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Marco Salm

Property Taxes in BRICS: Comparison and a First Draft for Performance Measurement

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Abstract

This paper constitutes a first didactic foray into the research project 'Property Tax as Financing Instrument of Megacities in BRICS states'. It assesses the property tax systems of the BRICS states with consideration for how property taxes should be designed and used. In addition, a model to assess the efficiency with which the property tax is applied will be developed. This model will later be used to conduct an assessment of the property taxes of the BRICS states' megacities.

1. Background

The purpose of this paper is to develop an analytical framework for a comparative assessment of the property tax systems within BRICS[1] states and their megacities[2]. This is a sine qua non for a general understanding of the property tax designs found within the BRICS states and constitutes the foundational research required for the intended property tax performance study of the BRICS' megacities. In this context, property taxes are defined as recurrent municipal taxes on immovable residential property.

Property taxes are often described as having 'significant potential' or 'significant untapped potential'. Within the (mega-)cities in transition countries the property tax generally plays a minor role in revenue terms, yet it plays a major role in country-wide revenue collection. Large cities, such as megacities, of course have a broader tax base. Still, this does not explain the large inter-city differentials in property tax revenues. The megacities' administration can of course make use of economies of scale, but beyond that, coverage, assessment and collection also play a vital role. Property taxes are very resource-intensive from an administrative perspective. It seems megacities are at the cutting-edge of administering property taxes within their states.

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1 BRICS is the acronym for **B**razil, **R**ussia, **I**ndia, **C**hina and **S**outh Africa.

2 Reference for the definition of megacity is "Urban Agglomeration" from UN-HABITAT. This definition includes the actual city and its surrounding suburbs, making them a (mega-)city (or urban agglomeration).

The characteristics of property tax systems can be divided into policy choices (tax base, tax rate) and administrative practices (tax assessment, billing, collection, enforcement). The political choices can be discussed according to public finance theory; the administrative practices, however, are more difficult to conceptualize. This paper summarizes the variance in property tax designs, with regard to tax policy and administrative realities that can be found among and within the BRICS states. Further, the paper identifies and discusses (independent) variables that influence property tax performance (dependent variable) and which can serve as a basis for a follow-up property tax performance study of the megacities of the BRICS states.

Generally speaking, it is the megacities that are already today coping with the problems of tomorrow. They are confronted with trends of fiscal decentralization and urbanization that are leading to fiscal stress on the local level. Although the magnitude of these effects may differ among the BRICS states, the results are comparable: Major investment needs, rising poverty, and increasing congestion and pollution levels in the context of limited financial resources – especially in regard to property taxes. Therefore, the focus herein is on the megacities. They are simultaneously experiencing the costs and benefits of urbanization, decentralization and property taxation.

In short, the main characteristics of the BRICS states and their megacities can be summarized as the following:

- ***Fiscal decentralization*:** All BRICS states have faced or are facing a period of fiscal decentralization. The increasing complexity of (mega-)city systems places financial burdens on both municipalities and central governments. The latter like to 'cope' with these problems by decentralizing responsibilities. In most cases fiscal decentralization is shaped by unclear institutional arrangements and duplication and confusion in the areas of shared responsibility. Further, municipalities are often *de facto,* but not *de jure,* responsible for local public service provision. As a result, municipalities are usually not appropriately 'equipped' for their tasks, neither from a financial nor from a decision-making perspective.
- ***Urbanization*:** Megacities, having more than 10 million inhabitants, exemplify, by definition, the tip of the "urbanization iceberg". The megacities are economic hubs, political control centers and attractions for millions of people. The level of urbanization in BRICS states will increase from 60% in 2011 to 70% in 2050.

Each week, the ranks of urban residents within the BRICS states increase by half a million.

- ***Fiscal gap*:** (Mega-)cities provide not just 'hard services' such as urban roads, water supply and sewerage, public transportation, and streetlights, but also 'soft services' like primary education, recreation facilities and basic health. Decentralization and urbanization further increase the financial requirements for coping with growing congestion, pollution, inadequate services/facilities and slum settlements. According to UN-HABITAT (urban indicators), for instance, 30% of the urban population in Brazil, India, China and South Africa live in slum settlements.
- ***Poverty fighters*:** (Mega-)cities play a vital role in fighting poverty, as they provide economies of scale and proximity that generate enhanced productivity. Urbanization is positively correlated with prosperity, since income increases with the rising productivity in urban centers[3]. Therefore, cities make their states rich, e.g. Beijing and Shanghai generate 3.1% and 13.6% of the GDP in China respectively, Mumbai accounts for 5% of GDP in India, and Johannesburg produces 15% of GDP in South Africa (UN-HABITAT 2008: 19). Thus, cities make their states effective poverty fighters if benefits and opportunities are distributed wisely.

In regard to the property tax, (mega-)cities within the BRICS states should basically be self-sufficient. Due to urbanization the property tax base overall is increasing. Larger cities generally have a larger per capita property tax base due to enhanced urban public services, speculation and/or higher property values. Therefore, such cities can impose higher taxes without losing their tax base to more competitive localities.

Within financial theory, property taxes are perceived as being an appropriate financing instrument for cities in general and for megacities in transition states in particular. Property tax is seen as the means of choice for putting megacities' financing on a sound basis. Financial theory suggests a 'golden way' – a well-administered tax based on market values with a high degree of local autonomy – for a rational local tax; however, each BRICS state has its own institutional framework, tax-

3 Due to rising incomes in urban economies – especially in China – one of the eight UN Millennium Development Goals (halve the proportion of people whose income is less than $1 a day) was even achieved before 2015. World Bank, Press Release No:2012/297/DEC.

specific legislation, and political, fiscal and administrative environment, resulting in a variance in property tax designs and performances. However, they have in common that their property tax, in most cases, plays a minor role in municipal revenues. Property tax revenue (recurrent tax on immovable property) as percentage of GDP constitutes approximately 0.5% in Brazil, 1.1% in Russia, 0.3% in India, 0.0% in China and 1.0% in South Africa compared to 2.85% in Canada, 2.48% in France, 2.53% in United Kingdom and 2.91% in the United States[4]. Therefore, the research focus here is on identifying 'explanatory variables' for the property tax performance among and within the megacities of the sample-states. These independent (explanatory) variables will be able to explain the variance in the property tax performance (dependent variable). Based on the findings, reform strategies for optimizing the property tax design can be developed. The property tax performance is of main interest here since maximizing revenues should be seen as a key goal if governments' are to have the means to address the aforementioned problems BRICs and megacities are facing.

1.1 Scope of Study

The study sample is the BRICS states' megacities. BRIC is the acronym of four major emerging economies: Brazil, Russia, India and China. The term goes back to economist Jim O'Neill who predicted in 2001 that these states would see strong economic growth – which in turn was, and is, mainly based on their urban centers. The same has qualified South Africa a BRIC member since 2010, thus the term is now BRICS. Since then, these states have gained significant influence on regional and global affairs, as they are all members of the G20. Due to their political and economic role within their regions, the BRICS states are named as anchor states in German development cooperation. These emerging economies – and especially the megacities within these states – have a positive impact on their geographic region. The megacities in particular lead the way within their countries by coping already today with the problems soon to face many (mega-) cities. These megacities

4 *Prakashm Prashant* (2013: 25). The amount for China is not specified, as there are controversies about the property tax/taxes on property in China. Within this article the taxes on urban property (*Urban and Township Land Use Tax* and *House Property Tax*) are seen as a property tax. However, there are reform initiatives to amalgamate the different taxes (since 2004).

are confronted by similar challenges, including urbanization, decentralization and, in turn, rising financial needs. Furthermore, they are playing a leading role within their countries in regard to their administration. Thus, placing the megacities into the research focus is essential. Contributing to this, the forthcoming dissertation thesis will research the property tax designs of the BRICS states' megacities.

Property taxes – as with taxes in general – can be designed to serve different functions. Typically the main function of taxes is to generate revenues (*revenue function*). Additionally, property taxes can seek to re-distribute wealth from the rich to poor (*distributional function*), e.g. via a progressive tax rate structure, or they can be used to encourage a specific behaviour by the taxpayer (*steering function*), e.g. by setting higher taxes on vacant land to stimulate urban land development. In these two cases the distribution and steering function have a positive impact on municipal revenue. Where they have negative impacts on revenue these functions should take the back seat, as this study views the primary function of the property tax as being to mobilize tax revenues. This is because the (re-)distribution function, for instance, is better achieved on the expenditure side (e.g. by providing public housing), if provided funds are available.

The study will review the integral elements that determine the property tax performance. Furthermore, the study will review the current status of the property tax regimes in the BRICS states. The focus therein is on residential real property taxes (recurrent taxes on immovable property within municipal areas).

1.2 Methodology

Methodologically, the research project adopts a mixed methods approach:

First, the large and vibrant literature on public finance in developing/transition countries will be reviewed in order to derive a normative public finance framework for megacities in regard to tax base, tax rate, tax assessment, billing, collection and enforcement. Within this step a detailed descriptive portrait of each BRICS state will be painted in order to identify the different property tax designs within the sample-states. This constitutes the necessary basis we need in order to identify the specific variables causing the variance of property tax performance within these states/megacities.

Second, the analytical part of the project draws on the *Most Similar Case Design* (MSCD). In such as an analysis similar cases within the same context are compared to each other; the context has to be as similar as possible in order to reduce the external influence on the outcome of interest. Therefore, the sample here is drawn from megacities that have a very similar underlying overall context regarding population, public services, economic significance within their states, etc. The basic idea of MSCD is to identify and explain the differences in the dependent variable, which for us is the variance of the property tax designs and their performances. The independent variables (policy choices and administrative practices) should be allowed to vary and should not be identical if they are to provide insight into the driving reasons for the variance of the dependent variable. However, whereas the independent variable should exhibit a low level of variance, the dependent variable should preferably feature a high level of variance. This holds in regard to the megacities of the BRICS states in this comparative approach, which matches similar cases as much as possible with the assumption that independent variables capable of explaining the value of the dependent variable can be identified. In other words, within this study, the property tax designs and their performances are defined as the dependent variable and we seek to identify the (independent) variables that explain the variance in performance within the BRICS states' megacities.

Third, based on the first two steps, a series of in-depth expert interviews will be conducted. The interview partners should be academic experts and experts within the tax administration. The interviews are exploratory. According to the research questions, the interviews aim to obtain at a descriptive analysis of the independent variables (policy choices and administrative realities). The interviews are interpretive in order to get a comprehensive understanding of the models. The questions in the semi-structured interviews are open. As this research approach is exploratory, the interview questions will be developed further and adapted based on the previous interview results.

Finally, the results of all the previous steps will be scrutinized and used to develop lessons learned and recommendations for the further development of the property tax within the megacities of the BRICS states.

1.3 Terminology

In the case of property taxation the same word or term may have different meanings in different states or even within a single country. This depends, for instance, on economic or juridical terminology used. Further, different words or terms may be used within the states reviewed describing what is, in essence, exactly the same thing[5]. Therefore, defining a consistent terminology that is used throughout the research project is necessary:

- ***Property*:** The term refers to *immovable property* or *real property/real estate* usually including land and buildings and to *movable* or *personal property* that includes e.g. vehicles and machinery. Further, in the case of megacities holding a large share of slum settlements with no formally adjudicated property rights, the term property could be distinguished between secured and unsecured property, with *unsecured property* referring to tenure rights not formally adjudicated while *secured property* refers to clear tenure rights where the debt is against real property.
- ***Tax*:** A tax is generally seen as a recurrent or once-off monetary levy imposed by a government on all taxpayers without a specific service in return and provided for by enabling legislation to fund the provision of public goods and services. The main objective of a tax is usually (but not necessarily) for revenue raising purposes[6].
- ***Property(-related) Tax*:** The *Property Tax* itself is a tax imposed by government on the ownership or occupation of property. The property tax may be called *Rates* (from the Latin taxo, "rate") in many states (especially those with a British colonial heritage) and refers to a tax levied by the local government level. The *Real Property*

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5 The terminology used is based mainly on *Bird/Slack* 2003 and on an online seminar "Designing and Implementing Property Tax Systems in Africa" held by *Riël C. D. Franzsen*, Lincoln Institute of Land Policy.

6 This understanding of a tax is narrowing down of the definition of a tax: (i) only cash payments by the taxpayers are included into the definition of a tax. (ii) A tax is not seen as a levy for specific services in return, which would rather be fees or charges. (iii) Taxes are levied by sovereign government authorities only. (iv) The tax revenues must accrue to the public community – e.g. local governments. (v) Generating revenues is not necessarily the main objective for levying the tax; generating revenues may also be seen as secondary aim. See also *Homburg* (2007: 1).

Tax is distinct from the *Land Tax* (also called *Site-Value Tax* or *Tax on Unimproved Land*), which refers to the value or area of land only, excluding any buildings or improvements on the land.

Furthermore, there are, besides the real property tax, taxes on land and property that are related to the (i) **transfer**, (ii) **ownership** and (iii) **occupation** of "property". (i) The **transfer** of property in case of acquisition or elimination of a property may be a base for *Value Added Tax (VAT), Real Property Transfer Tax, Succession Tax, Donations Tax, Gift Tax, Stamp Duty, Estate Duty* and/or *Death Duty*. (ii) The **ownership** and the right of property use may involve profits or gains that cannot be traced back to the owner's action; these profits/gains may be subject to *Capital Gains Tax, Land-Value Increment Tax* and/or *Tax Increment Financing.* (iii) In the case of **occupation,** local governments have an incentive to recoup the costs for specific public-related expenditures or services rendered at local level. These specific services may be the basis for *Development Charges* and *Betterment Levies*.

Throughout this paper the property tax is considered as an annual tax on the ownership and/or occupation of immovable (un-)secured real property only.

2. Analytical framework: Theoretical Insight on the Property Tax

In regard to the local public finance literature, public service provision and property taxes are specifically allocated to the municipal level, as local residents reveal their preferences for public services and the corresponding taxes on the local level (2.1.1). Furthermore, it is important to answer the question: Who is paying the property tax? – which constitutes the question of the property tax incidence (2.1.2). Finally, based on the public finance literature criteria for a rational local property tax can be derived and these will be reviewed in section 2.1.3.

The property tax is in its nature much more complex than it may first appear. Disaggregating the design of the property tax into its basic elements (tax base, exemptions, tax rates etc.) is necessary. These 'stylized facts' of the property tax are discussed in section 2.2.1 to 2.2.5. Based upon a review of the property tax structure, first measures of performance will be drawn up (2.2.6) and the linkage to the property

tax revenue will be illustrated (2.2.7). The section closes with a discussion on reasons of property tax failure (2.2.8) and outlines essential components of the property tax that have to be reviewed within the BRICS and their megacities (2.3).

2.1 Theoretical Background

2.1.1 The Property Tax as Decentralized Tax

In order to shape the tax (and transfer) system, Musgrave (1959) categorized the division of governmental economic activities into three branches: the ***allocation*** of resources with related questions of efficiency, the ***distribution*** of income with an integrated tax and transfer system, and the ***stabilization*** of the overall economy[7]. Referring to the standard Musgrave model of the public sector, the responsibility for stabilization, distribution and allocation should be assigned to different levels of government: while stabilization and distribution is mainly a central government task, the efficient allocation of public goods should be assigned to local governments. Musgrave and Musgrave (1976: 19) conclude that the allocation function, the provision of public goods, "calls for a decentralized system". The ***decentralization theorem*** (Oates 1972: 55) states that "each public service should be provided by the jurisdiction having control over the minimum geographical area that would internalize benefits and costs of such provision"[8]. The fiscal instruments in such a setting focus on an overall equitable and efficient tax system (Oates 1999: 1228):

- central governments should collect non-benefit taxes and taxes that have an unequally distributed tax base;

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7 *Musgrave, R.* (1959): The Theory of Public Finance: A Study in Public Economy, MacGraw-Hill, New York.

8 The decentralization theorem presumes that there is no perfect information given and, therefore, the central government provides a uniform provision of public services across all jurisdictions.

- progressive tax rates should be levied at the central government level (the central government could be a tax collector for lower-level governments within a revenue sharing system)[9];
- lower-level governments should avoid mobile tax bases;
- benefit taxes and user fees not competing seriously with central tax bases can be decentralized[10].

However, the efficient allocation of public goods in practice was challenging public finance economists due to the ***free-rider problem***. Musgrave and Samuelson stated that there is no "market-type" solution to determine the level of expenditures on public goods. People would never disclose their true preferences for public goods provision because they cannot be excluded from public goods consumption (free-riding problem)[11]. There is no conditional link between expenditures and taxes. Tiebout (1956) found a solution for municipalities. Tiebout was responding to Musgrave's and Samuelson's analysis with his article "A Pure Theory of Public Expenditures". On the municipal level public goods provision is geographically limited to municipalities with municipal managers offering a "menu" of alternative bundles of local public services and local taxes accordingly. Each individual household selects the "prix fixe menu" that best fits their preferences (Fischel 2001: 34). This decision-making process – often called ***"voting with feet"*** – provides a market-like solution on the local level by preventing the free-riding problem. Residents choose not only the bundle of public goods and services but also the corresponding tax rate[12]. In such a setting, tax

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9 *Dillinger* (1992: 3) states that intergovernmental transfers (mainly revenue sharing) and local indirect taxes may play a role in stabilization and distributional policies but that they cannot be seen as prices (as is the case of benefit taxes).

10 The revenue assignment is, however, not that easy. The vertical tax assignment structure is known in the literature as the "tax-assignment problem" (*MacLure* 1983).

11 *Musgrave* first clearly articulated the free-riding problem in his 1939 article "The Voluntary Exchange Theory of Public Economy". In his book "The Theory of Public Finances" Musgrave emphasized that public and private goods provision differs in the free-riding problem.

12 *Tiebout* (1956: 422): "Just as the consumer may be visualized as walking to a private market place to buy his goods, the prices of which are set, we place him in the position of walking to a community where the prices (taxes) of community services are set. Both trips take the consumer to market".

charged turn into market-like prices as homeowners reveal their preferences by choosing to reside in the jurisdiction that mirrors their individual preferences best. Households are therefore effectively purchasing their preferred level of public services. As a result, there is a match between those who receive the benefits of the public goods provision and those who pay for it within a unique border of a governmental institution. According to Olson (1969), this match is called "***fiscal equivalence***"[13].

Tiebout neither published an empirical test of his hypothesis nor mentioned the property tax as a financing instrument for public goods provision. It was Wallace Oates (1969) who added property taxes to the Tiebout model. Moreover, he empirically showed that inter-municipal differences in local government spending and taxes do determine housing prices (***capitalization effect***)[14]. The Tiebout hypothesis received little attention until Oates' article. Therefore, it would be more accurate to call it the Tiebout-Oates hypothesis (Fischel 2001: 38). Bruce Hamilton (1975) added to the Tiebout model by including zoning, responding to the criticism of Buchanan and Goetz (1972) – among others – that the "poor would chase the rich" within the Tiebout model. By zoning, exclusion of households that are 'fiscally undesirable' is possible and guarantees that new development will pay its own way. Zoning and the possibility of exclusion correspond with the theory of clubs ("An Economic Theory of Clubs") by Buchannan (1965), though he did not mention Tiebout. Fischel (1985, 1992)[15] proved that Hamilton's model of zoning is realistic and added politics (2001) to the Tiebout model.

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13 Fiscal equivalence does not necessarily imply that taxes paid reflect someone's individual consumption of public goods. Fiscal equivalence fits best when thinking about (relatively) homogenous Tiebout-like groups, where public goods could be provided at the lowest point on the average cost curve: beneficiary group = decision-making group = tax payer group.

14 The capitalization effect could be defined as the manifestation of local taxes and expenditures into property values. *Oates* (1969: 968) econometric evidence of the capitalization effect was based on a 1960-dataset of northern New Jersey municipalities. *Oates* concluded that "if a community increases its tax rates and employs the receipts to improve its school system, the coefficients indicate that the increased benefits from the expenditure side of the budget will roughly offset (or perhaps even more than offset) the depressive effect of the higher tax rates on local property values."

15 According to *Fischel* (2001: 56) "capitalization is everywhere". *Fischel* (1992: 171) argues that there is a wide range of zoning tools (e.g. minimum

Fischel (2001) argues that Tiebout wanted to avoid politics, as an efficient allocation of local public goods could be provide without the influence of politics. Fischel shifts away from the emphasis on "voting with feet"; emphasizing the more realistic control of the political decision-making process. As homeowners do not have a realistic "exit" option due to immobility of homeownership (reduced mobilization due to capitalization effect, transaction costs), homeowners have to rely on "vote" rather than "exit". According to Fischel (2001: 40), "rational political actors are the key". Home-voters need to have the ability to adjust local institutions to their demands (by electing public officials and their policy agenda). Home-voters are committed to influencing politics because local decisions are capitalized into property values.

The Tiebout-Oates-Hamilton-Fischel world fits perfectly into the decentralization concept, as people get what they want and thus it enhances the overall public welfare (Bahl 2013: 86)[16]. This follows the ***subsidiarity principle***, which suggests that responsibility for the efficient provision of public services should be at the lowest governmental level possible if it is to best meet the needs and preferences of the citizens associated to those services; i.e. the beneficiaries. This holds true especially for states with different languages, ethnic background, climate and terrain, or sub-national governmental units – such as megacities – that are too big to control from the centre.

The World Bank distinguishes between different types of decentralization, such as political, administrative, fiscal and market decentralization[17]. In our case here, administrative and fiscal decentralization play an important role. Administrative decentralization can be disaggregated according to the control over functions[18]:

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lot sizes, height restrictions, requirements for off-street parking etc.) that could be used by local governments to control their capital stock (zoning is imposing strict limits on housing consumption). They are used specially to preclude entry by low-income households that would have high demands on public services but would contribute little in the sense of property tax base: "the poor chase the rich".

16 In the context of private goods, the ultimate form of decentralization would be delivered by the market, with a consumer buying a tailored good from a choice of suppliers. As this in not the case with public goods, decentralization may approximate the market allocation.

17 See: http://www1.worldbank.org/publicsector/decentralization/what.htm.

18 See: http://www1.worldbank.org/publicsector/decentralization/admin.htm

- ***Deconcentration***: This can be classified as the most centralized form of decentralization, as decision making is shifted to regional and local offices of central line ministries – which merely implies a 'geographic' shift of functions within a central bureaucracy. It is mainly found in unitary states.
- ***Delegation***: Functions are taken over by semi-autonomous organizations or quasi-public cooperatives or institutions (e.g. state-owned enterprises) not fully controlled by the central government level but accountable to it.
- ***Devolution***: Devolution implies moving functions and the authority for decision-making from the central government to a subnational government - e.g. state, provincial or local government - level.

Fiscal decentralization (or fiscal federalism) implies the devolution of taxing and spending decisions to lower-level governments by the central government and in principle decision-making powers reside with the residents via their elected public officials (Hong/Ingram: 2008: 3)[19]. Fiscal decentralization is not necessarily a component part only of federalism; it may be relevant for unitary governments as well.

Among scholars there is no common understanding of whether decentralization of power to local governments increases or decreases the effective provision of public goods and raising of taxes. Critics are concerned that small local units of government may lack local administrative capacities and are subject to potential corruption ("decentralized corruption") and the risk of "elite capture" (McLure 1995). (De-)centralization should not be seen as an 'either/or' condition, rather a balance of both is to be found in many states (e.g. decentralized responsibilities with centralized supervision).

2.1.2 Incidence of the Property Tax

The fundamental question regarding the incidence of the property tax is "Who pays the property tax?" and, to be more precise, "How is the tax burden related to personal income?". If a higher tax burden is allocated

19 There is a grey area with subnational governments having budgetary discretion and political leadership responding to local preferences, but they are not elected by local population as is the case in China.

to higher income individuals then the tax rate is progressive. In the reverse case, the tax is regressive. A neutral or proportional tax would allocate the same tax burden to all income groups.

The ***traditional view*** assumes that a property tax is a tax on structures with perfect elastic supply and a tax on land with a perfect inelastic supply (Aron 1975). In this case the tax is ***regressive*** as (especially business-)owners have the option to shift the tax burden onto consumers, workers, and renters with on average lower income than property owners. If a ***tax on land only*** is applied, within the traditional view there is no economic inefficiency. The tax cannot be shifted. Therefore, it is perfectly 'neutral' since it does not distort an otherwise desirable allocation of resources[20]. Therefore, heavy taxes on land values might be advocated on the grounds of equity and neutrality (Henry George, 1882). This holds especially since external effects – such as natural population increase, rural-urban migration, speculation, and reclassification of rural to urban land – are capitalized into land values and therefore play a vital role in the case of property taxation. The landowner is a passive beneficiary. These gains derived from increases in land values – especially as seen in metropolitan areas – are sometimes considered as unjust enrichment, as initially argued by Henry George (1882). Landowners receive an 'unearned' economic rent as the increased value cannot be traced back to the initiative/effort of the landowner. This impact could be called the '***getting rich(er) while sleeping effect***'[21]. Municipalities should aim at skimming the increased land value resulting from external effects[22].

In regard to the Tiebout-Oates-Hamilton-Fischel world (see section 2.1.1), there is a homogenous group of residents that have the same preferences, tax liabilities and benefits received from public goods and

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20 The property tax on unimproved land (land value only) cannot be shifted, as the tax will not cause any change in the behavior of the landowner. This holds if the market value is the assessment base. The particular use is then independent of the tax. "Whatever use would be most profitable in the absence of such a tax will remain so when the tax is levied" (*Heilbrun* 1983: 58).

21 *Lowell C. Harris* is speaking about "getting richer while sleeping" in the context of urban landownership (*Harris/Oates*, 2001: 15).

22 However, in the case that land is transferred frequently, recapturing unearned rents from the present owner may be inequitable (*Heilbrun* 1983: 59). The tax should be levied on future gains in land value (beyond those resulting from price inflation).

services. Tax liabilities and public services are balanced, the so-called ***benefit view***[23]*.* The *benefit view* therefore requires a lump-sum tax. Within a perfect Tiebout world – with enough municipalities' satisfying all combinations of demand for housing and public services – a proportional tax would result[24]. The lump-sum tax, however, is independent from a person's income. Therefore, lower income households spend a larger fraction of their income on property taxes. There is a tendency towards a declining proportion being paid in property taxes as incomes rise: In this case, the property tax is a ***regressive tax***.

This benefit view is, however, not shared by all economists. Peter Mieszkowski (1972) brought up a competing approach – further developed by George Zodrow (1986) – called the ***new view***. Mieszkowski and Zodrow (2001) see the property tax as a levy on capital (including buildings) resulting in both distortions in the housing market and in local fiscal decisions. If the tax base includes structures, the tax discourages buildings. As a consequence the capital-land-ratio (the amount of capital used per unit of land) will be less than the economically efficient level. According to the ***new view*** the average rate of the property tax across all jurisdictions is a tax on all capital. If municipalities are taxing buildings (capital) then the average rate of the property tax becomes a national tax on capital: Capital in high-tax jurisdictions will migrate (if there is no corresponding local public service level provided) to low-tax jurisdictions or other uses in non-housing sectors, depressing the rate of return on all forms of capital. Therefore, within the profit tax component, the property tax is shifted to capital owners, making the property tax a ***progressive tax*** because higher-income households possess a higher share of capital and/or land. With the only immobile factor being land and assuming full mobility of households and other factors, the property tax differentials[25] will be capitalized into land values. In the

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23 The benefit tax could be seen as a non-distortionary user charge that has no effects on the allocation of capital (including housing) or the level of local public expenditures and does not (re-)distribute income among different jurisdictions (*Zodrow* 2001: 79).

24 It is as *Dillinger* (1992, 3) states; "The match between incidence of the property tax and the benefits of the service it finances is clearly far from perfect: the statutory burden of the property tax is distributed according to value of property; the benefits of the service it finances are not."

25 The property tax differential is defined as the difference between the present value of the benefits of local public services received and property taxes paid.

case of land there is a "benefit view within the new view" resulting in a regressive tax effect (Nechyba 2001: 115). Thus, it is progressive from a national perspective and regressive from a local perspective.

Further, there is a view of property tax as a ***wealth tax*** on fixed assets used to help financing local government provision of public services. Property taxes are often defined as an 'ad valorem' tax (according to the market value, in opposite to unit taxes) against an object (opposed to a personal tax). In the context of property taxes, Musgrave and Musgrave (1976: 343) point out that there are some arguments for wealth taxation – especially in respect to the ***ability-to-pay principle***[26]. In this regard, Musgrave and Musgrave see wealth as representing taxpaying ability. A primary finance asset for wealth accumulation is real estate – especially in developing countries given their weak capital markets and high inflation. Land and real estate are therefore a major way to concentrate wealth. These investments are highly visible, immobile and concentrated. If property wealth is to be taxed on ability-to-pay grounds, it should be a personal tax on the net worth of the property (like the income tax) with a progressive tax rate.

The incidence theory of the property tax is based on studies of developed countries; whether the theory holds for developing and transitional countries as well has not been proven. Underlying aspects of the incidence theory, such as capital markets, access to information, and defined property rights do not or only partially exist in developing and transition countries. Sennoga et al. (2008: 66) reviewed the incidence theory and the applicability to developing and transitional countries and summarized some contradictions:

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26 According to *Musgrave* and *Musgrave* (1976: 344), to make the benefit principle work in general property taxation it has to be applied so that all real property benefits from local public services equal the property tax yields (which would be the Tiebout equilibrium). According to Musgrave and Musgrave, neither proposition holds: "A general tax on real property, therefore, is a poor instrument for charging for services rendered." They conclude, that income and value added tax might be a better proxy for benefits for individuals and firms. But in the case of different service levels among municipalities the benefit principle fits. Given a community A with higher public service levels than community B, the difference will be capitalized in property values in A. Therefore, the argument for benefit taxation holds only for the differential. This establishes a "tenuous" link between ownership and service level.

Assumption	View	Reality
Capital is mobile among jurisdictions	Traditional and new view	This may be true in theory, but a lack of available capital or an unwillingness to invest in many areas of the country may effectively negate the value of this assumption. In some states regulations prevent the legal movement of capital outside the country.
Households are mobile and able to vote with their feet	Benefits view	In many developing countries individuals are mobile but not necessarily able to vote in local elections. In some transitional countries, such as Russia, individuals are not legally allowed to migrate freely, which may prevent voting if they migrate illegally.
Jurisdictions are allowed to impose different tax rates	New view and benefit view	Not true in all states, but might be true in fact if tax administration varies.
Non-monopoly markets for land and capital	All views	In some transitional countries (e.g. China) state ownership of land may have confounding effects on incidence.

Source: *Sennoga* et al. 2008, 66.

To summarize, even after more than 40 years of debate there is no agreement on 'the one' view. The theories generally have strong unrealistic assumptions, one which are even more unrealistic for transition countries. But as Netzer (2001: 328) states, at least a part of local decisions are capitalized into land values; therefore this part of the tax is in accordance with the *benefit principle*, as it can be seen as a voluntarily payment for access to the services and facilities of a municipal-club. This part of the tax has a user-charge character (being neither regressive nor progressive). Although there is no evidence supporting the different views, there is a 'common' understanding that we must look at the property tax with regard to the property tax incidence:

- A tax on residential real property is regressive because housing constitutes a relatively larger share of consumption for low-income households.
- A tax on capital is progressive because income from capital constitutes a relatively higher share of income for high income households.

- A tax on land value only paid out of the unearned economic rent is equitable because external factors (public service provision, re-classification of land, urbanization) determine the value.
- A tax on benefits received (benefit tax) does not raise the question of incidence because it could be seen as a tax in lieu of charges.

2.1.3 Local Finance Criteria for a Rational Decentralized Tax

Features of a rational local tax system are based on the decentralization theorem. In order to meet the objectives of fiscal decentralization and to establish an equal and efficient tax system, there are well-elaborated and well-defined criteria that are generally applied to all kinds of taxes, while there are also further criteria specifically applied for taxes on local level. While every tax needs to follow rational criteria, such as *economic efficiency* and *ease and cost of administration*, local taxes must meet several additional criteria, such as *fiscal autonomy* and *balance of interest,* which specifically apply to the local level. Taking these criteria into account allows us to examine local taxes and make a general determination as to whether the examined local tax is a good local tax or not. The rational criteria for a decentralized tax can be subdivided into general and municipal-specific criteria[27]:

General criteria

- ***Economic efficiency and equitability****:* Efficiency required both that the tax be non-distortionary for other economic allocations ('neutral') and that the taxes paid and benefits received match (benefit principle). Equitability has two components: horizontal equity (individuals with the same ability-to-pay[28] should pay the same amount) and vertical equity (individuals with higher ability-to-pay should pay more). As redistribution is a central government task there should be more concern with horizontal than vertical equity on the local level.

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27 *Zimmermann* (2009: 139-149); *Smolke* (2008: 40); *Oates* (2001: 23-24). *Bird/Slack* (2004: 40-41).

28 This fundamental principle of taxation states that each individual needs to take part in financing public services according to their own economic power. However, the tax levy should be justified by the benefit principle and a norm for ability-to-pay has to be defined.

- ***Ease and cost of administration:*** Ease and cost of administration implies that the fiscal productivity, i.e. tax revenue less administrative and taxpaying costs, is as high as possible. Therefore, the administrative part of local taxes is sometimes in the hands of the central tax authority. The local tax has to be easy to assess and administer (easy to administer the tax base and compile the required information). A simple assessment method should be in place, building on objective features that can be determined in a mass appraisal procedure. However, if the assessment method is too simplistic then inequities in the tax assessment may occur among different properties within a municipality. It is thus a question of balancing between simplicity and equity.
- ***Acceptance:*** The taxpayer should perceive the tax to be reasonably fair. Furthermore, the taxpayer should be able to comprehend the assessment and be able to track his or her annual tax liability. Therefore, the calculation method should be designed to be simple and transparent.

Municipal-specific criteria

- ***Balance of interest*** *between user groups of local public services:* Every user group needs to take part in financing the public goods of a municipality. Citizens, as well as businesses and land/home owners have to be taxed by the municipality, as they receive different services based on different needs.
- ***Visibility:*** A property tax is a highly visible tax in different senses and this should be seen a virtue, not a shortcoming:

  Property can be verified physically, it is hard to 'hide' and therefore difficult to avoid legally;

  Homeowners usually receive a tax bill – they are aware of the costs of local public programs and they can weigh the benefits. Further, public services rendered at the local level are highly visible as well, such as local parks, garbage collection etc.

  Visibility enhances accountability from an economic (hard budget constraints) and from a political (democratic) perspective.

- ***Proportional growth sensitivity:*** The tax should be sufficiently durable and flexible so as to meet local needs over time. Therefore, municipal tax revenues should grow proportionally to the local economy and expenditure needs (assuming the revenue elasticity equals 1).
- ***Fiscal autonomy*** *(flexibility):* Local governments should have a degree of tax autonomy to cover their expenditures. This establishes the required connection between taxes and benefits for the local voters and the elected municipal managers. Depending on the range of public goods provision, a municipality should be able to adjust the tax rates. This kind of taxation flexibility can only be achieved by owning partial tax competence (autonomy to set rates) and results in variation in the tax rates between municipalities.
- ***Immovable tax base:*** The tax base should be physically immovable (relatively inelastic) and, thereby, less distorting. As the tax base does not automatically increase over time, but revenue should increase with the economic cycle, the tax rate has to increase: This leads to visibility and accountability. Further, an inelastic tax base is important for local governments since other factors, such as labor and capital, are highly mobile on the local level. Shifting location in response to a tax is – at least in the short term in regard to buildings – not applicable. Furthermore, a relatively fixed asset yields predictable/stable local revenue.
- ***Avoid inefficient migration:*** Migration is common in dynamic economies and it is efficient as it allows scarce resources to be used in the most efficient way. This holds especially for agglomerations/metropolitan areas. They have unique advantages for households and enterprises and play a vital role for the national economy's growth. In turn, agglomerations cause rising public costs (e.g. pollution, congestion and crime). Local taxes may be used to adjust the marginal costs to average costs of migration. Further, local attempts at income re-distribution will likely result in inefficient migration.

2.2 Stylized Facts of the Property Tax

Integral elements of property taxation are: tax base, tax valuation/assessment, tax rate(s), tax relief (e.g. exemptions), billing, collection and enforcement. The basic nature of these elements must be reviewed to give a general understanding of the political and administrative complexity of property taxes. Each of the property tax elements has an influence on the property tax design and its performance (section 2.2.1-2.2.5). In order to identify the variance in the property tax performance, an analytical ratio study is necessary. Therefore, section 2.2.6 will draw up tax performance indicators that constitute the basis for testing the elements and their impact on the tax performance. Based on this, the revenue mobilization model defined by Kelly (2000&2003) is used to show the direct impact of the single elements on the property tax revenue (section 2.2.7).

2.2.1 Property Tax Base[29]

The property tax can be levied upon all types of properties including residential, commercial, industrial and agricultural properties. These categories of property are further specified in regard to nature and extent of the tax base. Regarding the nature of the tax base it has to be decided whether to make use of land only, land and buildings, or buildings only. The decision upon the extent of the tax coverage relates to whether to include urban and/or rural land and whether to take a broad or narrow tax base (exclusion versus exemption, section 2.2.2).

2.2.2 Exemptions and Exclusions[30]

Exemptions and/or exclusions are mainly based on ownership (e.g. governments), use (e.g. bona-fide farming), ownership and use (e.g. religious groups) or value (e.g. properties below a threshold value). From

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29 This section is based on an online seminar lecture "Designing and Implementing Property Tax Systems in Africa" held by *Riël C. D. Franzsen*, Lincoln Institute of Land Policy and on *Bird/Slack* (2004: 19-25).

30 Exemption and exclusions constitute only one part of tax relief. Tax relief, however, can be granted on a number of stages: by excluding properties from the tax base, giving a lower tax rate to certain tax payers, by not covering all

an economic perspective it is important to distinguish between ***exemptions***, where the property belongs to the tax base and is exempt from the property tax after assessment, and ***exclusion***, where (parts of) the property is not considered in the tax base. In case of exemptions, the revenue cost or opportunity cost[31] of the property taxes has to be paid by the remaining taxpayers (if the level of public services remains constant). Only if the full cost of land use is taken into account, is the decision about resource allocation efficient. In the case of exclusions it would therefore be more adequate if instead of exclusions the government made payments to balance the 'expenditure' adequately. Generally, exemptions and exclusions raise complexity and cause a loss of transparency and equity.

Further, the level of government deciding upon the granting of exemptions is important in regard to accountability: If a higher level of government is allowed to grant exemptions, they might 'buy' popularity but there would be fewer distortions among the different municipalities. If the local level has discretionary power on granting exemptions, political pressure by similar and equally deserving taxpayer groups might increase or local elites might influence the political decision-making process. Furthermore, if the local administrative level has discretion there might be issues of decentralized corruption.

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properties in the tax base, by not valuing/billing/collecting all properties or by the absence of enforcement.

31 The revenue cost could be estimated if the average tax liability per property and the number of exempt properties is known. However, it has to be kept in mind that most exempt properties are well-located governmental properties; therefore, the revenue cost is a gross underestimation, see *Mathur* et al (2009: 34):

RCEX = (NEX) [$\frac{\mathrm{TD}}{AP}$];

RCEX = Estimated revenue cost of exemption

NEX = Number of exempt property

TD = Property tax demand for taxable properties

AP = Number of taxable properties assessed.

2.2.3 Property Tax Assessment

The tax base for assessment – unit, sizes or value – allocates ('weights') the tax burden to taxpayers. If taxing a ***unit*** as the assessment base, then each property, regardless size or location, would pay an equal amount of the tax burden. In the case of ***size*** as the assessment base, each property regardless of location would pay an equal per square meter rate. Lastly, the ***value*** as the assessment base implies that each property would pay the tax based on their relative property value[32].

At present, the property tax is generally considered as an ad valorem tax, of which at least some value of the property is assessed (land and/or building). However, this holds only in the case of well-functioning property markets due to the close relationship between the accuracy of the property assessment and a well-functioning property market[33]. Depending on the level of market efficiency (largely depending on the availability of information for buyers and sellers), there are two distinct assessment methodologies: ***area-based*** and ***value-based assessment***.

The latter – value-based assessment – is further sub-divided into the ***rental*** and ***capital value approaches***. The capital value is based on the highest and best use and is seen as the most equitable assessment base (although it may not reflect the current use and therefore can penalize taxpayers). In contrast, the rental value is commonly based on the current use of the property and therefore does not necessarily reflect the highest and best use[34]. The right choice herewith depends on the pre-

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32 Within the assessment it is not required to determine an *absolute* value in market terms, but the *relative* value of properties at a common point in time (*Dillinger* 1992: 16).

33 A well-functioning property market implies that properties can be sold and bought on an open and competitive market. In this case, the property value reflects the highest and best use of the property and market price would equal the capital/market value.

34 The distribution of the tax burden differs between rental value and capital value. The capital value will place a higher proportion of the tax burden on underdeveloped property such as, for instance, vacant land.

dominant market type: a highly developed capital market with predominantly owner-occupation versus a highly developed rental market with predominantly rental-occupation[35].

In the case of less efficient, less developed property markets (e.g. command-based economies) an area-based property assessment might be of 'higher value'.

The decision about the allocation of the tax burden to the taxpayer in regard to the assessment base has direct implications for equity and efficiency[36]:

– **Area based/unit value assessment**

  Area based assessment is directly related to physical land and/or building characteristics (square meters of land area and/or of buildings). These characteristics may be regarded as a proxy for the intensity of public infrastructure usage and the resulting public costs. In regard to unit value assessment the assessment base reflects location, quality and/or age of buildings and other factors by introducing empirically determined adjustment factors. With this approach the market value[37] may be approximated.

– **Rental value assessment**

  The assessment base in this approach is the rental value or net rent. The logic of using the rental value is that taxes are paid from income (flow) instead of wealth (stock). To the extent that property is used for its best and highest use, the rental value approximates the market value. However, this is often not the case, as usually the current use is assessed. A property that is under-utilized in its

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35 Some counties make use of hybrid approaches, capital value for residential properties (owner occupied) and rental value for commercial property (rental occupation).

36 The overview is based mainly on *Bird/Slack* (2003: 47-52); *Bird/Slack* (2004: 26-30); *Bell/Yuan/Connolly* (2009: 1) and on proposals for a property tax reform in Germany.

37 Market value is determined by demand and supply factors and specific location factors that include the quantity and/or quality of public services. The Appraisal of Real Estate (1978) defines market value as "The higher price in terms of money that a property would bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably and assuming the price is not affected by undue stimulus" (see *McCluskey*, 1999).

current use results in lower assessment rental-values than market values.

– **Capital value assessment**

The capital value is further sub-divided into unimproved value (land value only) and improved value (land and structures). The market value can be ascertained by examining real estate transactions. If the number of transactions is not representative then there are three different methodologies that can be used to estimate market values: (1) *Comparable sales approach*: looks at valid transactions of similar property assessments, (2) *Depreciated cost approach*: the land value is estimated separately from the replacement costs of the building; both components reflect the market value, (3) *Income approach*: the potential gross rental income is estimated and operating expenditures deducted; the resulting net rent is converted to a capital value by making use of a capitalization rate.

Table 1: Applying rational local tax criteria to assessment base

	area-based assessment	value-based assessment*
economic efficiency	- property size badly reflects benefits received	- value is a better indicator for benefits received
vertical/horizontal equity	- disconnection between property values and tax levies results in inequities of the tax burden across properties (even with adjustment coefficients such as age, location, use etc.) - regressive tax: high-/and low-income properties are taxed the same - rising property values (e.g. reclassification of rural to urban land) lead to inequities	- good proxy for ability-to-pay - more equitable because it more accurately differentiates properties according to age, use, quality, location etc. - rising property values (e.g. reclassification of rural to urban land) are captured
ease and cost of administration	- less data required, easily obtained; especially in less-developed property markets/property records - cheaper to administer: municipalities could be responsible for tax assessment and collection	- synergy effect: assessment base could be used for other taxes (e.g. inheritance tax) - usually requires well-trained assessment staff, computer assisted mass appraisal systems

	- easier to maintain	- costly to implement and to maintain
acceptance	- transparent (easy to self-assess or to verify official tax bill) - could be regressive	- transparency may be lacking, self-assessment is difficult
proportional growth sensitivity	- less volatile/more predictable tax revenues	- revenue increases to the extent that the property values are frequently re-assessed

Source: Author; * Assumes perfect markets and optimal utilization, so differences between rental and market value disappear. However, underutilization is more realistic, resulting in adverse incentives, such as holding land for speculation purposes or high rates of vacation homes.

2.2.4 Tax Rates[38]

The tax rate converts the assessed value into a tax bill. As tax revenue is mainly based on the tax base and the tax rate, the tax rate depends primarily on the revenue requirements of the specific municipality. There are two different approaches to setting a specific tax rate and thereby determining the revenue size: according to the expenditure needs of the respective municipality (How much do we need?) or according to tax revenue maximization (How much could we get?). In the first case the property tax rates are most likely determined on the local level. The municipal council would determine the expenditure needs, subtracting available non-property tax revenues (e.g. charges, fees, intergovernmental transfers etc.) and then setting the tax rate accordingly[39]. The broader/narrower the tax base, the lower/higher the nominal tax rate, so there is a close relationship between the tax base and tax rate. In the latter case, the tax rate may be set by a higher level government, where the link between taxes levied and public services rendered

38 This section is based on an online seminar lecture "Designing and Implementing Property Tax Systems in Africa" held by *Riël C. D. Franzsen*, Lincoln Institute of Land Policy and on *Bird/Slack* (2004: 33-38).

39 Tax rate = (expenditures needs – non-property revenues) / (total assessed value).

is lost, as is accountability for tax decisions broadly. If a higher government level does not set the tax rate it may still, nonetheless, set a tax rate range to avoid distortions[40].

Table 2 Relationship between Tax Base and Tax Rate

Example[41]: A property consisting of land (200,000 EUR) and building (800,000 EUR), alternatively the property could be rented for 100,000 EUR/year. The municipal tax yield is a constant 10,000 EUR.	
Tax Base = Land and Building Value	1,000,000 EUR
Tax rate = 1%	*10,000 EUR*
Tax Base = Land Value	200,000 EUR
Tax rate = 5%	*10,000 EUR*
Tax Base = Rental Value	100,000 EUR
Tax rate = 10 %	*10,000 EUR*

The design of tax rates can be further specified by deciding upon uniform versus differential tax rates and by deciding upon the tax rate structure (progressive, regressive, proportional):

– **Uniform rate versus differential rates**

  A uniform rate applies equally to all property categories while differential rates are designed to set different rates on different property classes (residential, commercial, etc.), persons or objects (land and building, land only, etc.). Motivation for differential tax rates may be based on efficiency, equitability or political grounds. Differential tax rates may influence the efficient use of land (non-revenue goal) by setting higher rates on land than on buildings or higher rates on vacant land. However, the greater the extent and number of differential tax rates, the higher the administrative costs and the greater the risk of corruption.

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40 Whereas a minimum tax rate may avoid distorting tax competition (race-to-the-button), a maximum tax rate avoids distorting tax-exporting (which happens especially when setting higher rates on commercial properties).

41 Example is based on lecture of Riël C. D. Franzsen: "Designing and Implementing Property Tax Systems in Africa", Lincoln Institute of Land Policy, MA: Cambridge.

– **Progressive, regressive or proportional tax rate structure**[42]

  The different tax rate structures imply different impacts on taxpayers. A progressive rate is favored from an economic and equity perspective, as it reflects the ability-to-pay of the taxpayer. Further, it might promote efficient land use because the tax rate increases as the taxable amount (wealth) increases. A regressive tax rate could be a political decision made with land-rich owners who are well connected to politics, as this tax rate decreases with increasing taxable amount. Both, progressive and regressive tax structures imply higher complexity for the administration (tax billing and collection). In the case of a progressive tax rate there might be also issues of corruption.

Finally, the difference between the nominal and effective tax rate has to be considered. The effective tax rate adjusts the nominal tax rate by considering exemptions, value reductions, assessment ratio and rebates and is therefore lower than the nominal rate:

Table 3: Relationship between Nominal and Effective Tax Rate

Example[43]: A property values 100,000 EUR	
Value reductions	15,000 EUR
Assessment ratio	0.8*
Nominal tax rate	1.5%
Rebate	10%
Tax amount	918 EUR
Effective tax rate	0.92% (=918/100,000)

* Only 80% of the assessed value is taken into account.

42 Proportional rate: As the value of property rises the tax liability rises by the same percentage;
Progressive rate: As value/size increases, the tax takes an increasing percentage of value/m2;
Regressive rate: As value/size increases, taxes take a smaller percentage of value/m2.

43 Example is based on lecture of *Riël C. D. Franzsen*: "Designing and Implementing Property Tax Systems in Africa", Lincoln Institute of Land Policy, MA: Cambridge.

All in all, the comparison of different municipal tax rates must be done very carefully, as there might be differences in municipal revenue requirements, expenditure needs, the tax base used, age/quality of (re-)assessments and effective tax versus nominal rates.

2.2.5 Identification, Assessment, Billing, Collection, Enforcement

Property tax administration is one of the most important aspects of property taxation; it all comes to nothing if taxes are not billed, collected and enforced. According to Dillinger (1992) and Bahl/Martinez-Vazques/Youngman (2008) the fundamental weakness of the property tax is its administration, which is resource intensiveness[44].

The tax administration is responsible for recurrent key tasks of administration, such as property discovery (identification of taxable properties), valuation (calculating the relative value), assessment (calculating the amount of tax), billing (informing taxpayers of liability), collection (collecting tax payment) and enforcement (Dillinger 1992: 11-28):

- **Discovery and identification:**

  There are two basic approaches : self-declaration, where taxpayers provide the information to the taxing authority, or government inventory, where the taxing authority collects information in the field.

- **Valuation/assessment:**

  Again there are two distinct approaches: area-based and value-based assessment, of which the latter is further subdivided to the rental and capital value approaches.

- **Billing, collection and enforcement:**

  In the case of billing the definition of ownership may be necessary, as the owner (or occupier) is liable for the property tax[45]. Collection

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44 *Dillinger* (1992: 4) states that the poor performance of the property tax is partly technical. If the tax administration in developing countries would increase the coverage and collection efficiency the revenue would increase substantially.

45 Defining ownership is a difficult matter, as much of the urban periphery land in Africa has never been formally adjudicated. The same holds for Latin America, where some formally adjudicated land has been illegally occupied (*Dillinger* 1992: 25).

penalties are generally essential, as they set a financial incentive that: i) make taxpayers pay in the first place and ii) make them pay on time. An ad rem remedy against longstanding delinquents could be selling the property, selling personal possessions of the taxpayer or pursuing the taxpayers through the court system[46]. Another measure of enforcement would be a quid pro quo approach, e.g. only when taxes are paid is a legal change in ownership allowed.

To ensure assessment, billing, collection and enforcement of the property tax there is a need for a cadastre system. This can be differentiated into a ***legal cadastre*** and ***financial cadastre***. While a legal cadastre is unnecessary for property taxation purpose, a financial cadastre is a conditio sine qua non. A *legal cadastre* could be defined as a cadastre holding all necessary property data that would suffice in a court of law. A *fiscal cadastre*, however, is a more complex and data-orientated system. It has to provide specific data for property and taxpayer identification[47] to ensure proper property tax assessment and treatment of administrative aspects such as billing and collection. Cross-referencing among administrative bodies is important in order to ensure up-to-date data (fiscal cadastre, deeds registry, sales records, official building permits and bills on basic public services rendered such as water/electricity provision and garbage collection). Further, the maintenance of the fiscal cadastre data is twofold: first, physical changes to the characteristics of the property (subdivision of property parcels, re-classification from rural to urban land, improvements etc.) have to be incorporated as they occur; second, changes of ownership have to be captured. The number of data-details required is determined by the decided upon tax base, assessment system and administrative aspects such as collection, billing and enforcement.

All in all, properties that are assessed and billed for a tax must see that tax collected and enforced. Failure on the collection/enforcement

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46 The penalties imposed have high political and administrative costs. In the case of the administration they may not pay off directly but perhaps indirectly by increasing the overall tax collection performance.

47 Properties and taxpayers are usually identified by making use of a geographic reference system such as parcel maps or (as in United Kingdom) street maps with a street address system. However, the coverage in developing countries is very limited.

level results in inequities between the honest and willing taxpayers and non-tax payers, so called free-riders.

2.2.6 Property Tax Performance Ratios

Ratio studies are conducted in order to evaluate performance. In this context, the policy choices about the tax base and tax rate influences the complexity of the property tax administration by setting the overall framework for property taxation. However, the tax administration is itself the key factor for the property tax performance, as it is responsible for the efficiency and accuracy of coverage, assessment and collection. The property tax is very resource intensive from an administrative perspective. Therefore, the administration is the focus of the ratio study. The main determinants of administrative performance are (Bahl 2002; Bird/Slack 2004: 7; Mathur et al, 2009: 4):

- Coverage and enumeration of properties within the fiscal cadastre
- Collection rate
- Assessment/valuation rate
- Extent of exemptions
- Level of the tax rate

An analysis of these determinants is important in order to identify the weaknesses of a given property tax system in order to, in turn, mobilize tax revenues. The ratios illustrate the administrative performance and the potential for further improvement. The 'potential' represents a gap between the present property tax revenues collected and the taxes that could be collected under ideal conditions. A comparative view of key administrative features such as coverage, assessment and collection is especially useful for discovering similarities and differences in individual tax performances and for drawing lessons for further improvement. Examples for a property tax ratio study are:

Coverage

- Assessed properties / Total properties x 100 (coverage ratio)
- Tax paying properties / Assessed properties x 100 (real coverage)
- Tax paying properties / Total properties x 100 (effective coverage)

Assessment

- Assessed property values / Market property value x 100 (valuation ratio)

Collection

- Tax collection / Tax demanded or assessed x 100 (collection ratio)

2.2.7 Revenue Mobilizing Model

Keeping the results of the property tax ratio study in mind, the impact of each ratio on tax revenues could be tested by making use of the *revenue mobilization model* established by Kelly (2000: 38-42; 2003: 14). He defines revenue as a set of policy and administrative variables, i.e. revenue is defined by policy choices (tax base, tax rate) and administrative actions (Coverage Ratio (CVR), Valuation Ratio (VR), Collection Ratio (CLR):

$$\text{Revenue} = [\underbrace{\text{Tax Base x Tax Rate}}_{\text{(Policy variables)}}] \text{ x } [\underbrace{\text{CVR x VR x CLR}}_{\text{(Administrative variables)}}]$$

From a political decision-making perspective property taxation involves critical elements, such as the decision about the tax base (land only, land and buildings etc.) as well as and possible decisions about the scope of tax relief (e.g. exemptions). Furthermore, politics has to decide upon the allocation of the tax burden by deciding upon the tax base (urban and/or rural; land only, land and buildings, buildings only) and assessment base (size, unit, value) as well as setting the specific rate.

The administration, in turn, is responsible for the efficiency and accuracy of coverage, assessment and collection. The administration has to identify all taxable real properties and capture these in the fiscal cadastres (CVR: taxable properties listed in the fiscal cadastre in relation to all properties), it has to evaluate/assess the properties (VR: value on valuation rolls in relationship to the real market value) and, finally, the administration is responsible for tax collection (CLR: collected tax revenue in relationship to total tax liability).

The revenue mobilizing model matches the defined main function of the property tax: generating local tax revenues. Therefore, collecting and analyzing data on the political and administrative variables should be seen as sine qua non for every property tax assessment.

2.2.8 Reasons for Property Tax Failure

As the formula of Kelly (2000 & 2003) indicates, tax revenues are affected by political and administrative variables. These constitute the basis for property tax failures around the world, especially in developing and transition states.

However, blaming politics and/or administration is difficult since political issues are, of course, involved in the context also of administrative variables. Nonetheless, many problems involved in property taxation can be traced back to the lack of 'proper' legislation, which clearly is in the hand of local politics[48]:

- ***High visibility*:** While visibility is good from an economic perspective, leading to higher accountability and productivity, it is less good from a political perspective since identifying the tax base, increasing the tax rate etc. affects a large number of statutory taxpayers/voters. Therefore, political commitment is crucial in the case of property taxation.
- ***Lack of reckoning realities*:** Decisions about an inappropriate tax base and tax assessment/valuation not reflecting local skills and market information will result in dysfunctional property tax systems.
- ***Static nature of property tax revenue*:** Misguided politics may increase the effective tax rate as an immediate measure to increase revenues; not taking into account that inequities in the incidence of the tax will increase. Re-assessment is politically difficult due to the large number of taxpayers/voters affected: "the buoyancy of the tax is held hostage to the timing of general revaluations" (Dillinger 1992: 4).
- ***Local elites or "distributional coalitions"***[49]: Political pressure by elites and/or coalitions may influence the tax base and/or the tax rate structure (e.g. a regressive tax rate structure whereby properties with higher valuations get away with lower tax burdens), resulting in 'free-riding'.

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48 Several issues are, however, not in the hand of local governments. Often national politics is to blame instead (e.g. limited decentralization, undeveloped property markets, large informal sector, etc.).

49 *Olson* (1982) addresses special interest groups striving for redistribution of income/resources rather than generating new income/resources.

- ***Large scale of tax reliefs*:** Politics can easily 'buy' popularity.
- ***Capacity limitations*:** The institutional framework for the property tax administration is set by political decisions. The tax administration – like the property tax – has to be designed according to reality (e.g. under-/developed property markets). It has to ensure that the administrative capacity is sufficient to levy, collect and enforce property taxes.

On the other hand, there are administrative issues related to efficiency and accuracy of taxable property data, tax levies, collection and enforcement, as well as in regard to corruption issues:

- ***Limited data*:** For various reasons data on the tax base and taxpayers has several shortcomings and missing information, including: unclear tenure rights, informal property markets, rapid urban growth and missing property records due to lack of up-to-date fiscal cadastre. Further, there might be fragmented and unshared property tax related data (fiscal cadastre, deeds registry, etc.) in different governmental/administrative bodies.
- ***Accuracy and efficiency*:** Low accuracy in property information and low efficiency of tax collection leads to reduced revenues from property taxes, as taxpayers do not pay the correct and/or adequate amount of taxes.
- ***Low service quality*:** On the one hand low public service quality and efficiency results in low tax compliance; on the other hand low service quality in regard to tax administration (taxpayer information through pamphlets etc.) results in a lack of knowledge/awareness.
- ***Corruption*:** Decentralized corruption in the case of local tax authorities having discretion on the tax base/tax assessment could result in rent seeking ('win-win-situation' for taxpayer and tax official).

2.3 Summary: Benefits and Gains and Assessment of Property Tax

The property tax may not be a reasonable benefit tax within the districts of megacities; however, it may well apply to its suburbs. From the city centre to its periphery, the population changes from one which is mainly heterogeneous to being mainly homogenous. Therefore, the property tax becomes more and more a Tiebout-Oates-Hamilton-Fischel type of tax

the further one moves away from the city center and the more taxing and expenditure powers are devolved to these suburban jurisdictions[50]. However, this segregation process results in the enclaving of prosperity and the marginalization of the poor. The Tiebout-Oates-Hamilton-model clusters households according to their individual preferences and the taxes that have to be paid based on these (or not paid in the informal sector). This geographic income-clustering of rich and poor, which can be found in megacities, may even explain rural-urban migration of the poor in search of something better. Infrastructure and public goods are often better provided for in the cities (even slums) than in rural areas. Homeowners within the city, rich or poor, have to rely on voting (with the ballot, not with their feet) in order to influence politics and thereby to maximize the capitalization effect on their own property values[51].

However, most of the poor cannot afford the theoretical 'entrance ticket' to the megacities that public finance in regard to the Tiebout-Hamilton model or the club theory of Buchanan suggests. On paper, migration of the poor would be stopped by limiting the cities' growth. Although the poor cannot pay their own way, the presence of poverty shows that the city itself is working. Glaeser (2011, 70) states that "the presence of poverty in cities [...] reflects urban strength, not weakness. Megacities are not too big. Limiting their growth would cause significantly more hardship than gain, and urban growth is a great way to reduce rural poverty".

Even though the property tax may only partially reflect benefits received – as property taxes reflect, at least to a certain extent, voluntarily payments for access to services and facilities of a municipal-club – the property tax could still be seen as a wealth tax. Property is highly visible, immobile and concentrated. It therefore constitutes a reasonable tax base. As wealth taxes are generally progressive in their tax rate structure, they reflect the 'ability to pay principle'.

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50 *Gramlich* and *Rubenfeld* (1982) found evidence for Tiebout-grouping in larger metropolitan areas due to smaller mobility costs and greater satisfaction with public goods provision. Outside metropolitan cities employment factors more likely determine the location than preferences for public services.

51 Even in China, where subnational governments are not elected and local populations cannot make use of voting to hold governmental officials accountable, subnational governments are empowered with some budgetary discretion and the appointed leadership does respond to local preferences (*Bahl* 2007: 20).

If the property tax is an ad valorem tax, unearned economic rents due to urban population growth, public service provision, speculation etc. could be skimmed. In addition, highly speculative property markets could be deterred by property taxation, as this reduces the economic rents. Generally, property taxes encourage that land be put to its best and highest use, which in megacities is of especially high importance as demand increases in the face of constrained supply.

Property tax, if well designed, is consistent with both the concept of decentralization and the subsidiary principle. The downward-shift of tasks to the municipalities has to be accompanied by increasing taxing powers in order to enhance local revenue. This taxing power allows municipalities to adjust their own tax revenues to their expenditures.

Overall, property tax has a wide range of positive effects and is perceived as an appropriate financing instrument for cities. However, it involves political and administrative aspects and decisions that may prevent the tax from realizing its advantages. Critical elements of the property tax are:

- ***Tax base*:** The first critical policy decision is the identification of the tax base: land only, land and buildings, or building only. Furthermore, political decisions have to be made as to whether or not to allow exemptions. Within megacities the tax base is continuously increasing as they make use of their 'urban advantages'. The tax base could be seen as a function of a scale of economic activity and its translation into residential income and taxable property values. Due to urbanization, the property tax base is growing even further, as urban land development accelerates and expands, rural land is transferred into urban land, and municipal public services capitalizes into property values. The definition of the property tax base might reach its boundary in the urban periphery, where land has not yet been formally adjudicated.
- ***Tax assessment*:** The second critical policy issue is deciding upon the tax assessment and how the tax burden should be weighted, i.e. how the tax burden is allocated to the taxpayers: per unit (each unit would pay the same tax amount regardless of size and/or location), per size (each property would pay an equal per square meter price regardless of location) or per value (each property would pay the tax based on their relative property value). When deciding upon an area or value based system policy makers have to take into account the realities in their municipality (available

skills and capacity). Value based systems would better correspond to rising tax bases in megacities, but only if frequent reevaluations are conducted; area based systems are easier to administer in terms of skills and capacity.

- ***Tax rate*:** Tax rate setting is the third critical policy decision. Policy makers have to determine the tax rates (uniform or differential tax rates), constrained occasional by a tax rate range set by the legislature or higher level government (usually minimum or maximum tax rates are 'dictated' by legislation and/or central government). For megacities and metropolitan areas it is also important to coordinate and/or harmonize tax rates across multiple jurisdictions in order to avoid distorting incentives and inducing tax arbitrage and Tiebout shopping.
- ***Assessment, billing, collection and enforcement***: The tax administration needs to be efficient, otherwise defining a tax base, tax rate and assessment is redundant. Due to the megacities' sizes and populations, they have the 'critical mass' to fulfill the administrative efficiency criterion on the one hand, but they also require major resources to run key administrative functions such as keeping the database up-dated (e.g. fiscal cadastre), re-assessing properties, billing taxes and enforcing non-payment. However, inter-municipal department linkages can help to further levy economies of scale and improve synergies. Nonetheless, especially the assessment of properties within immature markets and the lack of information and of administrative capacities is a major concern in regard to efficiently fulfilling all administrative functions.

Although the property tax constitutes a reasonable tax for decentralized public goods provision, its success strongly depends on the above mentioned assessment elements. Therefore, the performance measurement analysis will focus specifically on these critical assessment elements, which are assumed to vary significantly among the BRICS states.

3. Property Taxes within the BRICS States

All integral elements of the property tax designs of the BRICS states will be reviewed in this section, including those relating both to political decisions (tax base, tax assessment, tax rate) and to administrative

practices (tax assessment, billing, collection and enforcement). Furthermore, the role of urbanization and housing markets in regard to property taxes will be discussed.

3.1 Country Profiles

The BRICS countries have three aspects in common, which underlie the relevance of these countries: their economies are of an outstanding size, they have strong growth rates resulting in increasing significance in the global economy, and they are demanding a stronger position within the international governance structure (EU Parliament 2012, 7). The role of South Africa among these nations is different as it does not perfectly fit within the characteristics of the BRIC states. With South Africa in an exceptional position on the one side, China and Russia would be the exceptions on the other side; China in regard to its economic dominance and Russia being a former superpower.

Overall, the sample of countries is very heterogeneous, as **table 4** illustrates. The variance among the countries in terms of population, area, GDP per capita and central government revenues (% of GDP) is significant. The distribution of the governmental bodies – central, state and local – also demonstrates great variance (**table 5**).

A more detailed review of each of the BRICS states with special regard for the embedment of municipalities within the national financial framework and taxing powers will be given in separate country profiles below (3.1.1-3.1.5). Thereafter, the property tax designs will be reviewed from a comparative perspective (3.2.1-3.2.2).

Table 4: Key Characteristics BRICS States

	Estimated Population 2010 (millions)	Urban population (% total)	Slum population as percentage of urban 2009 (%)	Area (thousands km^2)	Population density 2010 (pop per sq. km)	GDP per capita (PPP 2005 US$)	Central Government current revenues, 2010 (% of GDP)	Type of Government
B	195.2	84.3	26.9	8 459	23	10 079	26.2	federal
R	143.6	73.7	-	17 098	8	14 182	26.1	federal
I	1 205.6	30.9	29.4	3 287	367	3 122	12.9	federal
C	1 359.8	49.2	29.1	9 597	142	6 819	11.5	unitary
S	51.5	61.5	23.0	1 219	42	9 516	28.8	federal

Sources: United Nations, World Population Prospects; Central Intelligence Agency, *The World Factbook;* World Development Indicators, World Bank.

Table 5: Institutional Structure of the BRICS states

	Central Government	State Governments	Local Government
B	Central gov.	27 States and the Federal District	5,508 Municipal governments
R	Central gov.	State governments	Local government units
I	Central gov.	28 State Governments and 2 union territories with separate legislature	Local governments
C	Central gov.	not applicable	31 provinces (excluding Taiwan, Hong Kong, Macao; including Beijing, Shanghai, Chongqing, Tianjin); 333 sub-provincial administrative regions; 2,487 counties; 656 cities; 44,067 townships; 678,589 villages

	Central Government	State Governments	Local Government
S	Central gov.	9 Provinces	46 District municipalities, 231 Local municipalities and 6 Metropolitan municipalities

Source: IMF, 2004 & 2008, Government Finance Statistics Yearbook: Institutional Tables.

3.3.1 Brazil

In Brazil all levels of government have been equal partners (cooperative federalism) since the 1988 Constitution came into force, i.e. the municipalities are autonomous and have an equal status as higher levels of government. Expenditure assignments follow the subsidiarity principle. In terms of fiscal decentralization, municipalities have devolved functions, functionaries, and revenue and expenditure powers. However, an overhaul of Brazilian fiscal federalism is needed, as equity, autonomy, efficiency, and growth objectives have collided (Rezende 2007: 77).

Municipalities are in charge of basic urban and social services such as urban roads, water supply and sewage, public transportation, streetlights, primary education, and basic health (Rezende 2007: 77).

For the provision of public services on the local level the municipalities receive financial assistance from the federal and state governments. In addition to these (formula based) general purpose transfers via the Municipal Participation Fund, which constitute approximately 40% of municipal revenue, municipalities are entitled to impose user charges and to collect *Taxes on Sales of Services* (ISS)[52], *Urban Property Taxes* (IPTU), *Real Estate Transfer Tax* (ITBI) and *Income Tax Withheld at the Source* (IRRF) (**table 7**). The federal government covers 60% of health care costs, which are provided on a cost-free basis to every Brazilian citizen; municipalities and state governments split the remaining costs. The health care transfer constitutes a larger source of

52 Taxes that are levied on businesses and self-employed individuals for providing services to third parties and are based on the price of the service rendered. Transportation (inter-state and inter-municipal) and communication services are for the states.

revenue for metropolitan cities than the shared taxes from the federal government. Furthermore, the metropolitan cities are penalized in regard to federal shared taxes, which are biased towards smaller municipalities: "The state capitals generate one-third of GDP and house one-fourth of the population but get only 10 percent of this pie" (Rezende 2007: 81). However, the 12 most important cities (out of 5,536) in Brazil raise more than 50% of the overall local property tax revenue (Carvalho 2013: 19). The reason for this concentration (in total and per capita) is as simple; as intergovernmental transfers favour small municipalities, the importance of own-revenues is increased in metropolitan cities.

Table 6: Local Taxes on Property (100% revenue) and Administrative Assignments in Brazil

L=Local, S=State, F=Federal	Determination of		
	Base	Rate	Tax collection and administration
Urban Land and Territorial Tax (IPTU)	L	L	L
Tax on Real Estate Ownership Transfer (ITBI)	L	L	L
Tax on Services (ISS)	F	F, L	L
Income Tax Withheld at the Source (IRRF)	F	F	L
Betterment Contributions	L	L	L

Source: *Rezede* 2007, 81.

The *Urban Property Tax* (IPTU) constitutes an important revenue source for municipalities. Generally, the property tax takes second place in the composition of municipal own revenues – after the tax on services (ISS). The property tax constitutes approximately 0.5% of GDP.

The legal taxpayer of the IPTU is the occupant or possessor of the real property located within an urban area; in practice the tax is levied upon the owner of the property. The tax base constitutes land and buildings; the assessment base is the fair market value (Afonso et al. 2012: 10). The fair market value is determined by the tax authority. They estimate the value of the land according to market conditions and using the attributes of the property as recorded within the cadastre. The tax

bill is calculated by applying the appropriate tax rate to the assessed value of the property.

In regard to the administration of the IPTU, several problems have been reported (De Cesare/Ruddock 1999, 276; Afonso et al. 2012, 7-9): There is a high incidence of illegal/informal properties not included in the cadastre/tax rolls, the cadastre itself is incomplete and outdated, properties are very heterogeneous in terms of property characteristics leading to errors in assessment (lack of assessment uniformity: similar values for different properties, different values for similar properties) and valuation cycles are infrequent.

3.1.2 Russia

The Russian form of federalism is shaped according to the layer cake approach (versus coordinated-authority approach), i.e. there is a distinct hierarchical (unitary) relationship among the different tiers of government (Shah 2007: 5). Local governments have no power according to the 1993 Constitution; they have to be seen as extensions of the state governments. A reform of federal relations and local governments in the 2000-2004 period sought to demarcate expenditure obligations and revenue assignments. The reforms have been revised several times since then. The national government can exercise influence over the local governments either in a direct way or via the state governments. The local level has formally designated revenue sources and spending obligations. But they have no fiscal autonomy as in practice the upper levels of government control all the revenue and expenditure arrangements (Deryugin et al. 2007: 238). In terms of fiscal decentralization the centralized state is structured in a deconcentrated form.

Local government expenditure obligations are determined by federal laws (obligatory tasks) but can be expanded if own revenues are generated (voluntary tasks). While the standards of public goods provision are determined on the central government level, the actual provision is assigned to the different levels of government. Therefore, most functions are shared among the governmental levels, exemplified by culture and housing services (federal, provincial, local). Often local governments are not de jure responsible but de facto, as in the case of secondary education (de jure: federal, provincial) or the civilian registry (de jure: federal) (Deryugin et al. 2007: 239). The subsidiarity principle is – at least de facto – applicable to housing, communal services, education, cultural

institutions and health care. Some typical local services such as fire protection and public transport are provided by regional governments.

The local level receives transfers from federal level that constitutes a high share of local revenues. Aside from these transfers the municipalities depend almost completely on the regional taxes levied through the *Enterprise Profit Tax* (EPT) and the *Business Property Tax* (BPT). Furthermore, income tax (paid by employers) is part of the local budget. Therefore, municipalities depend heavily on the businesses located (headquartered) within their municipal boundaries. The property tax generates a minor part of the overall local revenues; mostly because of underdeveloped personal property markets (Deryugin et al. 2007: 254).

Table 7: Local Taxes on Property (100% revenue) and Administrative Assignments in Russia

L=Local, S=State, F=Federal	Determination of		
	Base	Rate	Tax collection and administration
Individual Property Tax (e.g. residences, apartments)	F	L	F
Land Tax	F	L	F

Source: *Deryugin* et al. 2007, 248; Federal Tax Service of Russia[53].

At present, the real property tax is split into land (*Land Tax*) and buildings/improvements (*Individual Property Tax*). Both taxes are asset-related and levied against the owner. The *Land Tax* is assessed according to the market value of the land at its best and highest use ("cadastre value"). Tax rates are set by local legislative acts but may not exceed 0.3% of cadastre value. The *Individual Property Tax* (a tax on residencies, buildings) is assessed on data provided by the cadastral and registry federal authority, which maintains technical building records. The tax rates are set within a range determined by the municipal government. The *Individual Property Tax* in Russia is seen as problematic, as in the case of residential development the tax is based on inventory cost/original cost, which in practice constitutes construction costs (not

53 Federal Tax Service of Russia: http://eng.nalog.ru/taxation_in_russia/nifl/

adjusted for inflation). The tax is therefore much higher for newer buildings than older ones even though they might be quite similar (Anderson et al. 2009: 122/123).

In regard to the administration, all taxes are administered/collected by the Federal Tax Service. Due to the lack of incentives, the collection of subnational taxes is under-collected. Furthermore, the administration of taxes is complicated due to the large number of entities that obtain exemptions from states and municipalities.

3.1.3 India

Since 1992 India is a three tier federation with urban and local bodies having constitutional status. The structure of Indian federalism is often called "quasi federal" due to its "centripetal bias" (Rao 2007: 152). In regard to fiscal decentralization within the restructuring process, states devolved functions to the municipalities at their own discretion. However, herein certain problems arose as some states have "devolved functions, functionaries, and finances, but the functions have been encapsulated in terms of schemes, and local bodies do not have flexibility or autonomy in expenditure implementation" (Rao 2007: 168).

The functions assigned to the three levels of government follow the subsidiarity principle, with municipalities being in charge of education, health care, the environment (including forestry), electricity, economic and social planning, and all residual matters that are not provided by the Union or the state (Rao 2007: 156).

The local revenues are determined by transfers recommended by the Central Finance Commission and grants recommended by the State Finance Commission, central and state government grants and funds for implementing centrally sponsored schemes, the *Property Tax* and, lastly and conditionally, some urban local bodies are allowed to levy the *Octroi*[54] (a tax on the import of goods into the urban area for consumption, use or sale).

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54 *Dillinger* (1992, 3) states in regard to the *octroi* that "local indirect taxes are bad local prices (in turn to benefit taxes), the tax falls on business rather on all residents. Local residents could therefore vote themselves a subsidy in the short term, which will result in the long term in cut back of production, shift of tax to consumers etc., by taxpaying businesses."

Table 8: Local Taxes on Property (100% revenue) and Administrative Assignments in India

L=Local, S=State, U=Union	Determination of		
	Base	Rate	Tax collection and administration
Property Tax	S	L	S

Source: *Rao* 2007, 161.

The *Property Tax* in India is based on land and buildings. The assessment base differs among the municipalities. Some municipalities make use of value based assessment, referring to the annual rateable value (ARV), which either uses rent as the basis (hypothetical rent) or instead is based on location, type of construction, age of building and nature of use. Other municipalities make use of the area assessment, referring to the carpet area. Overall, there are large inter-municipal variations in regard to property taxes; the spread is from Rs. 1334 in Mumbai Municipal Corporation to Rs. 40 in Patna Municipal Corporation. The tax base in India is narrow and constricted, only 50-55% of the 715 million urban properties are paying property taxes (Mathur et al 2009: 1). The *Property Tax*, therefore, plays a minor role on the municipal level and constitutes only 0.15-0.23% of the Indian GDP (estimated, as data on property tax revenue is not available, see Mathur et al. 2009: 49).

In regard to the property tax administration there are several drawbacks that can be identified (Naresh 2004, Mathur et al. 2009, Rao 2013): There is a major lack in the coverage of properties within the fiscal property cadastre and a lack of clarity in regard to ownership and tenure rights. Assessments that are based on rental values are characterized as inequitable due to the freezing of rents under the Rent Control Act. Furthermore, the definition of "reasonable rents/hypothetic rents" is based on arbitrary interpretations.

3.1.4 China

China is a unitary state with a highly decentralized fiscal structure (Rao 2003:27). Following the fiscal reform of 1994, taxes were reassigned between the central and local governments. Local governments have received tax assignments with significant revenue potential – e.g. the *Urban and Township Land Use Tax*, a *House Property Tax*, a *City Maintenance and Construction Tax* (**table 9**). However, the revenue

assignments and intergovernmental transfers do not provide adequate revenue to pay for all the public services assigned to the local governments (Wu 2011: 42): local governments account for nearly 80% of total government expenditures, but receive only 47% of total government revenues (Man 2010).

The main expenditure assignments of subnational governments are cultural, educational, scientific, public health, social security and urban maintenance and construction. Martinez-Vazquez/Qiao (2011: 21) stated that the decentralization process was not guided by an explicit strategy for formal expenditure assignments based on the subsidiarity principle. This is why pensions and unemployment insurances are assigned to the local level. As result, there is a mismatch between expenditure responsibilities and revenue sources at the lowest levels of governments.

The fiscal imbalance means that many local governments rely on selling land-use rights to make up the shortfall[55]. This windfall-type of revenue is unstable and unpredictable. Nonetheless, it constitutes the main income source for local governments in China. In addition, local government officials make use of the "backdoor approach", i.e. informal (often illegal) taxes are levied and kept in off-budget accounts (Bahl 2007: 23).

Table 9: Local Taxes on Property (100% revenue) and Administrative Assignments in China

L=Local, C=Central Gov.	Determination of		
	Base	Rate	Tax collection and administration
City Maintenance and Construction Tax	C	C	L
Urban and Township Land Use Tax	C	C	L

55 Public leasehold is a common land tenure system found in post-communist/transformation states where the state owns a majority of the land. The land is assigned for development and use rights given to private entities through long-term land leasing. Mostly land is not sold at comparative market prices; in Shenzhen for instance around 98% are allocated by negotiation instead of auctions. Furthermore, the property market could be classified as an "emerging market" because the definition and enforcement of property rights are limited, see Anderson (2011: 146).

L=Local, C=Central Gov.	Determination of		
	Base	Rate	Tax collection and administration
Land Appreciation Tax	C	C	L
House Property Tax	C	C	L
Tax on the Use of Arable Land	C	C	L
Deed Tax	C	C	L

Source: Author, State Administration of Taxation of the People's Republic of China.

Local governments are assigned both local tax revenues and shared tax revenues (*VAT, Business Tax, Individual and Corporate Income Tax*).

The Chinese taxes on property (land and buildings) are manifold; however, they generate a limited amount of tax revenue. The *Urban and Township Land Use Tax* is imposed on land plots located in urban areas, the *House Property Tax* is levied on houses located within urban areas, the *Farmland Occupation Tax*[56] applies to all state owned and collectively owned farmland, the *Tax on the Use of Arable Land* is levied for making use of arable land for non-agricultural purposes (e.g. the construction of residential houses), the *Land Appreciation Tax* is levied on the transfer of state-owned land use rights, and the *Deed Tax* is levied on the transfer of land and houses. These many different forms of taxes exist due to a land system divided between state ownership in urban and collective ownership in rural areas (Man 2011: 8).

The Chinese 'property tax structure' still faces substantial problems: The current tax structure on land and property has barely changed over the centuries; the *House Property Tax* and the *Urban and Township Land Use Tax* go back to the late 1980s; all taxes and land-usage fees have to be paid at the transaction stage, leading to higher housing prices (Anderson 2011: 146); and indeed most taxes place the tax burden on the transaction stage and not on the possession stage, making

56 50% of the farmland occupation tax shall be allocated to the local governments to establish an agricultural development fund for reclamation and consolidation of land and improvement of existing arable land.

them unstable/unpredictable revenue sources. Furthermore, local governments have no discretionary power in setting tax rates according to local priorities, economic structure and fiscal status, as tax rate bands are centrally determined.

The People's Republic of China is currently engaged in a process of property tax reform, mostly to slow rising property/housing market prices[57]. The intent of the proposed property tax system is to amalgamate the diverse 'property' taxes that exist into a single ad valorem tax on land and buildings.

In regard to the administration[58], local revenues are administered and collected on the local level. In 1994, the State Administration of Taxation (SAT), the state tax bureau system and the local tax bureau system were established. The tax bureaus on the various local levels are always under the supervision of higher level authorities: On the provincial level – for instance – the tax bureaus are mainly under the leadership of local governments and under leadership and supervision of SAT.

3.1.5 South Africa

South Africa practices a cooperative federalism with independent spheres ever since the Constitution of 1996 came into force, i.e. while the federal government determines policy, the state and local governments are the implementation agents (Shah 2007: 5). In this setting, states/provinces have an influence on federal policy making through a second chamber (in the upper house of parliament). In regard to fiscal decentralization, there are expenditure assignments that are still unresolved, opening up the possibility of unfunded mandates.

Within the range of municipal services provided, there are several services for which the national and provincial level have (de jure) shared in responsibility, but which are delivered de facto by the local level only.

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57 The central government permitted (on January 28, 2011) Shanghai and Chongqing to collect property taxes on new up-market homes. Shanghai started to collect taxes on newly purchased second homes of residents and first homes of nonresidents based on transaction value. The city of Chongqing is targeting existing single-family residences and newly purchased luxury apartments of residents or newly purchased second homes of nonresidents.

58 State Administration of Taxation: http://www.chinatax.gov.cn/n6669073/n6669133/6886063.html

For instance ambulance service, air pollution, child care facilities, fire-fighting services, municipal airports, municipal health services, etc. Furthermore, the local level is also in charge of electricity and gas infrastructure, street lighting, solid waste disposal etc. (Khumalo/Mokate 2011: 270).

Municipalities – especially larger ones – have a high degree of revenue raising powers. On average, municipalities finance 90% of their local expenditures by own revenues, though there is wide variation around this mean; some metropolitan areas finance up to 98% of their expenditures by own-revenues while some small rural municipalities are highly dependent on transfers and grants (Khumalo/Mokate 2011: 266).

Table 10: Local Taxes on Property (100% revenue) and Administrative Assignments in South Africa

L=Local, P=Provincial, N=National	Determination of		
	Base	Rate	Tax collection and administration
Property Rates	N	L	L

Source: Author, according to *Khumalo/Mokate* 2011, 274/275.

The most important local revenue sources (2009/2010 est.) for South African municipalities are service charges on the provision of (especially) electricity, water, sanitation, and refuse removal (43%); property tax (19%); grants (22%); and other revenues (16%) (Franzen et al. 2013: 9). Furthermore, they receive a formula-based transfer that utilizes population, poverty and household income to determine the capita share for each municipality.

The *Property Rates* are based on land and buildings and the assessment is defined as market value, i.e. capital improved value. Before the property tax reform of 2004 municipalities could even choose the tax base based on provincial laws (Franzen et al. 2013: 7). *Property Rates* constitute 1% of GDP.

In regard to the property tax administration, the responsibility lies with the municipalities. Comprehensive property tax coverage is basically attainable as a national tax base has been defined since 2004.

However, this is unlikely to happen given shortcomings in terms of the skills and capacity of local tax administration (Franzen et al. 2013: 10).

3.2 Comparative View on Stylized Facts of the Property Tax in BRICS[59]

The case studies chosen mirror the broad spectrum of property tax designs. The diversity in the application of residential real property taxation within the five states reviewed shows that every property tax design is unique even though overall normative criteria for a rational decentralized tax (section 2.1.3) are common. While Brazil splits the property tax into an urban and rural property tax[60], Russia levies separate taxes on land and buildings. Different property tax designs could be found within India, as the states have the power to determine tax parameters. China has numerous taxes on property[61] and recently started to introduce property taxes on newly constructed homes with the aim to amalgamate the different taxes on property. South Africa levies '*Rates*' only within the boundaries of municipal (urban) areas. The differences have implications for property tax revenue and therefore for the property tax performance.

The performance of the property tax is generally determined by policy decisions made about the tax base, tax rate, exemptions, and assessment in conjunction with administrative practices for assessment, billing, collection and enforcement. While the latter is – of course – set within a legislative framework, performance is based on administrative efficiency. Assessment could be seen as an important intersection in between politics and administration and best shows that politics does transform into administrative realities.

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59 The comparative view is mainly based on the property tax database of the International Property Tax Institute (IPTI) containing 40 countries, *Martinez-Vazquezet* al., 2010, p. 326-346, containing basic property tax characteristics of 84 countries, *Bird/Slack*, 2004, the various country specific literature cited as references and official webpages concerning property taxation (section 5).

60 Brazil divides the property tax into an urban *Imposto sobre a Propriedade Predial e Territorial Urbana* (IPTU) and a rural *Imposto sobre a Propriedade Territorial Rural* (ITR) property tax.

61 In this case, the *House Property Tax* and the *Urban and Township Land Use Tax* are reviewed as urban property taxes.

3.2.1 Tax Policy Decisions

The property tax is protected under constitutional law, except in Russia and China. In the latter cases the tax system seems to be subject to significant uncertainty.

▪	**Legislation**
B	Brazil Constitution 1988 allocates authority for property taxation to municipalities. Supplementary authority is provided in the National Fiscal Code (defining components of tax base, tax liability, exemptions). Local legislation is used to define specific aspects of the tax, such as the methodology for estimating assessed values and the rates, as well as additional exemptions from property tax.
R	Tax Code Chapter 30: Tax on the Property of Organizations Tax Code, Article 15: Individual Property Tax is only mentioned, further details in separate law.
I	Entry 49 in the State List of the Constitution; thereby, state governments set the framework for the property tax in regard to tax base, procedure for valuation, rebate and exemption policies, rate setting, tax liability, and measures for dealing with delays and tax evasion. - Traditional-ARV: Rent Control Act - New-Area-Based: Urban Local Bodies Act, 1998; in conjunction with various local enabling legislation
C	- Provisional Regulations of the People's Republic of China on House Property Tax (1986) - Provisional Regulations of the People's Republic of China Governing Urban and Township Land Use Tax (1988) - Provisional Regulations of the People's Republic of China on Farmland Occupation Tax (1987) - Reforms and new legislation are being developed as of 2004
S	Section 229(1) of the Constitution of the Republic of South Africa allocates authority for property taxation to municipalities. For the local government level there is the Municipal Property Rates Act 6 of 2004, which had to be implemented by all municipalities by 1 July 2011.

The tax base is prescribed by law. The tax base may be different in nature (land and/or buildings) and scope (urban and/or rural). In all cases examined here both land and buildings constitute the property tax base. In Russia and China there are separate taxes on land and buildings. While South Africa taxes only urban properties, there are geographically specified taxes in Brazil ("*Imposto sobre a Propriedade Predial e Territorial Urbana", "Imposto sobre a Propriedade Territorial Rural")* and China ("*Urban and Township Land Use Tax", "Farmland*

Occupation Tax"). Furthermore, China and in part Russia sell land-use rights for a specified number of years.

▪ **Tax Base** (subject to taxation)	
B	Land and improvements (all property-use classes, including vacant land, residential and non-residential property).
R	*Land Tax*: land plot; *Individual Property Tax*: residencies, buildings
I	- ARV: ARV on land and buildings, sometimes with reference to location, type of construction, age and use. - Area-Based: All improvements (carpet area) and vacant land
C	Generally, all land is owned by the state. Purchasers buy land-use rights for a set number of years. Land (*Urban and Township Land Use Tax*, *Farmland Occupation Tax*) and buildings (*House Property Tax*)
S	All "rateable property"; immovable property (land and buildings)

The tax assessment allocates the tax burden to the tax payer. Most BRICS states make use of property value as the assessment base, i.e. the relative property value determines the relative tax burden according to overall property value/tax burden. This holds true, more or less, also for the Indian *Area-Based* system. The assessment base 'area' approximates market value by taking location factors etc. into account. Area based systems – as in the case of India – permit self-assessment. All other assessments – except China – are based on value: "cadastral value" in Russia, "annual rental value" in parts of India, and "capital improved value" in South Africa. Value-based systems are more resource-intensive than area-based; they require a minimum level of valuation skills and capacities and they have to be maintained (re-assessments) in order to realize the advantages of value-based assessment.

▪	**Tax Assessment**
B	Capital market value of land and improvements.
R	"Cadastral value" of land and buildings. Cadastral value of land is based on the market value with the use of mass appraisal techniques. Buildings are assessed by tax authorities based on data provided by the cadastral authority and by surveying companies that maintain technical building records.
I	ARV: Annual rental value “fair rent”; Annual rateable value (ARV) with rent as the basis (hypothetical rent) and annual rateable value (ARV) with unit area characteristics representing the base - Area-Based: Assessment values self-reported based upon unit area values taking into account improvements, use, construction and location.
C	Property is not ‘assessed’. Values are assigned on the basis of size for land, and 70% to 90% of recorded cost values for buildings. Machinery and equipment, if attached, are treated as part of the building and taxed at book value.
S	Market value, i.e. capital improved value.

Tax rates are set by the local governments, except in China. Differential tax rates are found in all states. These may be due to political, equity or efficiency reasons. While Brazil, India and South Africa have different rates according to use categories (residential, non-residential), China and Russia have specified non-residential taxes (China*: Business Tax*; Russia: *Corporate Property Tax*). By setting higher rates on commercial property than residential, property tax exporting (‘subsiding residential property’) may become a problem. To prevent this, South Africa applies a ratio in between the residential and non-residential rate. Split-rate taxation, i.e. different tax rates on land and buildings, are found only in China and Russia due to their specific taxes on land and buildings. Differential rates may involve issues of complexity from an administrative perspective and entail corruption and tax exporting.

▪	**Tax Rates**
B	Differential rates are applied to different property-use classes. Rates vary considerably among the municipalities. Generally, higher rates are applied to vacant land (to stimulate land development, deter land speculation). Additionally, rates applied to non-residential property are higher than those on residential property. Progressive rates are common due to different zones and sliding rates. Typical rate is 2% to 2.5%.

R	- *Land Tax*: Rates are established by local legislative acts and cannot exceed the rates specified by Russian Tax Code: 0.3% for residential and utilities / infrastructure lands; - *Individual Property Tax*: Representative bodies of municipal government determine tax rate within certain limits according to inventory cost and type of usage of a taxable object: 0.1% - 2%.
I	Different tax rate structures: consolidated rate including imposts of various kinds on the same tax rate; statutory specification of maximum and/or minimum rate ('ceiling'); progressive rates; rates according to use, location etc. - ARV: Residential: 2.5% to 30%; Non-residential: 2% to 10%, - Area-Based: Residential; Rs 10/m^2 to Rs 40/m^2; Non-residential: Rs 22/m^2 to Rs 80/m^2
C	Differential tax rates; owned buildings - 1.2% of assessment; rental properties - 12% of rental income; land use: 2.0 - 100.0 Yuan/m^2 (increasing with city size)
S	Differential rates are generally set for different property categories (e.g. residential, business and commercial, education, mining, vacant land, public benefit organization s, etc.); tax rates for non-residential properties have to be set in relation to rate applied for residential properties (ratios prescribed by national government). So far, ratios have only been determined for agricultural properties (1:0.25) and public service infrastructure (1:0.25).

Exemptions constitute one part of tax relief. The property is assessed first and exempt thereafter. Most exemptions are granted to governmental bodies, organizations/institutions with religious and/or charitable purposes, and properties below a specific value threshold. Overall, property exemptions are complex from an administrative perspective and corruption issues may be involved. This seems to be the case in China, where exemptions are not specified but rather have to be appealed for.

▪ **Exemptions**	
B	Exempt properties: governmental, religious, political parties, trade unions, educational, health and non-profit organizations. Additionally, capping systems are sometimes used to guarantee that tax bills do not surpass ability-to-pay. The Chamber of Councillors, a group of politicians elected by the local community, is responsible for promoting and arguing in favour of the capping systems in order to protect the poor and retired taxpayers. Approximately 13% of properties were exempt from the property tax in 1996.
R	Land Tax: Certain types of legal entities, i.e. religious organizations, non-governmental associations of disabled people etc. may be exempt. Land located within Special Economic Zones is generally not subject to taxation.

I	Article 285 of the Constitution of India exempts properties of the Union government; state government properties and select properties of other levels of government; charity, medical relief, and education; burial grounds; places of worship; residential properties with rateable values below a minimum threshold; slum dwellings not having any title over land.
C	By appealing for reductions the land use tax can be reduced up to 30% below the minimum tax amount.
S	Municipalities decide on exemptions and rebates. Few properties are excluded: residential properties below R 15,000; places of public worship. Further exemption may be granted for e.g. public benefit organizations; indigent owners; pensioners; owners temporarily without income.

Within the property tax formula the tax rate is applied to the assessment value. The outcome determines the property tax to be paid by the property owner.

▪ **Property Tax Formula**	
B	Assessed Market Value x Tax Rate
R	Not available
I	- ARV: Assessment x Tax Rate - Area-Based: Total Area x Rent rate (per month) x 10 months less applicable depreciation x Tax Rate
C	Not available
S	Market value * Applicable Rate (Cent amount)

In addition to the property tax there are other taxes on property. Most of them apply to the transaction stage. A more detailed list is provided in annex 1.

▪ **Other Taxes on Property**	
B	*Real Estate Transfer Tax* (ITBI)
R	Tax on sales of land plots; Inheritance and gift tax on land.
I	- ARV: *Transfer Tax* - Area-Based: -
C	*Land Appreciation Tax* (on transfer of state-owned land use rights, buildings and attached facilities)
S	*Real Estate Transfer Tax* (“Transfer duty”) or VAT payable on the acquisition of immovable property and levied by national government. There are no stamp duties in South Africa

3.2.2 Administrative Practices

The administrative competencies for the property tax are based mainly at the lowest governmental level, although they are in some cases extensions of the national taxing authority (China and Russia).

	▪ **Administrative Structure**	
	Level of Government Responsible for Assessment	Level of Government Responsible for Taxation
B	Local government	Local governments
R	Federal Tax Service of Russia is the only tax administration authority in the country. It administers taxes in accordance with federal law for all levels of the Russian Government.	
I	- ARV: State and Urban Local Bodies (ULBs) - Area-Based: Municipal	- ARV: Local governments - Area-Based: Municipal
C	The State Administration of Taxation (SAT) has overall control of the taxation process. It has offices at both the national and the local level. Day-to-day administration is at the local level but all policy and administrative guidance are the responsibility of the Central State.	
S	Each municipality is responsible for the appointment of a municipal valuer, either being a direct employee (usually in larger municipalities) or a professional valuer in private practice.	Municipalities set their own rates annually. National government may limit year-to-year increases on rates and/or set maximum rates and may also determine ratios for residential and different categories of non-residential properties.

The assessment process is very resource-intensive due to the large number of property parcels. In addition, relevant databases have to be updated consistently and continuously (properties, property details and transaction prices) in order to precisely determine the assessment value for each specific property. This is main concern of the administration: an efficient assessment (cost per parcel) has a major impact on the tax revenue. An efficient cost framework that covers assessment, re-assessments and all other administrative functions (fiscal cadastre etc.) in order to maximize tax revenue is above all dependent on the administration. Therefore, it might be better to have a simple assessment base (e.g. area-based) that requires less administrative resources. However, this involves also questions of equity; the more equitable the assessment system the higher the administrative-burden.

	▪ **Assessment Process**
B	Local authorities are entirely responsible for valuation. Three departments are involved: one is responsible for assessing properties; one is responsible for keeping the real estate cadastre updated and another one is responsible for carrying out inventories on properties
R	- Self-assessment in case of organizations, tax authorities make assessments for individuals based on data provided from cadastral authority.
I	- ARV: None - Area-Based: Self-assessment to be reported by owners
C	Self-assessment (owner is required to give the taxation bureau information on the value of the building, from which the tax is then levied)
S	Approximtely1,300 municipal valuers are registered with the South African Council for the Property Valuers Profession (SACPVP), which allows them to undertake municipal valuations. Valuers inspect properties and may require information pertinent to the valuation of the property from the owner or occupier of the property.

The assessment period is of high importance, especially in urban centers where property values increase/decrease rapidly. The price-spread is to be eliminated by re-assessments on the basis of equity grounds (shifting gains from 'winners' to 'losers'). Often re-assessment periods exist *de* jure but are not carried out *de* facto. Upward and/or downward movements can be 'bridged' with indexation until re-assessment takes place. Additionally, the assessment base could be adjusted for inflation rates. Re-assessment cycles of 5 years are generally common, also in the case of BRICS. However, the large number of properties and the administrative resources involved often leads to major re-assessment time gaps.

	▪ **Assessment Period**	
B	- Period between re-assessments:	- No legal requirement; intervals between assessments vary considerably among the jurisdictions.
R	- Period between re-assessments	- Updated at intervals of 5 years
I	ARV: - Period between re-assessments: Area-Based: - Period between re-assessments:	- Typical valuation cycle 5 years - Supposed to be 3 to 5 years

C	- Period between re-assessments:	Not available
S	- Period between re-assessments:	Re-assessments at least once every four years - with a possible extension for a further one year (i.e. in practice it could be five years).

Objection and appeal against the assessed value is usually guaranteed by law. The appeal deadline is usually 30 days from notice (Brazil, India and South Africa). Appeals are submitted on the local level that is responsible for the assessment (Municipal Councillor in Brazil, Municipal Valuation Committee in India and Municipal Valuer in South Africa) and then moves up the courts level by level. China and Russia have a still weak appeal process.

▪ **Objections and Appeals**		
B	- Appeal deadline: - Appeal process requirements: - Appeal process:	- 30 days after delivery of tax bill - Administrative appeal to municipality, then advances through court levels up to Federal Supreme Court - In the administrative level, each municipality defines procedures for objections, e.g. taxpayers can object against the decision to a Municipal Councillor. In the judicial level, a formal appeal can be made to the Court of State and, finally, to the Supreme Court of the Nation.
R	- Appeal deadline: - Appeal process requirements: - Appeal process:	- Not available - Not available - The appeal process in Russia is still in the early stages of development: Upon receipt of tax notice the taxpayer may appeal for a revaluation of a property under section 8 of the federal law regarding appraisal activity.
I	- Appeal deadline: - Appeal process requirements: - Appeal process:	- 30 days from receipt of notice - Submission of a standardized appeal form. - Municipal Valuation Committee
C	- Appeal deadline: - Appeal process requirements: - Appeal process:	- Not available - Appeals are submitted to the legal department of the Taxation Bureau, then to a higher court if unsuccessful in the first-instance - Weak appeal provisions. Taxpayers can verify liability and legal provisions.

S	- Appeal deadline: - Appeal process requirements: - Appeal process:	- 30 days from Notice - "Any person" (i.e. the owner, the municipality or another interested party) - Objections are adjudicated by the municipal valuer who revises the valuation, thereafter; appeal can be made to valuation appeal board (30 days after valuer's decision).

Property tax payment requires, first of all, informing the taxpayer of the tax liability (billing). This involves issues of up-to-date data sources on all property owners. As urban populations are more fluid, Brazil, China and South Africa define also the occupier or user of the property as liable for the property tax. In the Indian annual rental system the tax could be attached to the owner in case of non-payment by the occupant. The payment arrangements have major influence on obtaining payments in time. In Brazil and India there are substantial discounts if the tax is fully and/or timely paid. Furthermore, the payments are usually spread out over the course of the year in order to decrease the tax burden: e.g. into four payments in Russia, ten payments in Brazil and twelve payments in China.

▪ **Property Tax Payments**	
B	Due between January and August for the previous year; sometimes financial incentives are given to encourage payment in full (e.g. Porto Alegre), or payments may be split to 10 monthly instalments.
R	- *Land Tax*: Payments are due quarterly, dates as established by local legislative acts of municipalities. - *Individual Property Tax*: Tax payment is determined by laws of the subjects of the Russian Federation.
I	- ARV: Up to four payments. Significant discounts in the form of a rebate for timely property tax payments in full, further rebates (30%) are granted to senior citizens, ex-servicemen and physically challenged persons. - Area-Based: Up to four payments. Significant discounts in the form of a rebate for timely property tax payments in full, further rebates (30%) are granted to senior citizens, ex-servicemen and physically challenged persons. Rebate of 100% is granted for properties with a rateable value below 1,000 Rs.
C	Monthly instalments, taxes collected by local government; deadlines determined by province, region or municipality
S	Determined locally by municipalities – in some cases payments are made in monthly instalments (City of Tshwane), in others as a once-off payment of the annual tax.

3.3 Rising Role of Cities: Property Markets and Property Tax

With a share of roughly 40%, BRICS states represent almost half of the global population and, simultaneously, half of its global urban population. They have gained a tremendous position on a global scale and BRICS' cities play a major role in worldwide urbanization processes[62].

In 2007, the global urban-population surpassed the rural one[63]. In 2017, the BRICS-group will break this barrier as well. The ten-year delay is caused by India, whose population will not live mainly in cities any earlier than 2048. In Russia and South Africa the urban population is already larger, since 1975 and 1987 respectively. Brazil reached this point in 2009, China in 2011. The degree of urbanization, i.e. the urban population's share in total population, will correspond – India excluded – to that of developed states today by 2025.

The process of urbanization, 'exclusively' occurring in developing countries, is not only increased by demographic growth (increasing birth- and/or decreasing death-rates) but also by rural exodus: The BRICS states are moving into the urban century (**figure 1**).

The forces of urbanization are mirrored in the BRICS states' number of megacities. While there were only two megacities in 1985, the number increased to eight in 2005, while the number of cities with more than 10 million inhabitants will double by 2025 (**table 4**). One third of megacities worldwide (16 out of 37) will be located in BRICS states by 2015.

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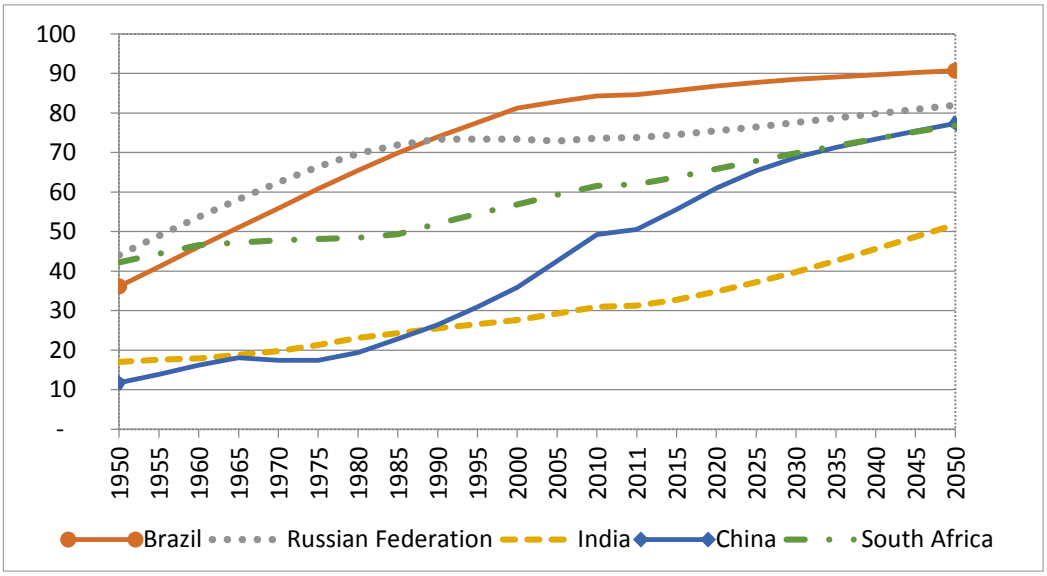
62 Urbanization can be traced back to different explanatory variables. In general, there are three main things determining the level of urbanization: i) natural population increase with a declining infant mortality and an increasing life expectancy outweighing the gradual reduction in fertility, ii) rural-urban migration which accounts for approximately 25 % of urbanization and iii) reclassification of rural areas as urban areas (UN-HABITAT (2010): State of the World's Cities 2010/2011, 22).

63 The calculation of "tipping points" (the point when the urban population outweighs the rural population) is merely a mathematical one based on statistics of the United Nations, Department of Economic and Social Affairs, Population Division: World Urbanization Prospects: The 2011 Revision.

Figure 1: Level of Urbanization within the BRICS States 1950-2050



Source: Author; United Nations (2011).

A cause for rejoicing is the positive correlation between urbanization and wealth, with incomes increasing due to growing productivity[64]. The transition from a rural to an urban economy constitutes the change from a low-income to a middle-income country. However, many emerging economies cannot exploit their 'urban advantages', as urbanization comes along with increasing housing shortages, poverty, crime rates, social inequality and environmental degradation. Such a process of structural change often results in a heterogenic cityscape. Regarding housing, urbanization usually leads to two divergent trends within the city: enclaves of prosperity on the one hand and marginalization of the poor on the other hand.

64 Cities are the "economic engines" of states due to agglomeration economics. Aspects such as proximity, scale advantages, and technological spillovers which enrich ideas and encourage innovation play a vital role, especially in a knowledge-based economy. Therefore, cities are the key to prosperity (*Yusuf*, 2013, 33-35).

Table 11: Megacities (resp. Urban Agglomerations) within BRICS States, 1985 – 2025

		Population (in thousands)			
Country	**City**	**1985**	**2005**	**2015**	**2025**
Brazil	Rio de Janeiro		11,368	12,380	13,621
Brazil	São Paulo	13,395	18,330	21,028	23,175
Russia	Moscow		10,755	12,144	12,576
India	Bangalore			10,016	13,193
India	Madras				12,814
India	Delhi		18,670	25,629	32,935
India	Hyderabad				11,647
India	Calcutta		13,702	15,076	18,711
India	Bombay	10,391	17,891	21,214	26,557
China	Beijing		12,349	18,079	22,633
China	Chongqing			11,054	13,627
China	Guangzhou, Guangdong			12,385	15,474
China	Shanghai		16,590	22,963	28,404
China	Shenzhen			12,337	15,545
China	Tianjin				11,934
China	Wuhan			10,256	12,727
South Africa	Johannesburg				(4,732)

Source: Author; United Nations (2011).

City growth leads to an increasing need for infrastructure and higher demand for housing. Most of the BRICS economies have a strong link between improving living conditions (housing development/construction and infrastructure) and economic growth. Massive investments in housing and infrastructure boosts national economic growth rates, which increases national income, which, in turn, raises property and housing prices. China has made use of housing as an economic stabilizer throughout the financial crisis. In India, the housing sector constitutes the second largest employment sector (after agriculture), one with a significant economic multiplier effect. However, economic growth and urbanization drive up the prices of urban land and housing while real per capita income often lags behind. Therefore, not only low income

households but also middle income ones are often priced out of the urban housing market.

The state governments have introduced housing policies to tackle these rising problems. Brazil, for instance, created a "Ministério da Cidades" in 2003 and introduced the "Minha Casa, Minha Vida" programme in 2009, with the goal of creating four million new housing units by 2015. China has introduced different policy measures in order to increase construction output and drive down housing prices and vacancy rates[65]. India, in turn, has initiated two taskforces on "Affordable Housing" (2010) and "Rental Housing" (2013). Further, the "Rajiv Anas Yojana" initiative aims at creating a 'slum free' India by 2020.

Nonetheless, housing prices are increasing within BRICS' urban centres. Some reasons for this development are, inter alia[66]:

- ***Inelastic supply of urban land***: There is a shift in housing demand due to natural population growth, rural-to-urban migration, increasing longevity, higher educational levels, rising incomes and a shift from several-family-homes to single-family-homes. However, urban land and housing supply is (in the short term) very inelastic. As a result, there is major shortage in the urban housing stock: it is estimated, for instance, that Brazil and India are facing a shortage of 5.5 million and 20 million homes respectively. The shortage

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65 Latest Chinese State Council policy interventions are:
2003; the real estate market became a major pillar of economic development following the "Announcement of State Council on Promoting the Continuous and Healthy Development of the Real Estate Market".
2010; the "Notice on Firmly Suppressing the Rapid Increase of Housing Price in Some Cities" introduced first purchase controls (mortgages were limited to two houses).
2011; according to the "Further Improvements Real Estate Market Regulation" the mortgage and purchase control policies were reinforced (minimum payment of 60% directly and mortgage interest rate for second homes increased to 1.1 times the base rate).
2013; the "Notice on Continually Improving Real Estate Market Regulation" resulted in a further strengthening of controls.

66 The points are retrieved from the RICS report (2014) on "Global Affordable Housing: BRICS Plus Mortar". The report reviews the housing needs and supply in Brazil (p. 19-34), China (35-55) and India (56-70). Further, they discuss the effects on economic growth and compare the government housing policies.

accounts for 15% and 25%, respectively, of the required total stock[67].

- ***Speculation resulting in high vacancy rates:*** Especially China and Brazil are or have been concerned with housing market bubbles in their recent past (since 2009 and 2013 respectively). In São Paulo and Rio de Janeiro prices have increased (2008-2012) by 159% (98% inflation-adjusted) and 194% (124% inflation-adjusted). First tier cities in China, such as Beijing and Shanghai, have saw price increases of 20% between March and December 2013. However, the housing boom is reflecting not just increasing demand but also speculation. Due to the latter, there is a high rate of vacant housing units: It is estimated that Brazil has approximately 5 million vacant urban housing units. China faces a vacancy rate of 20-30% in newly completed projects in major cities (Wak et al., 2007, 185). To deter speculation, the Central Government in China permitted the introduction of property tax on new upmarket homes in Shanghai and Chongqing (since January 28, 2011).
- ***Restrictions on the housing market:*** Strong demand is further fuelled by land-use restrictions such as: i) Floor Space Index (FSI)/Floor Area Ratio (FAR), ii) rent controls and iii) taxation arrangements concerning residential housing. These policy measures further increase housing prices:
  i. FSI or FAR limit the total floor area to the size of the land upon which it is built (an FSI of 2 indicates that the floor area of the total building should not surpass twice the ground floor upon which it is built);
  ii. rent control means that a rent ceiling is imposed which is below equilibrium rent;
  iii. the tax burden of housing taxation (property tax, transaction taxes, stamp duties, levies etc.) is often focused on the transaction stage instead on the possession stage.

67 Needs estimates in Brazil take into account: Excessive spending on rent (more than 30 per cent of household income); Involuntary cohabitation (when more than one household lives in the same unit); Substandard physical quality of buildings and access to infrastructure; Overcrowding (although this does not fully allow for overcrowding of children), see RICS 2014, 27.

- ***Market failure and informal market***: A deeper market culture and infrastructure is still missing in China and, to certain extent, in Russia. Most notably, there is need to create an efficient second hand and rental housing market. The same holds true for the financial system. Access to mortgage finance systems plays a vital role for both developers and purchasers and yet is still lacking in most of the BRICS countries. Furthermore, the informal market plays a major role in the overall economy and housing market: In Brazil, approximately half of the housing output is produced within the informal sector. The construction costs are 30-40% below those in the formal market. In India, three out of five employees (approx. 60%) work in the informal urban markets. As a result, much of the housing output is built without local permission and official planning approvals, titles are not administratively registered and the properties are often inadequately serviced.
- ***Corruption:*** Corrupt rent-seeking occurs especially in the areas of the land and housing markets experiencing growth. Governmental authorities' decisions are often not transparent, e.g. in the case of competitive tendering, land auctions, taxation, etc.
- ***Decentralization or fiscal embedment of cities:*** Naturally, housing is a local task. Therefore, central governments have devolved the powers for designing and delivering housing policy to the municipalities. As the housing markets are large and complex, the new role is challenging local governments when it comes to effectively regulating price and quantity outcomes. However, in most cases local governments are not given the additional resources or taxing powers needed to deliver the change. For both the poor and the cities it would be fairer if social costs would be borne by the national rather than local governments. In general, even the strongest cities cannot handle the cost of urban poverty by themselves.

As shown, many factors lead to increasing property values. However, urbanization and speculation seem to be the primary sources fuelling the demand growth as compared to property supply constraints.

Within the BRICS' states property tax is mostly (at least to some part: see India) an ad valorem tax, i.e. the tax is determined by the value of the property. In this case, increasing values would lead to increasing tax revenues. However, the case of China shows that the main objective behind the introduction of the property tax is not always to

raise local governmental revenue, as here the property tax was introduced to deter speculation in the housing market. As shown, property markets (or financial mortgage markets) in the BRICS are highly immature due to policy interventions (command based markets), informal rather than free and open markets, and scarcity of information. The transaction price, nonetheless, constitutes an objective indicator for property values. Therefore, the administration, or more specifically the valuers, does play a vital role in these countries, as they analyze and interpret the market in order to estimate the assessment base. Moreover, it is the administration that must consistently and continuously update all the required data regarding assessment, billing, collection and enforcement. However, the regulation of the property market is passed down to the municipalities, which often lack the administrative capacities and qualifications for this task. In addition, issues of corruption may arise.

3.4 Summary: BRICS' Property Tax Systems

Reviewing the framework into which the property taxes are embedded in general and the design and realization of the property taxes in specific constitutes a framework for further analysis of property taxes to be found within the megacities of BRICS states. The property taxes of Brazil, Russia, India, China and South Africa provide illuminating comparative insights into the nature of property taxes. Considering the five countries relative to each other raises a number of similarities and sharp contrasts in regard to the framework the property taxes are embedded within nationally and the property tax designs found.

The BRICS states have been undergoing a fiscal decentralization process since the mid-1990s, which has been accompanied, to a certain extent, by a downward-shift of higher governmental duties and responsibilities. While fiscal decentralization may increase local accountability and revenue mobilization, fiscal transfers do not. Similarities and contrasts in regard to decentralization, local public service provision and transfers verify are as follows:

- ***Decentralization*:** The decentralization process has been going on for ten to fifteen years and is or was recently revised in most BRICS states. Two waves of decentralization could be identified: the first could be dated to the early 1990s, the second wave, revising the tax and expenditure assignments, started about ten years later. The decentralization process in South Africa and Russia began after the breakdown of apartheid and the USSR respectively. The process in

Brazil, India and China may be traced back to the external financial crisis that hit emerging economies worldwide since the mid-1990s. The main indicator of the first wave was when the Constitutions came in force regulating the division of taxing and expenditure powers: In Brazil the Constitution came into force in 1988, in Russia in 1993, India in 1992, China with its fiscal reform 1994, and in South Africa in 1996. As the vertical tax assignment structure is troublesome, known in the literature as the "tax-assignment problem" (MacLure 1983), a revision process seems or seemed to be necessary, thus explaining the second wave

- ***Local public services:*** All local levels of the BRICS states render de facto basic public services such as sewage, public transportation, streetlights, primary education, and basic healthcare. De jure and de facto, however, are less clear, falling apart especially in Russia and China, as functions there are not set clearly (China) or shared among government levels (Russia). Further, the assignment of pensions and unemployment insurances to the local level in China is atypical.
- ***Transfers*****:** South Africa has a formula-based transfer system that utilizes population, poverty and household income to determine the capita share for each municipality. Brazil, in turn, provides a conditional health transfer, wherein about 60% of total health costs are taken on by the federal government, the rest being split in equally between the state and local governments. Within the intergovernmental transfer system, however, smaller municipalities are favoured in Brazil. As evidence suggests that transfers induce municipalities to underutilize their own tax bases, the bias results in the importance of own-revenues being heightened in Brazilian metropolitan cities. In contrast, on average South Africa even small municipalities finance 90% of their local expenditures through own revenues; some metropolitan areas finance up to 98% of their expenditures by own revenues.

The property tax designs differ to a certain degree among the BRICS states. Brazil and South Africa levy property taxes only within municipal boundaries (urban areas). Russia splits the tax into one on land and another on buildings. Within India there are different property tax designs to be found, as the responsibility for these is with the states. China has different taxes on state-owned urban land and collectively-owned

farmland. Furthermore, they levy a specific tax on urban buildings. Generally, all BRICS make use of property values (capital/rental value or approximate market values taking into account location and other factors) as an assessment base. Similarities and contrasts in regard to the main characteristics of the tax design, such as tax base, tax assessment, billing, collection and enforcement, are as follows:

- ***Tax base*:** The tax base is predominantly defined by national law (central government), as is the case in Russia, China, and South Africa. In India, the state level is in power to define the tax base. Brazil is the only country where the tax base is defined locally. Regarding the nature of the tax base the BRICS states decided to make use both of taxing land and buildings together (Brazil, India, South Africa) and land and buildings separately (China, Russia). All BRICS states levy the property tax within urban areas, but some levy specific rural property taxes (Brazil, China).
- ***Tax assessment*:** All BRICS states make use of property values (capital or rental value) as an assessment base, i.e. the relative property value determines the relative tax burden. Brazil makes use of the "fair market value" by estimating the value of the land according to the market conditions and attributes of the property recorded within the cadastre. Russia's taxes are assessed according to the market value, reflecting the best and highest use ("cadastre value"). The assessment base in India differs among the municipalities: some municipalities make use of the annual rateable value (ARV) either with rent as a basis (hypothetical rent) or by determining the ARV with reference to location, type of construction, and nature of use.
- ***Tax rate*:** The tax rate is determined on the local level in Brazil, India and South Africa; China and Russia have centrally determined tax rate bands and local governments are allowed to set tax rates within the centrally determined range. Differential tax rates can be found in all states: While Brazil, India and South Africa have different rates according to use categories (residential, non-residential), China and Russia have specific non-residential taxes (China levies a *Business Tax* and Russia a *Corporate Property Tax*). South Africa applies ratios to set residential and non-residential rates in order to prevent tax exporting resulting from higher rates on commercial than residential properties. Split-rate taxation is applied only in China and Russia, with specific rates on land and buildings.

– ***Assessment, billing, collection and enforcement*:** Tax collection and administration fall to the local level in Brazil, China and South Africa. The local tax administration in China should, however, be seen as an extension of the State Administration Authority (SAT). In Russia and India the collection and administration of the property tax falls to the federal and state level respectively. Although the tax administration on the federal and state level may involve economies of scale and less issues of corruption, it may result in under-collection of local taxes due to a lack of incentives at the higher governmental levels. This is the case in Russia. The assessment process itself is difficult to outline due to scarcity of information. The same holds for the cadastre system in China and Russia, while Brazil and India have an incomplete and outdated system. Generally, the tax administration seems to be more efficient in larger municipalities, as property tax revenue is above-average (in total and per capita) in Brazil and India; 50% of the property tax collected nationwide in Brazil can be traced back to the 12 largest municipalities (out of 5,536)[68]. In India, the average per capita revenue is between Rs. 1334 in Mumbai and Rs. 25 in Patna.

The tax designs reviewed also throw light upon problems of property taxation in regard to political decisions and administrative practices:

Local politicians often prefer to rely on indirect taxes that are less visible. The property tax in Brazil comes second in importance after the *Tax on Services* (ISS). Some Indian municipalities rely heavily on *Octroi* (import taxes into urban areas). In doing so, they export the tax burden to neighbouring areas. The same may explain why there are higher taxes on commercial property than on residential property. In addition, local governments often rely on taxes levied on the transaction rather than the possession stage in order to minimize the number of taxpayers, as is the case in China. Additionally, local politicians are often in the position to exempt properties. This can involve issues of corruption and vote buying while also attracting less attention due to a smaller number of taxpayers. In India, for instance, the tax base is narrow and constricted; only 50-55% of the 715 million urban properties pay property taxes. All BRICS states assess (at least some part) of the value of properties.

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68 This large share may be explained by lower transfers to metropolitan areas and the rising importance of own revenue sources.

Re-assessment is another political concern. The large number of taxpayers and their feared reaction to higher tax bills may well explain the time gaps between re-assessments.

Politics is only one side of the coin, administration is the other. The property tax is highly resource intensive from an administrative perspective. This holds especially for Brazil and India, where a high rate of informal/illegal properties exist that are not included in the property cadastre, leading to a lack of clarity in regard to ownership and tenure rights. But all BRICS states have incomplete and/or outdated cadastre systems: Brazil and India are the most negative examples while South Africa is a relatively positive example; China and Russia are only in the early stages of introducing a cadastral system. Yet without a cadastral system all administrative functions such as assessment, billing, collection and enforcement are redundant. Another administrative problem that arises is illustrated in the Russian context, where the Federal Tax Service collects, among others, local taxes. Due to a lack of incentives, subnational taxes are under-collected.

4. Summary and Further Research Outline

The paper constitutes a framework for a following-up assessment of the property tax in the megacities of the BRICS states. The case studies chosen mirror the broad spectrum of property tax designs that can be found around the world. The diversity in the application of residential real property taxation within the five countries reviewed shows that every property tax design is unique even if overall normative criteria for a rational decentralized tax are the same. The institutional frameworks concerning tax-specific legislation and the political, fiscal and administrative environment vary among the BRICS states, but the problems on the local revenue (low property tax performance) and the expenditure side (high costs involved with urbanization/decentralization) are very similar. A normative and comparative framework for a property tax performance assessment in the BRICS states runs, of course, the risk of generalizing. However, there are useful lessons to be garnered from such an exercise. The property taxes of Brazil, Russia, India, China, and South Africa provide illuminating comparative insights into the nature of property taxes.

The property tax of a Tiebout-Oates-Hamilton-Fischel-type fits well into the BRICS states and their megacities: especially for the rich, but

also for the poor. However, public finance theory should not be seen as an overall normative yardstick. Zoning, i.e. the exclusion of households that are 'fiscally undesirable', would, according to Hamilton, prevent the poor from free-riding by limiting a megacity to those who can afford the 'membership fee'. However, poverty could be seen also as part of the "Triumph of the City" (Glaeser 2010). Urban poverty reflects municipal strength, not weakness. It shows that metropolitan cities are functioning as a catalyser of wealth generation: Urban economic and population growth turn cities into poverty fighters. Further, even though the property tax does not fully reflect the benefit principle as Tiebout's model suggests, at least some part of the property tax has a user charge character, as property taxes paid are transferred to local public services, which in turn are capitalized into property values. According to the Tiebout-Oates-Hamilton-Fischel world and rational public finance criteria, the property tax constitutes an appropriate financing instrument for municipalities. Municipal own revenues should constitute the backbone of local governments.

Beyond the benefits received attribute of property taxation, property is highly visible, immobile and concentrated. Visibility of property taxes enhances accountability from an economic (hard budget constraint) and from a political (democratic) perspective. In addition, visibility qualifies taxation of property of informal settlements (e.g. slums). Overall, immobility hinders tax noncompliance; property taxes are therefore non-distortionary. Concentration of property can be found especially in command-based economies, where financial markets are immature and property constitutes a 'secure' investment. Therefore, property taxation constitutes a reasonable tax base.

As all BRICS states' property taxes are ad valorem taxes (at the very least location factors are taken into account), unearned economic rents from rising property values due to urban population growth, capitalized public service provision and speculation could be skimmed by the state (if property is frequently re-assessed). In these cases, the landowner is a passive beneficiary who gets 'rich(er) while sleeping'. These effects fuel already booming property markets and further increase land demand despite land supply constraints. Middle- and low-income households are thereby priced out of the cities. Property taxes deter speculation by reducing the economic rent. In turn, the high numbers of vacant housing units in megacities can be reduced. Above all, property taxes generate local own-revenues: which can be seen as a main goal.

Generally, megacities should be revenue self-sufficient. They have major residential and commercial tax bases that steadily increase and they seem to have the administrative capacities. In Brazil and India, for instance, metropolitan municipalities levy above-average tax revenues (in total and per capita). The administrations of major cities within the BRICS states seem to rely not only on higher property values but also on above-average administrative capacities. Furthermore, South Africa illustrates that municipal self-sufficiency is not only public finance rhetoric: some metropolitan areas finance up to 98% of their expenditures through own-revenues raised by own-taxes. It is, therefore, not surprising that the property tax share of GDP among the BRICS states is the highest in South Africa.

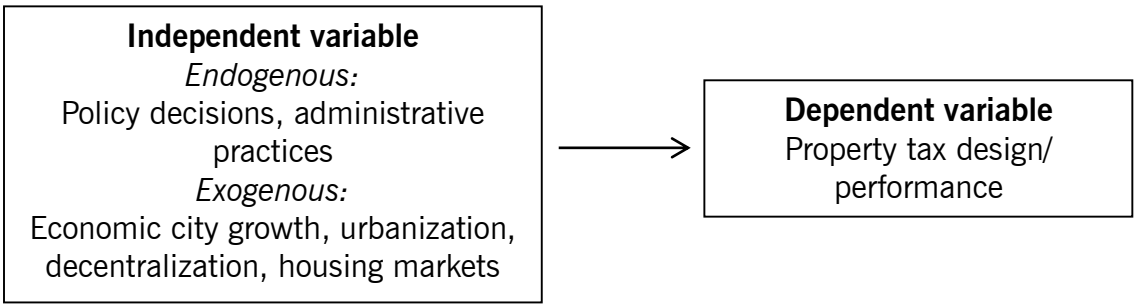
Answering the question of why property taxes do not realize their advantages within the BRICS states reveals the weaknesses of their property taxes. These weaknesses can be separated into the political and the administrative. Visibility and the large number of statutory taxpayers hinder political commitment to property taxes. Visibility is the reason why indirect taxes (e.g. *Tax on Services* in Brazil) play a greater role in the BRICS, they may well explain the Indian O*ctroi* (import taxes into urban areas), and why there are higher tax rates on commercial properties, as well why the transaction rather than the possession stage of property is taxed (China). In addition, visibility may explain the high rate of exemptions in the BRICS states. Politicians may also misjudge realities when designing property taxes; while the tax and assessment base are predominantly determined by national law, tax rates are set within the local sphere (Chinese municipalities determine their tax rate within a range given by Central Government). The political decisions about the tax base and assessment constitute, of course, the framework for the administrative practices. The tax administration is in charge of efficient and accurate data, tax levies, collection and enforcement. Yet immature markets as well as a lack of information and administrative capacities are major concerns in regard to efficiently fulfilling all administrative functions, especially the assessment and collection of property taxes.

Taking everything into account, one might summarize that the low yield of the property tax is a combined result of inappropriate tax policy and inefficient/inaccurate tax administration. Theoretically and practically, however, the weaknesses of a property tax can and should be outweighed by its strengths.

Further Research Outline

The performance of the property tax in the megacities surveyed in this paper will be analysed in a follow-up paper. The research design will be based on the Most Similar Case Design (MSCD). To define the dependent variable – the property tax design and performance – it was first necessary herein to identify the independent variables that follow from political decisions and administrative practices and explain the present performance. Moreover, the independent variable could be further specified into those that were endogenous and those that were exogenous. Endogenous variables are those linked to the tax design/structure (tax base, assessment/valuation, tax rates, etc.). Exogenous variables are economic city growth, urbanization, decentralization and housing markets, all of which may have an effect on property values and therefore on property tax revenues. Thus while endogenous variables have a direct impact on property values, the latter may have an indirect impact via property values.

Figure 2: Independent Variables for Property Tax Performance



Source: Author.

Regarding the MSCD, the key aspects of the study can be encapsulated in the following research questions regarding BRICS megacities:

- Is the property tax and its design explicitly (or implicitly) shaped to help solve or address connected issues such as urbanization, decentralization, (city) economic growth and affordable housing (exogenous independent variables) and what influences do these variables have on property tax performance?
- How do policy decisions and administrative practices determine the property tax performance within each BRICS megacity and what lessons can be learned from a comparative perspective?

- Could a state-of-the-art property tax for megacities in transition countries be identified?
- What is the highest potential of the property tax when constrained by normative considerations?

To gain insights regarding megacities' individual political and administrative (independent variables) impact on the tax performance one has to consider normative public finance theory (criteria for a rational local property tax) and the stylized facts of the property tax design. As policy decisions are laid out in law they are more easily identified, while administrative practices are more difficult to identify. While the first is discussed within normative public finance theory; administrative practices have to be discovered through ratio studies and interviews. Following from this paper, all aspects that have to be researched in more detail are outlined in **annex 3**.

The research project will close a gap in the large and vibrant literature on public finance in developing/transition countries. Comparative case studies such as this one, with focus on megacities, do not yet exist.

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http://www.china-tax.gov.cn/n6669073/n6669133/6887407.html

- **South Africa**; South African Revenue Service (SARS): http://www.sars.gov.za/FAQs/

A1: Property Taxes and Other Taxes on Land and Buildings

Real property taxes on residents within urban areas are marked (*)

	Types of taxes on land and property	Effective date	Legal incidence (Taxpayer)	Tax base	Assessment base
BRAZIL	**Urban Property Tax (IPTU – Imposto sobre a Propriedade Predial e Territorial Urbana)*		Property owner, occupier, user	Tax on urban land and buildings	Market value
	Rural Property Tax (ITR – Imposto sobre a Propriedade Territorial Rural)		Property owner, occupier, user	Tax on rural land	Market value (taxing competence at central government level)
	Real Estate Transfer Tax *(ITBI – Imposto sobre Transmissão Intervivos de Bens Imóveis)*			Tax on real estate transfers	
	Income Tax			Capital gains (difference sales price and acquisition cost), after 2005 a reduction factor may be applied, exemptions apply if sales price does not exceed BRL 20,000, the money is re-invested in new housing within 180 days, acquired before 1970	

	Types of taxes on land and property	Effective date	Legal incidence (Taxpayer)	Tax base	Assessment base
RUSSIA	**Individual Property Tax*	1991	Property owner	Residences, apartments, rooms, country homes, or other structures, premises and buildings, as well as ownership shares in such property	Based on data provided by the cadastral and registry federal authority
	Corporate Property Tax	1991	Businesses in possession of property objects which are identified as taxable objects	Immovable and movable assets recorded in the balance sheet as fixed assets	Annual average value of property
	**Land Tax*	2006	Owners of land (organizations, individuals and individual entrepreneurs)	Land plot	Cadastral value

	Types of taxes on land and property	Effective date	Legal incidence (Taxpayer)	Tax base	Assessment base
INDIA	**Property Tax* (Delhi as example)	NDMC Act 1994		Land and buildings.	Not more than 30% of rateable value
	Wealth Tax	1957	Individual, Company	Benefits derived from property ownership. Net wealth (including urban land, other and buildings, excluding let-out property and commercial complexes)	Market value
	Capital Gains Tax			Capital gains (difference between the money received from selling the asset and the price paid for it.) minus deductions (cost of acquisition, costs of improvement and expenditure incurred in connection with the transfer of capital assets are deducted from the full value of consideration)	
	Service Tax	1994		Rent on immovable property is subject to service tax.	Gross Value
	Stamp Duty/Registration Fees			Immovable property, property transactions	Market Value

	Types of taxes on land and property	Effective date	Legal incidence (Taxpayer)	Tax base	Assessment base
CHINA	**Urban and Township Land Use Tax (LUT)*	1988	Domestic enterprises and individuals	Area of land occupied	Area-based
	**House Property Tax*	1986	Domestic enterprises and individuals	Original value, if not available: comparable sales approach or rental income	Residual value (original value minus 10%-30%)
	Urban Real Estate Tax (URET)	1951	Foreign enterprises, Chinese enterprises with foreign investment	- Buildings and land separately or - real estate (land and buildings) or - rent	- Standard[69] Value - Consolidated Standard Value - Standard Rental Value
	Farm Land Occupation Tax	1987	Domestic enterprises and individuals, foreign enterprises	Area of farmland occupied	Area-based

69 *Standard Value of Buildings*: local market value and current price of building construction; *Standard Value of Land*: local market value; *Standard Value of Real Estate/Consolidated Standard Value*: market value; *Standard Rental Value*: local general rental value. The Standard values are specified in regard to different districts, categories and grades. 10-30% deduction is applied to standard value.

Business Tax	1994	Entity and individuals	Transfer of land-use rights, and immovable properties (price spread between buying and sales price for buildings since 2003)	Market price
Tax on the Use of Arable Land		Entities and individuals	Arable land that is used to build houses or for other non-agricultural construction purposes	
Land Appreciation Tax	1994	All	"Appreciation amount", proceeds received at transfer stage of real estate minus (i) sum paid for land use rights, (ii) land development cost, (iii) building construction cost, (iv) taxes related to transfer of real estate	Net market value
Deed Tax	1950; revised 1997	All	Purchase, transfer or exchange of property	Self-reported value of and houses transfer; Transaction value

	Types of taxes on land and property	Effective date	Legal incidence (Taxpayer)	Tax base	Assessment base
SOUTH AFRICA	*Property rates* (Municipal Property Rates Act (Act No. 6 of 2004)	2005	Landowners	Land and improvements	Market Value
	Transfer duty (Transfer Duty Act, No. 40)	1949	Natural persons and legal entities	Acquisition of legal title to a property; No transfer duty is payable if the transaction is subject to VAT	Value of the purchase price or fair value of immovable property
	Estate Duty	1955	Beneficiary	Estate duty is levied on the death of a person and is not limited to residents; Certain admissible deductions from the total value of the estate are allowed	"Dutiable amount of the estate" exceeding R3.5 million
	Capital Gains Tax	2001	Individuals, Companies, Trusts	Part of the income tax system and is based on capital gains made on the disposal of assets	Capital gain; difference between the proceeds and the base cost

A2: Property Tax Rates (and other rates)

	Types of taxes on land and property	Tax rate	Local discretion over tax rates
BRAZIL	**Urban Property Tax (IPTU – Imposto sobre a Propriedade Predial e Territorial Urbana)*	Varies according to the municipality (range between 2%-5%), there is no minimum or maximum rate fixed by federal or state laws. Higher rates are set on vacant land	Municipal
	Rural Property Tax (ITR – Imposto sobre a Propriedade Territorial Rural)	From 0.03 % to 20%	Federal tax
	Real Estate Transfer Tax *(ITBI – Imposto sobre Transmissão Intervivos de Bens Imóveis)*	Usually 2%	Municipal

	Types of taxes on land and property	Tax rate	Local discretion over tax rates
RUSSIA	**Individual Property Tax*	Tax rates are determined within the following ranges: Lower than 300,000 Rubles: 0.1% (inclusive) From 300,000 Rubles to 500,000 Rubles: within 0.1 – 0.3 % (inclusive) Higher than 500,000 Rubles: within 0.3 – 2.0% (inclusive)	Tax rate is determined by the legislative acts of representative bodies of municipal government

	Corporate Property Tax	Is established by laws of the subjects (i.e. regions) of the Russian Federation and cannot exceed 2.2% of taxable value	Regional Tax
	**Land Tax*	Rates are established by local legislative acts and cannot exceed the rates specified by Russian Tax Code: 0.3% for agricultural, residential and utilities infrastructure lands; 1.5% for other types of land use. Tax rates may be differentiated subject to allowed types of land use	Local Tax

	Types of taxes on land and property	Tax rate	Local discretion over tax rates
INDIA	**Property Tax*	Varies from city to city. Tax rates in ARC range between 10%-240%. Area based: 20%	Municipal
	Wealth Tax	1% on the value that exceeds INR 3m	
	Capital Gains Tax	Differentiation with respect to period asset was held; short-term (<36 months) or long-term (>36 months) 20% short-term 30% long-term	Levied by the Central Government
	Service Tax	Gross value of taxable services, including services rendered for construction projects, property management and works contracts	Gross Value
	Stamp Duty/Registration Fees	Stamp Duty: different rates depending upon the nature of the transaction, i.e. sale, lease, release, etc. The rates generally range between 5% and 15%	Levied on conveyance by the state government

	Types of taxes on land and property	Tax rate	Local discretion over tax rates
CHINA	**Urban and Township Land Use Tax*	(1) Large cities: RMBY 0.5-10/m^2 (2) Medium-size cities: RMBY 0.4-8/m^2 (3) Small cities: RMBY 0.3-6/m^2 (4) Counties, townships and mining districts: RMBY 0.2-4/m^2.	Central Government sets ranges, Provinces determine range within given ranges by central government, municipalities and counties classify land and set applicable tax rate within the range of provinces.
	**House Property Tax*	The tax liability is computed as 1.2 percent of the original value of the property less an exemption amount ranging between 10 and 30 percent. For rental houses, the tax liability is 12 percent of rental income.	
	Urban Real Estate Tax	(1) Buildings: 1% of standard value of buildings (2) Land: 1.5% of standard value of land (3) If not applicable: 1.5% of consolidated standard value (4) If not applicable: 15% standard rental value	
	Farm Land Occupation Tax	(1) county with ≥ 1one mu of farmland per person: 2-10 yuan/m^2; (2) county with 1-2 mu farmland per person: 1.6-8 yuan/m^2 (3) county with 2-3 mu farmland per person: 1.3-6.5 yuan/m^2 (4) county with ≥ 3 mu farmland per person: 1-5 yuan/m^2 Residents: Half of these rates are applied *one hectare equals 15 mu	County; for provinces, autonomous regions and municipalities at provincial level the Ministry of Finance has assessed the average tax per unit (ranges from 2,5 to 9 yuan)

	Business tax	5% land and immovable/movable property (including transfer of land use rights)	
	Tax on the Use of Arable Land	The tax amount standard ranges from RMB 5 to 50/m^2	
	Land appreciation tax	Progressive tax rates from 30% to 60%: (1) 30% appreciation amount not exceeding 50% of the sum of deductible items (2) 40% appreciation 50-100% of the sum of deductible items (3) 50% appreciation 100-200% of the sum of deductible items (4) 60% appreciation exceeding 200% of the sum of deductible items	
	Deed Tax	3-5%	Provinces determine rate within the range.

	Types of taxes on land and property	Tax rate	Local discretion over tax rates
SOUTH AFRICA	*Property rates*	Differential rates (residential, non-residential) possible but within a ratio set by national government. Ratios are set for agricultural properties (1:0.25), public service infrastructure (1:0.25) and public benefit organizations (1:0.25)	Municipal
	Land Rent	M 0.05-0.10 a year per m^2 for residential land; M 0.25-0.30 a year per m^2 for commercial land. Levy of 5% for late payment	

	Real Estate Transfer Duty	Rate for all persons is on a sliding scale: 0 - 600,000 Rand: 0% 600,000 - 1mln Rand: 3% on the value above 600,000 1mln - 1.5mln Rand: 12,000 Rand plus 5% on the value above 1mln Rand 1.5mln and above: R37,000 plus 8% on the value above 1,5 mln Rand Exempt: Registered VAT vendor, Public benefit organization	National (Minister of Finance)
	Estate Duty	20%	
	Capital Gains Tax	Maximum effective rate for Individuals 13.3%, for Companies 18.6%	

A3: Parameters for inter-municipal (BRICS) comparison[70]

- **Decentralization**
  - Fiscal decentralization (revolutionary or evolutionary; control over functions)
  - Administrative decentralization (deconcentration, delegation, devolution)
  - Revenue (total revenues and grants, total revenues, tax revenues, total property tax revenue, transfers from other levels of national government, user charges…) and expenditure structure (total expenditures, general public services such as housing, health, education, recreation, cultural and religious affairs and services, transportation…)
  - Corruption index
  - ?

- **Urbanization**
  - (Estimates) population total
  - Population density
  - (In-)migration rate
  - Suburbanization (urban sprawl) rate
  - Crime rates
  - ?

- **Urban Economic Growth**
  - Real GDP growth rate (of total GDP)
  - Municipal GINI coefficient
  - Households below poverty line
  - Unemployment rate
  - Inflation rate
  - Land ceiling rate
  - Change of land use
  - Quality/quantity of urban infrastructure
  - ?

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70 Based on a comparative analysis of the property tax in Latin America by the Lincoln Institute for Land Policy (http://www.lincolninst.edu/resources-tools/property-tax-in-latin-america-comparative-analysis/access-to-data; on an online seminar held by *Riël Franzsen* 2014; and on *Mathur* et al. 2009.

- **Housing Market**
  - Characteristics of market (transparent, state control, level of market efficiency…)
  - Type of housing market (rental/owner-occupied)
  - Housing stock
  - Vacancy rates (housing shortage)
  - Number and dimension of informal settlements
  - Trend of housing prices
  - House price to income ratio, house rent to income ratio
  - House ownership
  - Restrictions on housing (height, land-use, Floor Space Index, Floor Area Ratio…)
  - Household size
  - ?

- **Property Taxes**

  - **Legal Framework**

Legislation

- Name of tax and abbreviation, effective date
- Legislation type: constitutional (federal), local government legislation (district, county, municipal), ministerial regulation, municipal regulation
- Legislation name

Competences and Obligations

- Type of jurisdiction/responsible institution that determines tax base, assessment base, levies tax, sets tax rates, grants exemptions, collects and enforces the tax, is entitled to the revenue

Tax Authorities and Taxpayers

- Tax authority (national gov., state/provincial gov., municipal gov.)
- Legal taxpayer (owner, possessor, occupier, usufructuary, other)
- ?

Taxable Event

- Possession/transaction stage (once-off payment or recurrent)

Tax Base (Tax Object)

- Scope of base (urban only or urban and rural)
- Nature of base (land only, building only, land and building)
- Categorization of property (residential, non-residential, commercial, industrial, governmental, agricultural)
- ?

Tax Rates

- Responsibility (local discretionary power, minimum/maximum rates?)
- Determination (legislation, decided annually)
- Nominal and effective rates
- Urban properties (uniform, differential rates: vacant land, residential/non-residential property, improvements)
- Tax rate corridors (minimum/maximum rates, ceiling) defined by higher level government
- Surcharge and/or rate reduction
- ?

Exemptions

- Properties occupied by entities (educational, research, cultural, charity, religious...)
- Property type or use (government buildings, residential property, historical heritage...)
- Personal (students, military, war veterans, low income, pensioners...)
- Tax holidays
- ?

- **Administrative Aspects**

Tax Assessment

- Definition (Area or value: area-based, site-value, market value, rental value…)
- Assessment process (estimates of market value: sales, income, cost approach)
- Information provided by taxpayer
- Frequency (adjustment of assessment with indexation, inflation…)
- Tax caps
- ?

Property Cadastre

- Level of government responsible (federal, state/provincial, municipal)
- Type of records available (sale price, results of previous assessment, declaration of property value for income tax purposes…)
- Information sharing with other
- Information provided (physical and postal address, property identification number, explanatory variables to determine value such as size of property, location…)
- Average period in between property inspections
- Property information declared by tax payer (property characteristics, change in property rights, change in area, use etc.)
- Organization of cadastre (file cards, micro film, computer system, GIS…)
- Cadastral maps (paper, digital, other)
- Latest survey and data collection
- Method of updating cadastral data
- Data management (data cleaning, quality assurance)
- Other uses of cadastre

Operating Resources/Management

- Publications about the property tax (advertising, manuals, bulletins…)
- Operating resources and services for taxpayers (internet, service center…)

- Services for taxpayers (access to cadaster data, payment of tax, access to legislation...)

Property Valuation

- Level of government responsible
- Responsibility of assessment (finance department, tax bureau, municipal-/private assessor, self-assessment...)
- Qualification of assessors (architects, engineers, tax inspectors...)
- Assessment methods (sales comparison approach, cost approach, income approach...)
- Techniques/statistics used (descriptive statistics, multiple regression...)
- Measures used to control assessment performance (coefficient of variation, mean/median, price relation differential...)
- Assessment cycle and forms of adjustment (inflation index, property price index, property price index for classes of property, multiple regression models...)
- Date of last assessment
- Use for other purposes (income tax, tax on real estate transfers, inheritance tax...)
- National/regional standards

Objections and Appeals

- Provisions at the administrative level: agency, terms (time from the date to file appeal), procedures (administrative process, new assessment, inspection...)
- Objections and appeals: agency, terms, procedures

Penalties

- Tax penalty, interest on late payment, tax foreclosure, property loss, other

Distribution, Incentives

- Distribution of revenue (% of government level)
- Performance incentive (collected value is related to tax revenue or funds/transfers)

Changes in the Property Tax

- Administration Modernization, re-appraisal, property tax reform…
  - **Tax Performance**

Tax Collection

- Number of properties (properties recorded in cadastre & properties paying tax in the period differentiated between vacant land, residential property, non-residential property)
- Main problems affecting performance of property (out of date register, tax evasion, tax fraud, corruption, legal obstacles…)

Tax Benefits: Immunities, Exemptions, Concessions

- Number of units/properties, non-collected revenue

Property Cadastre

- Number of properties (vacant land, residential property, non-residential property)

Property Assessment

- Assessed value (vacant land, residential property, non-residential property)
- Assessment uniformity according to coefficient of variation (%)

Objections and Appeals

- Number of objections on administrative level
- Number of legal appeals

  - **Tax Indicators** (calculation based on data collected from tax performance)

Importance of the tax in terms of revenue

- Property tax revenue as % of municipal-/state GDP
- Property tax collected per capita (in US$)
- Property tax revenue as % of total tax municipal-revenue

Efficiency of tax collection

- Administrative cost % of revenue expected from property tax

- Administrative cost % of revenue collected from property tax

Property cadastre

- Composition of property recorded in the cadastre by property-use class (%)
- Ratio of cadastre coverage (%)

Assessment Performance

- Assessment level (%)
- Composition of total value of property assessments by sector (%)
- Weighting of assessments in terms of number of properties recorded in the property cadastre, by property-use.
- Average of assessed value

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