial data produced by ZMI to support possible property tax administration.

Main Reform Results and Key Lessons

The reforms made headway in improving the coverage ratio and expanding the potential tax base. The data gathered for the 500,000 building footprints and 13,232 buildings that have been surveyed in the field is commendable given that the previous system only had around 1,370 buildings on the tax roll. This increase represents an improvement in the potential comprehensive tax base coverage, which is one of the key property tax ratios of interest to policymakers.

Despite this progress, the improvements to developing the fiscal cadastre have yet to be implemented and translated into improvements in actual revenue collections due to two main reasons. First, the absence of a formal valuation methodology means that the 2008 PTA, which allows for properties outside Stone Town to be taxed cannot be fully implemented. Second, the ZUSP revenue potential pilot shows that even if the new valuation methodology (currently under discussion) were to be applied, as it was in the pilot setting, very few properties would be taxable due to the widespread exemptions. Therefore, property tax policy (for example, exemptions) will need to be reviewed so as to avoid the loss in potential revenues. Additionally, on the legal and institutional front, the roles and responsibilities of the ZRB and ZMC will also need to be clarified to avoid overlaps, on the one hand, and duplication of efforts on the other. Finally, in order to boost property tax revenue collections, it will be important to further invest in the integration of the property base information to the assessment, billing and collection system.

In summary, the key lesson of this case study is that finding technical solutions to establish a property tax cadastre and valuation roll, along with improvement in a computerized collection system alone may not be sufficient to ensure effective property taxation. It is equally important to strengthen the underlying legal and institutional framework and address broader property tax policy issues. In the absence of appropriate policy actions, the upstream property tax administration work cannot lead to increased property tax collections.

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ANNEX TP-1: TAX BASE DEFINITION

The property tax base is legally defined by "what is included" (that is, land and/or buildings, others such as machinery and equipment) and "what is not included" in the tax base (that is, implicit and explicit exemptions).

In most countries, the property tax base is legally defined to include both land and buildings (improvements), although some countries only include land (Jamaica, Kenya, New Zealand) while others only include buildings (Ghana, Haiti, Tanzania). Some countries tax both land and buildings as separate taxes. There are some tax jurisdictions that also include machinery and equipment for industrial and commercial property, although these are usually taxed as assets under the corporate income tax in most countries.

The tax base choice—whether the property tax will be levied on land and/or buildings—is often one of historical legacy, philosophy and/or practicality. In theory, a property tax levied on land is considered more economically efficient than a tax on housing/improvements, thereby minimizing economic distortions in the economy. The extent of efficiency losses from taxing buildings/improvements, however, depends on the returns to the investment in improvements relative to the tax burden. The efficiency gains from taxing only land in developing countries are often overstated since the effective property tax rates on improvements in most developing countries is quite low compared to other capital investments. These low effective tax rates result from the coverage, valuation, tax, and collection ratios.

In addition to the relative efficiency argument, moving to a land and building tax will shift the relative burden of the property tax towards those who have relatively higher building values. A land-only ad valorem tax base allocates the tax burden across the relative value of land parcels. Those having taxable land plots with higher values will pay relatively more than those who have lower values or smaller taxable land plots. In contrast, a land and building/improvement ad valorem tax base allocates the tax burden across the relative value of combined land and building values. Thus, the tax burden under a land and building tax base would shift to those taxpayers having relatively higher building value.

It should be noted that expanding the tax base to include land and buildings does not necessarily increase the tax revenues. The tax revenue yield is determined by both the tax base and the tax rate. Thus, it would be possible to increase the tax revenue yield under a land-only tax base simply by increasing the tax rate. In practice, if the tax base is expanded to include both land and buildings, the tax rate level may be decreased for revenue, efficiency, equity, and political reasons.

However, often the tax base definition choice is not based purely on theory and philosophy but on more practical reasons (for example, a country may have data on land but may not have sufficient data on housing and improvements). Or, in the case of a building-only tax, the land may be owned by the central government which is relying on collecting revenues from land as land rents under a leasehold system as the "landlord" alone rather than also imposing a property tax on that land to mobilize funding for providing land-related urban services.

In practice, the tax base choice of taxing either land and/or buildings is not typically the binding constraint for improving revenue, equity, and efficiency, as there is tremendous scope within any tax base definition to rationalize the exemptions and improve tax base coverage, valuation, tax liability assessment, collection, and enforcement.

Best practice would be for the property tax base to be defined as broadly as possible to include all land and/or buildings unless explicitly exempted by law. Public finance experts always argue for a "broad base with low rates" to maximize revenues at least economic costs. And, as explained in Annex TP-2, best practice would be to keep any tax exemptions to a bare minimum and only for well-defined public purposes, administered in a transparent and accountable manner.

Any attempt to redefine the tax base will involve time and resources to change the law and regulations, put new administrative systems and procedures in place, and build tax administration capacity and taxpayer understanding. For example, expanding from a land-only tax base to include both land and buildings/improvements would be more administratively costly, as it would require identifying, collecting and valuing the various buildings, and require time and a well-structured education program to strengthen tax administration capacity and taxpayer understanding of the new tax base structure. Similarly, moving from a building-only tax base to include land and buildings would need careful coordination with the current land tenure and land rental system, linking land and building property and taxpayer information, improved tax administration capacity, and a well-structured taxpayer education program. All reform changes involve startup and running costs (political, administrative, compliance), which must be carefully considered along with any possible benefits prior to their recommendation and implementation.

This said, if a decision is made to expand the property tax base to include both land and housing/improvements, it will be important to creatively phase such a shift in. For example, it may be possible to maintain the land tax while introducing a new luxury housing tax on only high-value residential or commercial enterprises. Or it may be possible to introduce a combined land and housing tax, structured to provide a high valuation exemption threshold on building values to virtually exempt all housing/improvement components except on very high-value buildings. Over time, rising property values would naturally expand the tax net, or a policy decision could be made to lower the valuation exemption threshold to broaden the tax base.

Annex TP-2: Tax Base Exemptions

As explained in Annex TP-1, the property tax base is defined by "what is included" and "what is excluded." Under this tax base definition, there will be properties or portions of property that will be implicitly or explicitly exempted from paying the property tax. Property tax exemptions—also called tax expenditures—are essentially "subsidies" given to particular properties typically based on property tenure (ownership characteristics) or property use characteristics.

Best practice would be to keep tax exemptions to a bare minimum—and only for well-defined public purposes, administered in a transparent and accountable manner. Any property tax reform should include a careful review and rationalization of these exemptions to improve revenue yield and equity and efficiency outcomes.

Property tax exemptions can be either implicit or explicit, as explained below:

a. Implicit Exemptions:

Many property tax systems define the property tax base narrowly in law, thereby implicitly exempting all properties not explicitly defined as taxable. For example, property tax laws which define the tax base to only include land, implicitly exempt buildings, while property tax laws that only tax buildings implicitly exempt land. As later explained in Annex TP-3, vacant land, for example, is not taxable under an annual value-based property tax system but is taxable under a capital value-based system. By definition, all properties not defined as taxable are implicitly exempt.

Even within these broad definitions of land and/or buildings, however, some property tax laws further define taxable properties as those located only in areas "declared and gazetted" by the Minister of Local Government (for example, urbanized, surveyed urban centers). Some property tax laws may also define taxable properties as only those "valued for tax purposes," implying that the Valuation for Rating Act (or similar valuation law) determines which properties are ultimately taxable (for example, Kenya up to 2010).

These narrowly-defined tax base definitions are usually found in less-urbanized lower to middle-income countries, which may have limited tax administration capacity and inadequate or unclear land records, and which may have large areas of the country not receiving location-specific public services for which to justify imposing a property tax. For these countries, it may be rational to phase-in the property tax by empowering the responsible Minister to declare areas as taxable in line with urbanization and the delivery of public services.

The challenge with this phase-in approach is that a proactive decision is needed by the government; thus, there may be delays in the declaration process and/or this declaration process may not be carried out in a transparent, consistent, and fair manner. There should be a system of periodic reviews of the declared property tax base areas based on such information as land use development permits, construction permits, building occupation permits, utility connections, zoning changes, among others, to ensure consistency with policy objectives.

Many countries face a challenge in defining the tax base due to a lack of clarity on property ownership and property rights. Many tax laws define the taxpayer to be the property owner, although some countries levy a portion of the property tax on the owners and a separate tax on the occupants. To address these taxpayer definition challenges, property tax liability is often defined broadly to fall on the owner, occupant and/or beneficiary as determined by the tax department, with these parties being "jointly and severally liable" for the property taxes. As will be discussed in Annex TA-4, unclear property ownership emerges as a major challenge when trying to enforce against tax non-compliance.

b. Explicit Exemptions

All property tax laws also define explicit tax base exemptions based largely on property ownership or property use. These exemptions vary across taxing jurisdictions but typically include a combination of diplomatic, government, religious, education and health, agricultural, and other properties (Table TP-2.1). However, there are countries that tax government properties, education, and health properties as well as agricultural properties. As indicated earlier, best practice would be to keep property tax exemptions to a minimum and periodically subject them to review and renewal to achieve revenue, equity, efficiency, and administrative objectives in a transparent and accountable manner.

Table TP-2.1 | Common Property Tax Exemptions

Exemption	Exemption Rationale	Comment
Diplomatic Properties	Vienna Convention on Diplomatic Relations, based on reciprocity	Typically, only applied to embassies, ambassador residences, and housing complexes owned by the foreign government and used exclusively for diplomatic employees.
Government Properties	Governments should not tax themselves for cost efficiency reasons	Taxing government properties could improve property use efficiency while allowing higher-level governments an opportunity to contribute to funding for local-level services. Some countries tax government properties at reduced rates, while others have a system of "Payments in Lieu of Taxes."

Exemption	Exemption Rationale	Comment
Religious Properties	Separation of religious and secular powers, positive social externalities	Typically, only applied to houses of worship and parsonages owned by recognized religious institutions and used for religious purposes.
Health and Education	Positive social externalities	Typically, applied to public facilities, with private health and education properties often taxed at reduced rates due to possible positive social externalities.
Agricultural Properties	To avoid administrative difficulties in taxing agricultural properties; reduce administration and compliance costs; promote equity to assist small-scale, subsistence agriculture; provide benefits to rural areas that often only receive minimal public services	Typically, there is strong political pressure to exempt agricultural properties, but large commercial agricultural properties are often taxed at reduced rates; small scale agricultural property can be taxed at a flat unit amount or administered under a simplified system.
Economic Development and Others	To provide incentives to encourage targeted investments in targeted areas for specific policy objectives	Studies are inconclusive on the effectiveness of these tax incentives; they may not be sufficiently targeted to achieve the intended purpose at least cost. These should be carefully reviewed and rationalized.

Source: Bird and Slack 2004, Kelly 2013a, Franzsen and McCluskey 2017.

These explicit exemptions should ideally be defined in the property tax law itself, but in practice may be found in a wide variety of other laws linked to property valuation, foreign and domestic investment, economic development, industrial and mining development, and hotels and tourism, among others. Consolidation of these exemptions into a single property tax law can help ensure the granted exemptions/subsidies are in accordance with government policy.

Tax base exemptions can be designed to exempt a property completely or can be designed to exempt only a portion of the tax base. The partial approach can be through exempting a portion of land/building area per property (Vietnam, Pakistan) or exempting properties valued below a minimum value (Bangladesh, Philippines). Many countries use a system of legally mandated valuation ratios (also known as “fractional valuation”), often differentiated by classes of properties, to exempt a portion of the property value per property (for example, Japan, the Philippines, South Korea). It should be noted that exempting a portion of the

property area per property can create perverse efficiency and equity implications as the values of those exemption areas would vary considerably depending on their location. Best practice would be to shift the area-based exemption to a valuation-based exemption to avoid those equity and efficiency challenges.

Property tax systems often will provide an exemption to certain properties (agricultural and residential) through using a different valuation standard for those properties. Rather than using the "highest and best use" valuation standard, some taxing jurisdictions apply a "current use" valuation standard, effectively exempting the development value of that property, resulting in a lower property value for taxation purposes. See Annex TP-3 for more details on how the impact of the assessment basis and its administration can provide implicit exemptions.

Guidance on Exemptions

International best practice suggests to minimize and/or restructure these explicit exemptions to best obtain the intended government objectives at the least economic, administrative, and compliance cost.

While exemptions may be well-intentioned, all exemptions are implicit subsidies that affect revenue, efficiency distortions, and equity. Furthermore, these explicit exemptions, once established, are difficult to change due to the political cost of dealing with constituencies benefiting from these targeted exemptions.

Explicit exemptions can be structured either as a reduction in the tax base or as a reduction in the taxes paid under the tax liability assessment function. Ultimately exemptions in the tax base, valuation standards and ratios, differential tax rates, and tax credit schemes affect the effective tax rate paid by different properties either based on property characteristics or property owner characteristics. The impact of various exemptions on property tax yield, equity, efficiency, and administration must be analyzed taking these various approaches into consideration.

Some countries may provide an exemption threshold to eliminate low-value properties from paying taxes, although some taxing jurisdictions require every property to pay at least a minimum tax amount for services (Jamaica, Latvia, U.S. State of Hawaii) (UN-HABITAT 2011). The rationale for a minimum tax for low-value properties is to strengthen the social contract between the government and taxpayers, enabling all taxpayers to contribute to development and have the legitimacy to hold the government accountable. Setting a threshold for exempting properties should be done with caution as some taxing jurisdictions set such generous value thresholds that erode the tax base significantly (Armenia and Egypt).

Annex TP-3: Property Tax Assessment Basis

Countries must choose the assessment basis for the property tax—that is, upon which basis will the property be taxed? A distinction is often made to either tax property on the basis of area or on the basis of value. Unfortunately, this simple dichotomy may be misleading and confusing—as even those property tax systems that are classified as area-based typically incorporate adjustment factors such as location, land use, access to utilities and services, and construction type—which can be calibrated to closely approximate relative differences in property market value.

Table TP-3-1 provides a practical typology of the property tax assessment basis, expanding on the various forms of area and value-based systems.

- Under a pure area-based assessment system, the property tax would be levied purely on the size of the land or the size of the building, with no adjustment for such valuation-related factors as location, building construction types, or depreciation, among others. A pure area-based system is extremely rare, as virtually all property tax systems make some notional adjustments to the size of properties for assessment purposes, thereby essentially shifting the area basis into a valuation basis.

- Under a value-based assessment system, the property tax would be levied based on the value of the property, either under either a capital value or a rental value system.

- Under a hybrid, or notional value assessment system, the property tax would be assessed using the property area, along with adjustments for value-related factors such as location, building characteristics and/or depreciation, among others.

The choice of the assessment basis depends on the level of property market activity, market-based transaction sales or rental information, and the level of tax administration capacity, specifically property valuation capacity. While some property tax system use an area-basis, most property tax systems tend to use either a hybrid, notional-value approach (ie, an area-adjusted approach) or a market-informed, or market-based value approach.

It should be noted that the official term used to describe the property tax assessment basis may not describe the assessment basis actually being used. For example, for practical reasons, some taxing jurisdictions may not be called a “value-based” systems but be called an “area-based” system although they are incorporating value-based adjustments.

As illustrated in Table TP-3.1, the specific valuation basis used can change over time from a notional valuation system to a market-informed valuation system to a more market-based valuation system—depending on the development of the property markets, the ability to capture market-based information (sales, rents, building costs), and the capacity to analyze and translate market information into property valuations assessments for taxation purposes.

Table TP-3.1 | Options for the Assessment Basis for Property Tax Purposes

	Approach	Comment
Area Basis	Apply uniform unit tax to a land and/or building unit area (m2), often with adjustment for value-oriented factors such as location, construction type, use, age, and other factors.	Extremely rare to have a pure area-based assessment system. Without adjustments for value-related factors, property tax assessments can be perceived as highly inequitable; thus, most area-based systems make at least adjustments by location, moving the area-based system towards a notional value-based system (see below).
Notional or Normative Value (Also known as "Presumptive Area-based Valuation" [India], a factor-adjusted area basis)	Using value-related factors such as area, location, building characteristics. The focus is on relative normative/notional valuation differentials, not necessarily calibrated directly to market information.	**Lower to Middle Income Countries** To be used in environments with nascent property markets, lack of market transactions and rental information, and limited property valuation capacity, with evolving tax administration, including appeals and dispute resolution capacity.
Value Basis Market Value (also called market-informed or market-based value)	Area basis adjusted by market information related to location, building construction costs, sales, and rental information. The focus is on calibrating property value differentials to market information evidence.	**Lower to Middle-Income Countries:** To be used in an environment with emerging property markets, limited market transactions and rental information, and nascent valuation capacity and adequate tax administration capacity, including appeals and dispute resolution.

Source: Roy Kelly 2020.

To be practical, low-income countries, with nascent property markets and weak tax administration capacity, could shift from a simple-area basis towards a hybrid basis, or a notional-valuation basis, while getting ready to move toward a market-informed valuation basis, as market information and valuation capacity develops. Middle-income countries with more active property markets and stronger tax administration (valuation) capacity may move from an area basis toward a notional value system, market-informed valuation system, and a market-based valuation system, in line with improvements in the quality of market information and valuation capacity.

The key is to adopt a property tax policy framework that will allow the tax base assessment basis to evolve from an area-basis to a hybrid, notional value basis to a market-informed value, and ultimately to market-based valuation, in line with developing property markets, access to market information and administration valuation capacity.

The ultimate objective of the assessment basis is to ensure a fair, relative basis upon which to allocate the tax burden across taxpayers. Similar properties of equal value should be assessed similarly to ensure equity across the property taxes to be paid by each taxpayer. To ensure relative consistency across property valuations, property tax systems should ultimately try to calibrate the estimated property values at a consistent level against market values. For this, there is need for assembling relevant property market evidence to calibrate against property characteristics to develop defendable property tax valuations.

While relative valuation is most important to achieve equity concerns, the absolute level of the valuation against market value can be important for revenue objectives. In situations where the property tax rates are fixed or politically difficult to change, along with improving the tax base coverage, tax reforms should focus on improving the relative property valuations for equity purposes, but also on improving the absolute level of property valuations for revenue objectives.

To achieve these objectives, property tax systems should incorporate a system of periodic property revaluations, ideally every three to six years. The longer the period between revaluations, the higher the inequities across properties, the higher the “sticker shock” to the taxpayer and the less buoyant the property tax system.

Indexing the property tax base to inflation can help maintain the real (inflation-adjusted) value of property tax revenue for the years between the property revaluation cycle. However, such indexation will not necessarily capture the changes in relative market values, and thus the property tax system will become more unequal over time. The only way to ensure equity in the property tax system is to systematically adjust for the changes in relative property values through a revaluation. The older the property tax valuation roll, the greater the inequality, especially in rapidly growing urbanizing areas with possible differences in the desirability of certain locations and types of property.

For property tax base assessment purposes, a country must also make a policy choice between adopting a capital value basis (based on the sales price of a property) or a rental value basis (based on the rental values of a property). See Box 4 for the Annual Rental Value versus the Capital Value System.

The capital value is typically the preferred choice as it can capture the highest and best use of a property and can avoid the challenges if there may be rent controls. The capital value approach will include taxation of vacant land, while the rental value approach will

exclude vacant land from taxation. Most recent property tax policy reforms have generally been shifting from a rental value basis to a capital value basis. This said, there are some mature property tax systems (Hong Kong and Singapore) which remain rental value-based systems as the main market evidence for property tax assessment is rental information, not sales. As with the policy choice over whether to tax land and/or buildings, the choice of the valuation basis is typically based on historic legacy, with the rental value system found in the Commonwealth Countries, and is usually not the binding constraint to improving property tax performance in most countries.

However, countries using annual rental values while also having a system of rent controls face a number of challenges in capturing the changes in rising market values (Egypt, India). In those countries, assessed values for property taxes are limited to the controlled rental levels rather than the market rents, thus affecting revenue yield, equity, and efficiency. Taxing jurisdictions in India and other countries have shifted to simple notional area-based value systems or self-assessment, and/or capital value systems to overcome this challenge (Mathur 2010, Mohanty 2016).

Property Valuation Methodology

Property tax laws will also define the valuation methods that can be used to determine the property tax valuation, although the law may specify that these will be determined through government regulation. Many countries specify a specific valuation methodology to be used (for example, zonal land values for land along with the cost approach for buildings). Other countries specify the valuation methodology to include the cost, income, and comparable (market) approach as determined in government regulation, while other countries provide discretion to the taxing jurisdictions (Kenya).

Guidance on Assessment Basis

The key principle is to have a tax basis that can ensure a legitimate, acceptable, cost-effective, and fair system to allocate the property tax burden across different taxpayers. It is commonly accepted that the property tax basis should be value-based to have a system that is correlated with differences in the relative value of properties as reflected in such factors as size, location, accessibility, land use type, construction type, and quality, among others. The extent to which these systems can adopt a notional value, market-informed, and market-based system depends on the extent to which these factors can be calibrated to the market values—a function of the level of property market activity and the ability to capture and analyze that market information to determine accurate, relative taxable values needed for property tax purposes.

Box 4: Annual Rental Value versus Capital Value System

Annual rental value systems are based on using an estimated value of the typical rent required to occupy a particular land or property. This system of assessment is used in a number of countries such as Australia, India, Uganda, and the United Kingdom (for non-residential property), among others.

By estimating rental values of properties, this approach can accurately reflect market values of current in-use properties on the basis of desirability and productivity. Estimating annual rental values requires market-related information on rents, which can be effective in jurisdictions with an active rental market. Serious practical challenges include the difficulty of making base assessments with a scarcity of data on actual rent payments; assessing properties that are rarely in the rental market, such as owner-occupied housing, industrial property, and vacant land; and properties under rent control (Collier et al 2017).

Base assessments may resort to rent surveys for different areas, often combined with expert valuation estimates. In practice, three methods are applied to estimate rental value. First, for properties with adequate rental evidence, estimated rental values might be imputed to all properties in one neighborhood and adjustments are made for the area of properties. Second, for properties with unavailable value comparatives, converting capital values from sales data or construction costs to rental equivalent through capitalization rate formula is an option. Third, a portion of estimated (net) profit of the property can be taken to be annual rental values (Bahl 2009, Norregaard 2013). In practice, the annual rental value system faces a challenge of substantial underassessment in most developing countries (Bahl 2009).

Capital value systems are based on the fair market sales value of properties (land and improvements or structures). Capital value valuation methodologies include comparable sales, replacement costs, and the income approach. The capital value system is common in most OECD and Latin American countries, South Africa, and the United Kingdom (for residential properties) and there seems a trend towards shifting from the rental value to the capital value basis for property taxation (Bahl 2009).

Capturing the value of land and/or property through comparable sales requires data on land and property sales as well as data on land and property attributes. Most countries adopt simple, mass valuation approaches to estimate capital value using a system of unit values with adjustments for location, property use, and building characteristics. However, in several high-income countries, techniques such as regression analysis (Computer Assisted Mass Appraisal, CAMA) are used to estimate capital market values of property and land (Collier et al. 2017).

As with rental value systems, capital value approaches also require market-related information, such as property sales, purchases, rents, construction cost tables and others collected from taxpayers, third parties such as financial institutions, notaries, real estate agents and others, and/or the government. It also requires trained valuation personnel with the capacity to effectively use market-related data to estimate the capital value for property tax purposes. As with the annual valuation approach, there is need for an appeals process and for effective taxpayer engagement and communications.

Sources: Collier, et al. 2017, Bahl 2009, and Norregaard 2013.

Annex TP-4: Tax Rates and Liability Assessment

The tax liability assessment function involves determining and levying the property tax amount to be paid based on the tax rate level, the tax rate structure, and the legally mandated tax abatement adjustments. Countries must also decide on the level of central/state-level oversight and the level of discretion given to local governments in determining the tax rate level and rate structure.

1. Level of Local Government Discretion

The tax rate level and rate structure are defined under national law in unitary countries and under state/provincial law in federal countries. These laws either define the tax rate level and structure directly or define the parameters under which local governments are allowed discretion to determine their tax rate structure, with or without higher-level oversight.

There is wide international variation on the degree of discretion granted to local governments. Some Latin American countries (Colombia, Ecuador, Honduras) allow local government discretion in setting their various tax rates, within minimum and maximum levels (De Ceasare 2012). Poland also provide discretion to local governments within a minimum and maximum (Bird and Slack 2004). In Indonesia, district governments have had the discretion to set tax rates up to a maximum rate of 0.3 percent since 2009, with no minimum imposed level, along with discretion to set their tax rate structure. The Philippines and Bangladesh also set the maximum tax rate level, within which the local governments can set their own rates. In countries like the United States and Canada, the tax rate structure and levels are typically determined by local governments based on revenue needs for balancing the local budget, although some local governments face tax-rate caps set by the states or imposed through citizen referendums.

International best practice for effective fiscal decentralization would suggest, in the long run, the need to provide some bounded discretion on the tax-rate setting to local governments for efficiency and accountability reasons. There is a need for a combination of central level and citizen oversight of the tax-rate setting to ensure transparency and accountability and to encourage local governments to maintain a high-coverage valuation and collection ratio to achieve the expected revenue, equity, and efficiency objectives.

This local-level discretion is usually designed to give local governments some bounded discretion between a minimum and maximum tax rate range, although some countries only provide for a maximum tax rate ceiling.

- A minimum tax rate may be needed to encourage a minimum level of property tax mobilization effort and to safeguard against local government taxation "racing to the bottom." Under a minimum rate regime, the higher-level government can set the minimum statutory rate that a local government is required to impose. Still, it must recognize that the effective tax rate imposed may be considerably lower if the local government has the power to set the tax rate structure, credits, and deductions if the local government has weak administrative capacity resulting in low-coverage, valuation, tax liability assessment, and collection ratios.

- At the same time, a maximum tax rate may be needed to prevent efficiency and equity distortions. A maximum tax rate can encourage local governments to focus attention on maintaining a comprehensive tax base coverage and updated valuation rolls rather than relying on ever-increasing the property tax rate for enhancing revenue yield. Solely increasing the tax rate on a narrow and outdated valuation tax base would create inequities and inefficiencies. In addition, maximum rates can also help to prevent distorting tax exporting, whereby local governments can place increasing higher tax rates on businesses that may be able to pass on the tax burden to those living outside the local jurisdiction. Tax exporting delinks the important accountability governance and economic efficiency linkage between local government spending and expenditure decisions. Once again, the impact of the maximum statutory tax rate constraint, in theory, could be bypassed by a local government overvaluing the property resulting in a higher effective tax rate.

Within these rules of bounded discretion, countries will often put in override provisions, which would allow local governments to set a tax rate outside these boundaries. Local governments can petition the central government for an override (Namibia) or they may be required to gain voter approval of any override (United States). This flexibility, if accompanied by government and/or citizen oversight, often is necessary to address unique situations facing property tax implementation.

2. Property Tax Rate Levels

Tax Rates (TR) are defined by government policy to be the tax amounts per value (percentage) of a property under an ad valorem property tax system, or by the amounts per unit of property under a pure area-based rating system.

As Table TP-4.1 indicates, typical statutory tax rates may range from 0.1 percent to 1.5 percent under capital value systems, with wide variation. Statutory property tax rates internationally

range from 0.5 to 1.0 percent, with property tax rates in the United States and East Asian countries at about 1 percent, with the exact rate differing by states. Property rates in Europe are reported to be closer to 0.7 percent of assessed values (Blochliger 2015, Kopanyi and Murray 2017).

Table TP-4.1 | Statutory Tax Rates

	Capital Value	Rental Value*
Middle- and High-Income Countries	0.5–1.0%	6–10%
Low-Income Countries	0.1–0.5 %	Up to 7%

Source: Blochliger 2015, Kopanyi and Murray 2017, De Cesare 2012.

** Caution must be paid when comparing tax rates levied under the rental value system. In some systems, a specific tax rate is applied to the property value as the "property tax" but with separate, additional rates levied on the same property value to pay for such local services as conservancy, water, and streetlights. In some other local governments, the tax rate may only apply as the "property tax," with a system of separate fees and charges for water, conservancy, and streetlights.*

Property rates for rental value systems also vary by country. In India, property taxes range from 6–10 percent, depending on the cities. In Singapore, annual property tax rates are progressive, ranging from 0–8 percent. Caution must be paid when comparing statutory rates for rental value systems modeled after the former U.K. rating system. Under those systems, the "rates" often include a number of separate tax rates. For example, the Holding Tax in Bangladesh includes four different rates applied to the annual rental value of a property—a maximum of 7 percent for the tax on land and building, 5 percent for street lighting, 7 percent for conservancy, 3 percent for water for a total maximum holding tax rate of 22 percent. It is, therefore, important to unbundle any statutory tax rate structure to clarify what rate is applied on the property only for generalized services versus those rates which are applied on the property value, earmarked for specific services such as water, garbage collection, and street lights. Ideally, separate user charges could be developed for services such as water and garbage, while street lights could be paid through a surcharge levied on electricity consumption, levied as a surcharge on property value, or paid for through the basic local government property tax collections.

Factors for Choosing a Tax Rate

As identified earlier, tax rates are either determined by the central/state government in law or through granting discretion to the local government. Setting these rates is typically done based on a combination of political and technical factors such as tax needs and tax affordability.

Taxing jurisdictions which begin with a given tax rate are sometimes called "rate-driven" or "value-driven" systems in contrast to a "budget-driven" property tax system (IAAO, 2020).

Under a "rate-driven" property tax system, the potential property tax revenue is driven by the level of property valuation, assuming a fixed property tax coverage. This places credence to the idea that the valuer determines both the distribution and the magnitude of the property taxes to be paid by taxpayers. Thus, taxpayers may tend to oppose any property revaluations as they fear these would automatically create higher tax bills, and there may be a reluctance for valuers to estimate accurate higher market values to avoid taxpayer criticism.

In contrast, taxing jurisdictions which follow a "budget-driven" system can approach the property tax as the "residual" fund used to support local budgetary needs not covered by other local taxes and fees and intergovernmental transfers. In terms of tax needs, each taxing jurisdiction would take into account their expected total expenditures and the level of their expected revenues from all local taxes and user fees (other than the property tax) and intergovernmental transfers. As Figure TP-5.1 illustrates, the required property tax rate would be set at the level needed to raise the property tax revenue from the local property tax base to balance the budget.

Figure TP-5.1: Determining the Property Tax Rate based on Need

$$R = \frac{E - NPR}{AV}$$

Where:

R = rate of tax
E = total approved budget (expenditures)
NPR = total estimated non-property-tax revenue
(such as fees and charges, intergovernmental transfers)
AV = assessed value of the tax base (in a value-based tax, total assessed value).

Under a budget-driven system, a substantial increase in absolute property values would lead to a reduced tax rate assuming spending needs remain constant. Under a budget-driven system, property valuations do not alone determine the total potential revenue yield, but it is the combination of the property valuation levels and the choice of the politically-chosen tax rate (IAAO, 2020).

Property tax rates can and should vary across local governments depending on specific local government decisions concerning the mix and quality of local government services that affect the expenditure levels as well as on the availability of other local revenue potential and the level of intergovernmental transfers.

Tax rates should also be set while considering affordability, understanding that certain taxpayers will be able to afford and be willing to pay higher property taxes than others. The exact level is a judgment call, heavily dependent on the specific taxing jurisdiction. If data is available, a useful benchmark to guide the discussion may be the per household property tax as a percent of per household income. In other cases, calculating the per household tax calibrated to a common purchase such as a pack of cigarettes, a cup of tea, a dinner in a restaurant can be useful in guiding discussions on affordability (for example, the average residential property tax in Myanmar is equivalent to three cups of tea a year) (McDonald and Hein 2017).

3. Statutory versus Effective Tax Rates

While these statutory rates may be useful as benchmarks, they should be used carefully, since there can be significant divergence between the statutory property tax rates and the effective property tax rates. Although the statutory rate is important, it is the effective tax rate that ultimately determines revenue yield, efficiency, and equity.

Effective tax rates are calculated as the amount of actual tax paid as a percentage of property market value. These effective tax rates may differ from statutory rates due to policy decisions linked to exemptions, valuation deductions, valuation assessment ratios, differential tax rates, and tax credits as well as by the quality of the tax administration in terms of coverage, valuation, tax liability assessment, and collection. At the extreme, for example, if a property is not captured on the tax roll, or if the property is captured but the tax is not collected, its effective tax rate is zero, regardless of the tax policy choices.

In practice, there is a striking divergence between statutory and effective tax rates. Sometimes these are intentional, as a country or taxing jurisdiction may design tax policy to reduce effective tax rates for certain types of properties for equity and economic incentive reasons (See Annex TP-6 on tax abatement and relief). However, poor administration in terms of low coverage, market valuation, and low collection ratio can also unintentionally create low effective rates distorting the achievement of the intended revenue yield, equity, and efficiency objectives.

Examples from the Philippines and Vietnam can illustrate the difference between statutory and effective tax rates. For example, the statutory tax rates in the Philippines can be as high as 2 percent while the effective tax rate is estimated at only 0.07 percent (Guevara, Gracia and Espano 1994, as quoted in Bird and Slack 2004). In Vietnam, the statutory tax rates range from 0.25 percent to 2 percent, while the effective tax rates are estimated to be as low as 0.012 percent (Trinh and McCluskey 2010).

As shown in Table TP-4.2, the extent of the divergence depends on the quality and timeliness of the property valuations roll, the structure of the exemptions and tax relief measures, as well as the quality of collection and enforcement. For example, the statutory property tax rate in Nairobi, Kenya was recently as high as 34 percent, to compensate for the outdated property valuation roll dating from 1982. The effective tax rate is estimated at perhaps less than 0.01 percent of the capital value (Kopanyi and Murray 2017).

Table TP-4.2 | Example of Differential Effective Tax Rates

	1	2	3	4	5	6
	Residence	**Residence**	**Residence**	**Residence**	**Commercial**	**Industrial**
Property Market Value	50,000	100,000	100,000	200,000	100,000	400,000
Appraised Value	50,000	100,000	90,000	180,000	90,000	350,000
Valuation Deduction	10,000	10,000	10,000	10,000	10,000	10,000
Owner Occupied Deduction	5,000	5,000	5,000	5,000	-	-
Taxable Value after Deduction	35,000	85,000	75,000	165,000	80,000	340,000
Taxable Value with Assessment Ratio (20%)	7,000	17,000	15,000	33,000	16,000	68,000
Statutory Tax Rate (1%)	1%	1%	1%	1%	1%	1%
Tax Amount (Annual)	70	170	150	330	160	680
Statutory Effective Tax Rate	**0.14%**	**0.17%**	**0.15%**	**0.17%**	**0.16%**	**0.17%**
Collection Ratio	**70%**	**0%**	**50%**	**80%**	**90%**	**100%**
Effective Tax Rate	**0.098%**	**0%**	**0.08%**	**0.13%**	**0.14%**	**0.17%**

Source: Roy Kelly 2020.

4. Property Tax Rate Structures

Countries also must make a policy choice on whether to adopt a single property tax rate applied to all properties or to allow multiple tax rates depending on property tenure/ownership or property use.

As Table TP-4.3 illustrates, there are various approaches for setting tax rate structures, with tradeoffs between intended policy objectives and administrative complexities and costs. Using a simple, uniform tax rate simplifies administration, reduces administration costs and increases transparency. For example, a uniform rate can be applied to a mixed-use property, rather than trying to apply differential rates (for example, residential property also serving

as a medical clinic). Allowing tax administration to determine the appropriate rate, without accountability oversight, can lead to unnecessary losses in revenues, equity, and efficiency. Finally, a uniform tax rate applied to differential property values means that properties pay the same tax percentage (rates), but will end up paying different tax amounts depending on the difference in property values.

Classified Tax Rate Structure: Although a uniform tax rate may be the ideal option, it often proves politically difficult, forcing countries to introduce a classified rates system in which differentiated tax rates are applied to different, specific classes of property (such as residential or non-residential). In countries adopting a classified tax rate structure, the key recommendation is to keep the number of property classes to a minimum, perhaps limited to residential, non-residential, and agriculture. Typically, property tax rates are lowest for agricultural properties, residential properties, and finally, nonresidential properties, respectively.

When choosing between a flat rate versus a classified rate system, it is important to remember the implications on the economic incidence of the tax burden. That is, placing significantly higher taxes on business properties does not necessarily mean that the business will pay the higher taxes, as the business will typically shift those tax burdens to consumers, suppliers, labor, equity holders to the extent possible. This tax burden shifting can lead to "tax exporting" where the tax is being borne by those living outside the local jurisdiction, breaking the link between local expenditures and local revenues, thereby leading to economic inefficiencies.

Progressive Tax Rate Structures: Some countries have progressive tax rates based on individual property value (for example, Bolivia, Brazil, Chile, Colombia, Egypt, Guatemala, India, and Peru) (De Cesare 2012, Kelly 2013a, NIUA 2010). These progressive rates, largely adopted for political purposes, are rationalized as a way of shifting the property tax burden to properties with a higher "ability to pay."

This argument is questionable since property values and taxpayer income are not directly correlated. Many low-value properties are owned by wealthy taxpayers, while many higher value properties are owned by "asset rich-cash poor" taxpayers. To be truly progressive, the rates should apply to the total value of all properties owned by a single property taxpayer rather than to individual property values. Given the quality of property information and the difficulty of effectively linking the tax subject (owner and/or occupier) and the property tax object (taxable property) information, it is virtually impossible to implement such a progressive property tax regime in a comprehensive manner.

To the extent possible, local level progressive property tax rates should be avoided, leaving the use of progressive tax rates for central-level income taxes. Instead, flat or classified property tax rates should be applied to realistic estimates of property value, collected, and enforced to ensure that the property tax system is equitable in practice. Jamaica in 2005 is an example

where the country abolished its progressive property tax rate structure to adopt a simple flat-rate structure to remove the tax rate complexity and improve tax payment compliance.

Shifting away from a progressive rate structure can have a number of advantages (Sjoquist 2004):

- It can reduce the incentive to sub-divide property for purely tax purposes.
- It can lower the tax burden on high-value properties, which may encourage greater levels of tax compliance.
- It can eliminate the problem with bracket creep, where properties can naturally fall into the higher tax brackets as property values naturally increase—unless the brackets are indexed to the general property value increases.
- It can make it easier to adjust the rate over time.

Guidance on Tax Rate Structures:

International best practice suggests to keep the tax rate structure as simple, transparent, and accountable as possible.

- **An area-based system should allow fixed area rates to vary by location, land use, building construction type, and other factors to move toward a notional/presumptive property value system.** The closer these adjustment factors can be calibrated to actual property market value information, the more equitable the property tax system will be. These notional value-based systems can evolve naturally to market-informed systems as market information becomes available.
- **An ad valorem system, for administrative simplicity, should ideally have a flat percentage rate. If a classified system is chosen, different property classes should be kept to a minimum, perhaps limited to residential, nonresidential, and agricultural.** Typically, property tax rates are lowest for agricultural properties, then residential, and finally nonresidential properties, respectively.
- **Progressive property tax rates should be avoided.** Public finance experts recommend that progressive tax rates be limited to income taxes and not applied to individual property values. Progressive rates applied to property values can be complicated, leading to unintended revenue, equity, efficiency, and administrative consequences.

- **Using progressive tax rates, as well as using classified tax rate structures, are identified as problematic approaches to dealing with perceived property tax regressivity.** To be truly progressive, rates should apply to the total value of all properties owned by a single property taxpayer rather than to individual property values. South Korea has been the only country that has successfully applied a progressive rate to the combined total value of a taxpayer's properties within the country (Republic of Korea).

- **Differential property tax rate structures as tax incentives and/or for tax relief/ abatements should be reviewed and rationalized, and limited to the extent possible.** All property tax subsidies/tax expenditures should be identified, quantified, and included in open policy and political discussions.

Table TP-4.3 | Options for Tax Rate Structures and Rationale

Practice	Explanation	Rationale
Flat Specific Rate	A flat rate per unit of property (for example, USD0.01/per m2).	Simplest way to tax an area base.
Flat Ad Valorem Rate	A flat ad valorem property tax rate applied to the taxable value of each property. Each property would pay the same percentage of tax but would pay different property taxes depending on the property taxable value.	Simplest way to tax property values.
Progressive Ad Valorem Rate	**Option 1:** Progressive ad valorem rates applied depending on property value. For example, 0.1% is applied for properties valued up to USD 100,000, while 0.15% is applied when properties are valued higher than USD 100,000. **Option 2:** A set of marginal tax rates is used for different property value brackets, similar to a progressive income tax. For example, 0.1% is applied to the first USD 100,000 in value, 0.15 is applied to next USD 250,000 in value, while 0.20 is applied on any value greater than USD 250,000. These progressive rates can be applied to a single property value or comprehensively to the total value of properties under a single taxpayer.	Encourages sub-dividing of property. Perception of being a more equitable system by taxing higher valued properties at higher nominal rates. If applied on comprehensive property value, it could become a partial wealth tax. But must be cautious since there are "asset rich-cash poor" taxpayers and many low-value properties may be owned by higher income groups

Practice	Explanation	Rationale
Differential Rates Applied to Different Types of Property	Typically known as a "classified tax rate structure" where certain types of property (for example, residential, non-residential, agricultural) are taxed at different rates for policy objectives. These could be structured as either flat (uniform rates) or progressive tax rates per property class. Some taxing jurisdictions require higher-level government oversight and approval to adopt a classified rate system to ensure appropriate levels of coverage, valuation, and collection efficiency.	Usually to reduce taxes on agricultural property and capture higher taxes from commercial and industrial land.
A Surcharge Rate on Vacant or Underutilized Property (Brazil, Namibia, Senegal, Venezuela)	Higher rates applied to vacant or underutilized property.	To encourage the development of vacant and underutilized land.
Dual Tax Rate System	Different tax rates applied to land/site and capital improvements/structures.	To encourage greater efficiency by taxing tax (inelastic resource) at a higher rate than taxing building (an elastic supply), very rare.
Different Tax Rates for Tax Abatement/ Tax Relief Schemes or for Economic/ Urban Development Objectives	Lower or higher tax rates applied to properties to promote specific policy objectives of economic development, relief for low-income taxpayers, reduce urban sprawl, and others.	To provide tax relief for such groups as veterans, widows, pensioners (elderly). However, many relief schemes are structured as property valuation exemptions or tax credits rather than through reduced tax rates. To encourage regional development schemes, industrial zones. These forms of subsidies should be carefully evaluated for their effectiveness in achieving the intended goal at the least cost.

Source: Adapted from Bahl 2009, Kelly 2013a, IMF 2016.

Annex TP-5: Tax Abatements and Reductions

Tax abatements are policy measures designed to provide tax relief or economic incentives to taxpayers for various economic, social, and often political purposes. These tax abatements (for example, reliefs, credits, and exemptions) are essentially government subsidies, structured to reduce the effective tax rate to be paid by a particular taxpayer based either on the characteristics of the taxpayer or the taxable property.

Several of the most common abatements may include the following:

- Businesses properties (for example, startups, investments in distressed regions, or in certain types of industries)
- Social welfare (such as low-income families, widows, retired and elderly people, pensioners, and orphans). (For the Latin American experience, see De Cesare 2012.)
- Owner-occupied housing, either targeted for specific groups (such as veterans) or to all homeowners, with no restrictions.
- Newly-constructed buildings, where some countries in Africa provide a tax holiday from 2–15 years.

These various abatement schemes have intended and unintended revenue, equity, and efficiency implications; thus, they should be reviewed in terms of their effectiveness in achieving the intended government objectives. There may be cases where these abatement/relief schemes should be eliminated or restructured. For example, some countries provide tax relief measures for homeowners, often known as a homestead exemption. In some countries, the push is to exempt all residential properties, while in other countries, it is to grant a single exemption to only the owner-occupied residential unit (Egypt, Indonesia). Some countries provide a total exemption (100 percent), while others provide a partial exemption. Many countries give preferential tax treatment to residential properties through a lower tax rate structure. Therefore, giving additional exemptions for owner-occupied properties often results in an overly generous exemption causing major revenue, efficiency, and equity problems.

While providing a blanket exemption for all residential properties may be politically expedient to garner popular support, it can be highly inequitable and generate a large loss in foregone revenue, without effectively helping those most in need. Even limiting the total exemption to a single owner-occupied house would be inequitable, as taxpayers owning higher value properties would receive a higher exemption (or subsidy) than those living in lower value houses. A million-dollar house would be totally exempt, for example, as would a USD 50,000

house. Similarly, providing a fixed, percentage-based exemption on the housing value would be unfair, as a fixed percentage exemption on a higher-value property would be worth more than the same fixed percentage exemption on a lower-value property.

Ideally, the homestead exemption should be targeted to the poor, linked to the income/wealth of the individual property owner, and not to the value of the residential unit. Unfortunately, there is no direct correlation between low-value residential units and the income of the owner, as many lower value housing units are owned by very rich landlords, and higher value housing units may be owned by the "asset rich-cash poor." To avoid this equity problem, Canada provides a tax credit through the income tax system so that the subsidy to low-income owner-occupied housing can be targeted through the income tax system. Other countries provide a tax deferral program for elderly, income-tested, owner-occupied residential property.

Therefore, best practice would suggest that, if desired, such residential exemptions should be structured as a fixed lump sum amount, making the residential exemption somewhat progressive—with lower value houses benefiting relatively more than higher-value houses.

Similar to the policy choice made to grant local level discretion in setting the tax rate level and structure, with central level oversight, a country must also determine the level of local discretion in setting abatements and tax relief. Tax abatement/relief measures are often determined centrally, consistent across the country, while in other countries, this discretion is given to local governments. As with the tax rate, this discretion can promote local autonomy, efficiency, and accountability but can also present a moral hazard problem. If intergovernmental transfer systems and their allocation formulae take these tax relief schemes into account, local governments will have incentives to reduce tax rates and grant tax relief as this may increase their resource transfers from the central government.

Guidance on Property Tax Abatement Schemes

Review and analyze all schemes to confirm government objective and whether the scheme is designed and implemented to obtain the intended objective cost-effectively. Overall experience shows that these schemes need to be better targeted, with many schemes to be restructured and/or eliminated.

Ideally, the taxing jurisdiction should prepare a tax expenditure that includes all abatement/relief schemes, estimating the revenue forgone and the equity and efficiency implications of these schemes for transparency.

It must be remembered that well-intended, taxpayer-oriented abatements can be difficult to administer fairly since they require effectively linking a property (the tax object) to the individual (the tax subject) and their related characteristics.

If tax abatement discretion is granted to local governments, the forgone revenue not collected should be considered when allocating intergovernmental transfers.

Annex TA-1: Improving the Coverage Ratio (CVR)

As earlier defined in the Property Tax Revenue Equation (Figure 4), the coverage ratio is defined as the amount of taxable property captured in the tax registry divided by the total taxable property in a jurisdiction. While the tax base coverage policy is determined in the law, the actual tax base coverage—the amount of the defined tax base actually captured on the tax roll—is determined in the field through the application of administrative systems, procedures, and capacity. This administration performance ultimately affects the revenue yield, equity, and efficiency of the property tax system.

The coverage ratio is estimated to range from 30 to 70 percent in most developing countries, depending on the tax administration capacity and the dynamic nature of the property market and urbanization in a country. For example, the valuation roll in Nairobi, Kenya, which dates back to 1982, has only about 125,000 properties out of an estimated 400,000. Maputo, Mozambique has only about 7 percent of properties registered, and Addis Ababa, Ethiopia, has only about 55 percent of all structures on the tax roll (Franzsen and McCluskey 2017).

Improving the coverage ratio involves a dedicated effort to identify, capture, manage, and maintain the property tax information, including taxpayer and property physical characteristics, needed for property tax administration. This information can include both alphanumeric and spatial information as defined in law. The administration challenge is to ensure that this property information is and remains complete, up-to-date, and accurate as close to 100 percent as possible to capture the total potential tax base.

Governments typically rely on a combination of approaches working with taxpayers, third-party public and private agencies, and direct field survey activities. Property tax legislation and regulations typically require taxpayers to self-report taxpayer and property characteristics (including physical and value-related information). Countries may also require third-party public and private sector agencies and individuals to submit required property-related information to the tax department in a timely manner. In addition, tax departments often will undertake field exercises to update their property information, audit existing property information, and capture property information not currently yet on the tax rolls.

To be timely and cost-effective, the reform will need to determine the required minimum property-related information for property tax purposes, design the data capture mechanism (either manual or digital), and implement a systematic capture, processing, and analysis

of the taxpayer and third-party information accompanied by an awareness, education, and support campaign. The property declaration/reporting form should be simple, user friendly, and strictly limited to information needed to build and maintain the fiscal cadastre database.

One challenge often encountered is that the third-party agencies with the required information may also be undergoing institutional development and reform, focusing on improving the quality of their own information management and service-related activities. Thus, any effort to improve the fiscal cadastre is dependent on the quality and timing of the other ongoing agency reforms. Effectively ensuring accurate and timely information sharing across agencies by overcoming technical institutional and procedural factors is critical.

Expanding the property tax coverage ratio, accurately improving the property data already on the roll, and capturing those properties not yet registered can substantially increase revenue yield, equity, and efficiency. For example, cadastral fieldwork alone in Carmen de Campeche, Mexico led to discovering 54 percent additional land parcels (the total increased from 53,713 to 82,890 parcels). Taxing these additional parcels increased tax revenues from 25.8 million pesos in 2008 to 67.0 million pesos in 2011, an increase of 120 percent in tax revenues (Banobras 2012, as quoted in Ahmad et al. 2014).

Theory and international experience suggest some reasons for low property tax coverage and possible administrative solutions to overcoming these constraints (Table TA-1.1)

Table TA-1.1 | Property Tax Base Coverage Constraints and Possible Solutions

Possible Constraints	Possible Administration Solutions
Land Tenure Systems	• Identify and rationalize information requirements (alphanumeric, spatial and imagery) for property tax administration • Identify and develop simplified property data collection forms, procedures, and systems to capture, maintain, and update this required information • Rationalize and develop forms, systems, and procedures to capture tax base information self-declaration by taxpayers • Identify and develop approaches to collect, manage, and link with information from other internal and external government institutions and third parties (such as banks, notaries, insurance companies) • Rationalize and develop proactive field data collection and verification procedures with quality control • Strengthen third-party cross-checks and public scrutiny • Introduce proper computerization for property information management and for property tax administration management systems) • Separate property information collection and maintenance functions from property valuation functions
Incomplete or Non-operational Information and Management Systems / Operating Procedures	
HR, Systems, and Financial Capacity Constraints across Agencies, Levels of Government	
Lack of Incentives (Personal and Institutional) & Institutional Culture	

Source: Roy Kelly 2020.

International best practice would be to develop a partnership approach to improving the coverage ratio, using a combination of taxpayer declarations, third-party property information sharing and proactive field surveys, along with streamlining the business processes and operating procedures.

Annex TA-2: Improving the Tax Base Valuation Ratio (VR)

Using property information captured on the tax roll linked to the coverage ratio (**CVR**), the taxing jurisdiction must determine the property assessment, which will serve as the basis for calculating the tax liability for each property. While an area-based assessment system will rely on using the land and/or building area contained on the tax roll, an ad valorem assessment system will need to use this tax roll information, along with other property value information, to estimate an appropriate value for a particular property. This property value to be used for property tax purposes must be determined based on the assessment basis (capital or rental value) as defined in law, using the available valuation methods as defined in the law and/or regulations.

Although most property tax systems rely on the government to estimate and determine the property tax valuation assessment, some countries have experimented with a taxpayer self-valuation assessment approach (Colombia, until recently, Ireland, some jurisdictions in India). Under this approach, taxpayers estimate the value of their properties (and assess their tax liability) within the guidelines set by the government. As Box 5 explains, taxpayer participation in property information self-declaration, self-valuation, and self-assessment have revenue, equity, and efficiency, as well as administrative and compliance costs implications.

As discussed in Annex TP-3 on Property Assessment Basis, virtually all countries, and their taxing jurisdictions, implement a property tax system at least loosely linked to value, ranging from a simple notional/normative value to a market-informed / market-based value. The choice depends largely on the degree of available property market information and valuation capacity. Typically, lower-income countries will rely on an area-adjusted, simple notional value, calibrated to the extent possible by real market information. Middle-income countries, typically with more active property markets and property valuation capacity, may be able to increasingly adopt a more market-informed valuation, while middle- and higher-income countries should be able to increasingly adopt market-based valuation approaches.

Within this stylized valuation framework, some countries should consider adopting an asymmetric approach where larger municipalities, which may have the necessary market information and valuation capacity, may adopt a market-informed or market-based valuation approach while smaller, less urbanized taxing jurisdictions may adopt a simpler area-base adjusted/more notional value or market-informed valuation approach, as appropriate.

Box 5: Taxpayer Involvement in the Coverage, Valuation and Collection Functions

Taxpayers are given various responsibilities that affect the coverage, valuation and collection administration ratios. All property tax systems require taxpayers to pay the property tax bill, but the remaining administration functions such as property identification, valuation, tax liability assessment and billing, collection, enforcement, and taxpayer service and dispute resolution are largely the responsibility of the government.

However, in some countries the government is opening up opportunities for the taxpayer to self-declare their property information and property valuation (Bogota, Colombia) and/or to self-assess their tax liability (Bogota, Colombia; Kolkata, Bangalore, Patna and Ludhiana, India; and Turkey). These self-declaration, self-valuation and self-assessment options may reduce initial administrative costs, collusion and corruption, and lead to higher revenue mobilization; but equally, they may lead to under-valuation and under-assessment of tax liabilities which can lead to revenue loss, inequities, and inefficiencies. Any self-declaration, valuation, and assessment system must include a system of government audit to ensure their integrity.

The self-declaration, self-valuation and self-assessment approaches involve the following:

- Self-declaration, as practiced in virtually all countries, requires the taxpayer to submit taxpayer information and information on the property characteristics, often including valuation and/or rental information. This self-declared information is then assembled, maintained, and used by the taxing jurisdiction for valuation, liability assessment, collection, and taxpayer service purposes. The declared property information is audited in the field and based on third-party information.

- Self-valuation, as once practiced in Bogota, Colombia requires the taxpayer to not only declare the taxpayer and tax property characteristics, but also the property valuation, which is used for tax purposes. The declared value can then either be used by the taxpayer to self-assess the property tax liability or by the government as the basis for an official tax liability assessment. Under the former, the taxpayer than pays the self-declared, self-valued, and self-assessed tax payment. The government selectively audits the accuracy of the property characteristics, declared valuation and the application of the assessment parameters, and makes the tax liability adjustment as appropriate. In Ireland, an occupier-assisted valuation system for residential and commercial property was recently introduced.

- Self-assessment, as practiced in India and parts of Latin America, occurs when taxpayers use valuation unit-rate tables provided by the government, in combination with taxpayer self-declared information, to self-assess their tax liability and pay that amount to the government. The government selectively audits these payments for accuracy on the property characteristics and application of the assessment parameters and makes the tax liability adjustment as appropriate.

Reformers must understand the implications of each option when evaluating possible options for property tax administration reform.

As illustrated in Box 6, countries/states for efficiency reasons often will consider centralizing the valuation functions to take advantage of economies of scale (for example, Canada Provincial Assessment Agencies, Maryland in the United States, Valuer General in New Zealand, Malaysia).

Box 6: Options for Organizing the Property Tax Valuation Function:

If valuation capacity is the main constraint, a country/state may choose to establish a more centralized property valuation agency to utilize the limited valuation capacity and take advantage of economies of scale. This valuation unit could be structured to develop the valuation models and parameters which could then be applied at the local government level using the property information contained in the fiscal cadaster. This centralized valuation agency could focus exclusively on providing valuations or could be mandated also with the responsibility to maintain the fiscal database (property tax base coverage along with the valuation function), while leaving the property tax treasury functions (for example, billing, collection, and enforcement) to the local government.

If this more centralized approach is adopted, this unit could be located within the Ministry of Finance for the property values to be used for taxation purposes or within the Ministry of Lands (for land valuation) or within the Ministry of Construction (for building valuations). Other countries may have an independent valuation authority (for example, the Central Valuation Authority in Thailand, Valuer General in Australia, New Zealand, and Malaysia). In other countries, the property valuations and maintenance of the fiscal cadaster may be carried out at the state or provincial level (such as the provincial level in Canada, and in the United States, the state level in Maryland and the county level in North Carolina). If more than property valuation is centralized, the property tax administration could be operationalized under the tax department or the country's revenue agency.

In countries where the property valuation responsibility is given to the local government, it will be important to explore options to cooperate horizontally with other local governments, higher-level government agencies, and/or the private sector to undertake their valuation functions in a cost-effective manner.

See Almy 2013 for more details on institutional options.

The valuation ratio is critical to ensure a buoyant revenue base and ensure fairness. This requires a focus on both the absolute and relative valuation ratios. In many developing and emerging countries, the absolute valuation ratio for properties may be no more than 20 to 40 percent, with some countries at less than 10 percent—largely a result of the long delays between property revaluations. There may also be large variations in the accuracy of the relative valuations, implying substantial inequities across property values. (Bird and Slack 2004, Kelly 2000, De Cesare 2012, UN-HABITAT 2011, NIFPF 2011).

As Table TA-2.1 illustrates, theory and international experience suggest possible remedial policy and administrative solutions to improve the property tax valuation ratio.

Table TA-2.1 | Property Tax Assessment Basis and Possible Solutions

Possible Constraints	Possible Administration Solutions
Land tenure system and property market informality	• Codify valuation standards, procedures, and systems into SOPs • Shift to simple mass valuation based on notional or market-informed/market-based property valuations • Shift from unworkable market value-based system to an area-based, notional, value system • Publicize valuation rolls and valuation methodologies • Enhance transparent appeals process • Index valuation rolls • Shorten valuation cycle (3–6 years) • Utilize a system of supplemental valuation rolls • Separate property information collection and maintenance functions from property valuation functions • Build valuation capacity • Collect, analyze and model property value information • Mobilize political, operational and taxpayer support
Lack of appropriate property valuation/ assessment systems & operating procedures	
Lack of HR and financial resources to implement those property valuation/ assessment systems	
Lack of individual and institutional incentives to maintain accurate and up-to-date valuations	
Political interference and taxpayer resistance	
Property tax system with low revenue yield, constraining resources warranted to be spent on administration	

Source: Roy Kelly 2020.

The quality of valuation ideally requires a systematic "assessment sales ratio" study to evaluate the level and uniformity of the estimated values contained on the valuation roll (IAAO 2013, 2014). Lower- and middle-income countries typically do not have the systematic market information evidence needed for such "assessment sales ratio" studies. Therefore, a practical approach would be to rely on local "expert opinion" on values along with any market value evidence. This expert opinion can be gathered through holding focus group discussions with property brokers, banks, notaries, property developers, construction companies, and other persons knowledgeable on property market trends. Such a study should be able to estimate at least the level of the valuation ratio as a percent of the market value estimates. In addition, if the number of properties is sufficient, it should be possible to get a sense of the

degree of relative valuation accuracy, which is important as a measure of the equity of the existing valuation system.

The accuracy of the absolute and relative valuation ratios requires constant attention to ensure consistent and periodic updating of valuation rolls to capture changes in property market values. As identified earlier, valuation standards and methods should be tailored to the institutional, system, and human capacities and the availability of market-based information.

As explained earlier, the choice of the assessment basis depends on the availability of market information and valuation capacity within a taxing jurisdiction. The specific valuation methodologies can include the additive approach, which combines land value maps and building cost tables used throughout Latin America and Southeast Asia with the more complex statistical estimation models used mainly in North America. In 1993, the United Kingdom introduced a market-valuation approach known as "banding," which classifies all residential properties into eight "bands" of value based on their estimated capital value. These values have not been revalued to date, creating major potential valuation equity challenges. Countries need to access, collect, manage, analyze, and monitor market information on property-related prices (for example, sales, rents, and construction costs) to implement any of these valuation systems, which range from simple to more complex.

As property markets are dynamic, the relative and absolute accuracy in property valuation can only be maintained through a systematic, periodic updating of the property tax valuation roll. Unless the property valuation roll is periodically updated, property values remain static, affecting property tax revenue buoyancy.

Some countries index the valued tax base to an annual inflation rate (or other rate determined by the government), between the normal periodic valuation process, to maintain the absolute valuation ratio level of the tax base (Chile, Germany, France). Although this approach can maintain the absolute level of the tax base valuation, it does not adjust for the relative changes in value across properties; thus, inequity will rise over time unless tax departments update the absolute and relative property values periodically.

One important diagnostic valuation benchmark is the frequency of the revaluation cycle—both legally-mandated and actually undertaken. International best practice is to undertake revaluations systematically and periodically, ideally between three and six years—or even annually in cases where property values increase dramatically. In many countries, these revaluations are out of date, and the practitioner should seek to identify the causes for these delays (such as political, administrative capacity, funding, or other reasons.)

Table TA-2.2 | Valuation Approaches

Valuation Approaches	Pros and Cons	Countries
1. Self-Valuation	**Pros:** • Quick and low-cost • No Appeals • Seen as an interim solution to an official assessment **Cons:** • Undervaluation, potential revenue loss, inequity and inefficiencies • Inconsistent valuations and potential inequity • Need audit and penalties in cases of gross undervaluations	Colombia (Bogota) for several years, Ireland, Rwanda
2. Official Valuation		
Notional Valuations Based on Location Adjustment, Building Construction, and Other Variables	**Pros:** • More equitable than area-based valuations with proper calibration • Notional adjustments can be calibrated to market value information using land value zones and building cost tables • Easy to explain to taxpayers **Cons:** • Potentially inequitable if improper calibration to market value information • Requires an appeals system	Bangladesh, India, Pakistan
Market-Informed, Market-Based Valuations	**Pros:** • More potential equity as the estimated property tax values approximate market value evidence **Cons:** • Requires capacity, market information, and an appeals system	Canada, Indonesia, Latin America, Philippines, South Africa, United States
Banding	**Pros:** • Possibly simpler as specific valuation accuracy is clustered into broad bands of value, with fewer appeals **Cons:** • Inequitable at the borders of the bands	England in 1993, but with no subsequent revaluation to date

Source: Roy Kelly 2020.

Frequent revaluations are important to maintain equity as well as to reduce taxpayer resistance to periodic, large increases in property values. Revaluations, bringing property values closer to market values, are also important to maintain the buoyancy of the property tax base and expand potential property tax revenues without the need to increase property tax rates. Revaluing an outdated property tax base can enable the government to lower the statutory tax rates in a revenue-neutral manner, focusing attention on improving equity rather than increasing property tax revenues.

Improving the valuation ratio requires combining the updated information on property ownership and characteristics with the collection and analysis of market-based information. The collection of market-based information can come from taxpayers through their property declaration forms and/or from third parties such as property brokers, real estate agents, notaries, banks and mortgage institutions, insurance companies, and newspapers. These information sources provide the underlying basis for market value trend analysis, which is used to update the property tax valuation roll periodically.

Institutional capacity and administrative procedures must be developed to collect and analyze market value information from various sources systematically. Obtaining this information often is less of a technical problem; rather, it is an institutional problem—for example, ensuring adequate regulations, coordination, establishing information exchange standards and protocols—often the same challenges faced when improving the coverage ratio.

International best practice would be to have a specialized valuation unit that collects, manages, and analyzes property market information. This unit would be able to develop the appropriate valuation models and parameters, such as land value maps and unit cost tables for buildings in low- and middle-income countries and more sophisticated computer-based statistical models in middle- and upper-income countries. As identified above, in some countries, this unit would be located within the tax department at the local government level; in other countries, this unit would be located at the state or central government level. In some countries, an independent valuation agency might operate at the central level.

Ultimately market value-related information can be used to develop cost, income, or market comparison approaches to valuation depending on the valuation purpose, property type, property information availability, technical, and administrative capacity (IAAO 2010). In practice, taxing jurisdictions in low- and middle-income countries can develop simplified mass valuation approaches using land value zones/ land value maps and building cost tables. In contrast, higher-income countries, with easier access to quality market information and with higher levels of valuation expertise, may develop more complex statistical models (for example, in North America and selected OECD countries). Ultimately, the accuracy and equity of the valuations depend on the quality of the available market information—not necessarily the sophistication of the valuation modeling.

To ensure legitimacy, consistency, transparency, accountability, and equity throughout the property valuation and assessment process, all property tax systems incorporate an appeals and dispute resolution process, except in those rare systems which allow self-valuation for property tax purposes. Property tax systems relying on official estimates of property value must be subject to appeal by taxpayers to ensure transparency and accountability and, ultimately, the equity of the property tax system.

These appeal systems give taxpayers options to challenge the estimated property value both administratively and through the court systems. These appeals systems help better ensure that property valuations are fair and close to market value, which tends to produce more accurate relative and absolute valuation ratios.

International best practice provides for both administrative and judicial appeals, with multiple levels to ensure fair, cost-efficient, and quick resolution. Property tax laws typically provide for the establishment of a valuation tribunal, valuation review committee to hear those appeals, after which aggrieved taxpayers have an option to appeal through the court system on points of law. Countries can require a taxpayer to pay either all or a part of the property tax liability before filing a judicial proceeding (for example, in India) to avoid frivolous appeals.

Annex TA-3: Improving the Tax Liability Assessment Ratio (TLR)

Using the property tax-related information contained on the valuation roll, a taxing jurisdiction must apply the legally mandated policies to calculate and levy the correct tax liability to be paid by each taxpayer.

These tax policies include various property tax exemptions, use of fractional assessment ratios, often differentiated by types of property, valuation, and any area-based deductions which often vary by property use and tenure, appropriate tax rates that may differ across property classes, as well as possible, varying property tax credits.

While most property tax systems follow an official tax liability assessment approach, some jurisdictions allow taxpayers to self-assess their property tax liability (for example, India and Laos). Under these self-assessment systems, taxing jurisdictions issue guidelines and forms for taxpayers to declare their property tax-related information, along with the estimated tax liability, and to pay this to the tax department. Under the self-assessment approach, the government will have an audit system in place to encourage accurate tax liability assessments. Often, these self-assessment systems have been put in place to intentionally separate taxpayers and tax officials to reduce administration and compliance costs and encourage greater transparency.

As expected, complex policies and administrative procedures can potentially lead to unintended (or perhaps intended) miscalculations, which may either over-levy or under-levy the tax liability for specific properties. This can be especially a problem in systems that rely on manual operations, verbal instructions, and when the assessment and collection functions are carried out simultaneously by the same individual.

Although there may not be records which quantify the loss in potential revenue, equity, and efficiency under the tax liability function, it is logical that the Tax Liability Assessment Ratio (TLR) could be improved by adopting clear, simplified and transparent policies and procedures linked to tax exemptions, tax rates and fractional assessment ratios, deductions, credits, and tax abatement/relief schemes. Using the simplified policy structure, combined with improved staff capacity, systems and procedures, and effective oversight and transparency, will improve the quality of the tax liability assessment process. Appropriate automation of the tax liability assessment process can also improve its equity and efficiency.

Annex TA-4: Improving the Tax Revenue Collection Ratio (CLR)

Property taxation is primarily a revenue instrument to raise government revenue equitably with the least economic, administrative, and compliance costs. Identifying and valuing the tax base produces the valuation roll, which represents the potential tax base. Applying the tax rate to the valuation roll produces the tax roll, which represents the potential tax revenue. This potential tax revenue is only transformed into reality through the tax collection process. Without successful collection, the property tax system would not be able to realize and achieve its revenue, equity, or efficiency goals.

Countries should focus priority on enhancing voluntary compliance, providing incentives to taxpayers to pay their taxes in a timely manner. These incentives can vary, from linking the property tax payment to improved public services, enhancing taxpayer service and reducing compliance costs, providing discounts and incentives for timely and complete payment, and improving overall tax administration. In cases of non-compliance, appropriate sanctions and penalties should be applied to ensure equity and efficiency in the property tax system.

As Table TA-4.1 illustrates, a careful diagnosis and understanding of collection and enforcement challenges can help identify possible reform interventions. The appropriate approach to improve revenue collection must be tailored to the underlying rationale for low revenue collections.

Table TA-4.1 | Approaches for Improving the Revenue Collection Ratio

Possible Reasons for Low Revenue Collection Ratio	Possible Solutions
People do not pay because there is a lack of tax payment mentality. Some cultural/political systems have a recent history of free services from the government and thus do not understand the rationale for taxation in general. In rural areas, customary land tenure systems make it difficult to enforce through seizure and auction of property.	Improve taxpayer education programs to explain the importance of property taxation. Carefully evaluate the cultural/political norms and implement creative alternatives means to stimulate voluntary compliance.
Citizens do not pay because they cannot afford the tax. For example, in some situations, taxpayers (such as pensioners and others) may be genuinely "Asset-Rich, Cash-Poor." The value of their property may be high, but the taxpayer does not have the income stream to pay the tax.	Review the affordability of the property tax as a percentage of taxpayer income. For those genuinely Asset Rich-Cash Poor, consider encouraging downsizing, reverse mortgages for taxpayers, and/or consider options for tax deferral programs, homestead exemptions, or property tax credit schemes targeted for the poor. A system of payment instalments may also encourage tax payment, spreading out the lumpiness of the tax bills. However, the administration and compliance costs of implementing such instalment systems should be weighed against the benefits.

Possible Reasons for Low Revenue Collection Ratio	Possible Solutions
Citizens have no faith in how the government will spend the collected revenue. They feel that collected revenues will be misused and therefore refuse to or are reluctant to pay.	Improve public service delivery. Develop a credible budget. Improve government budgeting, revenue & expenditure decisions, and financial management systems. Improve public relations between the government and the taxpayers—for example, by correcting misinformation about expenditures decisions. Use participatory planning and budgeting techniques to allow citizens' voices when allocating expenditures to help improve revenue and expenditure credibility. Introduce citizen report cards and other third-party monitoring and evaluation systems.
Citizens have no faith in the ultimate equity of the property tax system. Outdated property information, unequal property valuations, "mis-assessment," mismanaged collections, unsystematic enforcement, and lack of fair appeals procedures create mistrust.	Improve property tax policy and administration. Re-examine policies related to tax base definitions, exemptions, rates, deductions and assessment ratios, abatement schemes, incentives, sanctions and penalties, and appeals. Improve administration, focusing on property information, valuation, assessment, collection, enforcement, and appeals.
Citizens are willing to pay but do not because of poor tax administration. Tax bills are late or never delivered because bill distribution systems are inadequate, payment systems are not understood or too complicated, or payment points are inconveniently located. Compliance costs for payment are very high in relation to the amount of the tax or the penalty for noncompliance.	Improve tax administration. Use computers to calculate and issue tax assessment notices, change the legal concept of notification, institute an effective bill delivery system, use barcoding with addresses, improve taxpayer education programs, and simplify the payment system.
People pay, but the collected tax revenue may be mishandled and incorrectly managed. This is especially a problem in cash-based societies.	Improve revenue accounting and payment control system. Rotate revenue collectors, use numbered receipts, oversight, and audit. Transfer "teller function" to the banking system; use ATM machines and cell phone payment systems to reduce compliance costs and improve revenue accountability trails. Enforce against non-compliance to complete the audit cycle with taxpayers against payment accounting to determine possible revenue leakages.
People do not pay because they know the government ultimately will not enforce the tax obligations. There is a lack of enforcement measures (for example, incentives, sanctions, or penalties) and/or there is a lack of political will to use the available enforcement measures. Taxpayers may use the court system to effectively forestall any attempt at enforcement.	Ensure that the payment control system generates a prompt and accurate delinquency list to enable enforcement; reevaluate incentives, sanctions, and a penalty structure; and mobilize political will to enforce. Effectively develop and utilize non-court options for encouraging compliance.

Source: Adapted from Kelly 2013b

As indicated, taxpayer and civic education programs are critical to providing information on the rationale, responsibilities, and rights related to the property tax, the links between tax revenues and expenditures on local services, and the property tax structure, payment procedures, appeals and dispute mechanisms, and enforcement provisions. Increasingly taxing jurisdictions are using social media, text messaging, and other forms of Information Technology (IT) to improve communication with their residents. See Annex TA-5 on Information Technology (IT) for Property Taxation for further details.

Taxpayers must be informed of their tax liabilities. This notification process typically requires creating and delivering a tax bill to the taxpayer. This billing process can be a challenge in many taxing jurisdictions. Tax bills are often produced manually and delivered by hand due to a lack of clear postal and/or street addresses. In those situations, tax bill delivery typically relies on the local government and neighborhood organizations. Automating tax bill production and streamlining tax bill delivery can improve the collection ratio.

Better information, combined with easily accessible payment systems, can lower compliance costs and encourage voluntary compliance. For this, countries are increasingly providing multiple convenient payment options, for example, through banks, post offices, ATMs, the internet, or by allowing payment by electronic checks, credit cards, direct bank deductions, or payments through cell phone credit transfers. Some countries have tried to link property taxes to electricity or water bills to facilitate collection (Greece, South Africa).

Effectively using social pressure to encourage property tax payment compliance has been effective in many countries. Publishing names of top compliant taxpayers publicly recognizes outstanding compliant taxpayers as positive role models, thereby helping to encourage voluntary compliance (Philippines, Indonesia). Other countries publish the names of the delinquent taxpayers, who are given advance notice to pay the tax to avoid the negative publicity (Kenya, Malawi, Tanzania). Some countries provide direct monetary incentives to encourage compliance by giving a discount for those paying in a timely and complete manner (Philippines, Barbados, Ecuador, and Kenya) (Kelly 2013a).

In addition to lowering compliance costs and providing incentives to encourage voluntary tax payments, countries also apply sanctions and penalties (such as late payment penalties, possible interest payments, or the use of tax clearance certificates, tax liens, and other penalties). Strict enforcement against non-compliance can encourage a culture of voluntary compliance to avoid being sanctioned or penalized.

To address non-compliance, countries adopt a mixture of sanctions and penalties. Sanctions can be applied through the withholding of location-specific public services (for example, building permits, business licenses, land/title registration, withholding and/or suspension of utilities) enforced through “tax clearance certificates,” which can be used

for private sector services (for example, financial institutions issuing mortgages or home equity loans). By requiring tax clearance certificates, tax departments can mobilize third-party support from other public sector departments and private sector agencies to promote collection compliance.

In addition to requiring tax clearance certificates, most countries can impose a tax lien (or encumbrance) on a property title to ensure tax payment when a property is sold or transferred. Such a tax lien affects the collateral value of a property for borrowing purposes, thus should be encouraged for those titled properties which have arrears. Countries find that a combination of tax clearance certifications and tax liens can be quite effective in deterring non-compliance.

In addition to incentives and sanctions, countries apply a system of progressively strict penalties to encourage compliance. These typically include the imposition of a lump sum payment penalty and/or a monthly interest payment (Bahamas, Indonesia, United States). Interest payments for late payment should be consistent with other major taxes, such as VAT and income taxes, and the rate should be set higher than the prime interest rate.

Ultimately these late payment and interest penalties must be enforceable through legal tax debt recovery. Countries use various alternatives to secure legal debt recovery, including civil legal proceedings, the ability to garner wages and rents, seizure and sale of movable properties and/or the seizure and sale of immovable property (Canada, Chile, Indonesia, Philippines, United States). Other options for enforcing property tax collections include linking the property tax to location-specific services. For example, South Africa allows cutting electricity in cases of non-payment.

In North America, tax departments ultimately rely on property seizure and auction to enforce against tax nonpayment leading to collection rates close to 100 percent. In contrast, enforcement using seizure and auction in developing and emerging countries is very rare, with three documented exceptions: Chile, Indonesia, and the Philippines (Kelly 2013a). Each case illustrates the importance of a strong political will and technical capacity to implement enforcement measures.

Improving the collection ratio on land owned under land use rights present special challenges. For freehold land, governments can place a lien on the property title, ultimately selling the property to recover the tax debt. However, to enforce against land use rights, governments must take action against the individuals or businesses owing the tax, such as attaching taxpayer wages and bank accounts, seizing movable assets, or canceling the land use rights. In cases where property ownership is not clearly defined, not registered, and/or communally owned, tax departments must rely on moral persuasion, communal social pressure, and/or seizure of movable properties. Strategically publishing relevant

information on the largest non-compliant properties can be quite effective to encourage compliance (Kenya, Tanzania) (Kelly 2000).

Some countries have designated the central government tax departments / revenue authority to be the collection agent for local government property tax revenues (Rwanda, Tanzania) while others allow local governments to explore this arrangement (Ghana, Kenya). These arrangements vary in terms of which property tax functions are maintained by the local government and which are contracted to the central government revenue authority. These arrangements must be carefully evaluated to ensure the appropriate balance between central and local government autonomy, accountability, and cost-effectiveness.

Some countries have used the private sector to assist in the tax collection process (Pakistan, Uganda) (UN-HABITAT 2011). These private sector approaches, often used for collecting market fees or parking/bus park fees, have been used for property taxation as well. Contracts are typically structured as a lump sum payment through a bidding process, with the winning contractor able to keep any amounts collected over the contracted amounts. A best practice would be to allow the government to be responsible for collecting all current liabilities and delinquent accounts for up to a year, after which the outstanding accounts could be contracted to collection agencies and/or lawyers to take legal action for recovery.

Other countries engage neighborhood organizations (Paraguay), urban neighborhood governments (Philippines), and village and/or traditional leaders (Ghana, Indonesia, Sudan) to encourage tax compliance. To mobilize their active support, governments typically provide a collection incentive or institute a system of shared revenue from the property tax to ensure that a portion of the collected property tax revenue is retained at lower government levels. For example, property tax collections in the Philippines are shared with smaller local government units that compose the province or the city. In the case of a province-level property tax, 40 percent goes to the municipality, 25 percent goes to the village where the property is located, while the province retains 35 percent. Property taxation collections of city governments are divided 70:30 between the city and the village (Barangay) (Guevara 2003).

Ultimately improving the tax collection ratio requires a comprehensive collection and enforcement approach—one which promotes voluntary compliance through a combination of payment and collection incentives, sanctions, and penalties, combined with the necessary political will to take action against noncompliance to the full measure of the law (Kelly 2013a, Kelly 2013b). All administration reforms require strong political and technical support, legal authority, institutional capacity, and financial and human resources to implement and sustain improvements in the collection, coverage, and valuation ratios.

The efficiency of property tax collection management also affects the coverage ratio. Although taxpayers may pay their property tax, that revenue collected may not be properly deposited and accounted for within the government accounts. This is an internal government management challenge to ensure that the business processes linked to the billing, collection, and enforcement are transparent and accountable. In addition to strengthening internal auditing and oversight, systematic enforcement against taxpayer non-compliance can reveal situations where taxpayer payments were made but incorrectly recorded in the financial accounts.

Tax collection efficiency is affected by the quality and professionalism of the tax administration staff. To avoid rent-seeking and other forms of corruption, many taxing jurisdictions have encouraged the use of self-assessment systems, using banks as payment points, and otherwise seeking to separate contact between taxpayers and tax department personnel. Instituting a code of conduct, separating office functions, HR management, rotating staff, internal audit, and external oversight are options to reduce the potential for inappropriate and corrupt behavior.

The collection and enforcement activities require strong political and administrative commitment. These measures should be undertaken not primarily to improve revenue mobilization in the short run, but primarily to establish an environment of voluntary tax compliance. That is, a comprehensive collection and enforcement approach is necessary to promote voluntary compliance through a combination of payment and collection incentives, sanctions and penalties, combined with the necessary political will to ensure that follow-up action is taken against noncompliance to the full measure of the law.

Annex TA-5: Information Technology (IT) for Property Taxation

The introduction of improved information technology (IT) solutions has long been regarded as a potentially transformative tool for strengthening local property taxes (Prichard and Fish 2017). Increasingly, developing countries, including countries in Africa, Asia, and Latin America, are managing large volumes of data on taxable properties and taxpayers within the IT environment.

Specifically, IT systems have the potential to play a major role in increasing outcomes by improving property identification; improving property data management; automating aspects of valuation and assessment; enhancing billing, collection, and enforcement; facilitating taxpayer services; and enhancing transparency and accountability, thereby improving transparency and accountability.

Such systems are now also being used to a greater degree in developing-country jurisdictions. Indonesia, since its devolution of the rural and urban property tax in 2014, has introduced a number of IT innovations, as has the Philippines. A recent World Bank project in Tanzania saw the creation of an integrated IT system to manage property tax administration (McCluskey et al. 2018). Elsewhere, simpler home-grown solutions have enjoyed success in Sierra Leone, Uganda, and Lagos State, Nigeria (Jibao and Prichard 2015; Cheeseman and de Gramont 2017). In Senegal, a new locally developed system is under development through a partnership between the government, international experts, and a local IT firm. However, the success of IT systems has been mixed, and research has increasingly pointed to the need for systems that include key functions but which are also simple, relatively low-cost, and easily maintained to ensure usability and sustainability (Prichard 2014). Further, the key is not necessarily the IT itself but the improvements in streamlining the business processes that have led to greater efficiencies in administration.

To analyze the IT options in the process of property tax collection, registration of properties through the development of a fiscal cadastre is vital. Properties may be more easily identified, numbered, measured, and recorded using basic IT systems, satellite maps, and appropriate geographic information system (GIS) technology. In a recent project in Senegal, drones were deployed to support property identification and measurement. Several cities in India have also used drones and GIS technology to identify and record properties.

Clearly, some metropolitan areas have the financial capacity to do this, as is evident from the practice in South Africa. Conversely, the use of such technology in, for example, Manila, is

restricted to the larger cities in the metropolitan region (Makati and Quezon). In several cities, it is estimated that coverage is now almost 100 percent (Bogota, Bengaluru, Hong Kong, Kuala Lumpur, and South African metropolitan regions). In some Latin American cities, in contrast, informal and illegal constructions are generally not recorded, and the coverage is therefore around 75 percent (De Cesare 2004). The experience is less satisfactory in poorer cities; for example, in 2002, coverage in Dar es Salaam was approximately 30 percent (McCluskey and Franzsen 2005). Difficulties have arisen for other metropolitan areas when they have no control over the cadastre (Dar es Salaam, Kingston) or when they have no resources to create their own GIS (Accra, Kampala, and smaller cities in metro Manila) (McCluskey and Franzsen 2013b).

Besides property registration through the assistance of GIS and drones, the property valuation process can also be assisted by technology. In some advanced property tax administrations, largely OECD countries, sophisticated Computer Assisted Mass Appraisal (CAMA) methodology is used to value properties. This approach is one of identifying key variables that influence a property's value—such as market price, size, age, location, and quality of construction—and running a multiple regression model to identify coefficients linked to each variable.

In developing countries, while complicated, information-intensive CAMA models are not feasible, many are adopting simplified, more appropriate computer-assisted valuations, including those for mass valuation. Appropriate technology-assisted valuation systems largely depend on the quality of the market information and the technical capacity available within the taxing jurisdiction, along with the legal authority to adopt mass valuation approaches for property tax purposes.

IT solutions are also helpful in improving property tax revenue collection, automating the tax liability assessment process, billing, revenue collection accounting and monitoring, and managing the delinquency accounts and arrears. In addition, IT can be used to improve taxpayer services, including managing the appeals and dispute resolution process.

Potential Challenges

Complexity of IT systems

Many property tax administrations only have limited capacity in terms of IT skills. IT systems imported from outside the taxing jurisdiction may fail to reflect the needs of their end-users. Simplified systems and interfaces and hands-on training programs should be adjusted to the learning styles and needs of local staff. Basic infrastructural limitations in many local government settings, such as intermittent electricity, basic and unreliable computer hardware, and weak internet connectivity should also be taken into consideration.

High costs

Potential property tax revenue is often limited due to inappropriate tax policy and administration and taxpayer affordability. Even relatively effective property tax systems are unlikely to generate more than 1 percent of GDP in revenue—often USD 5 per capita or less outside capital cities in many countries (Prichard and Fish 2017). As such, reliance on IT solutions developed or maintained internationally or in the capital city, or with high complex functionality, may exceed local affordability unless costs are shared widely.

Politics

Initial enthusiasm, driven by the promise of new revenue, can give way to increasingly organized opposition from those threatened by reform—mostly among larger property owners, but also smaller property owners who fail to see public benefits from tax revenue. Key gains may be eroded: weakened valuation processes, elimination of transparency, removal of data controls, and the undermining of procedures for identifying non-compliers. Government officials fail to see the political pay-off from challenging property-owning interests. Central governments may be reluctant to support these reforms as they may be resistant to expanding local fiscal autonomy. Poorly designed intergovernmental transfers may also undermine incentives for local collection and reform.

Inadequate systems

IT systems are only as good as the property tax system itself. An effective property tax IT system must successfully integrate a series of interconnected functions: at a minimum, identification of properties, assessment/valuation, billing, payments, monitoring compliance, and providing taxpayer service. It also needs effective coordination and cooperation between different agencies and different levels of government. Inadequate property tax systems result in ineffective IT system reform. Anecdotal evidence suggests that new IT systems are often introduced before fully understanding the broader property tax environment, including excessively complex and inefficient business processes for property information and valuation procedures, billing and collection systems, and enforcement processes.

Sustainability

IT reform programs may prove unsustainable over time. Complex systems may still be in use with support from external technicians; however, stability may collapse when technical support ceases. Donor or central government support can maintain the operation of IT systems; however, the cost of maintaining those systems may be prohibitive once those funding sources disappear. Additionally, external providers of technology may lose interest in projects yielding limited revenue, leaving local governments without a means to support and update existing systems. These cases will hinder the successful implementation of the local IT system and erode trust for future reform.

The Way Forward

Link IT reform to broader reform: Implementing low-cost and effective property tax information and valuation processes; putting data management protocols, billing and collection practices, and effective enforcement mechanisms in place; and establishing more explicit links between revenues and spending can be critical in building a long-term, sustainable basis for reform. Simplicity and local appropriateness, cost-effective solutions, long-term, responsive, and hands-on implementation with regular training of local staff over time, coordination across levels of government, and local and open source software can contribute to successful property tax IT-related reforms.

Glossary

Absolute Valuation Ratio	Measures the percentage of the real market value that is being captured by the value determined by the tax administration. A 60 percent valuation ratio would imply that the government valuation for tax purposes is only capturing 60 percent of the real market value.
Ad Valorem Property Tax	A property tax imposed based on property value.
Area-Based Property Tax	A property tax imposed based on the physical area of land and/or buildings.
Assessed Value	The taxable value of a property assigned by the tax jurisdiction against which the tax rate is applied.
Assessment Ratio, as known as fractional assessments	Legally prescribed percentages applied to the estimated market valuation to determine the taxable value against which the tax rate is applied. Some tax systems apply differential assessment ratio by property type (Philippines).
Assessment Roll	A listing of all assessable (appraisable) property within the taxing jurisdiction. It identifies the property, the taxpayer (typically the owner (if known), occupant and/or beneficiary), and the assessed value of the property. The assessment roll is issued periodically by the taxing jurisdiction. If new properties or buildings are identified during the period between assessment rolls being issued, they are captured on a supplemental assessment roll.
Cadastre (also known as a Property Cadastre)	A database of property showing the extent, value, and ownership. Countries may have separate spatial, legal and fiscal cadastres, each of which may have different data fields. A multipurpose cadastre would contain legal and fiscal information.
Capital Value	The value which a property can be sold and bought. A property tax system based on capital value is one which taxes based on the value for which a property can be bought and sold.
Classified Tax Rate System	A property tax rate system which applies a different tax rate to different classes of property (for example, agriculture, residential and non-residential).
Comparable Sales Approach (also known as the Market Approach)	A property valuation approach which uses information from recently sold properties to estimate the value of a similar property.

Computer-Assisted Mass Appraisal (CAMA)	A system of appraising (valuing) property—usually only certain types of real property—that typically incorporates computer-supported statistical analyses such as multiple regression analysis to assist appraiser/valuer estimating property values. CAMA systems are often modules that can be linked to an integrated property tax administration management system.
Cost Approach (also known as Cost Replacement New Minus Depreciation)	A property valuation approach which estimates a building value by assuming that the value of the property would be equal to an equivalent building, adjusted for depreciation. Under the cost approach, the market price for the property is equal to the cost of land plus cost of construction, less depreciation.
Current Use	A system where property can be valued at the present condition of the land use (for example, agriculture or residential) rather than on "highest and best use" (such as residential or commercial).
Efficiency (economic) as applied to taxes	A tax is considered economically efficient the less it distorts decision making. Possible distortions would be behavioral changes in location, production, consumption, and timing. Lower rates on broader tax bases lead to fewer distortions.
Effective Tax Rate	The average rate which a taxpayer pays based on the market value of a property. The effective tax rate can be different from the statutory tax rate as the property may be underestimated, and there may be valuation deductions, assessment rates, and other adjustments to the taxable value.
Exemption	An exclusion of all or part of a property's value from property taxation. An absolute exemption excludes the total value of property, while a partial exemption excludes a part of the total value from taxation (for example, a homestead exemption).
Fiscal Cadastre (also known as a Property Cadastre for Tax Purposes)	A cadastre designed for property tax purposes. It includes factors required for property tax system implementation such as legal description, taxpayer information, land and property information, property physical characteristics, valuation, and location.
Flat Tax Rate System (also known as a Flat Rate System)	A property tax system that applies a single-unit tax amount per property (under an area-based system) or a single-percentage rate to the property value under a value-based system.
Fractional Assessment	Fractional assessment is allowed in many property tax systems. Rather than using 100 percent of the estimated property value, the law would allow a taxing jurisdiction to use only a fraction of that value for taxation purposes. For example, a tax system may stipulate that the tax rate will be applied to only 60 percent of the estimated value. In the Philippines, different factional assessments are applied to different categories of property (for example, agricultural, residential, commercial, hospitals, and water districts ranging from 10 to 50 percent).

Highest and Best Use	The highest and best use is the legally mandated property use that would produce the highest value for an asset (for example, current residential land that could be used for commercial purposes).
Immovable Property (also known as Real Property)	Property that cannot be moved without destroying or altering it, such as land or a house.
Improvements	Any action done to vacant land that increases its value. This would include a structure (for example, building) built on a property, as well as actions, such as fencing and landscaping.
Income Approach (also known as the Income Capitalization Approach)	A property valuation approach which takes the estimated net operating income of the rent collected and dividing it by a capitalization rate, also known as the discount rate.
Integrated Property Tax Administration Management System	A computer-based system to support property tax administration management. These systems would incorporate most of the key functions such as property information management, along with the property valuation, tax liability assessment, billing, collection, enforcement, and taxpayer services modules.
Legal Cadastre (also known as Property Registry)	A registry of land and building information based on legal rights and ownership. The legal cadastre typically only applies to land parcels that have legal titles of ownership.
Market Value (also known as Fair Market Value or Full Cash Value)	The amount of cash or its equivalent that a property would bring if put up for sale in the open market under certain conditions: • Neither buyer nor seller could take advantage of the needs of the other • Both buyer and seller must have knowledge of all of the uses and purposes to which the property is adapted and for which it can be used, or • Both buyer and seller must be aware of any enforceable restrictions on the property's uses and purposes
Mass Valuation (also known as Mass Appraisal/ Mass Assessment)	An approach to value a group of properties as of a given date and using common data or standardized methods. Although often associated with sophisticated statistical methods, mass valuation in many countries relies on simple, often automated systems using base values with adjustments made for location, property use, building characteristics, among others.
Parcel	Any unit of real property, regardless of size, that has a single owner or is held in undivided ownership and for which there is a separate appraisal record.

Progressive Tax Rate System	A system which applies higher tax rates on higher-value properties. Some property tax systems may apply a higher tax rate on properties over a certain valuation threshold, for example, 0.5 percent for properties with values less than USD 100,000, and 0.6 percent for properties higher than USD 100,000. Other tax systems will apply 0.5 percent on the first USD 100,000 in value, and then a 0.6 percent only applied to the value over 100,000. Under the first option, a property valued USD 110,000 would pay 660 (0.5 percent * 110,000) while under the second option, the property would pay (0.5 percent * USD 100,000 = USD 500) and (0.6 percent on USD 10,000 = USD 60) for a total of USD 560.
Property Tax Roll	All the information on the assessment or supplemental assessment roll plus the taxable value and the tax levy for each property parcel. The property tax roll is used as the basis for issuing the tax bill notification.
Relative Valuation Ratio	Measures the amount of market value captured by each property. That is, if all properties are being valued at 60 percent of the market value, there is relative fairness in the property tax assessments. However, if some properties are being valued at 60 percent, while others are being valued at 80 percent of the market value, there would be inequity across properties.
Rental Value	The value which a property can be rented in an open and fair market. The "gross rental value" is calculated as the value the property can be rented at over the year, with the "net rental value" calculated by subtracting an amount for maintenance (often one to two months' rent). The property tax rate is typically applied to the net rental value.
Statutory Tax Rate	The tax rate which is legally defined in the law. The statutory rate should be distinguished from the effective tax rate.
Supplemental Assessment Roll (also called the Supplemental Appraisal Roll or an Interim Assessment)	The "Supplemental Assessment Roll" (or the supplemental appraisal roll) contains a listing of all property that has undergone a change in ownership or experienced new construction since the last property reassessment (property revaluation). Supplemental assessment rolls can be used, along with assessment rolls, as the basis for preparing a tax roll.
Tax Levy	The amount of tax due on a specific property. It can also refer to the total amount of taxes imposed by a taxing jurisdiction on the taxable properties within its boundaries.
Taxable Value	The amount of tax due on a specific property. It can also refer to the total amount of taxes imposed by a taxing jurisdiction on the taxable properties within its boundaries.

Taxpayer Assessment **(also known as Self-Assessment)**	The assessed value of a property minus all applicable tax exemptions, legally defined assessment ratios, and other deductions.
Taxpayer Declaration	The taxpayer provides the property information on the owner and property characteristics, including value-related information. These declarations can be required on a periodic basis when a property is bought or sold and when there are physical changes to the property.
Taxpayer Valuation	The taxpayer estimates the valuation of their property to be used for property tax purposes. These estimates can be structured to use valuation guidelines issued by the tax department, with all estimated values subject to audit by the government.
Valuation Deduction	The legally mandated amount of the property tax value that is deducted from the estimated market valuation to determine the taxable value against which the tax rate is applied (for example, used in homestead exemptions)
Value-Based Property Tax **(also known as Ad Valorem Property Tax)**	Property tax based on property value.

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