



Property Taxation Economic features, revenue potential and administrative issues in a development context

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Table of Contents

Executive Summary: Property taxation and SDGs in developing countries.....	4
1. Methodological issues and choices	4
2. Revenue implications	6
3. Tax Design issues	6
4. Tax Administration.....	7
5. Property taxation and the SDGs in the Sub-Saharan Context	8
6. Conclusions and Next steps	10
I. Property taxation, instruments, models, administration and potential effects.....	12
1. Types of instruments for the taxation of property	12
2. Recurrent property taxation	14
3. Ability to pay and benefit approaches and assignment of property taxation	17
4. Tax Administration options for Arms' Length Operation of Local Taxes.....	21
5. New technology: blockchain options.....	26
II. International experiences: shifting to simple property tax options.....	29
1. The evolution of the English model	29
2. Colombia and Bogotá	31
3. Evolution of Indian property taxation—work in progress	32
4. Bolivia: not keeping up with inflation undermines a well-structured flat tax	33
5. The political economy of the Mauritius model	34
6. Namibia's agricultural land tax	36
III. Property Taxation: evidence from field studies in Senegal and Tanzania	37
1. Senegal.....	37
2. Tanzania	49
IV. Special issues: Equity, Revenues and Costs.	60
1. Property taxation and equity	60
2. Revenue: Models vs experiences	62
3. Statistical analysis and legal, social and political-economy constraints.....	63
V. Recommendations and concluding remarks	69
1. Options for taxing urban property	69
2. Taxing agricultural land and informality	72
3. Administration and institutions	72
References.....	74
Acronyms	78
Annex: Terms of Reference	79

Executive Summary: Property taxation and SDGs in developing countries

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The taxation of property is a critical element in the sustainable development agenda. While the typical approach concentrates on a largely untapped revenue source in developing economies, an effective property tax system can lay the basis for the more effective provision of local public services and sustainable access to credit for public investment. It can also be used to signal occupancy rights for specified periods of time, critical for household access to credit and upgrading of informal sector living conditions. There are several instruments for taxing properties, such as taxing property use or ownership on a recurrent basis, as well as taxing property transfers or sales and capital gains.

The study focuses on **recurrent taxation of unbuilt and/or built land** whose use presents potential revenue and positive externalities, particularly with a focus on sustainable development predicated on successful urban transitions and employment generation. In addition, two field studies on Senegal and Tanzania represent the Francophone and Anglophone institutional arrangements respectively, and are typical of the low property tax collections and informality observed in developing countries, and not just in Africa. Separate and complex issues are linked to the taxation of agriculture, involving food and cash crops, and forestry and natural resources. Pricing and support policies and contracting arrangements tend to have a far greater fiscal impact than any direct taxation implications. Our work, including the field visits, has focused instead mainly on urban property taxation issues.

1. Methodological issues and choices

Property taxation, particularly recurrent taxes, usually referred to as land and property taxes, on which this report is focused, reflect complex fiscal issues impacting on, and in turn constrained by, extremely diverse factors. These include ownership rights, mobility of persons, taxation equity, multilevel governance and administration of both property and income taxes. Present day property taxation evolved from practices in industrial countries. Even in advanced countries, property taxes operate with different levels of efficiency. The property tax has also been exported by colonial powers to their colonies. Particularly in urban areas (essentially the capital city), without adapting either the design or the administration to local circumstances. Full use of property taxation in developing and emerging countries is constrained by further factors, such as land tenure regimes, prevalence of a large informal sector, and poverty. Also, unlike other broad based tax instruments, such as VAT and even corporate and personal income taxes, property taxation impacts on essential components of the material and psychological wellbeing of individuals,

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such as the need for shelter, or the ownership of a basic asset. This is the most visible of taxes and generates the stiffest political resistance. Yet, given a relatively limited revenue potential, far below that of the broad area taxes, property taxation has a major role to play in ensuring accountability of local officials in both deconcentrated and decentralized countries, and also lays the basis for a credible and sustainable access to credit for local investments and infrastructure needs.

The historical and institutional context is also important. In this report, we examine the similarities and differences inherent in the Francophone and Anglophone colonial transitions, governing the choice of Senegal and Tanzania as case studies. A comprehensive approach is needed in the formulation of policy options, reflecting consideration of political and capacity constraints. Further limitations of time and resources have restricted us to focusing on only two urban centers, including the main metropolitan areas, in each country. These have been sufficient to illustrate the importance of the detailed analysis including the actual institutions and operations of the administration, rather than just relying on legal texts (often copied from the colonizing countries) or complex theoretical constructs that lead to separate taxation of land from built up enhancements and betterment investments that are impossible to implement, given the skills available. Indeed, the complex models have been abandoned even in advanced countries, such as the UK, as we illustrate.

The report has two main components. The first is analytical, while the second one is based on the relevant literature, including previous studies by the authors in a number of African countries, China, the Indian Sub-Continent, and several Latin American Countries. This also includes the EC-project financed field studies in Senegal and Tanzania. The two components are intermingled in the text with the intention of providing evidence supporting analytical statements, and to derive new analytical propositions based on the evidence provided.

We use a comprehensive framework starting from land tenure regimes, the supporting administrative and political institutions, and end up in channeling tax collections to government treasury accounts. We focus on particular components of property taxation that are critical for its success in emerging-market and developing countries, and that must be differentiated, in most cases, from the prevailing practice in industrial countries. Two components play a crucial role. The most important include the determination of the tax base and the registration of owners/occupiers, and of property titles. Standard practices from industrial countries, such as valuations based on market prices, and establishing and updating fully-fledged cadasters, turn out to be non-applicable in most cases. We suggest that these must be replaced by more flexible, and also more innovative, solutions, such as flat taxes and new digital distributed platforms for registration, revenue generation capabilities and information on transactions.

The choice of case studies has been determined in accordance with the framework we have suggested. To exemplify, the UK offers the prototype of a modern approach to property tax, and its choice of occupiers as taxpayers appears to be of special relevance for emerging countries, given uncertainty surrounding property rights and ownership, limitations on valuation, and of the link between costs and benefits of government action. Bolivia and Mauritius are relevant because of reliance and experimentation with a flat tax. Indian cities have had varying degrees of success with presumptive alternatives to the traditional property tax that has largely failed despite the advanced legal design that has been in force for over a century. Namibia offers practically the only recent example of the introduction on a tax on agricultural land, although the taxation of land in the Indian sub-continent operated well since the middle ages, as a tax farming and upward revenue-sharing mechanism. It atrophied with the political economy constraints of colonial British rule.

In consultation with the EC, we selected Senegal and Tanzania for detailed study; given traditional tribal land rights, state ownership of titles, and gradual evolution of individual property rights more suited to property taxation. The case studies also illustrate different administration traditions; centralized versus decentralized property tax regimes; as well as protracted, and largely unsuccessful reliance on cadasters and valuation of properties for taxation.

2. Revenue implications

Property taxes collections in many developing countries tend to be relatively low, if not negligible (between 0.1 and 0.5% of GDP in many cases). The study suggests that a conservative **potential yield from property tax should be at least 1% of GDP** in most cases. Much of the potential lies **in urban areas**, particularly in the large cities, and is critical for local services and investment.

Property taxation generates information on assets and living conditions that can help to expand the base of the income tax, with a multiple of the revenue potential of the property tax itself. Greater efficiency in spending is possible because of **enhanced accountability** of a well-designed property tax. Reducing informality enhances efficiency and growth, with additional indirect benefits on the public finances.

3. Tax Design issues

The traditional ownership-valuation model of (residential) property taxation has not worked in most developing economies, and Sub Saharan Africa is no exception. Cadasters are often out of date, and incomplete, and their use is complicated by forms of state and communal ownership. Valuation is hard to determine. Extensive informality also poses complications, for the local governments, as well as inhabitants, who then lack the basic prerequisites for access to basic services, as well as credit.

Self-assessment methods, that have worked in the more advanced cities, such as Bogotá, that operate modern functional tax administrations with strong audit and enforcement, are probably not applicable in much of Sub-Saharan Africa. **Presumptive methods**, such as in India, have had a mixed record—with falling revenues or inequity as the presumptive valuations were raised.

A simple, flat tax linked to essential characteristics of properties, such as location, size and occupancy is to be recommended as it would be relatively easy to implement quickly, with the owner liable in case the property is vacant. This is, or was, done in many countries such as Bolivia and Mauritius. It is also being attempted in Tanzania, although a linkage with local services and benefits is critical for political acceptability.

The property tax is an ideal local tax through a potential link with benefits, particularly of basic services and local investments. A property tax would become an “own-source” revenue for local governments *if they are able to set the property tax rate at the margin* (e.g., within a band that would be feasible in both unitary and federal states, or just subject to a floor), even if key elements of the administration are managed centrally or by independent agencies. This would make it possible to effectively devolve functions to local governments; and for the local government to access credit, or issuance of local bonds, for public investment. The property tax can play a crucial role in decentralization and local territorial development.

There may be an explicit integration of the property and income taxes. In some cases, the property tax payment can be offset against income tax liability, or direct benefits provided to offset the property tax payments, as in some advanced countries. In all cases, the information on property use, rentals and ownership is needed for the effective operation of the personal income tax.

A simple flat rate per hectare of agricultural land, based on the South Asian experiences, can be recommended for developing countries (see Ahmad and Stern 1991). This could be based above a minimum exemption limit that would vary according to irrigated or non-irrigated land. As with the income tax, the basic limit is sufficient to meet distributional considerations. We have not developed specific proposals for Senegal or Tanzania. Although the principles are the same, an assessment of the administrative, legal and political factors is needed before specific recommendations can be developed. This is an area for further work.

Distributional considerations are important with any tax reform. The impact is also shaped by effectiveness of administration. In reality, the most expensive properties largely escape taxation in almost all developing countries. **The flat tax proposal would enhance equity of the tax as it is hard to escape, and if there is a strong linkage with the cost and delivery of local public services, as well as investment.**

In keeping with the SDG goals and commitments to provide basic services there is a **strong case for considering an equalization framework for current spending**, to provide similar levels of service at similar levels of tax effort, given the likely concentration of property tax revenues in the main metropolitan/capital city areas. Failure to do so will enhance inefficient mobility and informality. The equalization transfers have to be ‘lump-sum’ and not determined on the basis of deficits or factors under the control of local governments. **However, there is no case for equalization of capital spending and investment, as there also closely linked to the choice of local “hubs” for sustained growth, and property taxes are needed to make the hubs operational**, to access credit for complementary local investments and to lay the basis for accountability in the provision of basic services. **The combination of instruments is important in effective devolved or decentralized governance.**

4. Tax Administration

A characteristic of the property tax is the **potential proximity of tax officials with taxpayers**. However, the advantage of proximity and local information can be offset by greater possibilities for rent-seeking and corruption. A functional model of administration is typically organized around registration, bill delivery, enforcement and information management, and taxpayer services, rather than by tax. Rent-seeking is limited if registration and enforcement (that also includes information sharing across taxes and audit) is managed in common across taxes,

The functional model of tax administration can overcome the problem of limited incentives to administer the tax centrally, exploiting interactions with other taxes. The total revenue collection is the result of all the components acting in coordination. The flow of information and data exchange needs to be enhanced between different tax instruments, as well as the treasury circuit. This is illustrated with its implications in the study.

The study examines options for maintaining the policy linkage between rate setting and enhancements in service delivery. Attempts to break the local “corruption nexus” in Tanzania have resulted in a degree of centralization of the tax administration and experimentation with the use of modern technologies, like satellite imagery. Both Senegal and Tanzania illustrate the importance of addressing the public financial management (PFM) agenda jointly with the tax administration, to consider likely political economy constraints and potential restrictions on local autonomy and accountability.

The use of open access and block-chain technologies for property taxation could be further explored, with assessments of benefits and risks. This technology could potentially generate the needed local information to supplement an arms-length administration, including at the regional/national levels. This could also simplify the cash-circuit and the functioning of the treasury/accounting systems. However, there would be a need for a national audit and big-data management function that is likely to be beyond the capabilities of most local tax administrations and which should be managed centrally, even if bill delivery and taxpayer functions are maintained at the local or regional levels.

5. Property taxation and the SDGs in the Sub-Saharan Context

While there are important institutional differences between the Francophone and Anglophone traditions, **there are many similarities at the local level in all cases.** Local public services are similar in most cases.

A key feature of sub-Saharan Africa (shared with Latin America) **is the high level of informality in the labour and housing markets.** As seen in Chart 1, this is high in Senegal, but even higher in Tanzania. This tends to be reflected also in significant rural-urban migration, particularly to the metropolitan/capital areas, with the emergence of “slums” or low or poor quality housing with uncertain legal rights. This often makes it impossible for residents to obtain credit, or have the incentives to improve living conditions when there is a danger or probability of eviction. In both cases, fuzzy property rights, with overlapping state, private, traditional or village/commons ownership, and poor information on the existing stock of housing and property, makes it difficult to implement the traditional “US-centric” ownership/valuation model of property taxation.

a. Senegal

The system of property ownership in Senegal is complex, with overlapping state legal ownership and informality in urban areas; and traditional/communal rights in rural districts.

The President (February 22, 2017) has called for addressing the issue of property titles on an urgent basis, to ensure better access to credit and public services, and develop a consistent approach towards sustainable development. The absence of titles is a severe problem even in the most advanced regions of the country, including Dakar (see below).

Although municipalities receive the bulk of the revenues collected,² the rates are set by national legislation that weakens incentives for effective governance at the sub-national

² #74, Loi 2012-13 du 31 décembre 2012, portant Code général des Impôts; and République du Sénégal, 2013, “Décret 2013-1162: portant répartition du produit du

level. The administration is split across three national agencies. This adversely affects incentives for improved performance facing local governments as well as the individual agencies. The poor flow of information across these agencies means that each effectively operates in isolation, and there is little focus on mechanisms to improve the policy or administrative frameworks.

There is very poor information on the actual property tax collections and how these relate to budgeted amounts. Municipalities do not have timely information about either assessments or collections, although spending is effectively constrained by available balances held by the center. Even at the central level, there is also considerable confusion about the amounts collected, and how these relate to the assessments, and local budgets. The meager collections are reported to be inadequate to cover costs of administration, and are probably at the lower end of the very poor performance of the property tax in SSA. The budget estimates have little meaning for any agency. Even though spending is constrained by local balances in the Treasury, the buildup of arrears on account of both revenues and local public spending, make budgetary rules and discipline somewhat moot.

Three national agencies are involved in the administration of the property tax:

- The national tax administration, DGID, is responsible for registration, valuation and setting the assessment notices;
- The Treasury is eventually responsible for collections; and
- The Court of Audit (Cours de Comptes) bears ultimate responsibility to check that the collections match the assessment notices. There are, however, no sanctions applicable in case of non-matching.

The flow of information across agencies is cumbersome and bureaucratic, including between the DGID and Treasury that are nominally part of the same Ministry. The compartmentalization of information flows and responsibilities for assessment and collection further imply that no agency has an incentive to address revenue gaps or indeed to take a view on the overall effects of the tax on sustainable development.

We focused on the municipalities in the Dakar metropolitan area—the main productive hub of the country and the magnet for migrants and the informal sector, and the area is now hugely congested and polluted. Given the emphasis of the authorities on the creation of new productive hubs, we also visited Saint Louis, the old capital of French West Africa and port city, with considerable tourist potential, and a high-quality university that could become the core of “clean new activities.”

In its own-right, Saint Louis is among the most ecologically endangered cities on the African Continent. It would require action at both local and national levels—along with appropriate responsibilities and actions that require alignment of incentives through the tax system. The current dysfunctional property tax system fails in generating any incentives towards sustainability.

b. Tanzania

As in Senegal, an effective system of local taxation is seen as key in the developmental challenge to create sustainable employment and growth hubs outside the Metropolitan

recouvrement de la contribution globale foncière et dévolution de la compétence du recouvrement.”

capital area (Dar-es-Salaam). However, the yield from the old tax was negligible. This was partly due to the complex ownership and property rights that mirrored those in Senegal. Tanzania has an Anglophone institutional tradition, with Zanzibar having an autonomous status, and mainland Tanzania organized as a unitary state.

A major preoccupation of the administration is to address the scourge of corruption, also vis a vis local taxes. The establishment of arms' length property tax administration under the Tanzanian Revenue Authority (TRA) is a key policy measure to remove the rent-seeking arising from the proximity of taxpayers and officials, typical of property tax systems in emerging market economies. As in Senegal, we see that making this arms' length arrangement work will require a better interface with the spending responsibilities, as well as the PFM system. But making a success of the property tax system is key to making the strategy of new medium-size cities as the foundation for sustainable development. The case of the city of Mwanza is very interesting in that it provides an example of the use of new technologies, including satellite imagery, to move towards stronger growth dynamics,

The absence of official statistical information on property tax base and revenue is a severe constraint. Central government reports must rely on information collected at the local councils. The (protracted) absence of information flows between levels of government exacerbates weakness of the system of public financial management in Tanzania, contributing to distrust and conflict among levels of governments, and lack of local accountability, as in Senegal.

The President has just announced the shift to a flat rate property tax linked to area/size. Its operation would be considerably facilitated with the use of a simple registration system based on occupation/residence as described in this paper. Such a system would also benefit from a generalization of satellite mapping, as experimented already in some Tanzanian municipalities, together with a careful application of block-chain technology. The linkage between rate setting at the margin and the level and quality of local public services, investment or access to credit for investment could address possible political economy constraints. This presents a significant research and policy agenda for Tanzania and other Sub-Saharan countries like Senegal, and for emerging market countries more generally.

6. Conclusions and Next steps

In both countries, **the administration of the property tax is a problem**, as well as the poor accountability of local governments and widespread corruption. Centralization of key administrative functions requires actions vis á vis generation of information across agencies, as well as the clarification of the cash circuits. These involve not only traditional aspects of tax administration but also the public financial management systems that have to be calibrated accordingly (Ahmad 2015 and next section).

The **poor information on property tax revenues** collections, as well as what should be collected, poses political economy problems in both countries. This includes the possible sequencing of greater accountability of local governments for devolved or decentralized functions, as well as a clarification of the key role that they must play in sustainable development.

Before a fully-articulated strategy is articulated for SSA, it would be desirable to explore in greater detail with the sample countries, the detailed policy, institutional, and operational imperatives that will be needed to make a property tax functional and better linked to the

sustainable development agenda in each case. This is particularly important with the operational use of the new technologies that will require significant institutional restructuring to operate efficiently, while minimizing risks.

Despite differences in institutional and administrative structures, **the common themes we note in Senegal and Tanzania are the focus on arms' length mechanisms** to generate property tax revenues. Together with enhanced security of tenure, access to credit, services and investment, the objective is to create local hubs for sustainable development.

We recommend exploring in depth the use of open-access and block-chain technologies for property taxation. This could potentially generate the needed local information to supplement an arms-length administration, including at the regional/national levels. It could also potentially simplify the cash-circuit and the functioning of the treasury/accounting systems. However, given potential risks, there would be a need for a national audit and big-data management function that is likely to be beyond the capabilities of most local tax administrations.

I. Property taxation, instruments, models, administration and potential effects

1. Types of instruments for the taxation of property

There are different specific instruments to tax immovable property, land and improvements on it, i.e., buildings of various types. These can be taxed on a **recurrent basis**; yearly in practice; or **non-recurrently at the time of transfer** through sale, or inheritance/donation. There are, in addition, two non-recurrent selective instruments targeted to tax only variations in the value of property. They are the tax on **capital gains** and **betterment taxes** aiming at capturing the increase in value derived from public infrastructure work.³ Table 1.1. provides an illustration of the basic characteristics of the taxes.

Recurrent taxes are levied in practically all developed and in most of developing countries, generally at the local level. When properly administered and exploited, they can contribute substantially to the financing of local expenditure, particularly in the urban areas. **They have a non-distortive character, are closely linked to local policies and provide beneficial side effects through the definition of property rights.**

Non-recurrent instruments include, first, taxes on transfer of property, also frequently called registration or stamp taxes or duties. Transfer taxes are levied on the sale, or purchase of property, donations as well as inheritances. These taxes have existed in almost all countries often over long periods of time and are presently levied almost universally. In Africa, for example, they are levied with varying frequency and outcomes (for example the tax rate varies from 0.1 per cent in Sierra Leone to 10% in Djibouti, see Franzsen and McCluske, 2017).

The tax base on property transfer is the value of property and the tax rates are generally flat, although there are notable exceptions, as in the UK (see later in this Report), where a progressive rate schedule is applied to property transfers. Transfer taxes have a substantial revenue potential, and relative ease of administration in the more advanced countries. However, in developing countries, these contribute to the general understatement of property values, affecting also the property tax per se, and consequently generate very little revenue. The tax generates large distortions in the immovable property market, making it more rigid and, as a consequence, impacting on the mobility of persons. Transfer taxes add on other expenses associated with transfer of property, such as notary fees, increasing transaction costs. Also, transaction taxes disproportionately undermine the mobility of younger households (Andrews, 2012). From this perspective, transaction taxes are harmful from both efficiency and equity perspectives.

Table 1.1. Instruments for immovable property taxation: a synthesis

³ Useful summaries are provided by Bahl and Wallace (2008); Mirrlees Report (2001); Norregaard (2013).

A common practice is **to subject sales of new properties, more specifically buildings,**

	Recurrent taxes (yearly)	Non-recurrent taxes			
	<i>Property tax /land tax</i>	<i>Registration/ stamp duties</i>	<i>VAT</i>	<i>Capital gains tax</i>	<i>Betterment levies</i>
<i>Fact originating taxation</i>	Ownership/occupancy	Transfer for consideration, or free	Sale of new property	Increase of value between points of times	Increase of value deriving from public infrastructure projects
<i>Tax base</i>	Value of land only/of buildings only/of land plus buildings. In alternative, physical size of property.	Value of transaction	Value of transaction	Difference between present and initial value	Difference of value after and before project
<i>Tax payer</i>	Owner/Occupant	Buyer	Seller	Owner	Owner
<i>Determin- ation of the tax base</i>	Assessment of market value/parametric systems (flat taxes)	Price of property at sale price	Price of property at sale	Assessment of market values	Assessment of market values

to VAT, often in addition to a stamp duty. This is an increasingly used instrument, paralleling the expansion of the coverage of valued added taxation. In this case, the taxpayer is the building company, or the developer (as in most cases in Senegal) that can deduct from their VAT due on sales, the VAT paid on inputs and investments. This is needed to reduce the costs of operation of the construction sector and to better integrate with the rest of the economy. This also reduces loopholes and incentives to cheat, and provides information to benchmark the construction costs and consequently the valuation of properties.

VAT is typically not levied on transfers of existing properties, because no value is added. It is possible to include a double system, consisting of VAT on new construction, and a property transfer tax on existing properties. However, the VAT should accrue to the Central Government, whereas the property transfer tax is frequently assigned to local administrations.

Capital gains taxes are frequently used, and share with transfer taxes the tax base and the moment when they are levied. They share with transfer taxes the efficiency and equity disadvantages. Betterment levies are used, more sporadically, in Latin America and In USA. Although they can contribute substantially to the financing of infrastructure projects, their administration presents a number of challenges in addition to political acceptance.

2. Recurrent property taxation

a. Tax bases

Recurrent taxes can be levied on land only (empty land), or on built-on land, meaning land plus buildings. A small number of countries only tax land, through a land tax. In the case of built-up land, the value of buildings must be separated from the value of the land. In developing countries, land is used mostly for agriculture, making a tax on land mostly a tax on agricultural land.

In many countries, **taxes are levied on the combined value of buildings and land**, also known as the property tax. Many countries typically levy a tax that includes *de jure* in the tax base both empty land and built-up land. De facto, only built up land and empty land in the urban areas is taxed, while land in rural areas may be subject to the agricultural land tax (see Ahmad and Stern, 1991 for a discussion of South Asia). As a result, we can conceive **of two main, not mutually exclusive instruments: the property tax targeted for the urban areas and the land tax for rural areas**—these are not mutually exclusive.

There are a few alternatives to the definition of the base of land and property taxation:

- a) the annual rental value;
- b) the capital value of land and improvement/buildings;
- c) the capital value of land;
- d) unit value of land; and finally
- e) property area.

The annual rental value system is based on notional rents that might be expected in a fair market transaction. It has been used for centuries in Britain (and then exported to the British Empire). It is still used in France (*valeur locative*) and in part of Francophone Africa, as a proxy for capital market value.

In Britain, property sales were infrequent in the past centuries, while renting of property was more frequent, leading to the selection of rental value to assess the tax base. Rental value presents huge problems. First, there is strictly no rental value for vacant land, although it can have a huge value from public policies, both regulation and fiscal. Secondly, it is arduous to identify the value of market rent in the case of owner-occupied property, which is the most frequent property type found. In France, the top performer in property tax collections in 2015, the occupiers are liable for one of the components (*Taxe d'habitation*) of the French system of property taxation. The second component is levied on owners (*Taxe foncière*). While using rent as the tax base allows the administration to choose freely between owner and occupier as the taxpayer, this is particularly difficult to establish in emerging market economies.

The capital value of land and improvement/buildings is identified in most countries by the market value. This eliminates most of the problems found with rental value, such as vacant land, owner occupied properties, and controlled rents. Identifying the market capital value of properties presents a more challenging problem than rental value in implementing a property tax in developing countries (for example see Bahl and Wallace, 2008), due to the rarity of market transactions.

The third base is the site value of land excluding improvements. Its use amounts in practice to levy a land tax in all areas, urban as well as rural. The advantage is the efficiency impact.

The disadvantages are connected to the smaller potential revenue and, again, to the difficulties of identifying (or getting close to) the market values, since the number of transactions of vacant lands is modest especially in the urban areas. While both rental value and capital value are impacted by, especially local, government policies, the link between site value and policies is somewhat more tenuous, since vacant land prices cannot reflect the impact of different policies.

The fourth base is unit value of land or property. In this case, the government determines a rate per unit of property (square meter, or foot). The total tax burden is then derived simply by the multiplication of the two elements, i.e., the rate and the area (square meters). Although, the unit value assessment derives from market values, in practice the determination of the rate is affected by location, quality of services and infrastructure, and other factors that reflect the market value of property.

Complications arise when countries try to separately tax the value of land, and then the value of buildings or improvements to built-up structures. Although theoretically attractive, these combinations have proved difficult to implement given limitations on the numbers of surveyors, as seen in the Tanzanian case below. Tanzania is moving to just a “flat tax” that should be relatively simple to administer, with limited possibilities of arbitrariness or local corruption.

A related, fifth base, is property area, determined using the simplest method, i.e., with reference only to the area of the property. The tax is levied per square meter of land area, per square meter of building (or sometimes “usable” space), or some combination of the two. Area-based assessments were used in the past for agricultural land taxation and more recently were adopted in Central and Eastern Europe, where the absence of developed property markets made it difficult to determine the market value. An interesting example reported in this report is provided by Mauritius, that levied of a period a tax on urban and rural property based only on the number of square meters utilized.

b. Potential of revenue and main approaches

There is a dismal collection of revenues from property taxes in developing economies, including in Africa (see Table 1.2), with collections well below 1% of GDP in most countries (except South Africa, and for a short period, Mauritius). With the perceived limited potential relative to the main wide area taxes such as the VAT, excises, CIT or PIT, there is a tendency to ignore or bypass discussion of both policy and administration of property taxes in structural reform programs. Also, the standard approach to tax administration is typically that it would be a diversion for the tax administration to be concerned with a myriad of small taxpayers for relatively small revenue gains, especially since large taxpayers typically generate over three quarters of total revenue.

Yet, there is a growing recognition of the potential role of property taxation in the sustainable development agenda, even if the revenue potential remains relatively small in comparison with an overall target of around 18-20% of GDP for general government revenues for the MDGs /SDGs (Ahmad, 2015 and 2017). This is for several reasons. First, as much of the basic public services are carried out at the local level, an own-source of revenue with which the local government can decide on at the margin has positive effects both on overall accountability as well as improved decision-making vis a vis devolved or decentralized spending responsibilities. A second related reason is that own-sources of revenues permit an access to credit for public investments in a sustainable manner. Further, paying taxes also facilitates household access to credit. These result in more responsible

decision-making at the household and local government levels. These important effects are hard to quantify precisely, as they depend also on the institutional elements that we discuss further below.

A system of property taxation can begin to provide information on assets. This is a significant element in moving towards more effective taxation of income and capital gains tax—which also perform badly in most emerging market economies. In the Scandinavian countries, Italy and the US, a local/state piggy-back on the personal income tax may be applied at the discretion of the relevant subnational government. These supplement the accountability of the jurisdiction and its officials—but the property tax payments can generally offset the income tax liability. More importantly, information from the property tax valuations and transactions are used to cross-check income tax statements by individuals.

Table 1.2 Property tax collections (most recent year available in the IMF’s GFS Yearbook)

Country	Year	Basis	Property tax % of GDP	Taxes on income and capital gains % GDP	Total tax revenue % GDP
France	2014	GG	4.1	11.5	28.9
Germany	2014	GG	0.6	11.6	22.9
Sweden	2014	GG	0.8	17.6	39.9
UK	2014	GG	3.3	11.5	27.0
US	2014	GG	2.8	12.4	19.7
Singapore	2014	GG	1.1	6.2	14.0
Brazil	2014	GG	1.2	6.9	24.2
Chile	2014	GG	0.6	6.0	18.6
Colombia	2014	GG	1.0	5.3	18.3
Senegal	2012	BA	0.0 See notes	5.3	19.2
Mauritius	2014	GG	0.2	4.4	18.8
Namibia	2011	BA	0.2	8.1	22.1
South Africa	2014	GG	1.6	14.6	27.8
Tanzania	2014	BA	--	--	See notes

Notes: GG: General Government; BA: Budgetary Central Government. For Senegal, Total tax collections (BA) for 2014 were 1,376bn CFA, of which property taxes were 3 bn CFA —this is estimated to be around a third of general government collections, but there are incomplete data. For Tanzania, total tax collections for 2014 were 9,900 bn Tsh; of which 64 bn Tsh were on account of property taxes (probably half of total property tax collections. For Mauritius, see the discussion in the text, as the property tax was abolished, because of political economy difficulties.

Source: compilation by the Authors. Original source, IMF, Government Financial Statistics Yearbook, 2015.

3. Ability to pay and benefit approaches and assignment of property taxation

There are two alternative approaches to immovable property taxation: the ability to pay and the benefit approach. According to the first approach, property is one of the most important indicators of the ability to pay taxes and can be taxed to help in redistributing wealth. Since redistribution can be best performed at the national level, an ability to pay oriented property taxation is best assigned to the central government, as stressed by the normative theory. However, both yardstick competition and the significant advantages of local information explain why property is predominantly taxed at the local level around the world and across different institutional arrangements.

The second approach focuses on link between the burden of the tax and the benefits received, and has illustrious antecedents --starting with John Stuart Mill (1848). This is not necessarily in conflict with the ability to pay approach, given the correlation between property values and level and quality of public services. Clearly, in a perfect tax-benefit framework there is no net burden. This should make the tax more appealing to taxpayers and politicians.

The link is seen in the capitalization of the tax and benefits on property values. Most of the services capitalized in values are provided locally, making the property tax an eminently local revenue instrument. Alfred Marshall famously developed this argument labeling local property tax as a “beneficial” tax in antithesis to “onerous” national taxes (first edition 1890; reprinted 1920). This is a quite positive view that cannot conceal the fact that the property tax is one of the most visible tax instruments. Unless the tax is clearly linked to social services or benefits it generates political resistance (see Ahmad, Brosio, Pöschl, 2015).

The linkages between tax and expenditure determine the choice of the base and formats for taxing property as a local revenue mobilization instrument. The introduction and/or reform of such an instrument requires careful consideration of a vast array of issues and requires strategic choices regarding the type of instrument used, the selection of the taxpayer, the method of administration and collection, with careful consideration of constraints, such as facilitating compliance and limiting political opposition, exploiting the revenue potential of the tax while also containing administration and collection cost.

We use both theory and international experiences to identify a set of alternative models for designing and administering property and, more generally, local tax systems that might be relevant for Sub-Saharan Africa. We also examine the potential (direct) revenue effects—as the important indirect effects on other tax instruments and efficiency of spending are beyond the present scope of the research.

a. Rate setting at the margin by local governments and accountability

One of the potential advantages of a local tax system is the possible enhancement of local accountability. This comes about by the local government deciding on the rate of

taxation at the margin, and effectively constitutes a precondition for hard budget constraints.

Even in a unitary state (like Tanzania or Senegal), the essence of accountability would involve local rate setting at the margin, e.g., within brackets determined by the central level. Such a tax would constitute an own-source revenue even if the central tax administration or another body carried out all other administrative functions. As a matter of fact the essential condition to characterize a tax as own-source revenue is that local government are able, i.e. have the autonomy, to determine the burden they impose on their citizens primarily via the tax rates.

In cases where the local governments do not set the rate or the base, as is typically the case in African and Latin American countries, the property tax revenues are no different from transfers from higher levels of administration.

The property tax is even further removed from local governments when they lack information as to how much should be or was collected, and their share of the collections.

b. Tracking ownership and values

The typical model of property taxation used in industrial countries and followed in most emerging market economies, countries is based on ownership, as in the US, Canada, and many European countries, **or alternatively on occupancy of properties,** as in the UK, or both, as in France, **and on an accurate valuation mechanism.** To make the model fully operational, there needs to be an accurate record of the property, as well as ownership/or occupancy, and changes in prices and valuations. **Records of properties, ownership and values are typically kept in cadasters.**

Market forces drive valuations and there is typically timely and accurate information on property values and sales, tracked both by the market as well as the (local) tax administrations. In principle, (yardstick) competition limits both tax rates and burdens as well as the level and quality of public services. Improvements in infrastructure—e.g., opening of a new metro line or stop, are immediately reflected in property values, hence taxes and affect the local government's ability to issue bonds or borrow for the improvements in infrastructure.

Property prices are closely linked to quality of public schools and effectiveness of local services. If these services are not provided effectively, people move with their feet to a jurisdiction that provides better quality services, (particularly education in the US). This has an important feedback effect on property values, and taxes, as well as the income tax base. **The resulting fiscal pressures are part of the electoral discipline that comes about with yardstick competition.**

While this model is appealing in many respects, **its adoption faces huge challenges in many emerging market and developing countries** (as well as some OECD countries—the UK example is discussed in the next section). There are several layers of difficulty with this model and we explore them sequentially and suggest ways for its better adaptation to the prevailing context of emerging market and developing countries.

c. Cadasters or registers and complex ownership patterns

Maintaining cadasters is the bedrock of property management systems. However, maintaining cadasters and keeping them up to date is typically a difficult, complex and costly task. The situation is made more complex in many emerging countries with widespread state or communal land, and migrations leading to “informal” settlements, especially in the environs of large metropolitan areas (Dar es Salaam), or capital cities (Dakar).

In many developing and emerging market countries, little is known about what properties are located and where. This applies equally to low-end informal properties, as well as to high-end properties as farms and single properties are torn down and replaced by luxury condominiums. In many metropolitan areas in Africa (e.g., Cairo) and in Asia, only properties within the physical limits of the old cities are classified as urban, and many new satellite towns and high-end suburbs remain zoned as rural.

Often there is an overlap between state ownership and traditional or communal property rights that have not been extinguished. In many countries with state ownership of land, as in China, or long-standing hereditary ownership by nobles, as in the UK, leaseholds of various lengths have evolved. This provides limited rights of alienation of property, in England subject to subinfeudation. This mechanism is also used in Tanzania, where foreigners are permitted to “own” properties on alienable 98-year leases.

The multiple and often overlapping property rights complicate the ownership-valuation model. An immediate consequence is the **mushrooming of informal settlements with substandard living conditions and poor access to public services in and around major cities.** Particularly damaging is the absence of incentives to improve the “uncertain” living conditions, together with the inability to access credit. This has deleterious long-term effects on the quality of life of an increasing and mostly vulnerable segment of the population and meeting the SDG targets.

d. Difficulties of recurrent property: valuation

Valuation is most difficult administration task and is hugely problematic in many developing and emerging market economies. It is often not clear what buildings or additions are constructed relative to the legacy cadasters. Similarly, it is hard to incorporate the effects of additional improvements (e.g., metro-stops or road and other infrastructure investments) have on market prices.

One of the principal difficulties with valuation and changes in valuation in that markets do not operate with the efficiency as in advanced industrial countries. Furthermore the information base is much more segmented, severely curtailing the relevance of the typical property tax model found in advanced countries to emerging market countries.

The distributional advantages of property taxation disappear when high-end properties and improvements are effectively excluded from the tax base.

e. Limits of colonial “tax collector” administration

The typical colonial model for the administration of the property tax outside cities was an important functionary called the “tax collector.” This functionary was often from an elite administrative service; played a dual role with local administration; and also formed an interface between the colonial masters and the native people of the colonies. Post-independence, the colonial oversight disappeared, and local governments lacked

incentives to effectively manage the “collectors.” Proximity to taxpayers opened avenues for rent-seeking, and failed to generate any significant revenues.

Proposals to use incentive payments for the tax collectors merely reinforce a colonial administrative structure (Khawaja, Khan, and Olken, 2016). However, while the experiments show that some improvements are possible in the experimental sites, it is not clear that the results can be generalized, as Pakistan’s tax collections remain dismal, and the perception remains that the tax administration is a cesspool of corruption. The principal difficulty with the method is that it continues to encourage direct contact between the taxpayers and the revenue collector—the old colonial model which worked when the collector was a well-paid British official but breaks down with local officials that are able to make deals with friends and relatives. Besides this is the antithesis of modern administration, in which a functional structure is used and no single administrator or function can take credit for revenue performance, but it is efficiency of the whole system that matters (see below and Ahmad 2015).

Countries from India to Tanzania and Senegal have been seeking to put some distance between the tax collection process and the taxpayer. This is part of a move to address rampant corruption. We outline some options in this chapter, and country experiences to follow.

3. Viable approaches for emerging and developing countries

a. Self-assessment together with a modern tax administration

A self-assessment system may generate a substantial and sustained increase in property tax revenues, and obviate temporarily to deficiencies of cadaster and valuation, as experimented in Bogotá by Mayor Mockus in 1994 when attempted to expand property tax collections (also see below). The cadaster and valuation basis was retained as a minimum.⁴ It relied on the sanction of forcible purchase of the property at a multiple of the declared value in egregious cases of under-declaration of property values. There is no need for a heavy-handed use of the sanction, and one or two examples suffice. However, there is the danger that the sanctions might be used for “political” purposes, although the Bogotá system is still in operation despite changes in city administrations.

A true self-assessment system requires an arms’ length trust system, with a high probability of detection, relatively good information on local property tax transactions; and credible sanctions. These are all characteristics of a modern functional tax administration—which we examine in the next section.

⁴ Colombia has now a reasonably good system of property records and cadaster, based on an independent and arms-length agency: *Instituto Geográfico Agustín*, established in 1935, and now is under the Statistics agency. Its responsibilities include the management of official maps and basic cartography and soil surveys, as well as the cadaster. The basic problem remains that the valuations are not particularly up to date or accurate, and the tax collections were low.

b. A flat tax based on key parameters of properties

With a flat tax the tax liability is determined through the application of a unit tariff (for example n dollars) **to indicators or parameters of property size and value of use.**

⁵Mauritius (see later) has experienced the simplest possible flat tax based only on square meters. Tanzania (see also with more detail later) has used until now and for non-registered properties a flat tax based on size location and use and intends now to generalize it. Colombia uses for non-registered properties a flat tax based on size, type of building and use. Bolivia (as illustrated later) tries to approximate market values with a more sophisticated version making use of a set of indicators describing the main features of properties.

Self declaration of parameters by taxpayers, largely applied around the world, circumvents problems of information and administration capacity. It makes the flat tax a viable solution for most emerging and developing countries.

A flat tax can be adapted to the local circumstances, choosing the model according to the availability of information and capacity.

- It can be Implemented quickly with satellite technology, and an easy registration mechanism;
- to the extent that it actually begins to tax high-end properties, this would be an improvement over the un-implementable ownership-valuation model;
- taxpayers resistance would be addressed if the tax were linked to the provision of basic local services—enhancing accountability and meeting the SDGs more effectively.

Under the flat-rate/simple size-based system, the central government could establish a certain number of bands and the local governments would determine the precise level of tax within a range reflecting service delivery requirements, for example. This should be relatively simple to manage quickly, especially in relation to the complex valuation and assessment based systems.

4. Tax Administration options for Arms' Length Operation of Local Taxes

A functional model delineates rate setting and the administrative functions and provides for an arms' length basis for managing several taxes together.

An own-source revenue is one where the jurisdiction controls rate setting at the margin (e.g., within a band). This applies even if all the elements of administration are handled by another jurisdiction or an independent agency (Ahmad 2015). Conversely, even if a local authority controls all elements of the administration, but is unable to control the rate, the resulting revenue is not own-source, in the sense that it cannot be increased to say meet additional financing needs. Similarly, shared revenues are not own-source and are similar to intergovernmental transfers (e.g., through an equalization framework where the local jurisdiction has no ability to influence the allocations). The own-source revenues are critical for the local accountability that is needed for a successful decentralization program.

⁵ A typical basic formula would be: $Tax\ due = n \times m^2$, where n is the unit tariff, let's say 10 Euros, and m^2 is number of square meters.

It is common in modern tax administrations to have different functional specializations. These include registration, valuation, assessments, bill delivery, collection, enforcement⁶ and taxpayer services. Many of these functions operate across taxes, and facilitate the exchange of information across tax instruments, and prevent the duplication of similar operations. The most egregious example of duplication of functions is the operation of the Tanzanian land tax and property tax, with different agencies carrying out the same function (see below).

Under a functional structure, the total revenue collection is the result of all the components acting in coordination, and not one person operating independently. Consequently, it is difficult to decompose the additionality in revenues to any one individual, as needed for the performance-based model of Khwaja, Khan and Olken (2016) to apply.

Not all the functions need to be carried out in the same agency. It is typical for the property tax to have a separate body responsible for the cadaster, as this also has legal implications regarding ownership. The formal rural-urban distinction is not particularly useful if “urban” is strictly defined as falling within municipal boundaries, as a great deal of construction takes place in adjacent territories that are de facto part of the urban areas, but are classified as rural (e.g., settlements around Cairo).

a. Registration

For the purposes of registering a property tax, we suggest the importance of identifying where the properties are located, more or less in real time. This may not be possible with the cadaster that takes a considerable time to update. The most practical option for most emerging market economies would be to focus on occupancy for the property tax. In situations where the ownership is hard to disentangle, this is possibly the only feasible option. This can be achieved with several alternatives, or combinations of options:

- ***Using the principle of self-declaration*** that underlies modern tax administration, require occupants to register with local governments, or other responsible administration. This could be linked to the right to vote, and access to public services, including health clinics and public schools. It should also be linked to access to credit, and if a national identification number has been established (see e.g., the Pakistani electronically maintained database for the NIC using biometrics being replicated in Nigeria). The Bogotá experience with self-declarations subject to selective audit and sanctions (that included resumption/purchase of the property at above the declared value) worked both vis à vis identifying properties that were not yet in the Cadaster (one of the best in Latin America), but also identification of market value (more on valuation below—although this is not strictly needed in the simple area-based systems that may be relevant for emerging markets (adaptation of the UK model)).

In agricultural areas, with the ownership largely vested in the state or traditional property rights, it might be useful to register tenancy or use-contracts. This provides a degree of protection to the tenant to be able to make investments on the land, and to access credit. As proposed in Ahmad and Stern (1991) for South Asia, it might be useful

⁶ Note: Enforcement would include both (1) the maintenance of a common data base on transactions and assets, using tax and third party information, and (2) audit.
Source: Ahmad (2015).

to make a distinction between rain-fed and irrigated lands, and to exclude the smallest operational holdings from the payment of the tax—but they must be registered to receive the benefits of secure tenancy and access to credit.

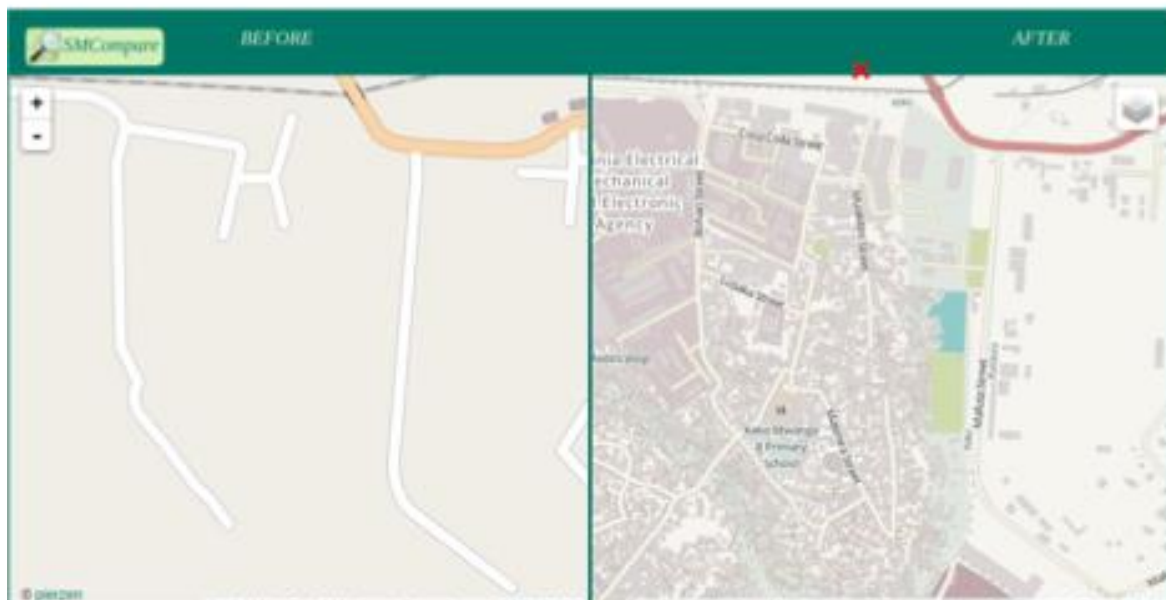
- **Using satellite imagery:** As in Mwanza and other cities in Tanzania, this can provide very accurate delineations of properties and their size. This can be achieved quickly, together with the identification of the number of inhabitants, which can be established through self-declaration, as well as through verification by survey teams.

Many local mapping projects exist—from private citizens mapping their local **neighborhoods** to larger efforts concerning disaster relief or food safety. A successful example from Tanzania is a mapping effort in Dar es Salaam (<http://ramanihuria.org/>). Originally created to assess flooding risks, this group has trained more than 400 volunteers, and has provided a detailed map of Dar es Salaam, including its informal settlements. It uses satellite imagery combined with images taken by drones to create very detailed maps.

Open Street Map (OSM) (<https://www.openstreetmap.org>) is an international collaborative mapping project where all data is freely available and reusable. One way to describe it is “the Wikipedia of Google maps.” Importantly, Open Street Map is not just a data standard for data: it is an ecosystem of users and developers, which have created tools to edit and visualize these data. This is a process of creating crowd-sourced maps through “interactive community mapping” (cf. Shkabatur, Jennifer; Kumagai, Saki (2014)). The fact that OSM data are open and free to re-use and extend upon, makes it an interesting project to build upon for many different organizations and purposes. In practice, this means that there are people present with knowledge and competence of mapping technology and the associated software that may (and probably should) be leveraged (see Chart 1.1).

While publishing cadastral data in OSM is clearly recommendable, it may also be used to create and expand on cadastral maps. Experiences are mixed (Mohsen Kalantari, Veha La (2015)). Of interest is Cadasta (cadasta.org), an open source software framework specifically created to address the creation of land registers in developing countries.

Chart 1.1 OSM in Dar-es-Salaam, before and after Satellite Imagery



b. Valuation

The traditional argument for valuation to be local is that there is generally good local information on property transactions. While this used to be true in the past, modern internet based generation of information, and tools such as Zillow, allow governments and the public anywhere seeking information on property values in the US, or around the world for example, to be able to track property sales and resulting market values in US States.

The local information base is more limited in emerging market economies, which is why the valuation-based models tend not to work (in many countries, e.g., in South Asia, the true values are typically not declared). However, developments in technology, better recording of property transactions and modern administration mechanisms can make a significant difference.

Use of flat taxes allows to overcome the valuation problem, until capacity is developed to make use of the best developments in technology.

c. Collection

Under a traditional model of administration, local officials are responsible for collections, as well as exemptions. This has the advantage of local information available to the officials that can be used to ensure that the correct amounts are collected, and can potentially enhance local accountability. However, the proximity can breed rent-seeking behavior that is magnified as local governments are disinterested in collecting a visible tax on behalf of another level of government. ***Incentivizing the collectors with promise of higher pay is unlikely to solve the corruption problem.***

Under modern functional arrangements, every attempt is made to minimize distance of the tax administrator with the taxpayer, and this involves in particular to the collection function. In many cases, this involves payments in commercial banks, or an increasing use of e-payments. There is a financial reconciliation function that typically also involves the Treasury.

Under modern systems, there needs to be a coordination of the treasury circuit and the tax administration. Payments could be made directly in banks, with a notification to the tax administration and the treasury. If the payments are subject to same day clearance with the TSA in the Government's account with the Central Bank, this could guide the setting of the payment limits for zero-balance accounts of local governments (if they have correspondent accounts in the TSA)—or direct payments within the specified spending limits notified and agreed with the local governments. Some large countries (Nigeria, China) may have state/provincial TSAs, but the same principles would apply to the respective sub-provincial governments. In all cases, it is important for the tax administration, treasury, and the municipal finance administrators to have at their disposal, full information of the funds being collected on their behalf and their ability to use these funds. This is a critical element of an improved governance framework, whether decentralized or deconcentrated.

As we see in further detail below, **to prevent corruption, the Senegalese system splits the assessment and the collection functions, assigned to the tax administration and the Treasury respectively.** However, the process is cumbersome with poor exchange of information. It takes a long time, and many steps from the assessments made by the local tax offices to the handover of the total set of assessments by the Tax Administration in the Center to the Treasury, which then filters the demands back to the local officials (*receveurs*). These *receveurs* end up making their own assessments, ignoring the work done by the tax administration, and the objective of the administrative split breaks down. All the work is then performed by the local *receveurs*, defeating the objective of the split.

d. Enforcement

Typically, the enforcement function includes data management, including from third parties and open source data (see below), and on the different stages of the collection process. The importance of keeping the data together cannot be overemphasized. This facilitates for example an exchange of information say between the VAT (that would typically also include new property transactions), the income taxes, and the property tax. One of the main weaknesses of the PIT in emerging market economies is that it is mainly a withholding tax on wages. Building up a picture on the ownership, use and transactions of physical assets, particularly property, is a critical element in expanding the base of the PIT. This can be achieved with the flow of information between different tax administrations (if they use a common TIN) and agencies, or a central tax administration. It is a fundamental element in the determination of an audit plan (for all taxes). Indeed, the audit function is very difficult to decentralize, as both a warehouse of national information is needed, relative to the legal framework, as well as very specialized skills.

While countries like Tanzania are moving the property tax to the central administration (Tanzanian Revenue Authority or TRA), this may not work well unless the TRA itself is organized on a functional basis and the model being followed covers both the large taxpayers and a small taxpayer regime. If the structure of a tax administration only focuses on large taxpayers, e.g., through a Large Taxpayer Unit (LTU), and the LTU absorbs most of the resources, the tax administration may have little incentive to operate a property tax (even if it improves the administration of the main taxes, such as

the PIT). Thus, the integration of the property tax with the central administration requires an amendment in the structure and operation of the administration itself. This is nicely illustrated with the Tanzanian example.

e. Bill delivery and taxpayer services

Under a self-assessment based system it is the responsibility of the taxpayer to make the assessment and the payments. The onus is then on the tax administration to determine whether the process works as intended, or whether an audit is needed. These functions could be handled by the local offices of the central tax administration or by local tax administrations.

5. New technology: blockchain options

A set of options relate to the potential of "blockchain technology." (Nakamoto, 2008; Buterin, 2014, UK Government Chief Scientific Adviser, 2016). This refers to a family of technologies and organizational principles to create a "trustless public ledger" –an immutable public registry that is not under control of any single agent. This aspect of the blockchain makes it particularly appropriate for the decentralized management and storage of public data as a "commons". In particular, the "public ledger" aspect makes it a candidate for improving the management of data in the public sector, and, in particular, for registering property ownership, rentals, and sales. Blockchain is being used increasingly for electronic property registration in Baltics and the FSU republics, as well as Sweden.

Blockchain technology could in principle allow countries to "leapfrog" institutional and technology constraints. The possibilities are quite exciting and could be developed further with experimentation. Ironically, in countries with weak institutions and procedures, the blockchain options may be easier to introduce, as there is less that needs to be dismantled, and what is there does not work very well in any case.

The main features of the blockchain technology are as follows.

- All Data is notarized. Blockchain data is immutable and time-stamped with a unique verification code (called a hash). Thus, data cannot be changed. Amendments are marked with the time the change was made. This means that data cannot be tampered with. Corrupt officials cannot change the official records or make a property transaction disappear.
- Accountability and access control. Each time data is added a new block is added to the chain is both time-stamped as well as digitally signed by the person (or software) initiating the transaction. These signatures cannot be faked. This mechanism provides verified access control, limiting which data can be changed by whom. The signature also provides mathematical proof of the origin of a transaction. What this means in practical terms is that all data in the database is marked with a mathematical proof of its origin. Together with the immutability and time-stamped properties, this effectively means that all data on the blockchain is notarized.
- **Data is distributed:** Blockchain also solves (or facilitates) the problem of public availability. The decentralized nature of the blockchain database means that there is no single point of failure: each "full node" contains a complete copy of all the data that is

constantly updated as new data is added, and as long as a single of such nodes exist, the service and the data will remain available. Blockchain technology a suitable way of sharing - and editing - a database between different departments or branches of government—say between the Cadastral service and the Tax Administration, or between the latter and the Treasury.

- **Smart Contracts.** Smart contracts are computer programs that encode agreements that are similar to those that would be normally set down in a written contract. The tracking of contracts is facilitated by the blockchain. More specifically, when recorded on the blockchain, such contracts are enforced automatically. Simple examples are escrow accounts, and more complex examples are contracts that define necessary conditions for the sale of a property.
- **New institutional and organizational forms are possible,** or even new business models known as Decentralized Autonomous Organizations. This could have implications for the design of tax administrations as well as budget and treasury systems, revolutionizing the flow of information across levels of government as well as with the public at large. This has the potential to enhance transparency, provided that the audit functions and security are strengthened to prevent misuse. This is a fruitful area for further work.

Blockchain would work by:

- **Validating new blocks:** A cadaster or register could be set up as a "permissioned blockchain": a small number of trusted parties are responsible for validating new blocks. These could be government agents or also private parties. The level of trust that needs to be placed on these validators is minimal - the possibility of changing and updating data is not under control of the validators. However, a certain amount of control over the blockchain remains in the hands of the validators. They can agree to "censor" certain operations; for example, if a private key is compromised, they can refuse to allow any updates signed by that key.
- **Resilience:** A usual database architecture depends on a central server, a relatively fragile setup, subject to breaks or overloads, poor or interrupted internet access; inadequate disaster relief and backups. These risks are mitigated using blockchain technology, as the database, and access to the data, is replicated in each "full node", which are regularly updated with the new blocks that are validated by the users. Anyone can set up and host such a full node. Municipalities could have their own copy of the blockchain for guaranteed and fast access, but so could, for example, do banks or other private companies. All these copies of the data add to the resilience of the system: they make it faster to access and less likely that data will be lost.
- **Access and safety:** "Write access" to the blockchain database is regulated by "public key technology", and rules for access are hardcoded in the software. This is a very potent system, in which access to data can be assigned in a very fine-grained way.
- **Controlling access to write data:** This should be granted depending on the usage of the system, and the business model to be developed. A conservative classical solution, one could imagine that a central authority - the cadastral institute itself - assigns (and if necessary, retracts) the permissions to write data to specific areas to specific agents. For example, depending on organizational and legal context, it could assign the right to transfer property in municipality to that municipality only - or reserve the right for finalizing

a transfer to a central authority. This system can arbitrarily be extended to include the taxpayers themselves, who maybe, for example, be given identifiable accounts into which taxes can be paid.

- **Security:** If a centralized database is hacked, data can be changed arbitrarily. The blockchain provides some additional safety against malicious actors. First, data cannot be changed retroactively (because of its "chained" structure and the fact there are many copies of the database, and unauthorized changes would be noticed immediately). Secondly, if a hacker steals the private key of any user, he can only have access to the data in as far as that user has that access. The data will only partly be compromised - and this can be identified and tracked to that user. Thus. the system can recover from such an attack, in particular, if the number of authorized users is known (as in a permissioned blockchain): access can be denied to the comprised key, and the hacked party can be assigned a new key.

Further protection can be obtained by a "multisig" - requiring certain transactions only if they are signed of on by two or more parties. One can image, for example, that the transfer of property is only finalized when signed by the seller, the buyer, and the cadastral agency itself. Many scenarios can be envisaged.

- **Private information on the blockchain:** The blockchain itself is public, but that does not mean that all data written on the blockchain is publicly available. While general cadastral data (where is the property, who owns it) is usually public, personal information that may be sensitive (did she pay her taxes on time) may not be. By encrypting such data is possible to save data on the blockchain that is readable only by selected parties, - for example, a payment may be visible only to (those who have access to the private key) of the payer and the tax authority.
- **Storing large amounts of data:** The fact that data is duplicated is one of the reasons that the blockchain is resilient. It also means that it is not the right medium to store large amounts of files. Photographs, scans of documents etc. are not stored on the blockchain itself, but in a separate system. These documents can then be notarized on the blockchain via their "hash" - a number that uniquely identifies the document. This schema plays nicely with IPFS, in which files are stored under the same hash value, and has a duplication and replication schemes that are similar to those of the blockchain. A central agency - the cadaster itself - would then store all the original files, and any nodes would duplicate those files as needed to have them quickly locally available.
- **Tokens with value:** One of the more interesting and potentially disruptive possibilities of the blockchain is to create "scarce digital objects": purely virtual objects that cannot be multiplied at zero marginal cost, as digital objects usually are. In particular, this means that one can create tokens that live on the blockchain and that have true value. This concept opens up a large range of scenarios in which the payment themselves can be integrated in the system. In a classical approach, payments are handled by banks or other payment providers, and the tax authority must coordinate with each of these providers to match payments to tax payer records in the registry. If payments can be made in the register itself makes this process more efficient.

Under this scheme, the tax authority emits credits with a nominal value, as tokens on the blockchain. Tax payers can now buy tax credits from the tax authority and pay their taxes directly on the blockchain - thereby reducing the procedure of payment and the processing of that payment in the tax administration to a single step, that is transparent

to all parties involved. This schema is interesting not only because it simplifies the payment process for individual taxpayers and makes it less error prone. It also facilitates the creation of third-party services for payment of taxes. because it makes it possible for third parties to provide services to tax payers in a "trustless way" - for example, a bank or a mobile payment provider such as MPesa or MaxLipo can integrate the possibility to pay taxes in their mobile applications without the need to coordinate with the tax authorities and without any financial risk for the tax authority or itself. Or the provider can buy tax credits from the authority and settle the tax payments for their clients directly on the blockchain.

II. International experiences: shifting to simple property tax options

Several countries have struggled with the ownership-valuation model and have moved towards simpler options linked to size, and in many cases, the alternatives are linked to local service delivery. Colombia is one of the more successful examples of property tax design and revenue generation among emerging market economies. The Bogotá example of self-valuation is of particular interest, given the success in improving revenues, although the linkages with modern tax administration are critical. Other countries have been less successful in making a transition. Mauritius moved in a related direction, but did not make the connection adequately to local benefits, and the resulting political economy constraints led to a reversal. In India, the move to a presumptive basis also did not make much headway. Other examples from Latin America and Africa complete our short survey of experiments.

1. The evolution of the English model

England is a most interesting case since it has one of the longest history of property taxation. The old "Rates" based on rental value were abolished and replaced with the ill-fated Poll tax under Margaret Thatcher, (see Foster, Jackman and Perlman, 1980). Poll tax had a short life being replaced by the Council Tax that reintroduced property taxation in the United Kingdom.

The use of the annual rental value in England over the years was designed to sidestep problems with valuing owner-occupancy. Earmarking the rates to finance local services, initially poor houses, and then local services established a link with benefits. The link appeared so strong to Alfred Marshall (1898) to suggest a distinction between 'beneficial' and 'onerous' rates. Property taxes were beneficial when used to finance services that provided corresponding benefits to taxpayers. When services were not provided, the taxes became 'onerous'. Also, local governments were, according again to Marshall, better suited to provide services of value because of their proximity to citizens and firms. National taxes were almost always onerous, because the national government tended and tends not to link broad-based taxes to local public goods. Since 1950 rates in England were assessed by the Inland Revenue authority, with general revaluation every five years and by requiring each property owner to inform the valuers of the market rent of his property. When property was not rented, valuation had to be based on rent of similar properties.

Residential property rates were replaced by the ill-fated 'community charge' in 1990. This was a regressive flat-rate tax paid by every adult, at a locally set rate. This tax

proved very unpopular and even difficult to administer due to the lack in Britain of local registries of the population.

The community charge, or poll tax was, in turn, replaced by an occupancy tax in 1993. The Local Government Finance Act 1992 introduced the Council Tax, and its incidence is on occupancy—whether tenants or owners, and on owners in case the property is vacant. Only if the property is a 'house in multiple occupation,' does the landlord pay the council tax.

Local government are free to set the rates whose progressivity is centrally determined by allocating each property into 8 different bands (going from A to Z; see Table 2.1.) according to their value (as of 1 April 1991 in England and Scotland, 1 April 2003 in Wales).⁷

Councils can reduce the amount of the tax owed on a property depending on the occupants' income, age, employment status, health, being a full-time student, or if the property is unoccupied. This is linked with the income tax status of the individual, and whether the person is eligible to other "tapered" benefits. Most councils allow reductions for single occupancy that is levied at 75% of the total bill. This last reduction reflects, clearly, the link between cost of service and tax paid.

A problem with the English system is that while the focus is on financing local services, the system does not track variations in market valuations. Reassessment of property values that is under the responsibility of the central tax administration has been delayed for years – the first revaluation after 1993 was planned to take place in 2007, but was postponed - and with hugely divergent spatial trends in property values it has become politically very burdensome. For instance, the cost of providing services for a property in Band H in Wimbledon (Borough of Merton) may not be very different from those north of the river Thames, say Chelsea or Knightsbridge, but the market value of the latter might be two or three times that of a similar property in Wimbledon. Although the Labour Party has proposed a "mansion tax" for the more expensive properties, the government has increased the stamp duty land tax (SDLT) on property purchases on the higher value properties: The current schedule is now as shown in Table 2.2. This covers the costs of registration, provides revenues and is also used to encourage equity and moderate the steep rise in property prices in central locations.

It should be noted that the property tax on commercial properties remains on the basis of annual rental values. These are relatively easy to track, based on the contracts. This has the advantage of encouraging the movement of businesses to the less crowded and cheaper outer areas within cities like London, or to cheaper cities in the Midlands or NE England. This has the advantage of moving large businesses (e.g., Amazon and Federal

⁷ The rate applicable to each band has to stay in a fixed proportion to the rate applicable to band D. For low valued property this proportion is < 1, high values property has a >1 proportion.

Newly constructed properties are also assigned a nominal 1991 (2003 for Wales) value. Each local authority sets a tax rate expressed as the annual levy on a Band D property inhabited by two liable adults.

Properties were assigned a nominal 1991 (2003 for Wales) value. Each local authority sets a tax rate expressed as the annual levy on a Band D property inhabited by two adults. This is determined in relation to the cost of public services actually met directly out of Council funds.

Express) to areas that need new employment opportunities, given the loss of jobs in shipbuilding or steel. It also has the advantage of relieving the congestion pressures in London, supplementing other measures such as the fuel tax and congestion charges.

Table 2.1. England: council tax bands and rates

Band	Value as at 1 April 1991	No. of properties in band in England at September 2010	Tax rate as a proportion of that in band D	Charge in local authority setting English average band D rate in 2009/10
A	Up to £40,000	5.7	0,67	£959
B	£40,001 to £52,000	4.5	0,78	£1,119
C	£52,001 to £68,000	5.0	0,89	£1,279
D	£68,001 to £88,000	3.5	1,00	£1,439
E	£88,001 to £120,000	2.2 11/9 £1,759	1,22	£1,759
F	£120,001 to £160,000	1.1	1,44	£2,079
G	£160,001 to £320,000	0.8	1,67	£2,398
H	More than £320,000	0.1	2,00	£2,878

Source. Tax by design (Mirrlees Report), Chapter 16. *The Taxation of Land and Property*. Institute for Fiscal Studies, 2011.

Table 2.2 UK Property sale stamp tax on property purchases

Property or lease premium or transfer value	SDLT rate
Up to £125,000	Zero
The next £125,000 (the portion from £125,001 to £250,000)	2%
The next £675,000 (the portion from £250,001 to £925,000)	5%
The next £575,000 (the portion from £925,001 to £1.5 million)	10%
The remaining amount (the portion above £1.5 million)	12%

2. Colombia and Bogotá

Colombia has one of the highest collections of property tax in Latin America-- indeed among developing and emerging market countries—around 1% of GDP (see Table 1.1). The basic problem remains that the valuations are not particularly up to date or accurate. Despite the working of the cadaster, in 1991, the property tax collections were 0.33% of GDP or more or less the Latin American average (Ahmad, Brosio, Spahn and Vehorn, 1995).

There are two factors that led to the increase in the tax collections since the mid-1990s.

- **The first is a gradual adoption of modern functional tax administration methods**, starting with Bogotá and being rolled out gradually through the major metropolitan areas. Thus, in 1995, only Bogotá had made the transition.
- The second is that Municipalities are allowed to opt for an “autoavalúo” (or self-declaration) system, subject to a minimum criteria based on the IGAC Cadaster. These minimum criteria (size, location) must be approved by the Municipal Council. Particularly important in this case are the sanctions to be applied in case of an egregious misdeclaration.

The self-assessment system as implemented in Bogotá by Mayor Mockus in 1994 generated a substantial and sustained increase in property tax revenues. Based on Ley 1421, Bogotá issued Decree 807 of 1993 that permitted:

- **Adopting the National Tax Statute** to define the tax administration system for the determination, emission and coverage of taxes, with adequate penalties and sanctions;
- **Collections managed through commercial Banks**, leading to significant reductions in staff with a new focus on financing information consolidation and controls functions.
- **Elimination of direct contacts stopped avenues for corruption**, and allowed staff to focus on taxpayer services—a critical and seldom utilized function.
- **Allowed a simplification of procedures**, with better control rather than “chasing after the taxpayers and collections”.
- Replaced the system of determination of taxes to be **paid by self-declaration and direct** payments on the part of taxpayers. This was supplemented by **sanctions and interest** penalties.

It bears emphasizing that none of this would have been possible without a functional structure of the tax administration. The system relies on relatively good information on local property tax transactions to operate the sanction of forcible purchase of the property at a greater than declared value. There is no need for a heavy-handed use of the sanction, and one or two examples suffice. However, there is the danger that the sanctions might be used for “political” purposes, although the Bogotá system is still in operation despite changes in city administrations, and has been extended elsewhere in Colombia, including the city of Barranquilla.

3. Evolution of Indian property taxation—work in progress

The standard Indian property tax is based on the standard “ownership and valuation model” common in Western countries. The valuation is based on an estimate of the annual rental or capital value of the property (Valuation (Metropolis) Act of 1869). However, as pointed out in Bird and Rao (2012), the information base on the property tax in India is severely deficient and unreliable. This is partly because the cadaster is woefully out of date, and the valuation system has not kept pace with market price changes.

An alternative, tried in Pune, Delhi and Bangalore, was to move to a presumptive basis for taxing properties based on location and size to try to approximate true values. The idea was to minimize the contact between the local tax administrators and the taxpayers, and by an arms' length arrangement to minimize the opportunities for rent seeking and corruption. This reform was initiated in Patna in 1992/3 but failed to yield additional revenues. A similar outcome occurred in Delhi. However, in Bangalore, the application of presumptive estimates led to a virtual doubling of the property tax revenues between 2007/8 and 2008/9 (Bird and Rao, 2012).

However, the typical problems with arbitrary adjustments to presumptive measures have appeared recently in Bangalore (Brosio, 2014). A 40% increase in valuations due to the new airport led to inequities within Bangalore, and had to be rescinded—and increases were capped at 25%. Fine-tuning the valuations to specific neighborhoods might yield more accurate changes, but again open the system to possible collusion and rent-seeking.

4. Bolivia: not keeping up with inflation undermines a well-structured flat tax.

The Property tax, *Impuesto Municipal a la Propiedad de Bienes Inmuebles (IMPBI)*, is an annual tax on value of residential and industrial commercial property is assigned to the municipalities. Although the rates and base are set centrally, the local government is able to influence the collection, and IMPBI (Brosio, 2012). This could be considered own-source given the manipulation of the base.

Bolivia has an urban cadaster run by the *Instituto Geografico Militar*. It is still largely incomplete (only the city of Cochabamba is fully covered, although information is outdated) and cannot be used for property tax purposes.⁸ Bolivia relies instead on registers run by municipalities and uses a parametric system for the determination of property values.

A presidential decree determines yearly the values associated of the parameters that municipalities must apply to determine the value of the three singled out components, land, main building and accessorial buildings, of each individual property. These parameters include the size of property in square meters, zone, age, quality, slope of land, and access to local services. The list of parameters and of associated values is included in a form to be filled by taxpayers. Municipalities are, however, responsible for the determination of the basic element of the valuation of property, which is the value of the square meter of both land and buildings to which the various parameters apply. They are also responsible for actual subdivision of their territory into a predetermined number of zones and for the updating of square meter value according annual reassessment, based on inflation. However, few municipalities have not updated these values in recent years, making the tax base is lagging behind the evolution of market prices. This is responsible for the decline of the ratio of collections to GDP, which is estimated at around 0.42% of GDP and is still on the low side, and below, say Colombia. However, the estimated per capita base of the property tax in Bolivia is one-ninth of that of Argentina, one-fourth of that of Brazil, and one-fifth of Chile.

Municipalities are also responsible for keeping the register of properties, and thus for determining the coverage of the tax, by updating the register of taxpayers, adding new

⁸ Alina Garate, Catastro Territorial en Bolivia. <https://prezi.com/iwkvyru1ho4w/catastro-territorial-en-bolivia/>

properties, and recording the changes in the characteristics and thus in the valuation of the existing properties. Municipalities' request for updating the filling by taxpayers of a yearly questionnaire. A growing number of municipalities are using the services provided by RUAT (*Registro Único para la Administración Tributaria Municipal*).² Finally, municipalities are responsible for the whole collection process.

After a period of good performance, with collections of 0.8% of GDP in 2005, collections dropped to 0.42% of GDP in 2012⁹(De Cesare, 2016). The drop is to be assigned mainly to the above illustrated missed adjustment to inflation of the value of square meter.

There is huge variation across Bolivian municipalities in the per capita property tax collections. The largest Bolivian municipality, Santa Cruz, is the richest, but collects on a per capita basis less than 50% of La Paz, that is smaller and much poorer (Table 2.3.). Roughly, about 30 per cent of properties remain out of the tax net. Municipalities can expand their collections and adapt their volume to their increasing expenditure needs by reducing red tape—e.g., by expediting building and renovation permits—and by rapid urbanization of new areas to satisfy the demand for housing coming from the (migrating) population. Providing adequate housing for the growing informal sector—mainly rural migrants—is a key challenge that Bolivia shares with Senegal and Tanzania. Much of the “informal” housing is without legal authorization, and cannot be registered and subjected to taxation. The migrants are willing to be subject property tax to strengthen their claims for residence, credit and local services.

In addition to the considerable lag time between the construction of new properties and their inclusion in the registry of the municipalities, there are considerable arrears in payments that for the large cities are estimated to represent about 10-15 percent of tax collections.

Central transfers are largely gap-filling in nature, and there is absence of clear policy control or responsibility for typically local functions, including primary education and preventive health care. These limit the usefulness of the property tax as a policy tool to anchor sustainable development in Bolivia.

5. The political economy of the Mauritius model

A variant of the simplified system bypassing the cadaster/valuation mechanisms was tried in Mauritius (see Ahmad and Mansoor, forthcoming). This was based on a self-declaration of built-up property owned, subject to a flat-rate of tax per sq. meter, whether in urban or rural areas. However, the opposite of usual practice of a general property tax was adopted, as only the top 10% of income tax earners were required to pay the property tax—along with the income tax declaration. The direct revenue collected, quite quickly, rose to over 1.3 % of GDP (see Table 2.4).

⁹ . It has also to be noted that Bolivia does not subscribe to the GFS standards, limiting international comparison of data, although OECD and Cepal publish regularly data on tax collections including property tax.

Table 2.3 Basic Indicators of the Property Tax in a Sample of Large Bolivian Municipalities

Prefecture	Number of properties registered, 2011	Number of households 2010	Percentage share of properties to households	Population 2010	Total collections 2009, Bolivianos	Collections per property, Bolivianos	Collections per capita, Bolivianos
Cochabamba	118,587	153.080	77,5	618,384	89,481,050	755	145
El Alto	190,338	246.880	77,1	960,767	44,681,614	235	47
La Paz	157,365	223.039	70,6	840,209	175,437,044	1,115	209
Montero	16,313	20.299	80,4	98,539	4,143,497	254	42
Oruro	73,055	58.226	125,5	232,265	21,071,103	288	91
Potosi	32,871	41.322	79,5	167,439	7,438,040	226	44
Sacaba	50,778	42.752	118,8	179,847	7,579,430	149	42
Santa Cruz de La Sierra	209,247	373.628	56	1,651,436	152,544,497	729	92
Sucre	52,154	74.060	70,4	306,54	25,668,508	492	84
Tarija	36,206	50.670	71,5	211,018	18.783.512	519	89
Trinidad	14,598	19.866	73,5	97,625	4,672,616	320	48
Villa Montes	4,374	6.227	70,2	27,55	1,021,599	234	37
Yacuiba	11,411	31.175	36,6	138,414	4,382,606	384	32

Source: Brosio (2012). Original data from: RUAT, number of properties; INE: number of households and population; Ministry of Finance: tax collections.

Table 2.4 Mauritius: Taxes on Property

	2008	2009	2010	2012	2013	2014
Budgetary CG				53	102	521
CG excl SS	4003	3940	3904	53	102	521
CG incl SS				53	102	--
General Government	4309	4277	4315	288	364	796
% of GDP			1.35%			0.2%

Source: Ahmad and Mansoor (forthcoming), "What can countries in SSA learn from the political economy of political economy of property taxation in Mauritius?"

Indirectly, the measure had the effect of forcing the hard to tax groups, such as the self-employed professionals (e.g., those subject to the poorly performing presumptive income taxes in many emerging market economies or the *patente* in Senegal—see below) to also pay their income tax. Indeed, we shall argue throughout this report, that the linkages between the property and income tax are as important as between the property tax and basic services.

There was strong negative reaction by the rich suddenly forced also to pay income tax. The restriction of the property tax payment to the top 10% of income tax payers, and collected with the PIT payments, meant that the direct linkage with local service delivery could not be established. It was also paid, reluctantly by the well-connected, and there were also underlying sectarian implications. This led to political opposition by the wealthy, without the counterbalancing forces from municipalities, and the tax was discontinued in 2010.

The Mauritius example shows the potential for greatly simplifying the property tax by simple registration and tax determination methods. However, the political constraints need to be carefully factored into the design of the taxes proposed.

6. Namibia's agricultural land tax

Namibia levies a tax on agricultural land on the unimproved site value of property with eminently non-fiscal goals (Ministry of Lands & Resettlement 2012). The tax aims at facilitating the redistribution of land in favor of domestic and poor farmers by forcing big properties to split, and foreign owners of properties to leave. The tax rates discriminate between Namibian citizens, who have to pay 0.75 %, and foreign nationals taxed at the rate of 1.75 %. In addition, to discourage multiple ownership both, rates increase by 0.25% for any additional farm owned by the same owner. An 85 percent exemption from payment of the land tax is granted (on request) to previously disadvantaged people.

Property values are determined on a market value basis. The law mandates a revaluation every five years. Finally, revenue is earmarked for the *Land Acquisition & Development Fund* (LADF) to facilitate and accelerate the land acquisition, distribution and development process.

The agricultural land tax was introduced in 2004, but collections started in 2005 at a very modest level; only N\$ 3 Million (about US\$ 230,000) was collected in the first year. The number of properties registered was small, with the 2007 main valuation roll containing a total number of about 12,500 farms.

The cost of granting tax payment exemptions was projected at about N\$ 3.7 million. Tax collections increased in 2011-12. to about N\$ 36 million (3 millions dollars, or a little more than one US dollar per capita, amounting to a 1/2000 share of GDP) and are expected to increase further after the introduction of the CAMA (Computer Aided Mass Appraisal) system for the assessment of values. Interestingly, data on administration and collection costs are available. According to the government the total, fixed and variable cost sustained by the government and by all donors amounted to 6 percent of total collections from the inception to 201-12. This is rather reasonable amount.

CAMA system is a means of performing valuations en masse by determining by statistical analysis the parameters of the variables that determine the value of properties. More specifically, a sample of properties, being subject to market transactions is selected and their value observed. Statistical analysis is then performed to identify the determinants of value and to estimate their associated coefficients. The results are used to estimate the value of the universe of properties. This requires, obviously, the collection of information about the variables used in the statistical analysis. CAMA is reported to be much less expensive than conventional valuation.

A substantial increase of collections in Namibia will require an extension of the coverage of the tax to include medium-sized and small farms. In turn. But this requires a change in approach, by introducing the cost-benefit linkage and graduating the tax according to the services received. **Assigning the tax to local governments is an unavoidable component of the reform.**

III. Property Taxation: evidence from field studies in Senegal and Tanzania

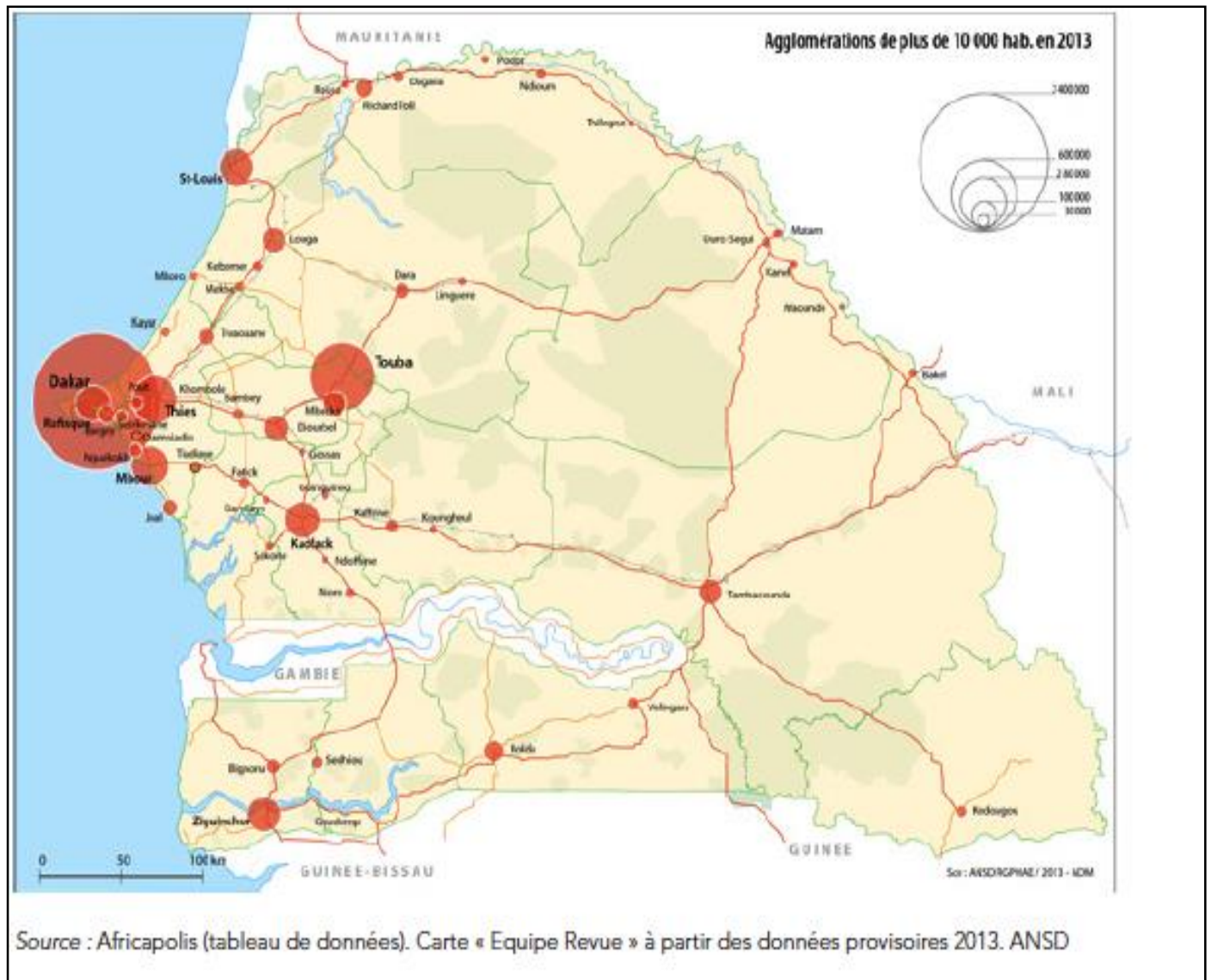
1. Senegal

Senegalese property tax collections are negligible, even if the precise figures are not known with precision. CFA 3 bn is reported on account of budgetary central government, and the total may be in the range of CFA 10-15bn.

Significant differences in property values and revenue potential obtain between Metropolitan areas of Dakar and other cities in Senegal. In rural areas, there are major differences between rain fed and irrigated areas and between forested and agricultural land that represent development challenges and point to the need for an appropriately differentiated system of property taxation. The legal framework is complicated as there were vast areas of “communal land” where traditional rights obtained. After independence, all land was “nationalized”, although this did not extinguish traditional rights and obligations in the communal lands. A hybrid system of land titles has emerged with some private property, especially in urban areas, but with a great deal of “informal” (actually illegal) settlement on state lands that is more pronounced in urban Senegal, accentuating the difficulties with rural-urban migration.

As we see from Figure 3.1, the Dakar metropolitan area houses a quarter of the population of the country. But more importantly, it generates 55% of GDP, and hosts 80% of enterprises, and 87% of local tax revenues. However, given the growing disparities in employment opportunities between Grand Dakar and the rest of the country, rural-urban migration has led to growing pressures on very stretched infrastructure in Metropolitan Dakar (World Bank 2016).

Figure 3.1 Regional agglomerations in Senegal



Box 1. Types of local taxes –largely drawing on law 2012-31

- **Minimum Fiscal** (#270 to #274): a **poll tax** on the basis of individual income capacity ranging from 600 to 24,000 CFAF, with a list of exemptions
- **Representative de l'impôt du minimum fiscal** (#275-282); addressing profits of local activities but taxing **payroll**, from 900 to 36,000 CFAF
- **Contribution foncière des propriétés bâties**: (#283-#294); or tax on built up properties; rate of 5% on residential and 7.5% for commercial use and factories; based on cadaster, valuation by DGID, collection by DGCP.
- **Taxe sur les ordures ménagères** (TOM); or garbage collection tax, on the basis of the cadaster, at a rate of 3.6% in the Greater Dakar region, and 3% elsewhere
- **Contribution foncière des propriétés non bâties**: (#296-302), or tax on undeveloped or semi-constructed land, with a tax rate of 5% of the market value; a surtax is also permissible (#303-#307)
- **Patente**: (#320-#342); presumptive tax on professions, with a fixed component by sector; and a variable component where the value varies by location and sector
- **Licenses**: for sales or consumption on location (e.g., alcoholic beverages), with rates from CFAF 35,000 to CFAF 175,000 in Dakar—lower in other areas
- **Commission de la fiscalité locale**: is responsible for the revaluation of properties (members largely nominated by the tax administration, and rural chiefs; or quarter representatives) along with the cadastral service; also can levy a surtax (#319).

The local taxes form part of the General Tax Code, Loi 2012-31 of 31 December 2012 (see Box 3.1). A significant component includes *patentes* on services, licenses and minimum taxes on employment or self-employment on a *forfait* basis, as well as presumptive taxes on employment and profits. Six presumptive taxes were amalgamated into the *Contribution Globale Foncière* (CGF, see Decret 2013-1162), to be shared between the state and local governments on a 25:75 basis (#74 of the *Code générale des Impôts*)—to be administered by the Treasury (*Direction Générale de la Comptabilité publique et du Trésor*, (DGCP)).

Despite the very extensive list of taxes, heavily influenced by the French administrative tradition, local governments have neither the power to set rates even at the margin (e.g., within a band as is often the case in unitary countries), **nor are they involved in the determining the base or the administration**. The assessments for the property tax charges are made by the central tax administration, based on the register, and amounted to less than 0.4% of GDP in 2016, or 24.1 bn in assessed local and property taxes (data provided by DGID). Of this, CFAF 21.2 bn was generated in the Dakar metropolitan region. As discussed below, **actual collections were typically a fraction of the assessments** for a sample of municipalities for which data was provided by the DGCP/Tresor. Indeed, neither the amounts budgeted by local governments, nor the actual collections (which were a third of amounts budgeted) had any link with the assessments carried by the tax administration.

Dakar's revenue base is heavily concentrated in rich municipalities (communes). A selection of assessments for rich and poor communes in the Dakar metropolitan areas is shown in Table 3.1. It shows the commune of Ngor Almadies (an exclusive residential and

upper end business area) is assessed at CFAF 4 billion; whereas the commune of Ndiareme Limamoulaye is assessed at around CFAF 800,000.

a. Informality, sustainable growth hubs and property taxes

Given the difficulties with property titles, much of the expansion of population and properties have been in very poor informal settlements on the periphery of Metropolitan Dakar (see Figure 2.2). This has added to congestion and unsanitary conditions, and also reduces the long-standing attractiveness of Metropolitan Dakar as an “international hub.” Building on this favorable geographical location and potential harbor facilities, is one of the factors envisaged for the longer-term growth strategy in Senegal (Kireyev and Mansur, 2015). **A Presidential decision in February 2017 is designed to provide some assurance to the informal settlements.**

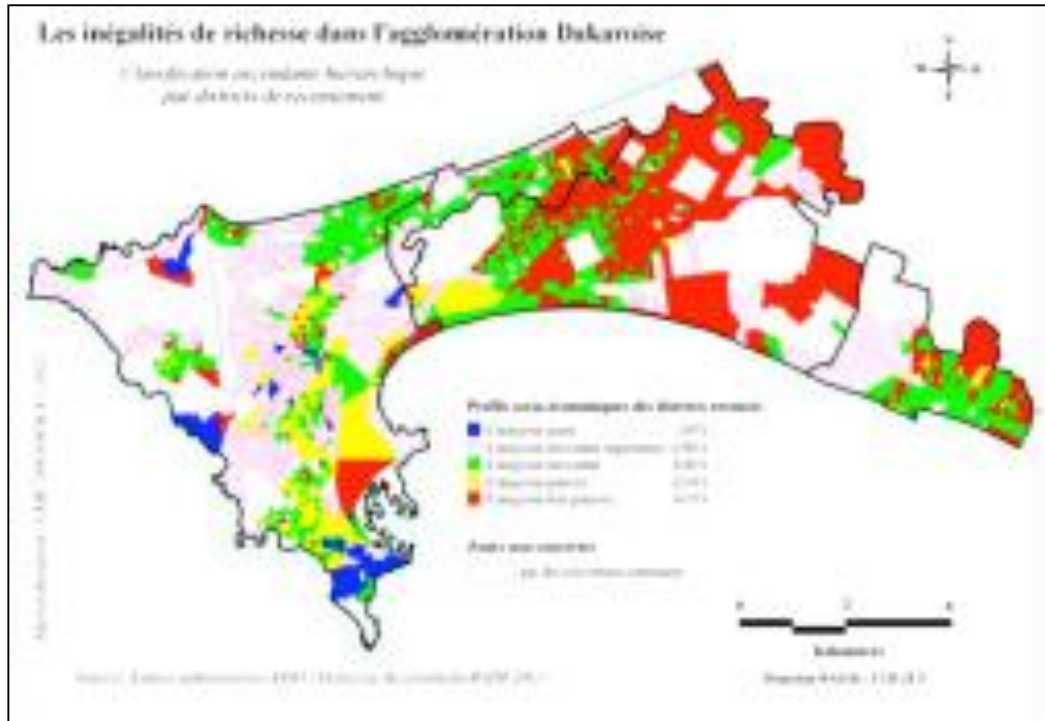
Decentralization of the current meagre property tax bases from the Ville of Dakar to the communes in Metropolitan Dakar has the potential to further reduce the resources available to the poor peripheral areas of the metropolitan zone, in the absence of a proper system of equalization transfers either within Metropolitan Dakar or from the central government directly to the communes. This is likely to cause continuing congestion, and limited investments in the peripheral communes, as basic services such as paved feeder roads as well as sanitation, adequate water supplies and garbage collection are likely to remain out of reach. Rather than adding to the attractiveness of Metropolitan Dakar as a hub for West Africa”, the growing informality can only result in increasing congestion costs, and stretched local public services that would likely make it harder for firms to maintain their competitive positions.

Table 3.1. Assessment of Property Taxes: Selection of communes in Dakar , 2016

Localité	Code Rubrique	Rubrique Impôt	Montant Impôt
COMMUNE DE PATTE D'OIE	510	Foncier Bâti Actif Entreprise/Usin	526,119
COMMUNE DE PATTE D'OIE	511	Foncier Bâti Location	264,450
COMMUNE DE PATTE D'OIE	514	T.O.M. Dakar	190,404
COMMUNE DE PIKINE	510	Foncier Bâti Actif Entreprise/Usin	586,564,583
COMMUNE DE PIKINE	511	Foncier Bâti Location	626,050,720
COMMUNE DE PIKINE	512	Foncier Bâti Résidence Secondaire	10,042,900
COMMUNE DE PIKINE	513	Foncier Bâti Résidence Principale	12,479,775
COMMUNE DE PIKINE	514	T.O.M. Dakar	535,106,601
COMMUNE DE PIKINE	522	Foncier non Bâti	2,859,688
DAKAR-PLATEAU	510	Foncier Bâti Actif Entreprise/Usin	77,215,318
DAKAR-PLATEAU	511	Foncier Bâti Location	1,837,589,419
DAKAR-PLATEAU	512	Foncier Bâti Résidence Secondaire	14,843,227
DAKAR-PLATEAU	513	Foncier Bâti Résidence Principale	67,822,097
DAKAR-PLATEAU	514	T.O.M. Dakar	1,538,642,999
DAKAR-PLATEAU	522	Foncier non Bâti	146,160,824
DAKAR-PLATEAU	524	Surtaxe Foncière	47,070,000
DAKAR-PLATEAU	600	MINIMUM FISCAL CAT. EX	1,092,000
DAKAR-PLATEAU	601	MINIMUM FISCAL CAT. 1	8,000
DAKAR-PLATEAU	510	Foncier Bâti Actif Entreprise/Usin	93,906,457
DAKAR-PLATEAU	511	Foncier Bâti Location	838,108,839
DAKAR-PLATEAU	512	Foncier Bâti Résidence Secondaire	900,500
DAKAR-PLATEAU	513	Foncier Bâti Résidence Principale	5,784,260
DAKAR-PLATEAU	514	T.O.M. Dakar	560,263,928
DAKAR-PLATEAU	522	Foncier non Bâti	66,368,280
DAKAR-PLATEAU	600	MINIMUM FISCAL CAT. EX	132,000
DAKAR-PLATEAU	602	MINIMUM FISCAL CAT. 2	6,400
DAKAR-PLATEAU	801	LICENCE FERE CLASSE	1,225,000
GRAND-DAKAR	510	Foncier Bâti Actif Entreprise/Usin	329,487,410
GRAND-DAKAR	511	Foncier Bâti Location	891,507,036
GRAND-DAKAR	512	Foncier Bâti Résidence Secondaire	18,637,400
GRAND-DAKAR	513	Foncier Bâti Résidence Principale	16,487,738
GRAND-DAKAR	514	T.O.M. Dakar	821,434,613
GRAND-DAKAR	522	Foncier non Bâti	10,086,368
GRAND-DAKAR	524	Surtaxe Foncière	241,860
GRAND-DAKAR	602	MINIMUM FISCAL CAT. 2	3,200
NGOR MALMADIES	510	Foncier Bâti Actif Entreprise/Usin	6,203,712
NGOR MALMADIES	511	Foncier Bâti Location	1,354,159,232
NGOR MALMADIES	512	Foncier Bâti Résidence Secondaire	69,068,882
NGOR MALMADIES	513	Foncier Bâti Résidence Principale	50,564,690
NGOR MALMADIES	514	T.O.M. Dakar	1,586,560,331
NGOR MALMADIES	522	Foncier non Bâti	768,969,037
NGOR MALMADIES	524	Surtaxe Foncière	440,068,500
COMMUNE DIAREME LIMAMOULAYE	511	Foncier Bâti Location	466,321
COMMUNE DIAREME LIMAMOULAYE	514	T.O.M. Dakar	335,751
COMMUNE DES HAMINOTAIRE	511	Foncier Bâti Location	716,450
COMMUNE DES HAMINOTAIRE	514	T.O.M. Dakar	515,844

Source: DGID

Figure 3.2. Dakar—metropolitan expansion, informality and poverty



A very significant transformation that has taken place turning Senegal from a peanut oil and raw cotton producing country in 1968 to a much more diversified production and export structure by 2008. The authorities are correctly focusing on developing additional domestic “hubs”, or growth “poles”, particularly outside Metropolitan Dakar. Encouraging SMEs would be critical in enhancing both employment opportunities and realizing Senegal’s production and export potential. The negative “complexity index” indicates that Senegal remains well below its potential in leveraging its natural and human resources and exports (Hausman, 2016). This is likely linked to the increasing congestion and informality that adds to the cost of doing business in the main cities and also makes it harder to stop “cheating” and tax evasion.

Consequently, **the tax reform program, especially at the local levels, must include measures linked to the sustainable growth agenda.** As in other emerging market economies (see Ahmad, 2017 for a description of the Mexican reforms to address informality and cheating), a rationalization of both tax policy and administration measures will be needed, involving both wide area national taxes such as the VAT that incorporates services and linked to an integrated small taxpayer regime; the income taxes and also a simplified local tax agenda. The generation of information on assets at the local level, e.g., through a property tax, is closely linked with blocking the cheating in the income taxes. Local taxes are also needed to provide financing for local services to make the hubs or

“poles” effective, but also in generating improved incentives for local governance and prevention of rent-seeking behavior more generally.

The continuing diversification of the location of activities and generating employment opportunities is critically dependent on the success of Senegal in creating the conditions necessary for private activity in the new “hubs.” Key constraints remain the (1) ability of SMEs and households to access credit—much depends on the security of tenure to provide collateral, linked to the problems with land ownership and use; and (2) the provision of basic services by local governments to facilitate the location of private activity in the relative jurisdictions (see World Bank 2016). Of course, both national and cross-border connectivity are critical and necessary conditions in reducing costs and in opening markets. But neither on its own is sufficient to ensure that the new “hubs” (or *Pôles de Développement*) will work.

b. The revenue collections and potential

How much is collected on account of property taxes in Senegal is not an easy question to answer. The amounts budgeted by local governments bear little resemblance to the assessments processed by the DGID (tax administration), and the collections appear to be orthogonal to either the assessments or amounts budgeted. For instance, the IMF Staff Report for 2016 reports figures of CFAF 27 bn (0.4% of GDP) for 2014 and CFAF 31 bn for 2015. From the DGID figures for 2016, it appears that only around CFAF 24 bn was assessed on account of property-related taxes (including TOM).

Figures from the Treasury/DGCP for the 28 most important local government (see Table 3.2) suggest that budget provisions for the FB and FNB were CFAF 9.7 bn and CFAF 194 m respectively. Collections, however, were CFAF 3.4 bn for the FB (roughly a third) and CFAF 14 m for the FNB—less than a tenth of the budgeted amount. The TOM fared better, and the collections for the 28 municipalities were 37% of the budgeted amount. The simplified CGF procedures also performed very poorly, with only over 25% of budgeted amounts collected.

Assuming some correspondence between the assessed and budgeted amounts (unfortunately as we shall see for St. Louis below, this is not always the case), we would expect that the overall collections would not exceed around CFAF 9-10 bn (or in the range of 0.15% of GDP). This is in line with the assumptions of collection in IMF (2017b).

The Senegalese property taxation system represents quite a dismal performance. While not dissimilar to the performance in other SSA countries, it falls well below that in South Africa, which at over 1.5% of GDP represents the highest collection in the continent.

Table 3.2. Local tax collections for selected communes in Senegal

FB= Impôt foncier bâti
FNB= l'impôt foncier non bâti
TOM=Taxe d'enlèvement des ordures ménagères
CGF= Contribution globale foncière

SITUATIONS D'EXECUTION DE QUELQUES COLLECTIVITES LOCALES

N° ORDRE	COLLECTIVITES LOCALES	PREVISION BUDGETAIRE				REALISATIONS			
		FB	FNB	TOM	CGF	FB	FNB	TOM	CGF
1	VILLE DE DAKAR	6 624 000 000	-	1 910 000 000	150 000 000	2 192 804 484	-	869 157 081	33 533 934
2	VILLE DE PIKINE	957 516 403	-	383 075 426	-	656 144 244	-	41 954 728	-
3	VILLE DE GUEDEAWAYE	175 000 000	30 000 000	70 000 000	-	53 297 945	-	38 099 641	-
4	VILLE DE RUFISQUE	646 000 000	-	90 000 000	-	105 171 042	-	8 711 280	-
5	VILLE DE THIES	450 000 000	-	30 000 000	-	49 264 966	-	13 268 584	-
6	COLOBANE	500 000	100 000	30 000	-	-	-	-	-
7	MBAR	3 500 000	2 000 000	-	-	-	-	-	-
8	KAOLACK	115 000 000	549 600	40 454 032	7 000 000	19 245 276	263 206	10 636 989	8 999 415
9	ST LOUIS	84 000 000	16 000 000	74 000 000	8 000 000	43 222 860	1 298 250	26 452 855	3 740 440
10	LOUGA	39 060 302	3 000 000	25 000 000	14 707 764	7 400 426	-	5 077 666	-
11	GUEOUL	1 000 000	-	50 000	-	-	-	-	-
12	FOUDIOUGNE	1 000 000	200 000	185 000	-	1 230 713	-	133 368	-
13	RUFISQUE EST	1 800 000	2 558 100	2 000 000	-	56 250	56 250	133 935	-
14	DIIOURBEL	70 000 000	18 000 000	21 322 436	-	10 247 531	150 000	5 948 389	-
15	DIOFFIOR	400 000	50 000	200 000	-	-	-	-	-
16	OUAKAM	25 000 000	54 000 000	30 000 000	-	9 994 902	423 000	1 094 096	-
17	NGOR	42 694 547	63 458 298	-	-	39 434 109	-	3 056 486	-
18	TIVAOUANE	3 000 000	-	410 000	-	1 977 256	-	284 036	-
19	KHOMBOLE	3 000 000	1 000 000	5 000 000	-	-	-	-	-
20	FANN-POINT E-AMITIE	80 000 000	-	-	716 225	10 667 696	-	-	1 744 065
21	PIKINE NORD	-	-	-	17 185 000	-	-	-	5 108 366
22	BAKEL	1 000 000	-	270 740	-	503 000	-	91 800	-
23	VELINGARA	10 000 000	100 000	3 000 000	-	215 600	-	714 480	-
24	RICHARD TOLL	280 188 855	50 000	3 000 000	-	218 495 431	-	132 480	-
25	ZIGUINCHOR	70 000 000	2 000 000	25 000 000	-	9 326 388	10 540 000	5 222 002	-

26	GAE	6 000 000	250 000	2 500 000	-	21 450	-	113 500	-
27	KOLDA	20 000 000	1 500 000	7 000 000	-	384 520	2 097 811	285 960	-
28	KAFFRINE	6 000 000	-	12 000 000	-	221 630	-	67 400	-
	TOTAL	9 715 660 107	194 815 998	2 734 497 634	197 608 989	3 429 327 719	14 828 517	1 630 656 756	53 126 220

Source: DGCP/Tresor

The IMF (2017) projects the property taxes to yield 2% of GDP in the short-to-medium term, using a simplified base. This is in line with the President's 2017 decree to ratchet up occupancy rights and to begin to put in place the financing and incentives to operationalize the new hubs (or *Pôles*)—with the new urban centers providing the basis for the new sustainable growth impetus. While we believe that the target is appropriate for the medium term, a more realistic target would be around 1% of GDP that was also achieved in Mauritius with a simplified system that did not rely on the cadaster—although political opposition led to the repeal of the tax (Ahmad and Mansur, forthcoming—also see above).

c. The case of Saint Louis

Saint Louis was the capital of French West Africa, and then French Senegal, but has decayed since the focus of activity shifted to Dakar after independence. It has several potentials—as the focus of a fishing industry, UNESCO World Heritage rating of the old town—but in need of significant renovation and uplift to become a major tourist attraction. With excellent education facilities and a top university, it has clear potential as a new hub.

The city faces significant sustainability challenges, and was ranked as the most threatened city on the African continent by rising sea level (UN Habitat 2012). The dredging of the river and tidal canal in 2004 was a failure, and has contributed to the vulnerability of SaintLouis island and the old city. Also, dumping of effluent and garbage into the fresh water river has poisoned the water supply and potentially jeopardized the quality of the fish farmed in the region. Much of the recent construction in and around the old city is informal, on state/communal land and of poor quality as there are few incentives to spend resources on risky construction. Service delivery is poor and the public finances are an indication of the dysfunctional arrangements at the local level in Senegal.

The Director of the Finance Office in the Municipality admitted that the budget is a meaningless exercise. The Municipal authorities have little idea about the revenue base, including central transfers, or how well funds are being utilized. Although a hard budget constraint exists in that spending is constrained by available revenues, the Municipality does not have timely information on the actual balances in their account in the Treasury. There is a quarterly report on treasury transactions, but the process does not stop the Municipality from running arrears. In some cases, there is a deliberate game-play with higher levels of government and SOEs: the electricity company does not pay local taxes and fees, and the municipality does not pay its electricity bills. This is reminiscent of the causes of circular debt in countries like Pakistan.

The property tax circuit in Saint Louis is representative of the problems associated with local taxation in Senegal. As mentioned, a significant portion of the land is either communal or belongs to the state. Much of the construction is therefore illegal, and the inhabitants have neither a property number(NICAD), nor an individual tax identifier number (NINEA). The municipal budget for 2016 forecast a collection of CFAF 84 m for the built up property tax (FB) but only 50% was collected (CFAF 43m); and the forecast for FNB (non-built up land) was CFAF 16 m, but only 8% was collected (Table 3.3). Similarly, only 38% of the budgeted TOM was collected.

The DGID had been forecasting a collection of FB of CFAF 126m in 2011 to a high of CFAF 145 m in 2012, declining to CFAF 113m in 2014. On average, CFAF 45m has been collected in any given year, although arrears are pursued. However, a revaluation exercise led to the FB being increased to CFAF 265m in 2016. Surprisingly, the Tresor/DGCP put the amounts to be collected in 2016 at CFAF 24.7 m—a number considerably lower than the assessments being used for previous years. There was no explanation as to why such a low number was used for 2016—when the amount budgeted was CFAF 84m, and the amount assessed by the DGID/Fiscal Reforms Committee was CFAF 265 m. Although it might appear from the numbers for 2016 that the Patente is doing quite well, in reality the collection is very erratic and there is a huge build-up of arrears that will likely never be recovered.

Part of the difficulty is the complex circuit of collections. Assessments by the local officials of DGID and the reassessments by the **Commission de la fiscalité locale** are passed to DGID headquarters, and from there to the Treasury in Dakar. The authorizations to collect are then filtered back through regional offices to “receveurs” (collectors) at the local level. The “Receveurs” are officials of the treasury, and have little to do with DGID officials in local tax offices, even though nominally they both fall under the same ministry. An additional difficulty is that the Receveurs, who do their own canvassing of properties (duplicating the work of the DGID/Tax Committees) cannot link the NINEA or individual tax numbers to specific properties—partly because of the ownership problems. The amounts to be collected consequently bear little relation to the local budgets, and the mayors have little idea as to how much is collected.

The local *receveurs* (DGCP/Tresor) effectively maintain taxpayer masterfiles, with manual records of what is past due and what should be paid. Unfortunately, this information is not transmitted back to the DGID. Nor are the *receveurs* able to initiate or maintain audit or sanctions—those are typical tax administration functions that should be consolidated in a reformed DGID that is organized on functional lines, including at the local level.

Table 3.3 Budget for St. Louis 2016

MINISTERE DE L' ECONOMIE ET DES FINANCES						POSTE 47
DIRECTION GENERALE DE LA						
COMPTABILITE PUBLIQUE ET DU TRESOR						
TRESORERIE PAIERIE REGIONALE DE SAINT-LOUIS						
RECETTE PERCEPTION MUNICIPALE DE SAINT-LOUIS						
SITUATION DES RECETTES ORDINAIRES						
CHAP	ART.	ANNEE 2016				%
		PREVISIONS 2016	ENCAISSEMENTS DU MOIS	ANTERIEURS	TOTAUX RECouvreMENT	%
	LIBELLES					
	121 Résultat de fonctionnement reporté	383 934				%
	115 Mouvement financier (Ex.Ft.Capit.)					%
70	PRODUIT DE L' EXPLOITATION	191 640 000	9 766 363	56 167 992	65 934 355	34,41%
	7020 T.O.M	74 000 000	5 466 363	20 996 492	26 462 855	36%
	705 Droits d'alignement et Frais de bornage	64 000 000		771 500	771 500	1%
	7094 Produit de l'expéd. des adm. D'Etat Civil	43 720 000	3 900 000	25 200 000	29 100 000	67%
	7095 Légalisation	9 920 000	400 000	9 200 000	9 600 000	97%
71	PRODUITS DOMANIAUX	552 610 000	31 521 600	358 827 178	390 348 778	71%
	7100 produits de la location de soucks	69 000 000	8 000	32 125 500	32 133 500	47%
	7103 pdts de la location des cantines	64 000 000	7 729 500	62 247 500	69 977 000	109%
	7104 Location propriétés communales	59 000 000	365 000	22 055 100	22 420 100	38%
	7110 produit de droit de place	79 000 000	4 467 700	41 904 100	46 371 800	59%
	7112 Produit des droits de parcage	5 000 000		-	-	0%
	7114 produits permis de stationnement	114 000 000	9 086 400	104 961 300	114 047 700	100%
	7115 redevance pour autor stat taxis	69 000 000	6 716 000	55 705 600	62 421 600	90%
	7118 droit d' occup du dom public	78 310 000	3 064 000	38 215 078	41 279 078	53%
	7119 droit de voirie	4 300 000		-	-	0%
	712 droit de fourrière	11 000 000	85 000	1 613 000	1 698 000	15%
72	IMPOTS LOCAUX	701 000 000	35 346 130	427 579 282	462 925 412	66%
	720 minimum fiscal	34 000 000	3 415 119	15 707 759	19 122 878	56%
	721 contribution des patentes	349 000 000	17 960 229	306 706 742	324 666 971	93%
	722 Licences	8 000 000	90 000	900 000	990 000	12%
	724 impot foncier bati	84 000 000	9 761 467	33 411 393	43 172 860	51%
	725 impot foncier non bati	16 000 000	319 500	978 750	1 298 250	8%
	726 Contribution Globale Unique	14 000 000	2 110 365	810 000	2 920 365	21%
	727 CGF	8 000 000	1 689 450	1 867 300	3 556 750	44%
	7290 taxe sur les vehicules automobiles	104 000 000		43 646 520	43 646 520	42%
	7291 taxe sur la plus value immobilière	84 000 000		23 550 818	23 550 818	28%
73	TAXE MUNICIPALE	333 356 000	78 585 605	126 112 875	204 698 480	61%
	7300 taxe complémentaire à la c des patentes	300 000		-	-	0%
	7301 taxe sur les véhicules hypomobiles	14 000 000	930 000	4 600 000	5 530 000	40%
	7310 taxe sur les spectacles	14 000 000	451 000	4 443 000	4 894 000	35%
	7311 Taxe sur etablissement de nuit			-	-	#DIV/0!
	7312Taxe sur les appareils automatiques (gab)	10 056 000		2 297 500	2 297 500	23%
	7313 taxe sur la publicité	99 000 000	5 610 000	56 762 020	62 372 020	63%
	7314 taxe sur l' électricité consommée	144 000 000	71 594 605	25 000 000	96 594 605	67%
	7315 taxe sur l' eau	15 000 000		8 866 355	8 866 355	59%
	7317 taxe sur les distrib de carburant	37 000 000		24 144 000	24 144 000	65%
74	PRODUITS DIVERS	31 302 252	35 893 834	12 370 824	48 264 658	154%
	743 produits des amendes	14 000 000	2 609 250	11 407 700	14 016 950	100%
	749 recettes éventuelles ou non prévues	17 302 252	33 284 584	963 124	34 247 708	198%
75	DOTATION DE FONCTIONNEMENT	-	39 567 373	98 000 000	137 567 373	#DIV/0!
	755 fond de dotation			98 000 000	98 000 000	#DIV/0!
	755 Fond de dotation à la décentralisation(BCI)		39 567 373	-	39 567 373	#DIV/0!
10	RECETTES D'INVESTISSEMENT	-	-	45 283 315	45 283 315	
	105 Fonds de dotation			-	-	
	1050 Dotation de base			-	-	
	1051 Fonds de concours de l'ETAT			45 283 315	45 283 315	
	1052 Fonds de concours de FECL			-	-	
	115 Mouvement financier (Ex.Ft.Capit.)			-	-	
	AVANCE DE TRESORERIE	-	-	-	-	
	TOTAL RECETTES ORDINAIRES	1 810 292 186	230 680 905	1 124 341 466	1 355 022 371	74,85%

Data management is manual, albeit quite exhaustive. As mentioned above, the *Receveurs* are able to record the arrears for registered taxpayers. However, they are not able to do anything with the information. Nor do they know the universe of unregistered properties, and the potential missing revenues. What is worrying is that even the available information on revenue arrears available at the local level is lost in the cash based accounting of the Treasury. Neither the (known) arrears on the revenue side nor those reflected on the spending side are reflected in the summary Treasury accounts.

In sum, the local tax administration is quite dysfunctional. While in principle it is not a bad idea to separate the setting establishment of the base of the property tax from the collection function (to avoid rent-seeking solutions), de facto this is not achieved in Senegal as the *Receveurs* tend to carry out their own evaluations of who should pay and how much, as part of the collection function. However, the amounts to be collected (set by DGID) appear to have little bearing in the work of the *Receveurs*. Neither agency is responsible for the collections, or maximizing the government revenues.

A meaningful flow of information is non-existent: between the DGID and *Receveurs* (Tresor/DGCP) and between them and the Municipality. Consequently here is very little scope for meaningful audit—and there is little investigation as to why the amounts demanded by DGID, or even the (lesser) amounts specified in municipal budgets are not collected. The very sharp drop in the amounts to be collected on account of the FB/TOM during 2016 relative to previous years might have merited a call from the *Receveur* in St Louis to his DGID colleague down the road. Similarly, DGID discovered a tax base of CFAF 265 m as a result of the revaluation (or more than double that in previous years) but had no idea that the collection target for the DGCP/*Receveur* was only CFAF 26m.

Keeping a separate body for the cadaster is also quite common, as it performs many additional legal and urban management functions. The digitalization of the land register, and issuance of land use numbers (NICAD) is an important initiative and opens the possibilities for easier ways of taxing property, as we describe in the next sections.

The transfer of taxpayer masterfiles and information on arrears from the *receveurs* to the local DGID would permit the treasury to focus on better managing the flow of funds. As there is an on-going reform of the Treasury Single Account, consideration should be given to creating zero-balance correspondent accounts for local governments (see Ahmad 2015) so that local *receveurs* could better manage the flow of transactions at the local level, as well as keeping better overall track of both spending and revenue arrears.

Much will depend on the operations at the sub-national level of an IFMIS (government financial information management system) that uses a standard GFSM 2014-compliant Chart of Accounts. This will permit more accurate and speedy information for the mayors as well as the local treasury officials, so that there is enhanced local accountability and more efficient incentives for better revenue generation and spending.

2. Tanzania

President Magufuli since his election in 2015 has made fighting corruption and the implementation of the rule of law two of the main axes of his administration. According to the 2016 Corruption Perceptions Index by Transparency International, Tanzania is ranked 116th out of 175 countries (with 175 being the most corrupt). This also affects tax administration (see also figures provided by Afrobarometer).

The yield of the property tax in Tanzania is almost negligible and largely disappointing—reflecting evasion or avoidance by the rich taxpayers, as well as political resistance. As a response to inefficiency and corruption, the government is pursuing centralization of the administration and collection of the tax through the Tanzania Revenue Authority. However, centralization is viewed by the political opposition as an instrument to curb its power, since most of the big cities, including Dar-es-Salaam, where much of the property tax base is concentrated, are run by the opposition. To some extent this reflects the lack of clarity and relevant details with which centralization has been introduced, as we will see later. In principle, with local the rate setting, and allocation of revenues remaining at the local level, the tax is still effectively local—with potentially significantly greater revenues, even if administration is centralized.

A major difficulty in Tanzania is the separation of property taxation into the rent fees and the property tax, administered by different agencies with no communication between them. Also, obstacles lie in the definition of the base of the property tax covering only the value of buildings and improvements. The assessment is complex and requires qualified surveyors that are in short supply.

Also, as in Senegal, **the property tax in Tanzania covers a small percentage of properties**, even in the urban areas. Most land is “Village land” which comes under the management of Villages, which can grant use-rights. The land tenure system in Tanzania is subject to intense conflict between traditional conventions, revived in the framework of Nyerere’s *ujamaa* vision, and the modern economy. The rent fees are not applicable on Village land, while the property tax can be levied in principle on modern properties built on this land.

Tanzania is a rapidly urbanizing country, although the overall urbanization rate remains low (29.1% in 2012; see Wenban Smith, 2014). The population of the capital city, Dar-es-Salaam of over 4 million, grew 6.5% in the decade between the last two censuses, and its growth rate exceeds the national one. The size of second and third and fourth largest cities, Mwanza, Dodoma and Arusha, lags largely behind Dar es Salaam, with populations of less than half a million people. Also, the three cities are located in the Northern part of the country and still reflect the pre-independence un-balanced urbanization path.

The growth of cities, especially Dar es Salaam, is driven by the construction and service sectors. Investment in real estate is massive, absorbing huge amounts of capital. However, the increase in the value of the immovable property stock has not been commensurately reflected in the property tax collections. Although there are no recent estimates about the size of the informal sector (at the end of last century two-thirds of the labor market was estimated to be informal), informal activities are still pervasive, being fueled by excessive regulation and insufficient provision of services in both the urban areas (particularly transportation and health) and the rural areas (the failure of the village development program). Even more important for its consequences is the size of informality in housing. According to the World Bank (2002), 70% of Dar-es-Salaam’s population

lives in poor, unplanned settlements. Residents are usually too poor to pay for services or infrastructure and the authorities are too resource-constrained to maintain these; thus, health and environmental conditions are generally extremely poor (Collier and Jones, 2016). Access to clean water and sanitation are major problems for Dar es Salaam's poor, and contribute to widespread illness, including cholera, malaria, lymphatic filariasis, and diarrhea, particularly during flood episodes, which could be more severe or frequent in future due to climate change. Congestion and pollution are also extremely high, especially in Dar es Salaam. The relatively small size of the other main cities in Tanzania is reflected in lower, although growing, congestion and pollution.

a. Decentralization

The Report focuses on Mainland Tanzania, a unitary state with 37 urban governments (19 Municipalities, 15 Town Councils and 4 Cities). Rural areas are governed by 133 Rural District Councils consisting of 2,918 registered villages and 64,691 Vitongoji (hamlets).¹⁰ Zanzibar is constitutionally an "integral part of Tanzania" has its own President and a House of Representatives responsible for legislation on all domestic matters, and, in practice, external trade.¹¹ It has also its own system of local government.

b. Property taxation in Tanzania: general features

Officially, only one instrument of taxation is recognized, the property taxes. But an additional instrument is levied, the land rent fees. Despite the complexity of the instruments, property taxation contributes only roughly 0.16 percent of GDP.¹² If we take for granted that the potential property tax revenue for a similar country is about one per cent of GDP, Tanzania is performing at one sixth of the benchmark for its group of countries.

Property taxes and land rent form a negligible part of total local own-source revenues—with the produce cess, service and hotel levies, licenses and fees making up the rest (Table 3.4).

¹⁰ The main legislation includes: The Local Government (District Authorities) Act 1982^{3b} and the Local Government (Urban Authorities) Act 1982^{3c} provide for the establishment of rural and urban LGAs as district township authorities (villages that are assuming an urban character) and village authorities. The Acts were amended in 1999 by the Local Government Laws (Miscellaneous Amendments) Act (No. 9) 1999. Other important legislation includes the Local Government Finances Act 1982; the Urban Authorities (Rating) Act 1983 amended in 2005 to grant Rural Districts the Power to Levy The Property Tax ; the Local Authorities Elections Act 1979 and the Regional Administration Act 1997.

¹¹<http://thecommonwealth.org/our-member-countries/united-republic-tanzania/constitution-politics#sthash.yG3G7Blc.dpuf>

¹² Land fees collected in fiscal year 2015-16 amounted to 74 billion Tsh, corresponding to 0.008 of GDP. In Table 4.4 collections of property tax are on average about three times the land fees, which in turn is 30% of total national collections. The equality between property tax and land fees revenue brings the total to 0.16 per cent of GDP.

Table 3.4. Average local revenue sources for the period of 2007/8 - 2011/12 in million Tsh.

Name of the Zone	Property taxes	Land Rent	Produce Cess	Service Levy	Hotel Levy	permits/licenses	Fees	Other	Total	% of the total
Central Zone						2,825	2,883	5,304	21,423	40
Lake Zone	3,244	589	688	5,425	466	618	1,326	1,097	8,197	15
Nothern Zone	194	125	3,654	872	310					
	940	698	212	1,668	150	1,486	2,387	1,362	8,903	17
Southern Highlands	471	97	1,992	641	134	918	2,227	4,365	10,846	20
Southern Zone						123				
	148	188	1,561	239	103		245	1,558	4,165	8
Total	4,997	1,698	8,107	8,846	1,163	5,970	9,068	13,685	53,534	100

Source Council Financial Reports (CFR) www.pmoralg.go.tz – 2007/08 – 2011/12

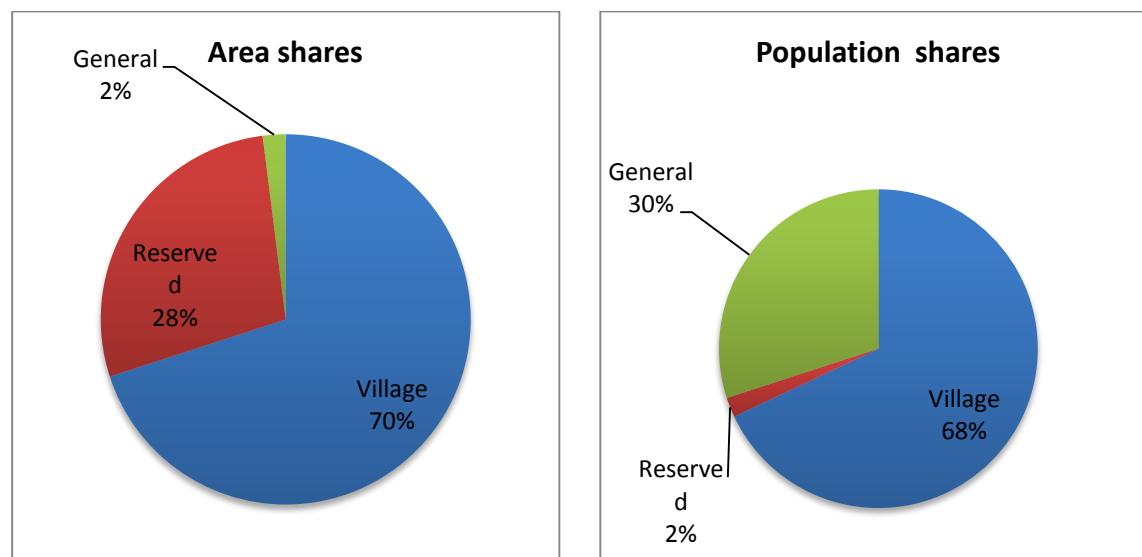
The property tax is levied on the improved value of land (meaning buildings), while land rent fees are based on (pure/non built) land. There is also no overlapping of assignment. The property tax is assigned to be collected by local governments. The Ministry of Lands, Housing and Human Settlements Development is responsible for collecting the land rent fee. In principle, the value of buildings and improvements must be deducted from the total value of property to determine the pure land value on which to set the rent fees (30% shared with local governments), while the value of pure land must be deducted from improved land to determine improvements to levy the property tax. **The Minister of Land has resolved the problem by simplifying it with the use of a flat tax, i.e. a parametric method for determining the tax base** (see later). Local Councils and presently also TRA are still facing the complications of the choice of built land as the tax base. There is no sharing of tasks and information between the Ministry of Lands, Housing and Human Settlements Development and the local authorities, and the duplication is costly and inefficient.

There is no official statistical information collected at the national level on property tax revenue and other characteristics of the levies. Central reports have to rely on information collected at the local level. There is a lack of comparability and the quality of information suffers, showing weakness in the system of public financial management in Tanzania. This leads to distrust and conflict among governments, and lack of accountability, as in Senegal.

c. Land tenure regime

Land in mainland Tanzania falls into three types: 1. Village land; 2. Reserved land; and 3. General land. This is shown in Figure 3.3. Village land covers approximately 70 per cent of mainland Tanzania and accommodates about 30 million people in 2012. Registered villages can assign land to three categories of use: a) communal village land; b) individual, families land, and c) reserved land. However, in practice only a minority of villages are registered and empowered to define uses. Land assigned to families and individuals can be transferred only within the village.

Figure 3.3. Land tenure in Tanzania



As the country grows, **the area of village land is increasingly eroded by the assignment of occupancy rights to modern economy activities, such as mining, timber production, large-scale farming, tourism and conservation.**¹³ This creates frequent opposition, and also harsh conflict with the local population and Village authorities, particularly on projects potentially endangering the environment. With the growth process, an increasing number of people are also acceding to modern dwellings that become, in principle *i.e.* for equality of treatment, liable to property taxation. After the granting of occupancy rights by the Ministry of Lands, Housing and Human Settlements Development, village land becomes general land and is removed from the jurisdiction of Village authorities, becoming liable to property tax under the responsibility of Rural Districts. These districts, however, have never levied it in the past (Center for International Development and Environment World Resources Institute, 1995)¹⁴.

Land rent fees are not levied on plots in Village land that have received occupancy rights, partly because of legal reasons, since the Villages are responsible for its use, and partly to avoid conflict. An obvious action for the Ministry of Lands would be to levy the rent fee and return the proceeds to the Villages.

Reserved land is set aside for natural parks, conservation areas, forest and game reserves. It amounts to 28.5 percent of mainland Tanzania and in principle cannot be occupied. Despite the legal ban, it is estimated that 300,000 to one million people live on reserved land, mainly pastoralists, displaced people, or even small scale informal tourist ventures.

¹⁴ Districts are local government authorities and are allowed after the 2005 amendment of the Urban Authorities (Rating) Act to levy the property tax.

General land is neither village nor reserved land. It covers only two percent of the national mainland areas and accommodated about 13 million people in 2012. Most of general land is situated in the urban areas, with a small portion of it located in the rural areas.

d. Property tax

The administration and collection process starts with the definition by local councils of the “rateable area” with built-up plots. Councils then should survey the plots and assess their value (this is also done separately and without any communication by Ministry of Lands). The process requires qualified surveyors, and only 130 are available nation-wide. As a result, despite frequent, donor-supported, surveying campaigns, the number of surveyed plots remains very small.

Surveyors assess property values based on building costs, with deductions for depreciation of buildings. Values can be well below market values, and the comparison is not immediate, since market value includes necessarily the value of pure land. Taxpayers can object to their assessed value, in which case the case is brought to The District Land And Housing Tribunal. The whole process takes at least a year.

The tax due is calculated by applying the locally determined tax rates (up to a maximum of 0.15% for residential property, and up to 0.2 % for commercial/industrial properties) to the assessed value. A “flat tax” applies to the (majority) non-surveyed plots. The tax due is derived from multiplication by the number of square meters of a unit tax determined for different categories of use and according to the location.

Both surveyed and non-surveyed plots are recorded manually, in most cases, on paper registers. In general, the level of effort exerted by Councils has been low, generating minimal collections and prompting moves by the central government to centralize the whole administration process.

Between fiscal years 2007-08 and 2011-2012 the government assigned to the Tanzanian Revenue Authority **(TRA) the administration and collection of property tax for a group of 8 municipalities**, including the three biggest ones in the Dar es Salaam area. However, during the pilot experiment period **the TRA performance was quite weak**, as documented in Figure 3.4 referring to the three biggest municipalities in Dar es Salaam.¹⁵ It appears that the TRA was attempting to maintain the old processes and procedures for property tax collections. Basically, there was non-cooperation, if not outright hostility, from the municipalities in the provision of information, and of seconded personnel to TRA. Also, the latter had realistically limited incentives to invest considerably in the administration of an unpopular tax with very small revenue.

After the pilot period and the return of administration to municipalities, collections increased sharply. In Kinondomi the increase was more than threefold (see Figure 3.4). This may be that TRA operated during the pilot with low efficiency and sub-optimal effort. Also, Councils had traditionally neglected the administration of property tax to such a large extent that even a modest increase of effort was able to produce substantial results. In Kinondoni, the payment of property tax was facilitated with the introduction of mobile

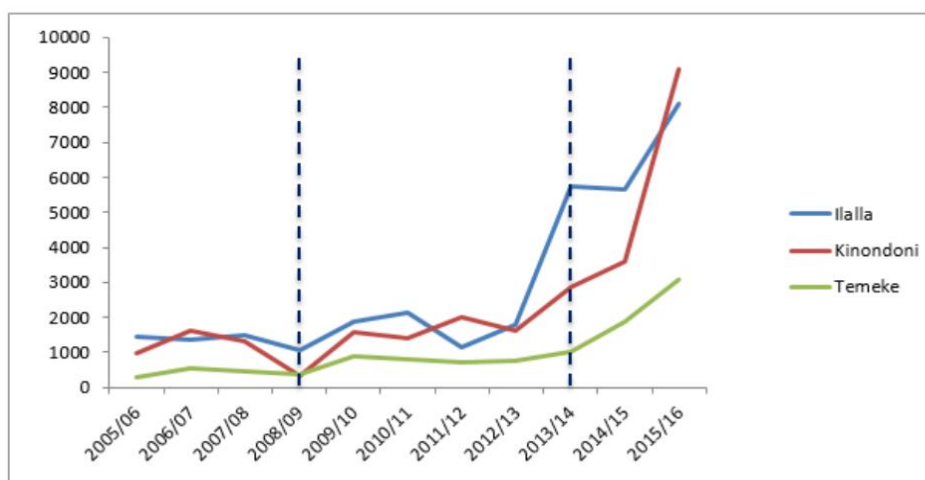
¹⁵ It has to be noted that the impact on collection of centralization is observable with a lag of one year. This explains why in figure 3.4. the period of reference is 2008-09 – 2013/14.

phone-based money payment systems like M-pesa and the electronic payment system Max Malipo. Also, the municipality started to use Mtaa (sub-wards) leaders to notify property owners. The attempt was to transform the tax collection mechanisms to reduce corruption.

In 2016-2017, **the administration and collection reverted again to the TRA.** According to the Budget Speech 2016/17 the decision was based on: "LGAs own sources were below the target due to inefficient revenue collection systems and low property tax collection compared to the available potential". However, the law did not specify details for the handing over of responsibilities, leaving in the vacuum, the management and even more importantly the allocation of the collections.¹⁶ Presently, collected funds are transferred from the commercial banks to a TRA account at the central bank, to which local councils have no access.

This centralization of revenue collection also has to be accompanied by PFM reforms. An example is the creation of correspondent accounts for local governments within the Treasury Single Account. Given the payments and clearing mechanisms, these could feed local zero-balance accounts, on which local governments might be able to draw. This is to ensure rapid access to own-source revenues. Although the links between local tax reforms and the PFM system are important and were also highlighted for Senegal, this issue is beyond the scope of the present report.

Figure 3.4. Municipal property tax in Dar es Salam before, during and after the experimental assignment of administration to TRA.



Note: This reflects the collections of property tax in the three largest municipalities of Dar es Salaam, before, during and after the experimental assignment of administration to the TRA.
Source Fjeldstad Odd-Helge and Lucas Katera, 2017.

¹⁶ The budget mandates, without further detail, the Tanzania Revenue Authority, to undertake the responsibility.

- (i) to estimate tax and make valuation of the properties; (ii) to collect property tax under its laid down procedures by using the relevant tax laws; (iii) To institute proper procedures for remittance of property tax collected by Tanzania Revenue Authority in the respective local governments; (iv) To set procedure for dispute resolution arising from collection of property tax by
- (ii) using prevailing tax laws; and, (v) To review property tax exemptions to ensure that more properties are brought into the tax structure

Visits to the TRA branches operating Municipalities of Ilala and Mwanza testify that the approach to administration varies substantially between the two cases as shown below.

Satellite imagery and other new IT procedures for assessment of value and payment were piloted in a small group of municipalities, including Arusha and Mwanza, since 2013. The project, *Tanzania Strategic Cities Project*, has been sponsored by Danida and the World Bank. We examine the Mwanza experiment below.

e. Land rent fees

Land rent fees are levied only on general land, amounting to only 2% of mainland Tanzania, and are managed and collected by the Ministry for Lands, Urban Settlements Development. The legal basis is the granting of the right of occupancy to specific individuals or firms, who then become liable to the fee. Obtaining an occupancy right is the first step towards recognition of the property title, officially labeled as the "Occupancy certificate". The certificate is granted upon request after the completion of the survey of the plot by the Ministry and validated by the Validation Commission. Occupancy certificates represent a leasehold title with duration of 33, 66, or 99 years. This is a transferable title and, as a consequence can be mortgaged. Informal settlers without the occupancy right are not liable to the rent tax. Occupancy rights are recorded in a register managed by the Ministry.

The amount of rent fee is determined by a flat-tax system according to tables compiled by the Ministry for each Ward. The tables contain the unit amount to be paid per square meter according to the use of land. Total fee is then determined by multiplying the unit amount by the number of square meters. It is a relatively simple method, requiring only three types information: wards; number of square meters and use. According to the Ministry 1,200,000 plots are recorded and collections amount to 74 billion Tsh in 2015-2016 corresponding to a mere 0.08 percent of GDP, as mentioned above.

According to the law, the Ministry must allocate 30 per cent of the collections to local councils according to the derivation principle. The allocation practice has corresponded to the legal requirement, as confirmed by Table 3.4. that includes the rent fees. Since fiscal year 2016-17 the allocation among Councils will be decided autonomously by the Ministry on the basis, it appears, of their cooperation on land tenure issues. No legal source on the change was mentioned to the mission. The process of devolution seems to become completely obfuscated.

f. Own-taxes and intergovernmental transfers

In 2012/13, LGA tax revenues represented 8% of total revenues of TZS 3.3 trillion, or approximately TZS 73,000 per capita on average.¹⁷ Recurrent transfers accounted for 70% of LGA revenues in 2012/13. Development transfers with a share of approximately 21% of LGA revenues in the same year complete the local revenue sources.

There are three main types of transfers: recurrent block (i.e., grants for specific areas of activity (composed of specific allocations for wages and salaries and others for operating expenses), subventions (including specific funds) and capital development grants. While subventions and donor specific funds (called basket funds) form part of the development budget, in practice they fund expenditures that are recurrent in nature. Capital development

¹⁷ This information is taken from *Local Government Authority (LGA) 2014*.

grants fund local government infrastructure and include the discretionary Local Government Capital Development Grant (LGCDG) and sector development grants.

The government has tried over the years to improve the efficiency and transparency of the transfer allocation using “objective” formulas, based on various determinants of need (see Table 3.5). Their impact is, however, impossible to ascertain given the fragmentation of transfers, unrelated to the formulae. The obfuscation prevailing in practice offsets any efficiency aspects of the formulae. Moreover, and more importantly, the arbitrary nature of the transfers negates the potential accountability potential of own-source revenues. There is also no incentive to use the own-source revenues, since the formulas for allocation do not include indicators of tax effort or of tax capacity, resulting in the poor revenue effort and low levels of collections. In this context, the centralization of administration to TRA makes sense, although steps need to be taken not to override local autonomy. **For local own-source control of a tax, it is sufficient for local governments to set the rates at the margin (e.g., within a band determined by a national legislature in a unitary state).** it is equally important for the national administration to be arms-length and not subject to local rent-seeking disincentives (see Ahmad 2015).

Table 3.5: Overview of formulae for grants to LGAs Sector block grant (Recurrent)

	Allocation formulae
Primary education	Number of school-aged children: 100% (Earmarked amount for special schools)
Health	Population: 70% Number of poor residents: 10% District medical vehicle route: 10% Under-five mortality: 10%
Agriculture extension	Number of villages: 80% Rural population: 10% Rainfall index: 10%
Water	Equal shares: 10% Number of unserved rural residents: 90%
Local roads	Road network length: 75% Land area (capped): 15% Number of poor residents: 10%
General purpose grant	Fixed lump sum: 10 % Total number of villages: 10 % Total population: 50 % Total number of rural residents: 30 %
Development grants	
Local Government Development Grant (LGDG)	Total population: 70 % Number of poor residents: 20% Land area (capped): 10%
Sector windows of the LGDG	Same as for the respective recurrent sector grants

Source: see footnote 7

g. City of Ilala

Ilala provides an interesting case to study the re-assignment of the administration of the tax to TRA because of the size of its tax base due to its location in central Dar es Salaam. A new Director, who was a former surveyor in the municipality, has been appointed and in turn has hired new staff with temporary contracts. Taxpayers are identified by using

previous registers and/or by using a local network of sub-ward “street” agents (showing central-local co-operation) in the field.

Taxpayers are asked to fill a form detailing the physical characteristics of their dwelling, such as the size and the materials used for each room and annexes, the age and the location. The form is very lengthy and detailed, hence difficult to fill, leading to frequent mistakes by taxpayers, needing checking. In Ilala the problem is temporarily solved by asking the taxpayer to make a self-declaration of the value of his property. The declared value will be used for the determination of the tax due for the first year (2016-17) for those taxpayers for whom no assessed value has been made available by the local Council.

From 2017 on the intention of the zonal TRA is to proceed to valuation of properties making use of the information provided in the forms. This implies that the determination of the value will still be made according the old approach, based on building cost minus depreciation, and accessible only to qualified surveyors. The lengthy process combined with the lack of surveyors will presumably keep the number of assessed properties quite low. According to the information provided by the tax administration officials during the mission, the number of properties in Ilala is about 350,000 but only 155,000 are in the records.

Table 3.6 Actual and targeted collections of property tax before and after centralization of administration and collection. (Millions Tsh.)

	Mwanza	Ilemela	Geita	Ilala
Actual collections 2015-2016	1,660	1,920	145	8,000
Target collections 2016-2017	2,225	2,500	160	12,500

Source: information provided by officials during the meetings.

TRA is aiming to meet the rather ambitious collections target that was set up by the Municipal Council before the centralization. The continued use of sub-wards agents to reach taxpayers may perpetuate rent seeking.

Collections go from commercial banks to the central bank account for reallocation to the city that has no access for the moment to the account. This is an incomplete PFM circuit, as pointed out earlier, and will likely lead to resistance on the part of local governments—this is in addition to the lower possibilities of rent-seeking.

h. Experiments in Mwanza

Mwanza is experimenting with the use of satellite imagery to determine property locations (*Tanzania Strategic Cities Project*). Locally trained students distribute to taxpayers the forms to residents to fill in the characteristics of buildings. The information collected and checked is used for determining the flat tax. This should also serve to check the value of properties on which the Council before centralization applied the property tax. However, this layer of control on valuation requires the work of a surveyor. In Mwanza, only the local TRA director, who as in Ilala was a former surveyor in the municipality, has this qualification. At best, he is able to conduct personally around 2000 valuations per year.

This implies that for the time being TRA is forced to rely on previous valuations, together with a few updates.

Twenty years would be needed, with existing staff, to check the 40,000 properties out of 150,000 properties in the three cities of Mwanza, Ilalela and Geita, subject to authority of the zonal TRA. With a staff of five surveyors that the local Director considers as a minimum, the time to complete the reassessment could be reduced to 5 years. This again confirms the bottlenecks represented by the present system for determining the tax base, particularly the length of the valuation process, Sidestepping the valuation requirements with a flat tax linked to service delivery (or a modification of the Mauritius models) would considerably simplify the procedures to facilitate greater compliance.

The experiment uses satellite imagery for the property register: zones are specified, and buildings in these zones are identified by drawing their outlines on the map. Each building is given a number and a code. Often, this is the first time these buildings are identified, and this method effectively gives them an address. Locally trained students then visit these buildings and collect detailed information about these buildings and their occupants, using a form like that used in Ilala, and take pictures with their mobile phones. This information is then entered in the database. The result is "Geodatabase" of properties. In addition to being a simple collection of data, it also comes with some data analysis functionality: the map can be rendered in different ways by coloring buildings on the basis of use, value, tax liabilities, etc.

Tax due for the so-called "flat rate" is then determined on the basis of the collected information, and bills are distributed via a local network of Sub-wards agents. Tax payments can be made also at commercial banks.

The software goes by the acronym LGRCIS (Local Government Revenue Collection Information System), and was developed by Dayone, a systems integration company from Dar-es-Salaam, as part of the Tanzania Strategic Cities Project. The local Valuation Surveyor, Fortunatus F. Kiwelese, speaks with enthusiasm of the system and its potential. He notes a number of "challenges": local IT support is missing, and the system is slow to use; the quality of the data is not as good as it could be, etc., but these are not caused by fundamental defects in the software, but rather the consequence of low budgets and lack of local ICT infrastructure.

The software can be improved in different ways. For example, all flows of information are not digitized yet. Maps are printed out and given to local surveyors, who then must find the building, collect information on paper and physically bring these forms to a central office, where the data is then entered in the computer system. It would be much more efficient if surveyors had access to the map itself while in the field, and could directly enter the information on an application in a mobile phone. It would also be much less error-prone (one source of errors, for example, is misidentifying the building - with a GPS enabled mobile phone, this would be much more difficult).

In the areas around Mwanza, Internet connectivity may not be available. **Distributed database technology could operate without internet connections.** The blockchain is an example, but more consolidated technology exists as well and is a common component of modern mobile applications, such as Google Maps. Such technology can also be used as a workaround for the lack of local ICT infrastructure, and the present slow connectivity and breakdowns of the centralized system.

The system is not integrated with the Government's Property Rent Management System (PRMS): the data in the two software systems are not linked. This means that part of the administration has to be done twice by the local administration; it also implies that the TRA itself does not have access to the data in the LGRCIS system, and that data from the PRMS system (such as data on payments) is not available in the LGRCIS.

Companies such as Google and Facebook publish the source code of parts of their software stack under an open source license so that it can be used and easily improved upon by others. The LGRCIS source code is proprietary, and this holds back further development or even basic auditing and improvements by technically competent users. There is no good reason why software that is developed with public funding for the public sector should not be a public resource itself.

i. Conclusions

Following the move to TRA administration, the Government has announced **that the property tax will be converted into a flat rate per sq. meter.** This will certainly address many of the complexities of the old system, and make it much simpler to administer, although it signifies in practice the centralization of the property tax, with no more local tax rates setting in addition to centralization administration.

Arms' length administration, facilitated by satellite imagery and direct payments through banks or smart phones, will also help consolidate the system, and prevent corruption emerging in the TRA machinery.

Additional work is clearly needed in these areas, including on the institutional arrangements for the tax administration and the payments system, block-chain and audit, plus the linking of the local tax agenda to the sustainable development strategy.

IV. Special issues: Equity, Revenues and Costs.

Policy makers are quite often concerned whether property taxes are regressive and whether they raise revenues. We examine the direct effects below, and suggest that a more complete framework of multiple taxes and related spending decisions are needed to fully address these questions.

1. Property taxation and equity

Property taxes are considered regressive because household incomes are distributed more unequally than the value of the home they occupy, or own. There is unquestioned evidence on this fact, However, the implications for the equity impact of property taxation require more consideration.

Let's start with the evidence. Mexico, an emerging country with good information on housing costs and values provided by the Household Survey¹⁸ (ENIGH 2014), confirms the inverse relationship between the incidence of value of housing on income on the one hand, and income on the other. ¹ ENIGH asks households, be they tenants or owners, to declare, or estimate, the rent of the house they occupy. ENIGH makes accurate tests of the quality of the information received and introduces corrections when needed. Results are observable in Table 4.1 showing that the incidence of the rent (and, as a consequence, of the value of housing) decreases as personal income increases, halving when moving from the poorest to the richest quintile.

Table 4.1. Mexico: incidence of rental value of residence on personal income of households

No households	Quarterly personal income (Mexican pesos)	Quarterly estimated rental value of household residence	Incidence of rental value on personal income
All	1 306 867 963	158 263 132	12,11
1	26 216 612	5 181 554	19,76
2	42 660 219	6 905 536	16,19
3	55 599 923	8 240 435	14,82
4	68 801 792	10 341 760	15,03
5	81 707 001	11 383 892	13,93
6	98 041 188	13 656 847	13,93
7	118 110 962	14 822 438	12,55
8	148 250 678	17 710 517	11,95
9	203 745 041	22 828 469	11,20
10	463 734 547	47 191 684	10,18

Source: Authors' elaboration on data from Enigh 2014. (INEGI)

¹⁸ Enigh asks to households be they tenants or owner to declare, or estimate the rent of house they occupy. It then makes accurate tests of the quality of the information received and makes corrections when needed.

A similar pattern is seen for Canada in Table 4.2. The first, poorer quintile, for example, has a share of income, 6.7 per cent of the total, that is half of its share of property, while the richest one has a share of income that is higher of the share of market value.

However, the regressive pattern can be corrected with actual property taxation. It can be reduced with the granting of exemptions and a progressive tax schedule. The pattern may, on the contrary, **be even exacerbated**, with actual property taxation because of inaccurate assessment of high-value properties and evasion.

Most countries work to correct the regressivity of the tax. Canada grants exemptions to lower income property taxpayers.

Table 4.2. Canada: shares by quintiles of after tax personal income and property market value. 1999

	Median after-tax income	Share of after-tax income	Share of market value of property
Quintile	\$	%	
Lowest	18,300	6.7	14.9
Second	31,300	12.7	16.8
Third	43,500	17.6	18.1
Fourth	58,300	23.7	21.4
Highest	85,100	39.3	28.8

Source; Boris Palameta and Ian Macredie, 2005. Original source of information *Source: Survey of Financial Security, 1999 Source: Survey of Financial Security, 1999*

The Danish property tax is characterized by generous exemptions to poorest taxpayers (Muller, 2000) that are able to partially correct the regressive character of the tax. The lowest quintile has the highest (even surprising) incidence of the tax, . but the incidence of the tax decreases until the fifth quintile is reached, then it starts to increase, albeit slowly, giving to incidence the shape of a non-fully symmetric U curve.

If only the tax burden is considered and not the impact of the expenditure of the tax, one implication could be that, if the main goal of taxation is redistribution, then income taxation is more efficient than property taxation. **But the argument overlooks that property is an important component of the ability to pay and that taxing both income and property increases the equity of taxation.**¹⁹

¹⁹ The simple example considers two individuals with same taxable income, the first of them having only income from labor and the second one having income from wealth and income from labour. Taxing only income will not consider that the second individual has a bigger capacity to pay deriving from security offered by property.

Table 4.3. Denmark: distribution of property tax per income share

Decile	Gross income per taxpayer[Effective Tax Rate (As share of gross income)
1	69,048	1,82%
2	126,443	0.87%
3	148,168	0.66%
4	169,020	0.71%
5	190,154	0.78%
6	211,524	0.82%
7	234,962	0.88%
8	263,325	0.92%
9	303,837	1.00%
10	457,278	1.11%

Source:Norregaard (2013).

Most importantly, in a decentralized context, taxes are assigned to local government to finance basic services and not primarily to correct wealth and income distributions. Equity issues then turn to the combined effect of tax and expenditure at the local level. If local authorities implement policies that favor relatively more occupants of poor properties the progressivity of the expenditure will correct the regressive character of the revenue. More specifically, the capitalization of the expenditure can have a larger impact on values of property than the capitalization of the tax.

To the extent that basic services and access to credit for local public investments are a function of local own-source revenues, the issue of the effects of the property tax on equity cannot be addressed without consideration of whether or not additional and sustainable employment generation emerges over the medium-term.

2. Revenue: Models vs experiences

Determining how much revenue recurrent property taxation can potentially yield is more than challenging. Models, typically found in the literature, do not provide much support in examining whether a local property tax leads to under or to over provision of public services, with different real outcomes depending on the approaches (Wildasin and Wilson. 1991; Zodrow, and Mieszkowski,1986; Zodrow, 2006).

While it is in principle possible to determine the size of the tax base, provided there were adequate information based on a census or surveys, **there is no objective possible objective determination of the tax effort applicable to the exploitation of the tax base.** Also, potential revenue depends on administration cost that can be extremely high with property taxation.

A less ambitious target for analysts and policy-makers is to estimate the amount of revenue that can be collected by the full application of the legal requirements of the tax. Differences between actual and legal potential revenue reflect not only effort in administration, that is inefficiency in collection, but also policy choices about the effective use of legal provisions, such as primarily exemptions.

One way to circumvent the difficulties could be the adoption of simple benchmarks reflecting the collections – or better the ratio of collections on GDP – of the best performers in each income group (Norregaard, 2013).

The six high income countries that best perform with reference to 2010-11 (Canada, France, Israel, Japan, New Zealand, the United Kingdom, and the United States) **set a benchmark about 2.9 percent of GDP**, meaning that other countries in their group could reach a similar level of collections if they exerted a similar level of effort.

On average, high income countries collect about 1.0 % of GDP, implying that reaching the benchmark would require them to almost triple the level of their collections. For middle income countries, the five best performers display a benchmark 0.9 percent of GDP, but the actual average for lower-middle income is 0.33 percent, and for upper-middle income countries is 0.44 percent. Reaching the benchmark would imply doubling or tripling actual collections, again a huge leap forward.

Benchmarks may lead to overly ambitious targets. At best, their comparison with actual figures suggests the existence of a substantial untapped revenue potential from the property tax in many countries. However, achieving this must address both institutional and political economy constraints in most countries.

3. Statistical analysis and legal, social and political-economy constraints

Statistical analysis conducted by Bahl and Wallace (2008) using World Bank (World Bank, 2006) data on estimated values of land and property for a very large number of countries while extremely interesting also overstates the potential.

Bahl and Wallace consider that an average tax rate of 1 percent is a reasonable burden in all countries for both built (urban properties) and agricultural land. While only one half of agricultural land can be taxed, exemptions can be modest for built land and their negative impact on revenue can be easily compensated with a small increase of the tax rate. With this burden, collections would reach between 2 and 3 percent of GDP.

Simulations using the Bahl and Wallace approach regarding Latin American countries and Senegal are shown in Table 4.4. (unfortunately, data is not available for Tanzania). The ratio of collections to GNP would always be over 2 percent, hence close to top world performers. This is a high multiple of present collections, even for the best performers in Latin America, such as Argentina and Bolivia. For Senegal, the exercise suggests a potential of 3 percent deriving mostly from agricultural land with no consideration of existing constraints.

Table 4.4 Estimates of revenue potential under different approaches. Latin American countries and Senegal. 2000

(US dollars per capita)

	Potential rural tax base			Poten tial urban tax base	Poten tial proper ty tax base: Cropla nd+pas ture land +urban land and structu res				Potential revenue from property taxation Bahl and Wallace (2008)			Share of prope rties lackin g access to	Potential revenue with exempt ion of propert ies without access to services	
Country	Crop land	Pasture land	Crop land + Pasture land	Urban land + Structu res *		GNI	% incide nce of Cropla nd + Pastur eland of GDP	% Inciden ce of Urban land +struct ures of GDP		as perce nt of GNP	Actual property tax % GDP 2000/4	basic servic es 2009		as % of GNP
Argentina	3632	2754	6386	18301	24687	7718	82.7	237	215	2.7	0.59	32	195	2.5
Belize	5201	133	5334	9298	14632	323	1651.4	2.879	120	3.7			120	3.7
Bolivia	1550	541	2091	2021	4112	969	215.8	209	31	3.2	0.69	64	26	2.7
Brazil	1998	1311	3309	9234	12543	3432	96.4	269	109	3.2	0.42	32	99	2.9
Chile	2443	1001	3444	10235	13679	4779	72.1	214	120	2.5	0.7	19	113	2.4
Colombia	1911	978	2889	4665	7554	1296	222.9	360	61	4.7	0.48	27	57	4.4
Costa Rica	5811	1310	7121	7989	15110	3857	184.6	207	115	3.0		12	112	2.9
Ecuador	5263	1065	6328	2721	9049	1170	540.9	233	59	5.0	0.13	41	55	4.7
El Salvador	404	395	799	3935	4734	2075	38.5	190	43	2.1		50	37	1.8
Guatemala	1697	218	1915	2967	4882	1676	114.3	177	39	2.3	0.14	56	34	2/0
Guyana	5324	252	5576	3192	8768	870	640.9	367	60	6.9			60	6.9
Honduras	1189	595	1784	2934	4718	897	198.9	327	38	4.3		42	34	3.8
Mexico	1195	721	1916	18155	20071	5783	33.1	314	191	3.3	0.18	28	174	3.0
Nicaragua	867	410	1277	1646	2923	739	172.8	223	23	3.1		70	19	2.6

Panama	3256	664	3920	10551	14471	3857	101.6	274	125	3.2		37	112	2.9
Paraguay	2193	1215	3408	4290	7698	1465	232.6	293	60	4.1	0.39	39	54	3.7
Peru	1480	341	1821	5326	7147	1991	91.5	268	62	3.1	0.17	60	52	2.6
Uruguay	3621	5549	9170	10330	19500	5962	153.8	173	149	2.5	0.7	26	140	2.4
Venezuela	1086	581	1667	13049	14716	4970	33.5	263	139	2.8		29	126	2.5
Senegal	608	196	804	976	1780	449	179.1	217	14	3.0	0.1	75	11	2.5

Sources: Tax bases: World Bank (2006);

The IMF estimate is also around 2% of GDP (see IMF, 2016). **Clearly, these high values are due, among other factors, to overestimates of the tax base by the World Bank.**²⁰

The target of 2 percent appears unrealistic for the property tax, even in medium term frame. Identification of achievable targets requires, particularly for countries such as Senegal and Tanzania, consideration of relevant institutional constraints, such as the amount of land occupied under customary regimes, the need to exempt poor properties and the high cost of administration in the rural and low-density areas. It appears even more unrealistic without deep reform of assessment system and of administration, and setting up of proper incentives.

Focus on only national targets and constraints can also be misleading. Metropolitan and urban areas of emerging countries, the cases of Dakar, Daar es Saalam and also Mwanza, come first to mind, have a concentration of property values that provides them a tax base whose fiscal exploitation can contribute to the financing of a share of local expenditure not dissimilar to that of high income countries, under the assumption of effective provision of services. The municipality of Kinondoni in Dar es Salaam, as reported above provides more than anecdotal evidence. In the two years after return of administration to the city collections increased three times simply through better effort. To sustain this effort over time, deep reform is needed as shown in previous chapters.

We maintain that the 1% of GDP target for the property tax is simpler to achieve. Only two countries in Africa have come close—South Africa and Mauritius, and the latter also for a very short period. The Latin American average is 0.33% of GDP, with much more extensive cadasters and efficient tax administrations. Yet 1% of GDP should be a sufficient first-step for the main metropolitan areas and to anchor selective “growth hubs”

²⁰ The three last columns to the right report a simple simulation on the impact on collections that would derive from the exemption of properties lacking access to basic services. Since properties lacking access to services have usually a low value their exemption would have a limited impact on collections, whose share on GDP remains quite high, but would help establishing the benefit/ tax link.

4. Administration costs

There is very limited cross-country information on administrative costs for property taxes, and much depends on how the tax is designed and the administration model used. Indeed, the case-by-case information on the administrative arrangements is even more patchy than the revenue collection data. Bird (2011) argues that land and property taxes are “surprisingly costly”, but the surprise factor disappears after considering the complexity of levying a property tax according to the traditional approach based on fully-fledged cadastral and assessment of value of each individual property. Furthermore, evaluation of the cost issue has to include the benefits of property taxation (both individual and collective) that are much more relevant than with other taxes.

We have to distinguish between fixed costs, like setting up a land registry or cadaster, and recurrent costs, which are defined by the costs of assessing land value and collecting taxes, and which are dominated by costs of assessors and employees in the tax administration. Very often, the skilled personnel needed, such as surveyors to estimate the separate property improvement in Tanzania, were just not available.

There are no comprehensive assessments of fixed costs of property taxes. The limited available evidence (Kalkuhl Fernandez Milan, Schwerhoff, Jakob, Hahnen and Creutzig, 2017) derives mostly from World Bank and other donors’ projects for creating land registries. According to this source, set-up costs range typically between US\$ 10 to 100 million. A project for the creation of a land registry in Ghana, for example, cost about \$ 55 m. (approx. 0.1 percent of GDP) and another in Laos was about \$ 28 m (approx. 1 percent of GDP). A World Bank project on the long-term development of Indonesia’s institutional capacity for land administration had an up-front cost of \$ 140 m (approx. 0.1 percent of GDP). **There are, however, substantial chances that these figures provide an underassessment of costs since in many case projects remain largely incomplete,** and there are no incentives to recognize the full costs, especially if some are borne by other levels of government, as discussed below. The field visits to Senegal and Tanzania also confirm that, despite a decades long process, the building of cadaster still has a long way to go in both countries. This likely applies also (as the team was informed) to a World Bank project on *adressage* in Dakar with a cost of \$50 m. Indeed, in Senegal the bulk of the costs of administering the property tax are borne by the Treasury.

Only a few studies exist that quantify full administration costs. Very interestingly Blažić, Stašić, and Drezgić (2014) estimate that in Croatia, administration costs as a percentage of property tax collections vary enormously, between 5-50 percent. **Higher costs are usually paid by smaller municipalities that can rely less on economies of scale in assessing property values.** A comprehensive study on property taxes in Latin American municipalities by (De Cesare 2016) reveals substantially lower costs of one to 20 percent of total taxes raised, with 6 percent costs for a median municipality. The large variability of administrative costs suggests that there is substantial potential for cost reduction with the adoption of flat taxes. **Also, important scale economies exist as shown by the experience of Croatia, and these can be exploited with centralization of property tax administration.** This would also have an impact by equalizing the costs of administration across the whole country, to the benefit of the poorer regions.

With a functional model, the synergies between the property tax and a national income tax can be better harnessed, with a central enforcement function. This includes both the data warehouse and exchange of information across tax heads, as well as critical audit functions that are hard to manage at the local level. Similarly, the use of modern technology, including satellite imagery may make more sense if managed at the national level.

The block-chain options represent a radical departure in that local information is generated at relatively low cost. However, this has major implications on the processes and procedures linked both to the tax administration as well as cash-management/treasury functions that can be greatly simplified, and overall functioning costs of both the tax and PFM systems reduced accordingly. However, there will be greater need to ensure proper overall management and audit—and this again will reinforce a national functional system to support the new technology. This is a major area of work, as it offers greater accuracy and potential savings on overall tax and treasury functions, even though higher costs of audit and some technological elements may also have to be factored in.

V. Recommendations and concluding remarks

1. Options for taxing urban property

Recurrent property taxation, which we call the property tax, is the main option considered and recommended in this report.

Non-recurrent taxes on transfer of property have also a role to play, particularly in providing revenue, and in addressing distributional issues.

Subjecting new construction to a VAT is now standard, and this helps the construction sector. But it also provides information on costs and prices, which is helpful in the administration of property taxes, even if appropriately the VAT is managed by the national tax administration and the revenues are central or shared among jurisdictions.

Transfer taxes on existing property, such as registration fees, produce revenues, but also generate market distortions and reduce mobility. Their equity impact can be enhanced by a surcharge on very expensive properties , as in England.

Collections on recurrent property taxes of at least 1% of GDP are possible with adoption of simplified structure and arms' length administration. **Moreover, property taxes affect incentives critically linked to a sustainable development strategy.** These include:

- better governance in both centralized and decentralized political systems;
- improved provision of basic services;
- access to credit for local public investments, especially in the metropolitan areas and new urban "hubs" to anchor inclusive growth; and consequently
- incentives governing private investment with implications for sustainable employment generation, inter-sectoral mobility and informality.

A basic precondition for local accountability is **the setting of rates at the margin at the local/municipal level, within bands in some cases** even if the overall bands are set by the national Parliament (in Unitary states) or Provincial Assemblies (in Federal countries). Local accountability is critical for decentralized systems that depend on cross-jurisdictional competition and an electoral process to ensure discipline.

There are two broad classes of options for implementing a tax on urban property. The first one is the traditional ownership-valuation method; including a self-assessment variant. The second broad alternative is a flat tax on properties, linked to occupancy, rather than ownership.

The traditional ownership-valuation model

Complex arrangements based on valuation, detailed cadasters, separate treatment of land and buildings and improvements, have not worked well in

developing and emerging market country contexts, and should be not form part of aid conditionality.

The traditional ownership-valuation model requires cadasters and valuation mechanisms. Variants include separate taxation of land and property improvements, and self-valuation mechanisms. These are not mutually exclusive, as we see from Colombia.

The ownership-valuation model is of limited relevance in Sub-Saharan Africa, even though it is common in the legal frameworks in most SSA countries, reflecting the practices in the colonizing countries. Recent policy changes in Tanzania and Mauritius illustrate the dissatisfaction with the model.

The reasons that the ownership-valuation model does not work very efficiently in most developing countries are manifold:

- **Often property titles are difficult to establish**, particularly where there are traditional property right, nationalized state lands in post-colonial contexts, co-existing with various forms of private ownership and leaseholds. Informal settlements with unclear property rights also form a significant portion of growing urban populations. These patterns were common in both Francophone and Anglophone institutional arrangements in Senegal and Tanzania.
- **Local administration is a problem, and the proximity of administrators to the tax-payers opens significant rent-seeking opportunities. These are not reduced by paying tax collectors higher salaries.**
- **Creating a cadaster takes too long, and is often outdated**, even in countries where there is a long tradition of record-keeping such as in Colombia and India.
- **Valuation is difficult**, especially with properties that have not been sold over generations.
- Despite theoretical advantages of the model, **the actual distributional impact is indeterminate** especially when properties at both the upper and lower ends tend to be missed out. Such a system cannot be described as very redistributive in practice.
- **The net revenue collections** are typically very low, and take a considerable amount of **time and circuitous processes to percolate back** to the local governments, as in Senegal.

Separating out the taxes on land from the improvements on land, or buildings, also appears to be appealing in theoretical terms. However, this variant still operates on the ownership and valuation mechanism, extended here also to land. This was tried in Tanzania, and the problems with this mechanism were also clearly identified:

- The ownership and valuation applied to land is also **complicated with the multiple and overlapping legal titles.**
- There is even greater pressure to **value “improvements”, including that of buildings separately from land—this is a huge task** beyond the capabilities of a limited number of surveyors that were observed in the Tanzanian case study.

Self-assessment principles

An alternative method to evaluation is to utilize self-assessment by property owners to establish valuation. While this method has proved very successful in Bogotá, its replicability has been limited.

There is no proof that it will work as a permanent solution. Also, it requires a fairly advanced tax administration organized on a functional basis and fully harmonized with the national tax information data bases, as well as superior audit capabilities. It also requires a timely tracking of information flows on property transactions. The Bogotá experiment still retains the underlying property tax based on the cadaster as a minimum. The self-assessment alternative may not be an appropriate option for all cities—even in other cities in Colombia, and indeed has not been widely adopted outside the most advanced areas of Bogotá and Barranquilla.

A flat tax on occupation of property linked to the use of local public services

A simple flat-rate property taxes should generate adequate revenues to anchor both basic services and collateral for public investment in the metropolitan areas and in generating new urban transitions for sustainable employment generation.

Simplicity of administration makes this instrument attractive. It can be subject to a small exemption, as well as multiple bands, that address distributional considerations. However, an excessive concern with progressivity can lead to complications, that begin to reflect the problems of the standard model. The biggest advantages are the potential linkage of the tax burden with service delivery, and the tax-benefit system in the more advanced emerging market countries.

The flat tax alternative could work well in a developing country context. It could be based on a simple registration of occupancy that would cut across the Gordian knot of overlapping and “grey” ownership structures—covering state, traditional, rental and free hold, as well as informal settlements.

Distributional equity can be improved if, pensioners and disabled people are able to get relief for property tax payments through the income tax system. However, in developing countries, there is a premium on keeping the system as simple as possible.

More effective and equitable taxation of properties may actually begin to tax upper-end properties. Also, the better information on high-end properties should help with expanding the base of the personal income tax.

The payment of a flat tax by informal settlements should also enable them to be eligible for public services such as education facilities and health care. Also a minimal rental period should also make them available for small business and home improvement loans.

Finally, the more effective service delivery, and local investments, should lead to higher and inclusive employment generation. These consequences of a property tax make it a potentially attractive instrument for meeting the SDGs.

2. Taxing agricultural land and informality

While agricultural land has not been a focus of the case studies, given limitations of time and resources, we believe that the **flat-tax proposal, with a minimum exemption of “y” hectares to address small family farms developed** in Ahmad and Stern (1991) remains an option to be explored in SSA. This is similar to the flat-tax proposal for urban properties we have proposed above.

As in Ahmad and Stern (1991), there could be a **higher rate imposed on irrigated land** than on rain-fed agriculture.

The taxation of forestry and natural resources is important, but beyond the scope of this report.

3. Administration and institutions

The local tax administrator model breeds direct contact with taxpayers and may engenders corruption particularly in countries with low political competition and control. To some extent, the problems may be mitigated by simple registration, aided by satellite technology, as well as increasing use of mobile phones and payments in commercial banks, where available. Some functions could be shared with higher levels—particularly the management and exchange of information, as well as the skills needed for audit.

Using the central tax administration is an option being developed in Tanzania. The typical critique is that this is an extra burden, and not worth it for the central tax administration given the relatively meager revenues involved. However, the argument is only correct if the traditional model of the tax collector is adopted by the national tax authority. Indeed, as we argue in this paper, the direct contact approach should be avoided as it generates corruption whether the tax administration is local or central. **If the modern functional model of tax administration is used instead,** the registration, control and audit functions would be shared across taxes. The information on land assets would provide useful information for the benefit of the major taxes, particularly the income tax that also need to be improved in most developing and emerging market economies.

For the local governments, the **critical issues is for the central tax administration to ensure that monies are collected efficiently and deposited fairly and without delay** to local accounts. These could be in the form of correspondent accounts of the Treasury Single Account in the countries with a Real Time Gross Settlement System and advanced banking infrastructure; or in zero-balance accounts in local commercial banks in other cases. The treasury/tax administration circuits will need to be reconsidered in both Senegal and Tanzania, and for which further work is needed.

Exploring in depth the use of open access and block-chain technologies for property taxation is highly recommended. Use of this technology could generate the needed local information to supplement an arms-length administration, including at the regional/national levels. This would also potentially simplify the cash-circuit and the functioning of the treasury/accounting systems. While block-chain technology is intrinsically local as it tracks individual transactions, managing the process and

ensuring that the full benefits are realized will **probably require coordination and management at a national level, together with cross-jurisdictional audit.** Again, a national level data base critical, and becomes feasible, even with local data registers.

The use of satellite imagery will also necessitate a reconsideration of the institutional and procedural arrangements. Thus, satellite technology can benefit the whole country as easily as a single city, with clear externalities.

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List of acronyms

CAMA	Computer Aided Mass Appraisal
CFA	Communauté Financière Africaine
CFAF	Communauté Financière Africaine Franc
CGF	Contribution Globale Foncière
CIT	Corporate Income Tax
CFR	Council Financial Reports
DGCP	Direction Générale de la Comptabilité PUblique et du Trésor
DGID	Direction générale des Impôts et des Domaines
ENIGH	Encuesta Nacional Ingresos y Gastos de Hogares
FB	Impôt Foncier Bâti
FNB	Impôt Foncier non Bâti
GG	General Government
GDP	Gross Domestic Product
GFS	Government Finance Statistics
GFSM	Government Finance Statistics Manual
ICT	Information and Communications Technology
IGAC	Instituto Geografico Agustín Codazzi
IFMIS	Integrated Financial Information Management system
IMPBI	Impuesto Municipal a la Propiedad de Bienes Inmuebles
IMF	International Monetary Fund
LADF	Land Acquisition & Development Fund
LGA	Local Government Authorities
LGCDG	Local Government Capital Development Grant
LGRCIS	Local Government Revenue Collection Information System
LTU	Large Taxpayer Unit
MDGs	Millennium Development Goals
NICAD	Numéro d'Identification Cadastral (Cadaster identification number)
NINEA	Numéro d'identification national des entreprises et des associations (enterprises and associations identification number)
PFM	Public Financial Management
PIT	Personal Income Tax
PRMS	Property Rent Management System
SDGs	Sustainable development goals
SDLT	Stamp-duty-land-tax
SSA	Sub Saharan Africa
TIN	Taxpayer identification number
TOM	Taxe ordures menagères
TRA	Tanzanian Revenue Authority
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization,
US	United States
VAT	Value Added Tax

ANNEX : TERMS OF REFERENCE

1.	BACKGROUND INFORMATION	80
1.1.	Contracting Authority	80
2.	OBJECTIVE, PURPOSE & EXPECTED RESULTS	80
2.1.	Overall objective	80
2.2.	Purpose	81
2.3.	Results to be achieved by the Contractor	82
3.	SCOPE OF THE WORK	82
3.1.	General	82
3.2.	Specific work	82
3.3.	Project management	83
4.	LOGISTICS AND TIMING	83
4.1.	Location	83
4.2.	Start date & Period of implementation of tasks	84
5.	REQUIREMENTS	84
5.1.	Staff	84
5.2.	Office accommodation	84
5.3.	Facilities to be provided by the Contractor	85
5.4.	Equipment	85
6.	REPORTS	85
6.1.	Reporting requirements	85
6.2.	Submission and approval of reports	86

1. BACKGROUND INFORMATION

A key message that emerged from the Third Financing for Development (FfD) Conference in Addis Ababa (July 2015) is that domestic public finance should be at the heart of all countries' efforts to achieve the overriding objectives of inclusive growth, poverty eradication and sustainable development. In response, development partners, including the European Union, joined forces to launch the Addis Tax Initiative. The countries subscribing to the Initiative declared their commitment to enhancing the mobilisation and effective use of domestic revenues and improving the fairness, transparency, efficiency and effectiveness of their tax systems in order to address inequalities. Participating development cooperation partners undertook to double their collective support in the area of domestic revenue mobilisation.²¹

In this context, property taxation is likely to become an increasing source of revenue and interest in property taxation has gained grounds in recent years. There are many reasons for this: create fiscal space; provide subnational governments with the means to meet their obligations; strengthen the social contract between citizens and their local authorities;²² and others. One area of focus relevant to Budget Support operations has been the need to integrate a detailed property tax strategy into the decentralization process (e.g. Bahl and Martinez-Vazquez, 2008).

The theoretical literature has also started to explore property taxation more in-depth. An IMF study (Nooregaard, 2013) shows that the yield of immovable property taxes on average represents about 4½ percent of total taxes in high income countries against 2.1 percent in middle-income countries. The same study evaluates that the potential for increase in the yield of property taxes is 2.1 percent of GDP and 0.6 percent of GDP in high income countries and middle income countries respectively. Clearly, there is substantial untapped revenue potential from the property tax although nothing much is known about the actual yield and potential for increase in low income countries (all references available upon request).

1.1. Contracting Authority

European Commission

2. OBJECTIVE, PURPOSE & EXPECTED RESULTS

2.1. Overall objective

The contract concerns a study on **Property Taxation – Economic features, revenue potential and administrative issues in a development context**.

The objective of the study is to cover a number of issues relevant to the work of the Commission in the context of budget support operations in low and medium income countries. It is important that the conclusions be of relevance to the work of Directorate General for International Cooperation and Development (DEVCO) in operationalizing the 'Collect More, Spend Better' approach, as well as to draw lessons for the implementation of budget support in decentralized contexts.

²¹ "Collect More, Spend Better", Staff Working Document (SWD) of the European Commission (2016), DEVCO A4.

²² The SWD states: 'Domestic public finance is also part of the social contract between a government and its citizens, whereby citizens pay for government activities in exchange for the services that government provides for (them).'

2.2. Purpose

The purposes of the study can be divided into three groups of issues to be addressed, as follows:

2.2.1. Economic properties and revenue potential:

- To what extent can the property tax help subnational governments, especially in the context of the need to better capture the strongly growing base of urban property?
- Can the property tax help address equity concerns? Should it be restricted to the value of the land (and not land plus the property on it) as done in a number of countries?
- Should earmarking be considered, in view of the growing need for urban infrastructure, in particular in Africa where the urban population is projected to double between 2000 and 2030?
- Is there merit in the idea (proposed by Bahl, 2009) to introduce in large and growing cities (but still heavily agrarian) a combination of capital value systems for urban places and an area-base system for more rural areas?

2.2.2. Administrative issues:

- What is the best administrative arrangement to make the property tax progressive, fair and administratively feasible (i.e. at reasonable costs and taking into consideration the difficulty of self-assessment)? Is it / should it be covered under the Tax Administration Diagnostic Assessment Tool (TADAT) in more details by virtue of the side benefits (see 2.2.3.)?
- What is the best valuation system i.e. that is fair and automatically scales-up with urban expansion? How should values be assessed / revised?
- In terms of its implementation (geographically and from the centre to the subnational governments): what are the pre-requisites for successful introduction of an optimal property tax system within a given country context? Which elements need to be in place, a priori, for its effective implementation? What are the potential impacts of such a tax in social, economic and political terms? Is there an optimal strategy for the sequencing of property tax implementation?

2.2.3. Positive externalities of and impediments to land registers:

- As a well-functioning property tax requires a land register, the study will explore the side benefits of developing this instrument as well as the impediments to implementation of a land register. The study will analyse the state of play of implementation of land registers and identify possible incentives for their creation. A distinction should be made between rural and urban areas. Land registers include critical elements for development: the reduced risk associated with undisputable property ownership; clarity when inheritance disputes occur; and the possibility, especially for women, to have a collateral indispensable to develop a business. The latter point is of particular importance given the vast informal economy in sub-Saharan Africa (66% of

total non-agricultural employment is informal, for women this rate is 74%). Formalising land registration and the use of property as guarantee for loans will also allow small businesses to formalise with the consequence that they would pay corporate tax – provided appropriate incentives for formalisation of businesses are in place.

- There may also be other benefits to explore, possibly linked to the protection of the environment and, more generally, to better land management.

2.3. Results to be achieved by the Contractor

- Draft summary of the initial briefing meeting with DG DEVCO within 4 days after the meeting
- Draft report (approx. 30-50 pages excluding annexes) to be submitted by the end of May 2017,
- Final report within 4 weeks of receiving DEVCO comments on the draft report.

3. SCOPE OF THE WORK

3.1. General

3.1.1. Description of the assignment

The study on **Property Taxation – Economic features, revenue potential and administrative issues in a development context** should address the issues listed under 2.2.

Indicative number of man-days is estimated at 73 (65 for draft report and 8 for final report).

3.1.2. Geographical area to be covered

The study should focus on ACP countries (Africa, Caribbean, Pacific), with selected studies preferably in Sub-Saharan Africa. Experiences from other regions should also be considered.

3.1.3. Target groups

European Commission services working on budget support operations in low and medium income countries.

3.2. Specific work

The assignment includes the following tasks:

3.2.1. Review, analyse and summarize existing literature on property taxation with a focus on low and medium income economies. Experience by region as well as urban vs rural areas within a given country are required. The methodology shall include a political economy analysis of reform processes. Selected case studies shall be undertaken with a focus mainly on ACP countries (Africa, Caribbean, Pacific). Experiences from other regions should also be considered.

3.2.2. Review existing literature and international experience on property tax policy and the merit of the standard assumption: the economic rationale for increasing the reliance on the property tax: property is not movable and therefore, as long as there is an efficient and accurate valuation system, the money can be collected with little elasticity with respect to rates. A tax regularly levied on land and buildings also presents the advantage of not distorting the decision to work, invest, or innovate.

3.2.3. Review existing literature and international experience with respect to the decentralization aspects and the role of central vs local governments. The case is often made that the property tax is a good local tax (Bahl, 2009) because: i) the local authorities are best placed to know about local real estate / land market conditions; and ii) citizens can directly assess the degree to which property taxes actually reflect the benefits they receive.

3.2.4. Review the literature and international experience regarding its administration, including the challenges that must be addressed at the design and implementation stage. Some argue that property, except for land, is movable at least to some extent; a reliable system of valuation does not exist; and those people who have the most valuable properties also tend to be those who have a lot to say at the local level, so either the rates remain low or the money cannot be collected, especially in middle and low income countries.

3.2.5. What are the positive (or negative, if any) externalities that a well administered property tax could generate? The tax could help address wealth distribution issues, but a land register would also help fighting poverty, in particular for women. Would it encourage better use of the land in general? Are there other such externalities? What is the international experience?

3.2.6 Undertake up to two field visits in selected countries, preferably in Sub-Saharan Africa, for more in-depth analysis of experience and lessons on the above issues, including the state of play of the land register. Specific consideration will be given to aspects of political economy analysis.

3.2.7. Suggest and prioritise country specific policy recommendations applicable to Budget Support operations in general and useable in the context of the EU budget support in decentralized contexts. How should the introduction of property taxation be best supported by the EU? Special attention should be paid to sequencing and realistic timing of policy reforms. The consultant is also welcome to suggest literature and data gaps which could be explored in future studies. The approach would require the selection of some examples in low and middle income countries.

3.3. Project management

3.3.1. Responsible body

The service responsible for the study is DG DEVCO, Unit A4 - Budget Support and Public Finance Management.

4. LOGISTICS AND TIMING

4.1. Location

The assignment is primarily desk based but should include up to two field visits for selected case studies. Consultants are invited to make proposals in their bids of countries for the field studies, preferably in Sub-Saharan Africa. The expert(s) should

also be available for up to 3 missions to DG DEVCO in Brussels (an initial briefing, a presentation of the draft report and a final dissemination workshop to be decided at a later stage).

4.2. Start date & Period of implementation of tasks

The intended start date is 1st quarter 2017 and the period of implementation of the contract will be 10 months from this date. Please see Articles 19.1 and 19.2 of the Special Conditions for the actual start date and period of implementation.

REQUIREMENTS

5. REQUIREMENTS

5.1. Staff

Note that civil servants and other staff of the public administration of the partner country, or of international/regional organisations based in the country, shall only be approved to work as experts if well justified. The justification should be submitted with the tender and shall include information on the added value the expert will bring as well as proof that the expert is seconded or on personal leave.

5.1.1. Key experts

Key experts are defined and they must submit CVs and signed Statements of Exclusivity and Availability.

The study may be carried out by one or several experts. All experts who have a crucial role in implementing the contract are referred to as key experts. The profile(s) of the key expert(s) for this contract are as follows:

Qualifications and skills

University degree in economics, public administration or related fields

General professional experience

Senior expert with at least 10 years of professional experience; relevant research

Specific professional experience

Areas of expertise: tax policy, tax administration, decentralization, including elements of political economy analysis in these fields.

Previous experience in areas linked to Budget Support and experience in setting up a property tax in developing countries is an asset.

If several senior experts are proposed, then the CVs of those additional experts should also be added to the offer.

All experts must be independent and free from conflicts of interest in the responsibilities they take on.

5.1.2. Other experts, support staff & backstopping

The costs for backstopping and support staff, as needed, are considered to be included in the tenderer's financial offer.

5.2. Office accommodation

Office accommodation for each expert working on the contract is to be provided by the Contractor.

5.3. Facilities to be provided by the Contractor

The Contractor shall ensure that experts are adequately supported and equipped. In particular it must ensure that there is sufficient administrative, secretarial and interpreting provision to enable experts to concentrate on their primary responsibilities. It must also transfer funds as necessary to support their work under the contract and to ensure that its employees are paid regularly and in a timely fashion.

5.4. Equipment

No equipment is to be purchased on behalf of the Contracting Authority / partner country as part of this service contract or transferred to the Contracting Authority / partner country at the end of this contract. Any equipment related to this contract which is to be acquired by the partner country must be purchased by means of a separate supply tender procedure.

5.5. Special requirements

The present service contract is a **global price** contract. Contractors will calculate their prices on the basis of:

- the fee proposed per day (unit price) x number of days foreseen in the offer;
- the prices of specific services needed for the performance of the project (eg. travel costs, subsistence allowances).

6. REPORTS

6.1. Reporting requirements

The Contractor will submit the following reports in English in electronic version.

- Draft summary of the initial briefing meeting with DG DEVCO within 4 days after the meeting.
- **Draft final report** of approx. 30-50 pages (main text, excluding annexes). This report shall be submitted no later than end May 2017. An indicative list of sections is given below:

1. Executive summary
2. Introduction
3. Summary of literature on property taxation (focus on low and medium income, selected cases)
4. Property tax – policy issues
5. Property tax in a decentralized context
6. Property tax - administrative issues
7. Externalities associated to the property tax - Impact on poverty
8. Conclusions and policy recommendations

- **Final report** with the same specifications as the draft final report, incorporating any comments received from the parties on the draft report. The deadline for sending the final report is 30 days after receipt of comments on the draft final report. The report shall contain a sufficiently detailed description of the different options to support an informed decision. The detailed analyses underpinning the recommendations will be presented in annexes to the main report. The final report must be provided along with the corresponding invoice.

The final report shall include the following standard disclaimer:

"The information and views set out in this study are those of the author(s) and do not necessarily reflect the official opinion of the European Commission. The Commission does not guarantee the accuracy of the data included in this study. Neither the Commission nor any person acting on the Commission's behalf may be held responsible for the use which may be made of the information contained therein."

6.2. Submission and approval of reports

The report referred to above must be submitted to the Project Manager identified in the contract. The Project Manager is responsible for approving the reports.