

**International Studies Program
Working Paper 06-51
December 2006**

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Property Taxes in Lithuania**

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International Studies Program
Andrew Young School of Policy Studies
Georgia State University
Atlanta, Georgia 30303
United States of America

Phone: (404) 651-1144
Fax: (404) 651-4449
Email: ispaysps@gsu.edu
Internet: <http://isp-aysps.gsu.edu>

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Lessons in Introducing Value-Based Property Taxes in Lithuania

Albina Aleksiene and Arvydas Bagdonavicius
State Enterprise Centre of Registers (Lithuania)

Introduction

Fifteen years ago the Republic of Lithuania restored its independence and started democratic reforms and development of market economy, however, only from 1 January this year introduced a market-value based real property (of constructions) tax. Land tax is still being calculated on the basis of normative value, however, in nearest future the Parliament is going to analyze the issue on introducing land tax based on market value.

The introduction of real property ad valorem tax evidences the achievement of necessary level for the development of market economy and democratic processes, the decentralization of management system what creates assumptions for introducing this tax with considerable evaluation of its fiscal and other benefits having in mind that the negative reaction of public will not force the recall of political decisions.

Similar assumptions and processes influence the real property tax reform in Lithuania, as in other Eastern and Central Europe countries, such as the privatization, development of market relations, strengthening of local self-government institutions and

similar. They are typical to all countries in transition from planned to market economy. Within this context Lithuania has one typical characteristic, which gave impetus to and facilitated the introduction of ad valorem tax, i.e. well-prepared and operating institutional framework of the real property administration (modern real property cadastre and register system, introduced necessary computer programs enabling to identify and record property and carry out its mass appraisal).

First months after the Law on Immovable Property Tax came into effect were very valuable in respect of experience. In the meantime it is too early to make more comprehensive summing-up nevertheless some observations may be useful for the colleagues from other countries and may be a subject for discussions.

General Background

Independent between the two World Wars, Lithuania was annexed by the USSR in 1940. On March 11, 1990 Lithuania became the first of the Soviet republics to declare its independence, which was recognized in 1991, following the abortive coup in Moscow. Lithuania subsequently restructured its economy for integration into Western European institutions; it joined both NATO and EU in the spring of 2004.

After regaining the independence, Lithuania attempted to recover from the command economy of the former Soviet Union. The country faced major problems such as: huge inflation (mainly due to considerably increased costs of raw materials and other resources from Russia), reduction in GDP caused by the change in economic style and loss of previous economic relations. Gross domestic and foreign investment fell in line with economic performance in the early 1990s. It was hard for the Lithuanian Government to subsidize the big inefficient manufacturers without the involvement of the Soviet Union. Thus, drastic measures of privatisation had to be taken, changing the balance between government investment and private sector investment.¹

¹ . Lill Br.. Investments in Lithuania. Center for Markets in Transition, Helsinki School of Economics. Updated by Ville Rämänen in October 2002 and Iana pietarinen in May 2003.

Privatisation, Restitution and Economical Development

The primary emphasis of Lithuania's economic transition policy has been placed on the restructuring of ownership relations. Lithuania was among the post-communist countries to initiate large-scale privatisation and restitution of the ownership rights.

On 18 June 1991, the Supreme Council of the Republic of Lithuania adopted the Law on the Procedure and Conditions of the Restoration of the Rights of Ownership to the Existing Real Property. This Law was amended and revised 19 times, resulting in the adoption of a new Law on Restoration of Ownership Rights to Citizens to the Existing Real Property on 1 July 1997, which has already survived 14 amendments and revisions. The restoration process of land and constructions was rather slow not only because of the lack of financial resources, which the State could allocate for this purpose, but also due to disagreements between various interest groups. In restoration of the existing constructions to former owners, most conflicts arose between the former owners and the current property users. This problem was extremely acute with regard to residential properties. The restoration of constructions is foreseen to complete in 2009. The number of constructions, which was restored to private persons, is not high in comparison with the total number of privatized constructions.

The restoration of land is carried out alongside the general land reform. Land reform was performed in all the area of Lithuania which amounts to 6,53 million ha, agricultural land of which makes 3,96 million ha. Ways for acquisition of land in the course of land reform were:

- 1) restoration of ownership rights to land:
 - restitution in kind;
 - by transfer or granting a land parcel into the ownership without payment;
- 2) granting of state-owned land into ownership without payment;
- 3) sale of state-owned land;
- 4) civil transactions performed by citizens with regard to land.

By 1 of July 2005, 796 000 applications of citizens are submitted to restore the ownership rights to the area of 4,2 million ha of land in rural areas. The ownership rights are

restored to 95 per cent of applicants. By 1 October 2006, 1 725 811 land parcels were registered in Lithuania.

Privatisation was carried out using the distributional model. The Parliament declared that this model ensures social equity and justice, allowing the creation of a capitalist class and also the reduction of social tension in Lithuania.²

The first period of privatisation in Lithuania took place between 1991-1995. It was a mass privatisation for vouchers with some cash sales, and for this purpose over 2,6 million investment accounts were opened in banks, which accumulated vouchers of the value over LTL 10,2 billion. All Lithuanian citizens were theoretically able to participate in the privatisation process by purchasing shares of the companies or various investment funds using vouchers or cash. Foreigners could participate with cash offers. During the first period of privatisation, altogether 5714 entities were privatised. Besides the sale of state companies (including over one thousand agricultural companies, better known as "kolkhozes"), the first period also comprised the privatisation of apartments to the tenants. During 1991-1995, the book value of private investment was LTL 3.4 billion which contained about 30% of the total state capital. The majority of transactions were made by local investors.³

Although the first stage of privatisation enabled the formal transformation of properties from state-owned to private ownership, however problems of enterprise capitalisation and restructuring remained for a long time. The majority of society (pensioners, workers, as well as people engaged in non-industrial sectors like agriculture, education, etc.) mainly used vouchers for the privatisation of their apartments. In contrary to this social group, the managers of enterprises, owners of largest investment

² Maldeikis E. *Privatisation in Lithuania: Expectations, Process and consequences*. Economic Research Centre, Vilnius, Lithuania.

³ Lill Br.. *Investments in Lithuania*. Center for Markets in Transition, Helsinki School of Economics. Updated by Ville Rämänen in October 2002 and Iana pietarinen in May 2003

companies, some part of workers of service sector were able to get the breaks and can be regarded as winners of privatisation.⁴

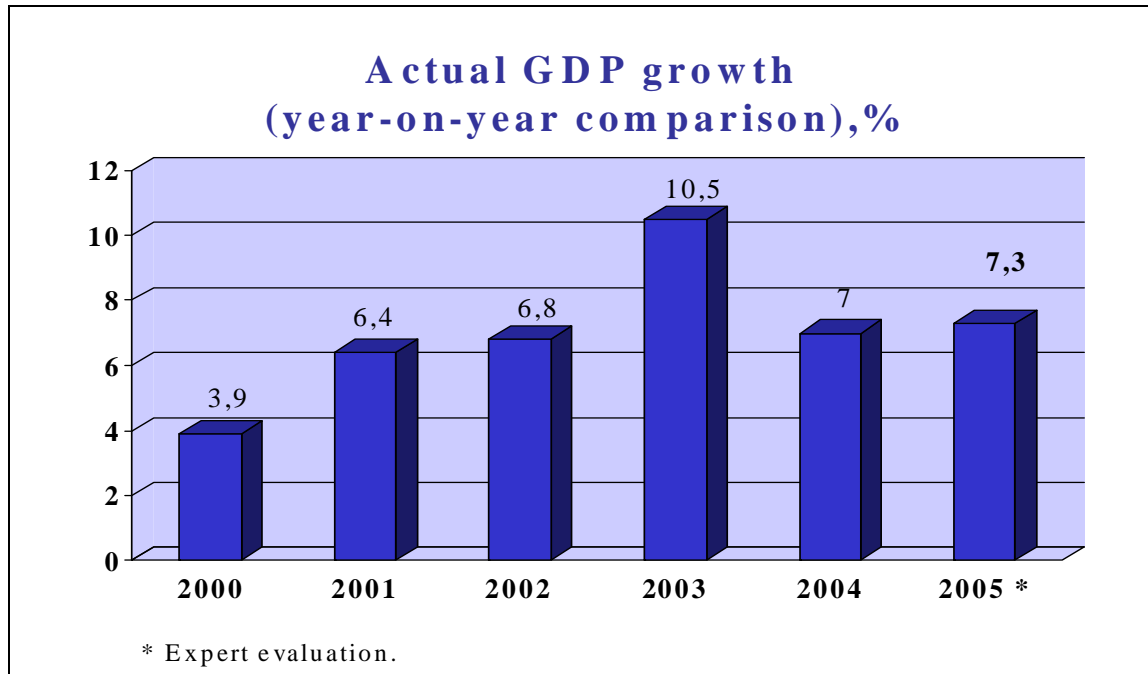
The second stage of privatisation started in 1996 and differed from the first one in two respects: first, state owned and municipal property was sold for cash under market conditions; and, second, Lithuanian and foreign individual or corporate investors had an opportunity to participate in the process of privatisation on an equal footing. Results of the second stage (until 2003)- more than 80 per cent of the total state-owned property was sold – a total 4568 stakes and real estate properties were privatised for LTL 5429 million.

In the course of privatization the majority of real property passed into private ownership. At present, 82 % of buildings registered in the real property register belong to private individuals and 4 % to legal entities. Buildings held in the ownership of the State and municipalities make 0.7 % of all buildings. The level of land privatization in most part of Lithuania exceeds 60 %.

Privatization and restitution created favorable conditions for the development of market economy. In the middle of last decade rapid economic growth was later slowed down by the Russian crises for some period. Lithuania, which has conducted the most trade with Russia, has slowly rebounded from the 1998 Russian financial crisis. After the crisis trade has been increasingly oriented towards the West. Lithuania has gained membership in the World Trade Organization (2004). The growth of economy renewed in 2001 and remains one the highest among the countries in the region.

Fig. 1. Actual GDP growth

⁴ Maldeikis E. *Privatisation in Lithuania: Expectations, Process and consequences*. Economic Research Centre, Vilnius, Lithuania.



Source: Ministry of Economy of the Republic of Lithuania.

The growth of GDP was conditioned practically by all types of activity mostly supported by the domestic market and related to the increase of the population income.

Lithuania has intended to withdraw its national currency Litas in 2007 and join the euro zone. Unfortunately, the growing inflation and some other unfavorable factors impelled the authorities of the European Union to pass a negative decision regarding the introduction of euro in Lithuania. The year 2010 is another date scheduled for the introduction of Euro. Expectations associated with the introduction of Euro and favourable crediting conditions activated the real property market and influenced a rapid rise of prices. Financial analysts call the situation existing in the real property market as “bubble of prices”. Negative decision regarding the introduction of euro suspended the price rise and forced market participants to assess the situation anew.

Land and other real property administration

In 1991 when private ownership was restored there was a need to secure rights to land and other real property. The main task was to develop a unified cadastre and register for land and constructions. In 1992 computer based land parcels registration system –

Temporary Register of land cadastre data was developed and implemented. It covered the whole territory of Lithuania, was fully computerised and managed by Land management Boards of Municipalities. In the central level – all data were copied to the Central data bank, operated by State Land Cadastre Enterprise.

By 1997, Inventory Bureaus carried out legal registration of buildings and premises. In 1997 a Law on Real Property Register was adopted. It provided the development of a unified land and other real property register and the establishment of State Land Cadastre and Register (from 2003 – State Enterprise Centre of Registers) on the basis of former State Land Cadastre Enterprise and Inventory Bureaus. In 1998 fully computerized Real property Registration System was developed. It linked land parcels and buildings- cadastre and register data into one unified system. Next year a computer network was developed , which covered the whole area of the country and connected local data banks in counties and districts to the central data bank. Data service for the end users via the internet started. First year the system achieved full cost recovery.

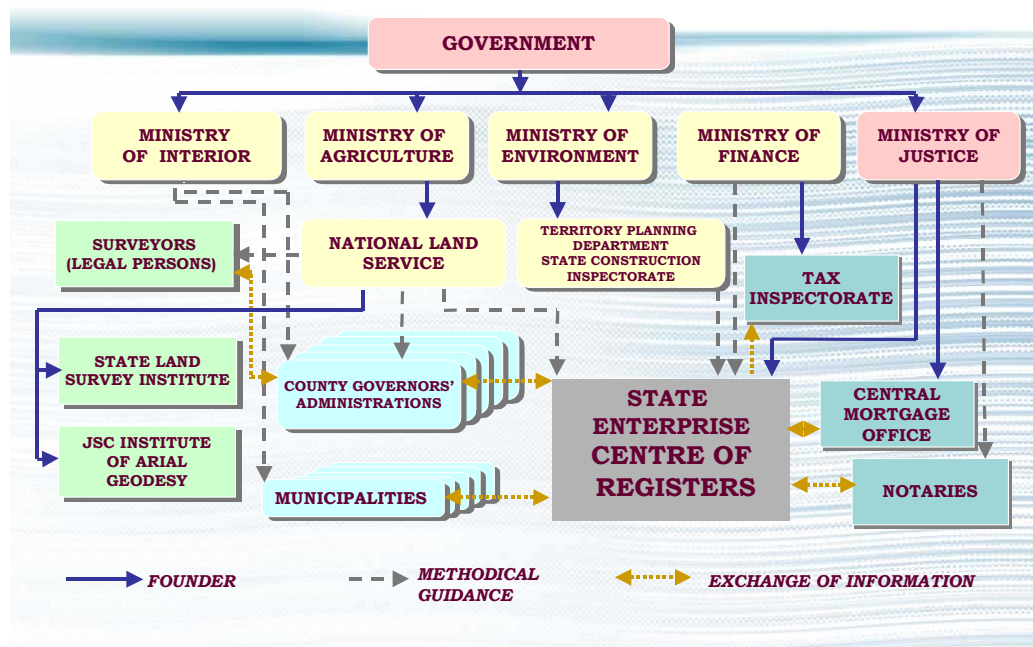
The Government charged the Centre of Registers with storage and updating of the real property cadastre and register data, to administer database of the real property cadastre and register, to create a GIS system in Lithuania and assess real property for public needs, including taxation. Data about the entire registered real property amounting to over 5,5 million objects is stored in the integrated database. Presently Lithuanian Real property cadastre and register is:

- unified (information about property objects –land and improvements as well as rights and values is accumulated in a single institution and single system);
- centralized (Central data bank for the whole country and only data of central data bank have legal status);
- digitalised (cadastre and legal data - graphical and descriptive- cover whole country, only digital data have legal force and data services available on-line (e-services), e-transactions are in process;
- multipurpose (ownership rights guaranty, taxation, valuation, market investigation, etc)
- self financed (full cost recovery from fees of the clients and services).

State Enterprise Centre of Registers is an important institution within organisational structure of Lithuanian Real Property Administration System. Founded by Government, which delegated the function of supervision to the Ministry of Justice, Centre of Registers co-operates with several ministries and other institutions, dealing with land and constructions matters as well as counties and municipalities. In the field of taxation Centre of Registers has developed a good partnership with the Ministry of Finance and State Tax Inspectorate. Close cooperation is also developed between Centre of Registers and notaries as well as Central Mortgage Office.

The State Enterprise Centre of Registers, compared to other valuation enterprises, has the best technical and organisational possibilities to perform mass valuation. It holds a computerised database of all real property registered in the country. The core of the Real Property Register information system is a single database of Real Property Register combining data on the registration of land parcels and buildings and a universal cadastre geographical information system where graphical information of land parcel

Fig. 2. Organisational Structure of Lithuanian Real Property Administration System



cadastre geographical information system where graphical information of land parcel boundaries and other data necessary for the compilation of land cadastre maps is stored. Central database is coordinated with the information of other basic registers and cadastres, such as Population, Legal Entities, Addresses, Mortgage, Cultural Heritage registers as well as the Forest Cadastre and Cadastre of Protected Areas. The Central database is being constantly updated.

The Development of Land and Building Taxation

Area-based property taxes

The historical treatment of land and buildings as separate entities is reflected also in tax system, where these two elements are used as distinct tax bases. Separate taxes on land and buildings were introduced respectively in 1992 and 1994. Presently the real property taxation system in Lithuania includes 2 taxes - land tax and tax on real property (buildings). There is also the third charge included to the property tax system. It is called land lease tax and it concerns state-owned land units used by private persons and legal entities using their land on rental bases. They have to pay the land rent instead of land tax. The main distinguish is that there are higher rates up to 5- 6% annually.

The main characteristics of the Land tax are as following:

- the tax object is private-owned land,
- the tax base is normative value of the land,
- the taxpayers are the owners (legal and natural persons),
- tax rates are fixed in the Law and are at the level of 1,5% for the land (0.5% for the agricultural land; forest land is excluded),
- only limited groups of properties (land used for public roads, land of historical, cultural, nature monuments, land of embassies, etc.) are entitled to exemption;
- there is a special relief for the old age and disabled pensioners,
- there is a special relief for the old age and disabled pensioners,
- the State Enterprise Centre of Registers is responsible for valuation, the State Tax Inspectorate is responsible for collection,

- municipalities receive the land tax revenues, they are also entitled to reduce the tax or to grant exemptions,
- tax can be paid in equal quarterly installments.

The Law on Tax on Immovable Property of Companies and Organisations was in force from July 1994 until 1 January 2006. The immovable property tax was imposed only on immovable property held by legal persons by right of ownership and located in the Republic of Lithuania. The main characteristics of the Immovable property tax were as following:

- the DRC as a concept was used for the taxable properties valuation (replacement costs x depreciation x location coefficient),
- tax rate – 1 percent of taxable value, set in the law; municipal councils were entitled to reduce this tax or to exempt from it at the expense of their own budget,
- State Tax Inspectorate was responsible for the administration of the tax and the State Enterprise Centre of Registers responsible for valuation,
- tax revenue was received by municipalities.

Land tax as well as tax on immovable property (buildings) are area-based taxes with certain market elements (the coefficients evaluating the impact of location are applied in setting value for land and, particularly, for constructions). “This traditional approach finds area-based taxes less problematic, because an official authority approves both the tax base and the tables of rates. Taxpayers, particularly enterprises, can calculate their own tax liabilities and make direct payments based on formulas provided by the state tax administration. As the result, sometimes, the easiest way to introduce a value-based tax is to introduce market elements into the area-based system.”⁵

Like in other countries in the region where area-based property taxes are applied tax revenue is not high (see Table 1) and has no significant impact on the formation of local government budget, and participation of municipalities in the administration of real property taxes has been rather restricted until now.

Table 1. Revenue Information of Lithuania (thousand Litass)

	2000	2001	2002	2003	2004	2005
a. Land tax revenue	20849	23065	25449	27103	31192	36193
b. Real property (buildings) tax revenue	189804	211826	226114	219164	214911	212 974
Total	210653	234891	251563	246267	246103	249 167
Total tax revenue to central government	10945000	11346500	13498200	14582000	16381208	18887400
Total tax revenue to local government	2829828	2803502	1494829	1534909	1744262	2001500
Property tax revenue as percentage of local tax revenue;	7,44%	8.38%	16.83%	16.04%	14.11%	12.45%
Property tax revenue as percentage of all local revenue;	7.25%	8.14%	15.39%	14.62%	12.18%	10.66%
Property tax revenue as percentage of total tax revenue to central and local government.	1.53%	1.66%	1.68%	1.53%	1.36%	1.19%

Source: Ministry of Finance.

Development of Market Value-Based Taxes of Land and Buildings

Property tax reform is not only a legal reform. Successful application of this tax requires reexamining more than just the respective legal frameworks. Functioning tax administration procedures and a friendly tax administration environment should be created in order to appraise real estate, to deliver tax bills and to collect taxes.⁶ The development of real property tax system in Lithuania, as in other Eastern and Central Europe countries, is conditioned by many factors, among which the most significant ones are as follows:

1. Privatization, in the course of which major part of land and buildings moved to private ownership and became a potential of real property market development and the object of real property tax.

⁵ Malme, Jane H. and Youngman, Joan M. The Development of Property Taxation in Economies in Transition. Case Studies from Central and Eastern Europe.

⁶ Šulija V. and Šulija G. Reform of the property tax and Problems of Real Estate Appraisal for taxation purposes in Transitional Economies of Central and Eastern Europe., Lincoln Institute of Land Policy Working paper, 2005

2. Development of the real property accounting and administration system. Cadastre and register information makes its core and is an important basis for the tax administration and establishment and maintenance of mass appraisal system.

3. Decentralization of governance and strengthening of local self-management. Real property taxes make a significant part of revenue in municipal budgets and help to strengthen the autonomy of municipalities and promote the transparency of their operation and accountability to residents. On the other hand, autonomous municipalities may considerably support the administration of real property taxes.

4. General reform of tax system. It was implemented as to be ready accessing the European Union however the focus was made on the harmonization of indirect taxes, which generate the most of taxable revenue in the EU member states. Property taxes were and remain not very significant in the gross taxable revenue. Thus the general tax reform “pushed” the reorganization of real property taxes into the background.

5. Comparatively low level of living, the fact that many people has lost their deposits or they have devalued, high prices of utility services and other factors that strengthen negative reaction of the public towards a probable introduction of ad valorem tax and forces politicians to be very careful while taking decisions regarding the tax introduction.

Only a small part of those factors from those mentioned above could make positive influence on the introducing market-value based tax. This causes unsteady progress of the tax reform and delayed political decisions regarding the introduction of the market-value based tax with each succeeding year. This fact is sustained by the attempts to reform the land tax.

The currently applied land tax, which is based on area-based value, does not meet fiscal requirements and does not promote efficient and sustainable land use. The time for reforming this tax has already come, and such reform has been already provided for in the drafts of legal acts. Significant efforts were also made in the field of land appraisal in anticipation of the introduction of market-value based land tax. The specialists of the Centre of Registers commenced preparatory activities regarding the implementation of

mass valuation system for land and other real property from 1998. OECD and the Lincoln Institute of Land Policy (USA) provided much support in this field. Mass land valuation has been performed in Lithuania since 2002. Later it was performed every year. In 2002 the Order of Minister of Agriculture of the Republic of Lithuania Regarding Approval of the Rules for Land Value Mapping was adopted which was the first official document establishing mass valuation of land and providing for the procedure thereof. The same year the Resolution of the Government On the Procedure of Land Valuation was adopted which established mass valuation of land to be used for land taxation. In fact, this was a document, which established land ad valorem tax. However in 2003, when the results of the first mass valuation of land were published, severe reaction of the society and mass media forced the Government to withdraw this Resolution. The Resolution was in force only several months and it was not applied for land taxes.

Data in the table 2 show that the value of the only type of land, i.e. agricultural, estimated by applying mass appraisal would have been lower than normative value used for taxes. Other values had grown up significantly and it was the reason of severe reaction.

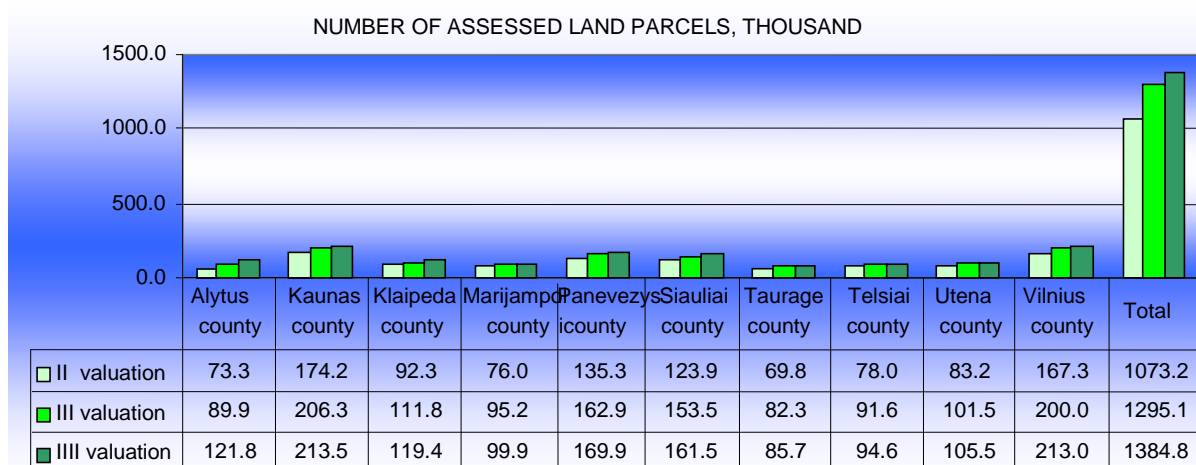
Table 2. Comparable data of land normative values and market values

Type of use	Total number of land parcels	Total area	Total value set by mass valuation, Lt	Total nominal land value, Lt.	Average value of unit set by MV, Lt/ha	Average nominal value, Lt/ha	Increase (times)	Decrease (times)
Commercial land	10226	8681	1,612,051,196	653,772,998	185,699	75,311	2.47	
Residential land	232889	50893	4,733,137,503	1,337,666,226	93,002	26,284	3.54	
Industrial, warehouses land	13197	21150	2,693,679,080	1,873,349,194	127,361	88,574	1.44	
Gardening societies land	202996	13871	885,392,043	56,183,576	63,830	4,050	15.76	
Agricultural land	666290	2863461	3,437,631,635	4,151,863,616	1,201	1,450		1.21
Grand Total	1125598	2958056	13,361,891,457	8,072,835,610	4,517	2,729	1.66	

As mentioned before, the mass appraisal of land supported by the Ministry of Finance and the National Land Service is further carried out and its results are used for various needs of the State (to estimate social support, to calculate the rent and sales prices of

state-owned land and similar.). Annual mass valuation is performed on the basis of market as of 1 July of each year. Mass valuation of land has been performed for four years. The compared volumes of works executed during the first, the second and the third mass land valuation are given in Figure 3.

Fig. 3. Number of Assessed Land Parcels.



Centre of Registers is interested in continuing the mass appraisal of land because this is a way to improve the procedure, to follow the evolution of land market, and to maintain human and technical resources.

Immovable property (buildings) tax reform

The reform of immovable property tax was more successful. Together with the reorganisation of land tax the reform of real property (buildings) tax was envisaged in the Government programme as a part of the tax system reforms. Some versions of the law were drafted for that purpose. It could be easy to adapt the developed mass appraisal system of land and the real property tax administration system to a new tax. Probably the expansion of tax base and fear of the public that tax will apply not only to the real property used by legal persons for commercial activity but also for housing stock what caused most of the problems associated with the tax reform.

Recently, in addition to other circumstances the tax reform was also influenced by the fact that in Lithuania there is great difference between taxes on labour and capital –

the larger tax burden is placed on labour, whereas taxation of capital is considerably lower, therefore, the system of taxes essentially promotes business through legal persons and adversely affects the growth of competitiveness in the region, also resulting in rather high labour costs. Moreover, large taxes on income from work have undesirable effects: looking for ways of partial concealment of wages and evading their official increase.

In view of the above, on 7 June 2005 Law on Income tax of Individuals was amended with a view to gradually reducing to 24% the existing income tax rate of 33%, i.e. from 1 July 2006 – to 27%, and from 2008 – to 24% to improve the balance between taxes on labour and capital.

Taking into account the reduction of the rate of income tax of individuals and of the fact that the current and future budget obligations prevent from concurrently taking decisions on reduction of tax rates without having introduced parallel compensatory measures, the Immovable Property Tax was selected as one of compensatory measures and it quickened the introduction of market-value based property tax.

On 7 June 2005 the Republic of Lithuania Law on Immovable Property Tax was passed aimed at unifying competition conditions for entities engaged in commercial and economic activity, i.e. extending the immovable property tax base. This Law replaced the former Law on Immovable Property Tax of Companies and Organizations which was adopted in 1994. The new immovable property tax is imposed both, on immovable property belonging by right of ownership to legal persons and immovable property belonging by right of ownership to natural persons and used in their commercial and economic activity. Taxpayers are owners of real property, except the cases when a private individual lets his property to a legal person and it is used for commercial purpose. In such cases property lessees pay the tax. Also, the Law will guarantee the application of immovable property valuation methods used in the international practices of the valuation of immovable property by determining the taxable value of immovable property.

The rate of immovable property tax is 1% of taxable value. Since 2007 tax rate may vary between 0.3-1% in accordance with the decision of the municipal council. Tax is paid in equal quarterly installments. Municipalities receive the real property tax revenues. Municipalities are entitled to reduce the tax or to grant exemptions.

Exemptions (non-taxable):

- Real property of embassies, international governments' organizations,
- Real property of churches, charitable organizations,
- Real property, used for education, science, cultural activities, social, environmental purposes,
- Real property owned by companies registered in the free economics zones, agricultural and insolvent companies.

State Tax Inspectorate remains the tax administrator, which:

- administers assessment and payment of taxes;
- collects and maintains data on taxpayers in the computerised databases;
- receives data on tax objects from the Centre of Registers twice a year.

Taxpayer must declare the real property (buildings) tax (tax rate, amount of taxable value and tax amount monthly and in the each municipality) after the end of the year. Law also laid down the principal provisions for valuation of buildings for tax purposes as well as the appealing procedure. These provisions were later detailed in the Rules for the Appraisal of Real Property approved by Resolution of the Government.

Valuation

The law provides for that the taxable value of immovable property shall be the average market value of the immovable property and in some cases replacement costs, adjusted with location coefficients. Immovable property shall be valued:

1) immovable property used for commerce –with the help of the of sales comparison approach and income approach (capitalisation of income or discounted cash flows) by applying mass valuation of immovable property;

2) immovable property, intended for residential purposes, gardens and garages (with the exception of industrial garages) with the help of sales comparison approach by applying mass valuation of immovable property;

3) engineering structures – with the help of the cost approach (by calculating the percentage of physical deterioration);

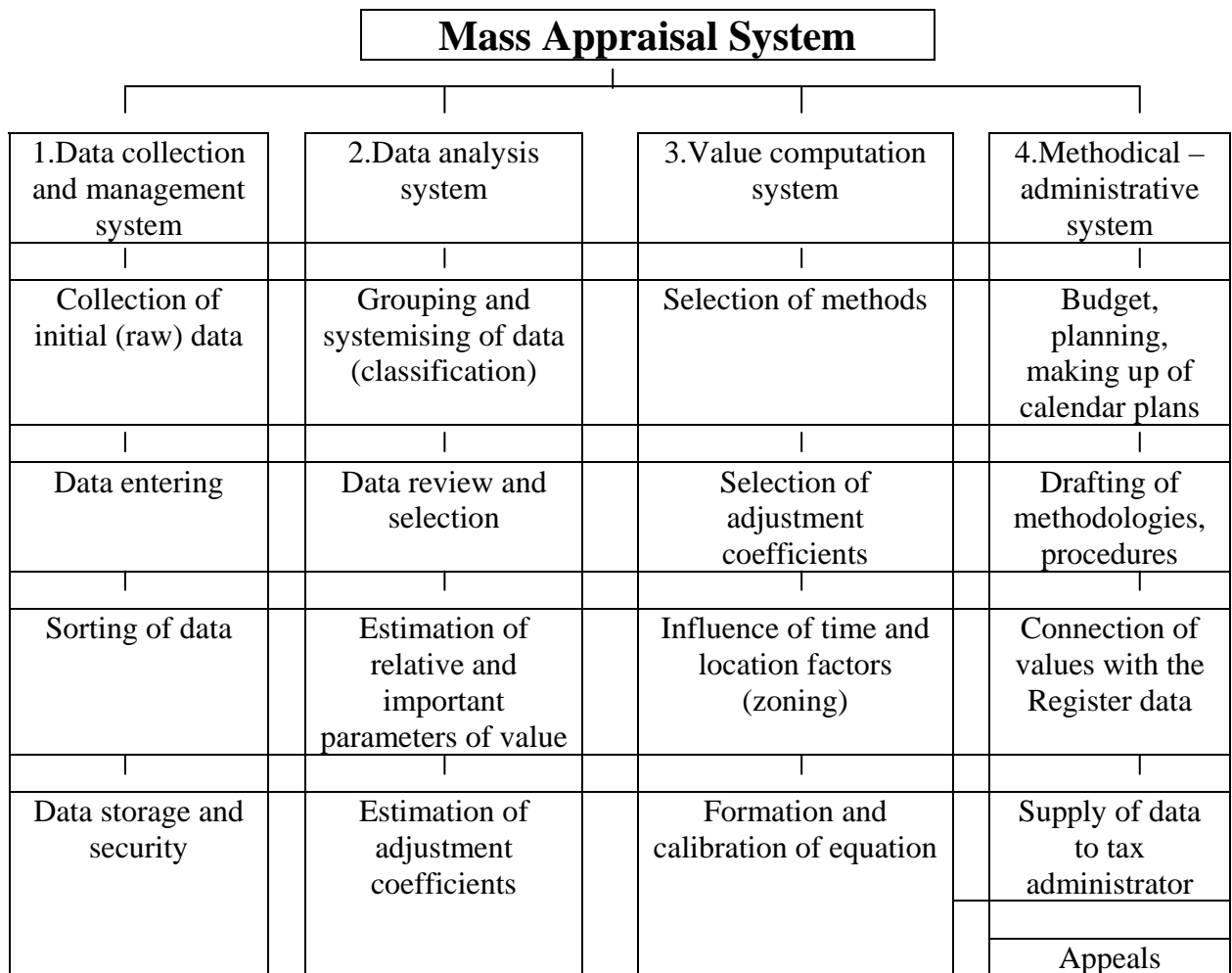
4) other immovable property not specified in subparagraphs 1-3 – the cost approach (by calculating the percentage of physical deterioration) applying the location adjustment coefficient.

When identifying specific valuation approaches in the law for different property categories it was considered that there will be enough market data for the appraisal of some objects while the cost approach will be used for appraisal of some other objects. This was a way to solve the problem how to apply market-value based approaches and mass valuation in case of insufficiently developed property market.

The law also provides that the taxable value of immovable property may be the value estimated by applying single property valuation, however, it will be only used in the case of appeal .

Centre of Registers is authorised to perform valuation. Centre of Registers in Lithuania fulfils the functions of a traditional cadastral agency. It also administrates the registers of real property, legal entities and addresses, i.e. some of the most important state registers.

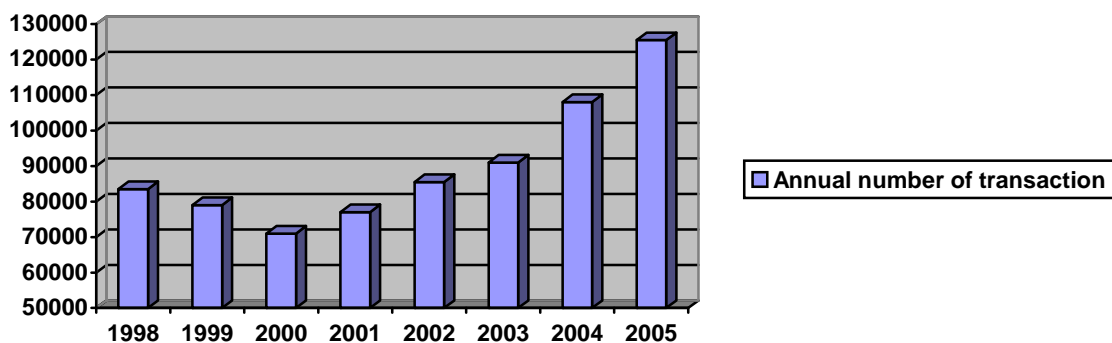
Four subsystems of mass appraisal system – data collection and management, data analysis, value computation and methodical- administrative system are concentrated in the Centre of Registers. Data collected in uniform digital format is a basic factor of success in developing an automated mass valuation model based on statistical methods. The developed computer-based mechanism for data collection and processing evidenced that having made proper adjustments to the enquiry formats. Data on market transactions and involved property stored in a uniform format creates a possibility to standardise and automate mass valuation process, to identify main valuation criteria and factors influencing value. Increasing use of statistical methods for the selection and processing of data reduces the potential of mistakes and random factors making influence on value.

Fig. 3. Mass Appraisal System⁷

The Centre of Registers has technical and organisational potential to perform this work. It disposes of a computerised database of all real property registered in the country. 11 branch offices cover the whole territory of Lithuania. The branch offices employ certified real property valuers, who have valuation experience and are familiar with the local market. The automated databases at the Centre of Registers enable to provide valuation results to the clients in digital form and link data with property owners. The aforementioned measures enable to perform mass land valuation works with the minimum additional technical, human and financial resources, as well as the lowest time

⁷ Eckert, Joseph K., Almy, Richard R., Gloudemans, Robert J. Property Appraisal and Assessment Administration, The International Association of Assessing Officers.

Figure 4. Annual number of transactions.



input and ensure the quality of valuation results. The existing legislation provides for a regular updating and provision of this valuation system with new data – newly formed property units and revision of cadastral data of the registered land parcels and property units. The mass valuation system enables to change valuation models, in case of the change in property market – re-estimation of property value.

A computerized mass valuation, integrating the information of the cadastre, register and market database into a single system was implemented in 2002-2003. It provided a possibility to evaluate the real property located in the entire territory of the country based on single principles, within the defined time and using updated market data. It also allows periodical re-evaluation of property taking into account the market developments. The results were integrated with GIS and therefore provided a possibility for public access to the value maps and received mass appraisal results in internet.

The Centre of Registers has developed mass valuation models for buildings and prepared value maps. ORACLE Discover, NCCS, GIS software were use in this process. In case the specialists failed to adopt standard software for certain works they tried to search for own solutions (GIS, merging valuation results with the Real Property Register data) in order to have full automation of valuation system and implementation of basic AVM and CAMA principles. On 29 December 2005, the Minister of Finances of the

Republic of Lithuania in his order has approved building mass valuation reports and value maps after the procedures of public discussions were completed.

The first experimental mass valuation of constructions and buildings in Lithuania was performed in 2003. When the Law on Real Property Tax was passed, valuation of real property gained legal status and the results of valuation became very important; for this reason this group of property was revaluated anew in 2005. From 2006, mass valuation of construction, as of land parcels, shall be performed annually. General statistics on construction structures in the country and market data are given in Table 3 and factors taken into consideration are given in Table 4.

Table 3. Statistical and market data on construction structures in the country by 1 January 2005

Date of recording data	Type of structures	Number of objects in the RPR	Volume, m ³ and areas, m ²	Number of sales	Market activity, %
01/01/ 2005	Buildings	2 077 921	912 645 700 m ³	52 510	2,53
	Premises	930 815	51 399 117 m ²	42 043	4,52

There were 540 valuation models (formulas) developed for the assessment of constructions, a separate report on mass valuation of constructions for every municipality (60 reports) and a report on mass valuation of structures in the whole country (4 volumes) were prepared.

Labour expenditure and quality of the results depend very much on the reliability of data. Statistical methods and graphical measures are used for checking and revision. The experience of property valuers as specialists and the knowledge of real property market within the territory being valued are very important. After elimination of the disputed transactions, a specification of the land valuation model is worked out, i.e. factors and characteristics affecting market prices as well as their relationship shall be determined. The impact of time factor on the transaction prices is being analysed in this phase. Having estimated the influence of the time factor, the adjustment of prices is done. The impact of the location factor results in land value zones, the boundaries thereof are defined, analysing the distribution of sales prices in the area, considering the purpose of land and types of the land use, the development of communications, street (road) network, satisfaction of social needs and other infrastructure elements, prestige of the site. Evaluation of the impact of the location factor ends in land value mapping. In the phase of model specification, land parcel data are grouped by the characteristics, essential to the land market value: value zones, purpose of use, agricultural land, size of the land

parcel, productivity grade and its use for recreation. The mathematical expression of relationship between these factors and prices make up a model. The influence of factors (characteristics describing property) in the model upon the land value is determined by calibration of models.

Calibration of the model is the process of estimating the coefficients in a mass valuation model. The calibration shall use the multiple regression analysis (the MRA) and other statistical methods. The MRA is statistical approach of estimating the unknown data, using the known and available information. In mass valuation, the unknown data shall be market value of the real property, and the known and available data – sales prices and characteristics of the objects. The reliability of the estimated coefficients shall be evaluated using the statistical indices estimated in the MRA. Those models, the statistical checking indices thereof match with the ones set or specified in valuation standards, shall be considered as designed correctly and integrated into the Real Property Register database for estimation of mean market values. If it turns out that the indices are incorrect, the model shall be analysed anew – the original market data are checked, the zoning and the specification of models is revised. Later, the calibration of models is done once more. This process will be repeated until the estimated value results are reliable. Works in the transaction database will be completed with the preparation of land value maps covering the territories of municipalities and reliable land valuation models. The obtained results with explanations are included in the reports on mass land or buildings valuation of municipal territories.

An automated property valuation system is inseparable from the integration of graphical information. Today, the integration of CAMA and GIS is a common and integral process. The use of GIS information is expanding in the mass valuation of land and constructions. Reorganizing and justification of the boundaries of value zones with the help of GIS information becomes one of the most relevant tasks in the current phase of real property mass valuation. As it was mentioned before, the results of mass valuation in Lithuania are used not only for calculation of real property taxes, but also for other public purposes. The users of data are various institutions and organisations, as well as the residents of Lithuania. It is very important to offer an opportunity for all interested institutions and persons to receive property values quickly, as well as to ensure a possibility to receive comprehensive data in such a format that is accessible for all, and at the same time to ensure protection of personal data. In supplying mass valuation data to the users in Lithuania, several ways are applied. The most popular is the supply of data via Internet according to the unique number of the property. Separate applications with valuation, cadastre and register data set are developed for the institutions, which need specialised information (municipalities, tax inspectorates). There is also an opportunity offered for the owner to order an official (approved) excerpt from the Real Property

Register specifying a relevant (up-to-date) value of property. Such excerpts are necessary for concluding transactions, documenting succession or gift.

Table 4. Factors considered in the structure valuation models, the number of separate factor clusters

Number of value zones	Number of purpose groups	Area, volume	Number of groups of wall materials	Construction year	Reconstruction year	First floor	End floor	Number of floors of buildings	Number of rooms	Number of heating types	Basement	Gas	Water supply	Sewage	Completeness of construction
948	10	+	13	+	+	Yes, no	Yeas, no	+	+	4	Yes, no	Yes, no	Yes, no	Yes, no	Up to 99 %

Appeals

The Law provided, that the taxable value may be considered as the real property market value calculated by the way of single property valuation. The taxpayer can order a single property valuation for the revision of taxable value only in case of appeal submitted to the State Enterprise Centre of Registers. The Centre of Registers shall decide whether to correct the taxable value following the submitted report of individual valuation or not.

Initial version of the Law on Immovable Property Tax has provided for a rather short period – one month that was given to appeal against the valuation results and submit the appeals. In practice, however, this term became longer after the State Tax Inspectorate has submitted a Law explanation. At the end of March 2006 the legislator amended the version of the Law on Real Property Tax and specified a 6-month term for submission of such appeals from the establishment of taxable value and its publication.

We have summarised first results of appeals submitted regarding the taxable value established by the way of mass valuation. Reaction to the changes in taxable value of the commercial buildings and constructions was rather nervous and stormy. Taxpayers

as well as local politician and mass media have reacted. The law granted the right to the councils of local authorities to decide upon the reduction of tax rate. This has also helped to ease the tension and unnecessary disputes. Taxable values of commercial properties in 18 municipalities (of 60) decreased or remained unchanged in comparison with the previously ones (before 01 01 2006). Market value of real property, i.e. taxable value as well, has significantly increased in Vilnius city, Kaunas city and other large cities of the country. The increase in some cases reaches 2 times and even more. The State Enterprise Centre of Registers, i.e. the main valuer for estimation of taxable value by the way of mass valuation, observed the following basic principles for public information and communication:

- maximum openness and transparency;
- clear establishment of the limits for competence and responsibility;
- positive attitude towards the taxpayers and public interest groups.

More than three million real property objects were valued by the way of mass valuation that pursuant to the definition specified by the law may be considered as the properties for commercial use. Within the first period (short one) of appeals there were 1617 appeals submitted regarding the taxable value of more than 2000 real property objects. Only half of them were submitted together with the report of individual valuation and therefore were analysed. The results of submission and investigation of appeals are presented in Table 5.

Table 5. Results of the investigation of appeals submitted against the taxable value estimated by the way of mass valuation (in units)

Total number of appeals	Rejected because no valuation reports were submitted	Investigation suspended under the request of applicants	Appeals and valuation reports investigated	
			Taxable value is corrected	Rejected because of wrong report
1617	811	31	458	317

The Centre of Registers set up the Appeals Investigation Commission, which has carefully investigated the appeals submitted together with the reports of individual valuation. Main reasons for acceptance of appeals and correction of values are as follows:

- part of premises are located in the basements;
- property is in bad shape and out-of-use;
- objects with large areas in the closed territories;
- commercial objects in expensive zones, however, located inside the yards without show windows and access to the premises from the street.

Main reasons for rejection of appeals:

- valuation for another purpose than that registered in the Real Property Register;
- another methods and approach applied than those specified by the Law;
- having estimated the market value of a building the value of land has been subtracted in addition;
- errors in the calculation of values.

Out of 317 decisions to reject the appeals submitted with individual valuation reports 3 decisions were appealed against to the Commission of Administrative Disputes and 40 decisions were appealed against to the Vilnius County Administrative Court.

After the extension of the term for submission of appeals there about 200 revised individual valuation reports submitted with repeat appeals and over 100 new appeals. In addition it makes the revision of taxable values for about 500 buildings and constructions.

As the separate case should be mentioned the question of hotels valuation. Property valuers apply the income value and residual value approach in the process of appeals. The Lithuanian Association of Hotels and Restaurants makes an especially great pressure regarding the use of use income approach. However it is very difficult to separate the cash flows attributable to the hotel real property and to another property (business) and to make an actual valuation of the building. Comparative analysis of the taxable values for hotel real property establishment by the sales comparison method and the use income value method shows that both methods for estimation of taxable value of hotels have drawbacks. This is to state that considering the current market conditions in Lithuania the market value of commercial property, especially including hotels, is higher than the use value by the income received. In other words the value of commercial property on the market by the sales (market) value and income method differs. This causes many discussions in period for introducing the real property taxation based on *ad valorem* principles. This also stimulates the methodological discussions regarding the justification of taxable value, the purpose of the tax and its expedience and application of new mathematical models.

Conclusions

In spite of rapid privatisation, development of market economy and strengthening of local governments, the introduction of ad valorem property taxes in the country is going slowly and the process is rather contradictory.

The development of a system for mass valuation of real property in Lithuania where a computerised cadastre and register as well as storage of transaction data in the common database served as a base, also methods taken over from the developed countries, was a successive process with applying new technologies, improving valuation procedure and obtaining more accurate values. In some extent it stimulated political decisions regarding of introduction of market value-based real property tax.

The system for mass valuation of buildings and constructions in Lithuania is introduced later than the system of mass valuation of land. It allows avoiding certain methodological and technological problems. Finally, the system for training the capacities of mass valuation specialists has been introduced with the help of experts from Sweden, Finland, USA and other countries.

The base of market transactions data in the Centre of Registers is in the process of constant development what makes a solid background for the estimation of taxable value under the *ad valorem* principle. The use of statistical methods allows estimating rather accurate average market value of real property. Any inadequacies encountered may be revised upon the request of a taxpayer on the basis of individual valuation. The system of appeals protects and defends the rights and lawful interests of a taxpayer.

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