

The Property Tax System in Brazil¹

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This chapter outlines the structure of the property tax system in Brazil. As the tax is administered at local government level, the system in the city of Porto Alegre is used as a case study. Porto Alegre is the capital of the state of Rio Grande do Sul, which is the southernmost state of Brazil, and is one of the chief industrial and commercial centres in the country. The city has approximately 1.5 million inhabitants, being the largest city in the South Region.

General Introduction to the Property Tax System

◆ *Name of the tax*

Property tax is defined in Brazil as an annual tax on urban land and buildings (*Imposto sobre a propriedade predial e territorial urbana - IPTU*). There are other taxes on real property, such as the Tax on Real Estate Transfers (ITBI) and a Tax on Rural Land (ITR), which is administered at central government level. Income raised from letting real estate properties is also taxed. This chapter is limited to examining property tax only.

◆ *Overview*

The National Fiscal Code (CTN) lays down the fundamental principles of the property tax in Brazil. The code defines the components of the tax base, the tax liability, and the general exemptions from the tax base. Other specifications concerning property taxes are defined at local government level. As a consequence, procedures related to establishing the tax base and rates for the property tax may vary considerably around Brazil.

◆ *Origins & evolution*

Since the reform of the taxation system undertaken in 1967, the property tax has been imposed at local government level. Until 1988, the only sources of raising revenue from taxes administered by municipalities were the property tax and a tax on services (ISSQN).

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Large transfers of revenue from central government and estates to municipalities complemented the revenue raised by the collection of the cited taxes. As a result, local authorities did not have much interest in collecting their own taxes. In summary, both a low level of effort in the collection of their own taxes and an extreme dependence on transfers of revenue were observed in Brazil. Taxpayers used to pay insignificant property tax bills.

Since the 80's, the progressive and continual reduction in transfers from other government levels to municipalities has been contributing to the financial impoverishment of local authorities.

In contrast, local authorities have been required to undertake large public investments in infrastructure equipment and services due to a population explosion and a rapid spread of the urban area over recent last decades in most large Brazilian cities.

Therefore, local authorities are facing the challenge of recovering revenue using their own sources of taxation in order to provide their community with, at least, the minimum standards of living.

The Brazilian Constitution, promulgated in 1988, partially favoured local authorities, allowing the imposition of two new sources of taxation at local government level. Additionally, according to the constitution, property tax (IPTU) could be used as an instrument of urban policy. In this context, progressive rates over time could be applied to promote a rational use of urban land with social benefits to the community at large.

An extensive series of studies identify that property tax is the most inefficiently explored source of revenue at local government level in Brazil (See Alonso, 1991; and Smolka and Furtado, 1996). The need to explore the potential of property tax for raising revenue is largely recognised by government authorities, urban economists, scholars and fiscal experts.

Due to the high visibility of property tax, the efforts to improve its revenue collection often result in the tax being highly unpopular. As a consequence, government authorities that effectively undertake initiatives in this sense are subject to extensive pressures.

◆ *The place of the tax within the general system*

The Brazilian Constitution (1988) outlines the basic structure of the taxation system, fixing taxes that can be imposed at Municipal², State and Federal³ government level. Local authorities can institute⁴ Property Tax (IPTU), Tax on Real Estate Transfers (ITBI) and Tax on Services (ISSQN).

◆ *Statistics on the size of the tax base*

Table 1 illustrates the pattern of real estate property recorded in 1996 in the city of Porto Alegre. There were approximately 472,000 real estate units in total. The residential segment accounted for about 81% of the properties and more than 55% of

² - Local Authorities

³ - Central Government

⁴ - The tax on sales of liquid and gas fuels (IVVC) was abolished from the taxation system in 1996.

them were residential apartments. Non-residential properties and undeveloped sites (vacant land) represented approximately 13% and 5% of the real estate units respectively.

Table 1- Pattern of Real Estate Property in Porto Alegre (1996)

Property-use class	1996	%
Vacant land	25,193	5.35
<i>Sub-total</i>	<i>25,193</i>	<i>5.35</i>
Houses	119,543	25.37
Apartments	263,563	55.94
<i>Sub-total</i>	<i>383,106</i>	<i>81.32</i>
Stores/Stores/Shops	22,726	4.83
Offices	37,211	7.90
Industries, factories, warehouses	1,747	0.37
Miscellaneous ^{*5}	1,140	0.24
<i>Sub-total</i>	<i>62,824</i>	<i>13.33</i>
Total (units)	471,123	100

Revenue

◆ *Total revenue raised*

At national level, revenue from property taxes represents 3.26% as a percentage of the total revenue from taxes in Brazil (World Economic Forum, 1994), or 0.8% of gross domestic product (Meneghetti Neto, 1995). Property tax is the second most important source of revenue from taxes at local government level.

When all the capitals of states in Brazil are considered together, property taxes represent on average 30% of the revenue from taxes raised at local government level (Smolka and Furtado, 1996). For instance, the property tax contributed in 1992 approximately 28% of the revenue from local taxes in Rio de Janeiro, the second largest city in Brazil. It represented only 10% of the total revenue in the municipality.

Table 2- Revenue Sources in the City of Porto Alegre

Revenue	1995	
	US \$	%
<i>Group 1- Current Revenue</i>	<i>432,343,591</i>	<i>97.97</i>
a. Revenue from taxes	165,253,361	37.44
b. Revenue from assets	25,715,856	5.83
c. Transfers from central government	43,225,285	9.80
d. Transfers from state	155,851,302	35.32
d. Others	42,297,787	9.58
<i>Group 2- Capital Revenue</i>	<i>8,941,620</i>	<i>2.03</i>

⁵ - Including schools, hospitals, hotels, motels, theatres, public buildings, etc.

Capital revenue	8,941,620	2.03
Total	441,285,211	100

Table 2 illustrates the revenue sources in the city of Porto Alegre. As with the majority of the cities in Brazil, the transfers from the State still represent an important source of revenue.

Table 3 illustrates the distribution of revenue raised from taxes in the city of Porto Alegre. The property tax contributed approximately 32% to the total amount collected in 1995. The revenue from taxes increased in almost 61% from 1993 to 1995.

Table 3- Distribution of the Revenue from Taxes in the City of Porto Alegre

Revenue from Taxes	1995	
	US \$	%
Property tax (ITPU)	52,170,173	31.57
Tax on real estate transfers (ITBI)	22,537,515	13.64
Tax on services (ISSQN)	86,868,734	52.57
Tax on sales of liquid and gas fuels (IVVC) ⁶	2,965,512	1.79
Charges for services	711,427	0.43
Total	165,253,361	100

Table 4 indicates the distribution of the total revenue from property tax considering the different property-use classes in 1996. Residential properties accounted for approximately 39% of the tax revenue. However, they represented more than 81% of properties. In contrast, only 5% of them were vacant sites (undeveloped sites) but they accounted for almost 29% of the tax revenue.

Table 4- Contribution of Property-use Classes to Property Tax Revenue in Porto Alegre (1996)

Property-use Class	Units [%]	Revenue [%]
Vacant Land	5.35	28.75
Residential	81.32	39.15
Non-residential	13.33	32.10
Total	100	100

◆ *Comparison with other taxes*

Taxation in Brazil represented approximately 25% of gross domestic product (GDP) in 1992 (World Economic Forum, 1994). Income tax represented only about 1.5% as a percentage of GDP, while taxes on goods and services represented approximately 12% of GDP. As discussed earlier, revenue from property taxes represented only about 0.8% of GDP (Meneghetti Neto, 1995).

⁶ - IVVC was abolished in 1996.

Meneghetti Neto (1995) highlights the regressive structure of the taxation system in Brazil, since consumption is its principal source. Taxes on consumption tend to absorb a larger percentage of income from low-income than high-income earners. The preference for taxes on consumption associated with the huge inequality of income distribution suggests that the taxation burden is unfairly distributed in Brazil.

◆ *Purpose of the tax*

The property tax revenue is spent in an integrated way with the other sources of revenue administered at local government level. Local authorities are responsible for financing an extensive number of public services in Brazil.

They supply and maintain the water, sewerage, sanitation, public illumination, and traffic system. They are responsible for refuse collection and disposal, and city cleaning. Additionally, they control and manage public transport services. Their responsibilities include the provision and maintenance of public areas, such as parks, recreation areas, and centres for entertainment, sports and culture activities. They are partially responsible for education, health services, environmental control and social services. Moreover, they have the difficult task of providing assistance to low-income families in the area of housing.

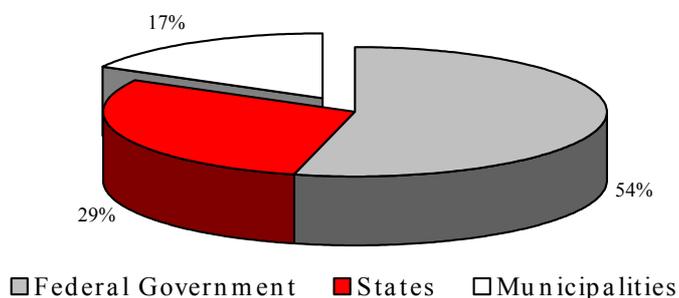
Municipal legislation lays down the minimum spending limits for expenditure on education and health services in Porto Alegre. Thirty per cent and thirteen per cent of the total revenue must be spent in education and health services respectively. The difference between the total revenue and the expenditure on personnel and maintenance of essential urban infrastructure and services is spent on public investment.

In 1989, the local authority in Porto Alegre implemented a type of participative budget scheme (*Orcamento Participativo*). The plan for expenditure with the revenue allocated to investment is defined in conjunction with the community. It means the community is organised for discussing, defining priorities and deciding the activities that local government will supply. The city pioneered this scheme in Brazil and the initiative has achieved high popularity at national level.

The public budget is approved on an annual basis by a Chamber of Councillors, elected by the local community and responsible for taking decisions on matters concerning strictly local affairs.

From 1992 to 1995, the distribution of total revenue according to the three levels of government in Brazil followed the model illustrated in Figure 1 (PMPA: SMF – Gaplan, 1995). Local authorities often argue that the division is not fair and the revenue administered at local government level is insufficient to cover their constitutional responsibilities with the community.

Figure 1- Distribution of the Total Revenue from 1992 to 1995



◆ *Level of government for whom the tax is a revenue source*

Local authorities collect the property tax in Brazil.

◆ *Importance of the tax*

Property tax in Brazil is important for two main reasons. Firstly, the tax is the second most important source of revenue from taxes imposed at local government level. When efficiently administered, the property tax can provide local authorities with a large yield, guaranteeing certain independence from other government levels. Secondly, the property tax can be used as an instrument of urban policy for deterring land speculation and for promoting urban development and a rational use of the urban land. Unfortunately, few local authorities in Brazil are making the best use of this powerful instrument.

Basis of Assessment

◆ *Tax base - Unit of assessment*

The basis of assessment is the market value of each individual real estate property. The tax covers all property-use classes, including vacant land, residential and non-residential property. Classes of properties exempted from the property tax will be discussed later.

◆ *Components of the tax base: Land, buildings and improvements*

The National Fiscal Code (CTN) establishes the property tax base, which is defined as that market value considering land and immovable improvements attached to land. Therefore, the tax base does not vary among different local authorities in Brazil.

◆ *Market value, capital value, annual value, site value - Statutory definitions*

Slight variations can be observed in the usual concepts adopted for defining market value in Brazil. The basic legislation in Porto Alegre defines market value as “the most probable price in terms of money for which a property would sell in a competitive and open market, assuming that seller and buyer are acting prudently and knowledgeably, without any special stimulus” (*Legislacao Municipal de Porto Alegre - Basic law of Porto Alegre, 1973*).

Responsibility for Making the Assessments

◆ *Assessment departments*

Local authorities are entirely responsible for valuations for taxation purposes. In other words, there is no central office responsible for assessing properties at national level. In Porto Alegre, the tax is administered integrally by the Municipal Secretary of Finance. There are three departments involved in establishing the tax base for taxation purposes.

A department is responsible for assessing properties. The internal staff performs all activities needed for real estate valuation. Another independent department is responsible for keeping the real estate cadastre updated. Finally, there is a department

responsible for carrying out inventories on properties. Due to the dynamic growth of the city with the consequent introduction of new dwellings and renovation of existing ones, a team of fiscal agents continually collects information about the physical characteristics of the properties. This information is provided to the sector responsible for the real estate cadastre and the records about the properties are updated.

There is a public company that provides computational support principally in the management of the real estate cadastre.

◆ *Qualification of assessors*

In Porto Alegre, the staff responsible for real estate valuation is composed of administrators, architects, civil engineers and economists. Additionally, a group of under-graduate assistants support the technical team in a large number of activities, including collecting, recording and mapping information.

◆ *Use of private sector assessors*

Alternatively, local authorities can decide to hire external services provided by private offices to establish the property tax base.

◆ *Frequency of valuations*

No legal requirement exists concerning intervals between general valuations. However, all properties must be assessed at the same assessment date. Since 87, general valuations took place in 1988, 1990, and 1991 in Porto Alegre, and the next revaluation is planned for this year (1997).

◆ *Notification of assessed value & valuation roll*

In Porto Alegre, tax bills are sent to taxpayers on an annual basis at the beginning of year. Tax bills indicate not only the amount to be paid, but also the basic characteristics of the property, its assessed market value and the tax rate. An information leaflet describing the basic procedures undertaken for establishing the tax is also provided to all taxpayers. Additionally, a brief valuation list is published in an official newspaper containing summarised information about taxpayers and their tax bills.

◆ *Intervals between general revaluation*

For years without valuations, the tax base has been readjusted generically according to the prevailing inflation rate in Porto Alegre. Some capping systems have been adopted in order to guarantee that taxes between consecutive periods do not overtake the ability-to-pay.

Appeal Procedures

◆ *Appeal system*

Taxpayers can consult, at any time, the local authority in Porto Alegre in order to understand the procedures used for assessing the property tax base or to check the cadastral information about their properties.

In the case of dispute over tax bills, taxpayers can apply for revision. Proposals for re-assessing any individual property are accepted up to 30 days from the delivery of the tax bill to taxpayers. When appealing against a bill, taxpayers must identify their reasons for non-agreement with the tax bill. The local authority analyses the proposals and informs taxpayers about its decisions.

If an application to alter the tax bill is not supported by the local authority, taxpayers can further object against the decision to a Municipal Councillor that revises the decision undertaken in the first instance.

After the two levels of objections, in case of dispute between taxpayers and the local authority, a formal appeal can be made to the Court of State and, finally, to the Supreme Court of the Nation.

◆ *Alterations on assessments*

Valuations for taxation purposes are altered in the following situations:

- The local authority realises that there was an inaccuracy in the procedures undertaken for assessing the property, such as the valuation being based on an incorrect record of the physical characteristics of the property.
- The local authority agrees with the proposals to alter the tax bill.
- The judiciary power requires the local authority to alter the tax base.

Methods of Assessment

◆ *Mass appraisal technique*

The cost approach⁷ is the method employed traditionally for assessing real estate property for taxation purposes in Porto Alegre. According to the cost approach, the following model establishes the property market value:

$$MV = LV + BC \quad (1)$$

Where MV is market value, LV is land value and BC is building cost.

$$LV = ULV * LA \quad (2)$$

$$BC = UBC * BA * (1 - D) \quad (3)$$

Where ULV is a typical land value per unit land area [US\$/square metre], LA is land area [square metre], UBC is a typical building cost per unit building area [US\$/square metre], BA is building area [square metre], and D is the depreciation factor [%].

The land value is estimated according to the methodology described below.

- The city is classified into 88 urban zones that represent a type of stratification in geographic areas with similar characteristics.

⁷ - Or method of the reproduction cost as defined in the Brazilian Standards for Urban Real Estate Valuation.

- Data related to sales of vacant land (undeveloped sites) that have been sold in a period close to the assessment date are collected for each zone.
- An average land value per unit land area is calculated for each zone according to the information collected about sales of vacant land.
- The typical land value per unit land area established is adjusted for each site, considering basically two groups of information, which are the infrastructure equipment and services, and the physical characteristics of the site.

The infrastructure indicators taken into account and their adjustment factors are summarised in Table 5. These factors are applied to the typical land value, when the site is not supplied with these infrastructure facilities. A large group of objective factors defined deterministically are employed in trying to adjust the typical land value to each individual site.

Table 5- Adjustment Factors for Land Value

Infrastructure Equipment	Adjustment Factor
Electric light and power	if not, 0.85
Water supply	If not, 0.85
Sewer System	if not, 0.85
Paved roadway	if not, 0.95
Public School	if not, 0.90

According to the specific physical characteristics of each site, the typical land value per unit land area can be further adjusted. Adjustments in typical land value are applied to an extensive number of situations. The basic adjustments are due to site depth, shape and corner influence. The present section only summarises the most common adjustment criteria.

For non-standard sites, an adjustment factor is computed according to equation (4). Standard sites are sites with 30.00m or 40.00m of depth according to the zone in which they are situated.

$$AF = \sqrt{SD / RD} \quad (4)$$

Where AF is adjustment factor, SD is standard depth for the zone, and RD is the real depth of the site.

Additional reductions are provided for sites without frontage to a public street (60% reduction in the typical land value), for triangular sites (30% reduction in the typical land value), and for sites with irregular shapes. Adjustments due to corner influence are attributed up to a 30% increase in the typical land value.

Considering all the adjustment factors, the adjusted land value can not be greater than the typical land value established for each zone.

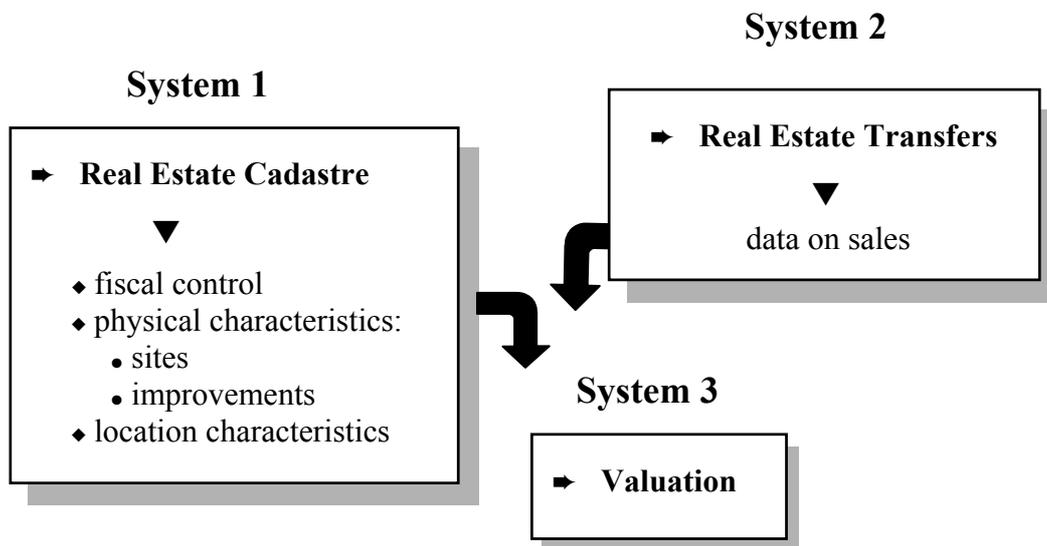
- For each individual site, the land value is estimated according to equation (2) considering the typical land value per unit land area, already adjusted, multiplied by the land area of the site.

The building cost is estimated considering a cost per unit area of constructing various types and styles of building. The estimated costs are arranged for classes of building in cost tables and they are used to estimate costs for each individual property. There are about thirty different typical building costs defined, classified according to type of building, walls, roof, storeys, and building quality.

For each individual property, the building cost is estimated according to equation (3) considering the typical building cost value per unit building floor area multiplied by the property floor area and its respective depreciation factor. Depreciation factors vary from zero to 45% for brick wall construction and from zero to 50% for other types of wall, taking into account only the year of construction.

The system used for valuation in Porto Alegre is totally developed using computational resources. Basically, the property data management for taxation purposes involves three distinct systems. The structure of the property data management for taxation purposes in Porto Alegre is illustrated in Figure 3.

Figure 3- Property Data Management



System 1, the real estate cadastre, is a general registry that manages information about taxpayers and their properties. The information managed allows the tax base to be assessed and the tax bills to be produced at the individual property level. This system includes information about the name of the taxpayer, property address, and previous bills and debts related to the tax. The principal characteristics of sites, buildings and zones are recorded. The basic idea of this system is to gather information to explain variations in the market value in different geographic areas. Assessed values are computed with the information provided by this system.

System 2 and System 3 are related to provide information for valuation purposes. The systems allow the establishment of the market value not only using the cost approach, but also using other mass-appraisal techniques, such as multiple regression analysis or artificial neural networks.

Because of a tax on real estate transfers, also administered at local government level, all ownership transfers are recorded in System 2. New owners declare sale prices. In

order to avoid taxation, part of the price is declared under the real value of the sale. A team of assessors is responsible for judging if declared prices can be considered as evidence of market price. When declared prices are accepted for taxation purposes, this information goes to System 3.

System 3 aims at recording information for valuation purposes. Sale prices come from System 2. The basic attributes of improvements, sites and zones are also inserted, which come from System 1.

Major problems concerning the real estate cadastre are observed in large cities like Sao Paulo and Rio de Janeiro. Sao Paulo is the major industrial and financial centre in Brazil, accounting for almost 30% of the national gross domestic product. It is the biggest city in South America with almost 18 million inhabitants. Local administrators of the property tax in Sao Paulo argue that the rapid spread and development of the urban area is the major problem in the administration of the property tax. As a result, a large number of new inventories are not recorded in the real estate cadastre. A large increase in revenue might be achieved simply by recording these inventories.

In the city of Rio de Janeiro, approximately one out of three residential properties is not recorded in the real estate cadastre (Smolka and Furtado, 1996). Less than 40% of these properties are slums. The rest of the properties are located in areas provided with urban equipment and services, and high-income families occupy them.

Exemptions, Relief and Concessions

◆ *List of properties entitled to relief*

The general exemptions from property tax are common in all local authorities in Brazil. They include the following:

- Properties used for governmental purposes (administrative purposes)
- Properties used for defence and infrastructure purposes
- Properties used for political organisations without profit purposes
- Properties used for public or social interest without profit purposes:
 - Public schools and properties used for cultural and scientific purposes
 - National parks, preservation areas, etc.
 - Properties used for health services (e.g. hospital), religious and charitable purposes.

◆ *Details of any particular important relief or exemptions*

In Porto Alegre, for individual taxpayers, relief is guaranteed for pensioners, retired people, orphans, widows, and mentally deficient people with a unique property used for owner-occupation and an income up to three times the minimum salary. Under the same conditions, other taxpayers with property assessed up to approximately US \$ 3,000 are also entitled to relief. Approximately 13% of properties were exempt from the property tax in 1996.

Collection Procedures

◆ *Details on the collection system*

Bills are sent to taxpayers at the beginning of the year and some financial incentives are given to encourage full payment in Porto Alegre. Otherwise, payments can be made in 10 monthly instalments. Other local authorities in Brazil have adopted similar payment schemes.

◆ *Liability for the tax*

The property owner is primarily responsible for paying property tax. An occupier or user, even without legal authorisation to use the property, can be requested to pay the tax.

◆ *Computation of the tax*

The tax results from the market value estimated for each property multiplied by a property tax rate.

◆ *Differential taxes between land and buildings*

In Porto Alegre, the rates for property tax are progressive according to market value assessed. The progressive rates aim at inserting an element to identify the ability-to-pay in property tax. Table 6 exemplifies rates for properties located in zones supplied with all basic infrastructure services and equipment. Properties situated in other zones are granted further reductions in rates. The tax is calculated by the sum of the market value corresponding to each class of value multiplied by its respective rate (sliding rates).

Table 6- Rates for Property Tax

Property-use Class	Assessed Market Value [UFM]	Rate [%] sliding rates
Vacant Land	up to 6,652	5.0
	over 6,652 to 33,259	5.5
	over 33,359	6.0
Residential property	up to 3,326	0.2
	over 3,326 to 6,652	0.4
	over 6,652 to 13,304	0.6
	over 13,304 to 33,259	0.8
	over 33,259 to 66,518	1.0
Non-residential property	over 66,518	1.2
	up to 6,652	0.6
	over 6,652 to 13,304	0.8
	over 13,304 to 33,259	1.0
	over 33,259 to 66,518	1.2
	over 66,518	1.4

Where UFM is a fiscal monetary unit that varies according to inflation.

In Table 6, the information about classes of assessed value is expressed in Fiscal Monetary Units (UFM). Due to high-inflation periods, a monetary unit for fiscal purposes, which is adjusted monthly according to the rate of official inflation, is

adopted to update values for taxation purposes. The UFM was equivalent to approximately US\$ 0.90 in January 1996.

Different property-use classes attract different rates. Rates for vacant land vary from 5.0 to 6.0% of the assessed property value, while the maximum rate for residential property reaches 1.2%. High rates applied to vacant land aim to stimulate land development and deter land speculation.

◆ *Enforcement procedures*

In the case of non-payment, interest and fines are the enforcement measures available. The debt is subject to the court and might result in the sale of the property by public auction in order to pay the debt.

Critical Analysis

◆ *Advantages and disadvantages*

Property tax is in fact a good option for raising revenue at local government level. Revenue from property tax can be allocated easily to a particular local authority. Additionally, the tax is capable of producing a large and predictable yield, and it is relatively difficult to evade.

In Brazil, the property tax was implemented at local government level in 1967. Therefore, the tax represents a familiar concept to taxpayers and local authorities. Taxpayers have a reasonable understanding of the property tax system, the tax base, the rates, and how the bills are computed. By the same token, local administrators are familiar with the procedures related to administering the tax.

The general structure of the property tax system in Brazil seems to be adequate. The tax base is market value. A large amount of evidence for open market transactions is recorded in the majority of municipalities in Brazil. Additionally, the real estate market for sales suffers from fewer governmental interventions than the real estate rental considering the annual rental value as the second option for the tax base. Moreover, market value represents a familiar concept to local administrators and taxpayers.

As discussed earlier, local authorities provide the entire urban infrastructure. In general, the provision of urban equipment and services results in the market value of properties increasing with benefits to their owners. This argument may be a strong reason in favour of the acceptability of the tax among taxpayers, since the property tax revenue can be associated with these public investments to supply and maintain the urban infrastructure. Alternative taxes to replace the property tax might not be accepted easily and result in revolts by taxpayers.

In Brazil, the alternative of imposing progressive rates contributes to the use of the tax as an instrument of urban policy. In developing countries, due to unstable economic period cycles, land and real estate are a major way of concentrating wealth. For these countries, the importance of having a tax on real estate is vital for encouraging investment in productive activities and deterring real estate speculation. The progressive rates of property tax can also be used to insert an element to identify

ability-to-pay in the property tax systems.

In spite of the extensive series of advantages related to having a tax on real estate, the property tax has been inefficiently and unfairly administered in the majority of local authorities in Brazil. The following weaknesses are frequently identified in current property taxes:

- Assessment bias in the tax base estimated

A fundamental requirement of valuation for taxation purposes is to present uniformity. Perfect assessment uniformity would be achieved if the ratio between assessed value and market value were constant for all properties at the assessment date.

In the great majority of cases, high-value properties are under-assessed relative to low-value properties in Brazil (See Smolka and Furtado, 1996; and, De Cesare and Ruddock, 1997a and 1997b). Part of the assessment bias can be attributed to the inaccuracy of the current techniques used for valuation for taxation purposes. Inaccuracies of the real estate cadastre and capping systems also contribute to the assessment bias.

- Inaccuracies of the real estate cadastre

Real estate cadastres need to reflect the real conditions of properties and taxpayers. Moreover, all properties must be recorded in the cadastral information systems. The vexing problem faced in large cities in Brazil, such as Rio de Janeiro and Sao Paulo, where no records exist for a large number of properties should not be tolerated. It penalises taxpayers that are effectively paying the property tax, exposing them to a disproportionately heavy burden. This fact may encourage these taxpayers to lose confidence in the taxation system.

- Inefficient exploration of the property tax as a revenue source

For a long time in Brazil, taxpayers were used to paying relatively inexpensive property tax bills. The tax base was absolutely out of date. Many local authorities have undertaken general valuations on a regular basis. However, capping systems have been used largely for guaranteeing that tax bills would not override the 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 the retired taxpayers.

However, the capping systems actually favour high-income taxpayers. Low-income and retired taxpayers can easily be exempted from taxation with relief based on income, as applied in Porto Alegre. Therefore, the great challenge faced by local authorities is still how to best explore the potential of property tax as a source of local revenue.

- ◆ *Proposed changes*

The fundamental principles that regulate the property tax in Brazil are not expected to change in the short term. However, the administration of property tax can be improved greatly in order to, simultaneously, explore the potential of the tax as a source of revenue and achieve assessment uniformity.

Some local authorities in Brazil are already improving their property taxation systems. Tax bases for the property tax are being re-established at periodical intervals using more accurate valuation techniques and equalisation factors. Real estate cadastres are being updated and mechanisms are being adopted to guarantee a continual update of information. However, local authorities still need to face the political risk of radically changing part of the tax bills.

Focusing on the city of Porto Alegre, the process of reform has already been started. After many years, the traditional method used for valuation is finally being discarded and multiple regression analysis will be used for the first time in 1997. The valuation process will include tests for assessment uniformity and eventual adjustments on the estimates of market value. Additionally, a geographic information system is being implemented and is expected to be available for use at the end of 1998.

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