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the case of Czech Republic

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TWO-LEVEL MODELLING OF REAL ESTATE TAXATION – THE CASE OF CZECH REPUBLIC

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ABSTRACT

Real estate taxes recurrently attract attention, because they are a source of potentially increased revenue for local and national government. Most experts agree that it is necessary to switch from using normative values for taxation to a market-value-based taxation of real property with computer-assisted mass valuation, with benefit from use of value maps.

In Czech Republic, efforts have been made to adopt current tax policy goals, but improvements are still needed. The paper aims at supporting the current improvement process towards a market based system. It presents models, which describe aspects of the present Czech property tax system. A proposal for the future system focuses on the value map component. The described change depends on political involvement. This political activity is modelled as well. The hypothesis is that the two-level modelling effort enhances the change process by providing a comprehensive view of options, both of a technical and a political character.

1. INTRODUCTION

1.1. The context: Real estate tax policy statements

Real estate taxes recurrently attract attention, because they are a source of potentially increased revenue for local and national government. Worldwide, demands are made that design of a land taxation system must be coherent with poverty reduction and social equity objectives. Land taxes should therefore be understood as a means to promote social and environmental objectives, and discourage underutilisation of land and prevent land speculation. Within the Pan-European context, an UN-ECE WPLA Workshop "Real Property Administration in Developing Information Society", September 2004, framed the conclusion regarding Lithuania that "[t]he current situation, with normative values used for taxation, is not sustainable. Most experts agree that it is necessary to switch to a market-value-based taxation of real property and computer-assisted mass valuation to establish the taxable values" (UNECE, 2004). However, as we shall see, policy statements do not by themselves lead to a change.

Governmental structures consist of central and mostly also decentralised, municipal, units. The principle of subsidiarity suggest that local units, in case the municipality, should perform as many tasks as possible, leaving the higher (state) body in a subsidiary function (*cf.*

Protocol, 1992). This implies that the state performs only those tasks, which cannot be performed effectively at a more immediate or local level. This principle is applicable, also, concerning real estate taxation, as local taxes may become more legitimate in the eyes of local people when the taxes are accompanied by more effective and secure rights and by effective provision of public services. There is thus good reason to focus on the municipal component of the administrative system needed for taxation. Furthermore, this is in accord with conclusions of the WPLA Workshop on Mass Valuation Systems, November 2003, which among others stated that “(h) Fiscal decentralization is important, especially local government decisions on local tax rates. Although land (real estate) tax is more frequently seen as a local tax, the introduction of mass valuation models on a national level reduces general valuation costs and strengthens national economic integrity. Thus mass valuation should be considered as a joint exercise of local and central authorities.” (*UNECE, 2003, p. 6*)

Improvement of the taxation system demands political involvement. In addition to an understanding of the technical aspects of mass evaluation, the actors, which are involved in this change process and their interplay, must be understood as well. Actors include committees of the Union of Towns and Municipalities of the Czech Republic, e.g. the Finance Committee and the Committee for information systems of towns and municipalities, as well as corresponding bodies in government and society at large.

The hypothesis is that a two-level modelling effort enhances the political change process by providing a comprehensive view of options, both of a technical and a political character.

1.2. Different levels of change

Market-value-based taxation must take its point of departure in the market, where rights in immobile property are traded against money. These *transactions* are performed through processes, which are modelled in the following section 2. The modelling is possible, because the transactions follow a certain scheme, which is defined by legislation and professional and general norms. Such schemes are here called *institutions*, following a branch of research called New Institutional Economics. An *institution* may be an organisation defined by or according to law, but here the term refers to “the humanly devised constraints that shape human interaction” (*North, 1990: 3*). These general terms allow us to describe the two levels, which above were dubbed the ‘technical’ and the ‘political’, with the same concepts, as we shall see.

The ‘political’ level is where new legislation is enacted, e.g. on the introduction of a new system of taxation. The political process resembles the immobile market so far as negotiations, bargaining and transactions take place. At the ‘political’ level however, the transactions regard the rules or *institutions* governing taxation or purchase of property, while at the ‘technical’ level the transactions regard the exchange of commodities or services. So, following Bromley (*1989: 49, 128f*), we may distinguish two kinds of transactions:

- transactions in commodities, and
- transactions in institutions, respectively.

Like transactions on the ‘technical’ level, the transactions at the ‘political’ level are bound by rules and norms, as we shall see detailed in section 4. High school knowledge informs us that the political process emanates from issues of the public debate, which through political parties are brought to Parliamentary deliberations. Parliament may agree to issue a new act, which is then implemented. Now, reality is that the law making process is much more complex.

Negotiations on new legislation are not restricted to political parties, but include other *actors* like the Czech Union of Towns and Municipalities, who trade their resources in terms of knowledge, mobilising skills, etc. against influence on the modification of existing institutions. Often, such negotiation patterns between actors are fairly stable. You then talk of *policy issue networks*. The rules and patterns of the (real) law making process are less stable than the rules of taxation or purchase of property. Therefore, the modelling of the political level in section 4 will be more tentative.

The two levels described above are put into perspective by the following table on levels of social analysis.

Levels of social analysis L1..L4	Frequency (Years)	Examples
L1: Informal institutions: Traditions, norms; religion	10^2 to 10^3	Often non calculative, e.g. revolutions, constitutional changes
L2: The institutional environment: The formal rules of the game	10 to 100	Implementing or changing of property rights, e.g. restitutions. Redesign of government, e.g decentralization.
L3: Governance: Play of the game. Institutional transactions.	1 to 10	Change of cooperation (e.g. policy issue) networks. Change of rules for administrative processes. Modification of information systems.
L4: Resource allocation and employment. Commodity transactions	Continuous	Exchange of assets: e.g. purchase of house; Change of property unit: e.g. subdivision

Table 1: Levels of social analysis

Source: O. Williamson (2000, p. 597). Simplified and illustrated

The two lowermost rows of the table compares to the two levels introduced above: L4 to the ‘technical’ level of what is considered routine processes (even if an individual owner performs the process only once or twice during his lifetime). L3 compares to the ‘political’ process of making new rules for the activities at level L4. Levels L2 and L1 are added for completeness. The relevant message is that the institutions at levels L1 and L2 condition the activities of levels L3 and L4, but often in a way, which is not easy to identify. For example, the substantial change in property rights in Central and Eastern Europe around 1940s and again around 1990s fit level L2. These changes are likely to influence a change of the tax system, but in a way, which is difficult to describe and address.

Having provided the conceptual frame for the two-level modelling, we are now prepared to address the levels in detail: Level L4 in the subsequent section, Level L3 in the following section 4.

1.3. Objective of the paper

The main objectives of this analysis of the Czech real estate tax system is to contribute to the improvement of the system by addressing both of the two described levels when proposing the wider application of market based values and the praxis of using value maps. More specifically, the task is to identify present practises, which fit tax policy statements referred to above, and then support a unified conception and implementation for the whole territory.

1.4. Terminology

Model - a descriptive and/or graphical specification of a selected part of reality, representing a simplified mapping the conceived and interpreted notion. Models help to shape and understand both the problem and its solution domain.

Real estate often refers to land along with anything permanently affixed to the land, such as buildings. In the present paper, the term is used in the wider sense, as the Czech conception of *real estate* is better rendered by *immovable property*.

Immovable property is pieces of land, buildings, and parts of buildings (flats)

Real property - for the purpose to this paper synonym with *immovable property*

Land value taxation - is the practise of raising state revenues by charging each landholder a portion of the value of a parcel of land without buildings or similar improvements. It is different from a property tax, which includes the value of buildings and other improvements on the land.

Normative value - value established in accord with an assessment ordinance

Market value - the most probable sale price of a real estate property in terms of money, assuming a competitive and open market (*UNECE, 2005*)

Common (or current) value - a surrogate for the *market value*. The ‘common value’ is outcome of a market analysis, which is based on available sales information.

2. REAL ESTATE AND TAXATION IN THE CZECH REPUBLIC

2.1. Types of real estate

Real Estate Market in the Czech republic

The Czech real estate market is attractive for foreign investors, because of its location in the middle of Europe and due to its rather developed infrastructure. However, the rather high cost of manpower and many imperfections in the legislation discourage potential investors (*ARTN, 2004*). The Czech real estate market is made up of the following units: Parcels, buildings, and flats, respectively. A parcel of land makes up a real estate unit without the buildings, which may be built on the parcel. An ‘ownership relation’ is a registration unit, relating an owner with one or more property units; for example, an owner may own 3 parcels and 1 building.

Type of property unit	Quantity
Parcels of land	21.880.000
Buildings	3.637.000
Flats and non-residential areas	1.208.000
Ownership relations	5.938.000

Table 2: Figures of the Czech real estate market (*COSMC, 2004*).

An indication of real estate market activities is provided through the figures of the following Figure 3. The process of property transaction is depicted in the following diagram 1, in order to substantiate the basis for collection of sales data.

Type of process	Numbers/year
Proposals to entry (registration of ownership)	562.401
Concerned parcels, buildings and flats	2.300.000
Requests of cadastral data	1.700.000
Requests of cadastral data over the internet	320.000

Table 3: Real Estate transfers and data requests in 2004.

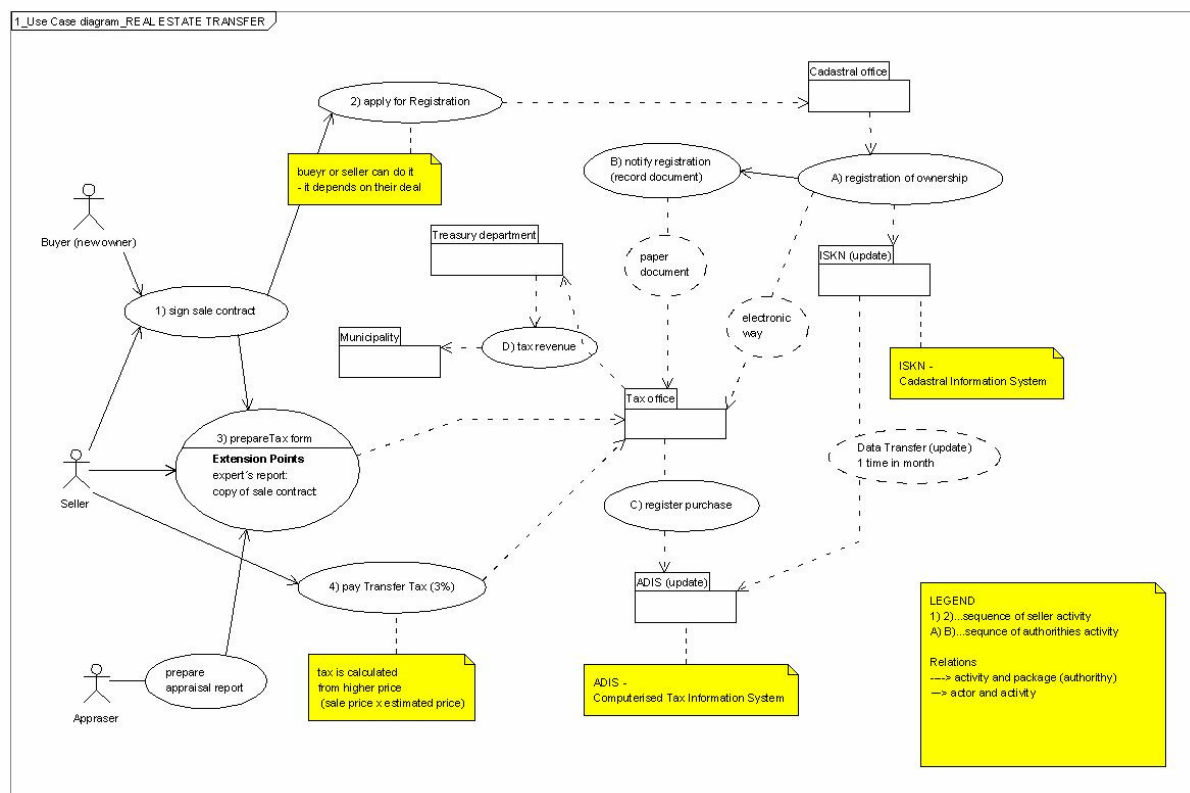


Figure 1: Use Case diagram - Real Estate Transfer.

A seller (owner) and buyer close a deal and sign the sales contract. They can use the service of a notary or lawyer for that. Depending on their agreement, who is in charge and whether charge is shared, a private appraiser is ordered to prepare an Appraisal report. Similarly according to agreement, one of parties applies for registration of ownership at the Cadastral office of the jurisdiction. Copies of the sale contract are annexed to the Application for the registration. After confirmation of application (usually in 1 till 3 months) the Cadastral office

- register a new ownership in Cadastral information system (ISKN)
- notify buyer, seller and Tax office about that. Furthermore,
- every month an (sales) extract of the cadastral database is transferred to the Tax information system (ADIS), which is administrated by the Tax office

The taxation issue is deferred to next section.

2.2. Types of real estate taxes

We can distinguish a property tax according to whether it is levied yearly (real estate tax, road tax) or due to a transaction (inheritance tax, gift tax or transfer tax). In Czech Republic, the property taxes include: Real estate tax; Transfer tax; Inheritance and Gift tax, and Road tax. The real estate tax comprises of two taxes: tax from buildings and from land.

The base for determination of real estate tax is still based on normative value according to the assessment ordinance, which is published every year by Treasury department (Ministry of Finance). An effort is made to differentiate the tax rate in accordance with the size of population within the settlement, but the rate is not adjusted to individual localities and do not distinguish land in city centre from land in the periphery. This means that a parcel at an attractive and developed location has the same tax rate as fallow land in a non-attractive locality. The tax thus does not motivate owners to develop their property and use the potential of their land. In addition, the tax rate is not continuously updated. Thus, there is no impact of inflation and therefore the amount of revenue and also importance of real estate tax decreases.

In 2000, the revenue from real estate tax was 4,4 mil CZK, which was 2,7 % of all tax revenues. For the municipalities, the real estate tax makes 5,3% of tax revenues. The revenues of real estate tax are in many cases so low that several proposals were made to cancel the tax.

Revenue/year	2002	2003	2004
From buildings	63	67	68
From building parcels	89	94	96
Total from Real Estate	153	161	164

Table 4: Income of Real Estate Tax for municipalities (in million of EUR).

As mentioned, the real estate tax comprises two parts - building tax and land tax, with different ways of taxation. Tax due rises from ownership or from lawful use of property and its payment does not depend on the income of the owner or user.

Building tax: The payer is an owner of building, flat or non-dwelling building. In past cases it could be a tenant or user of building. Part owners pay the tax in according to their part. The building tax is paid from buildings, which have passed a building approval (and then becomes registered in the cadastre). The tax base is area (in m²) of aboveground building according to the state as of January 1st of the tax period. The tax rate depends on the purpose or use of the building and the number of floors. Accessory buildings (workroom, garage, etc.) less than 16 m² are not trigger tax.

The basic tax rate is adjusted by a coefficient, which is determined according to population of the town or village. Tax is paid to the local Tax office once per year in May.

Land property tax: Land property tax is paid from all parcels, which are registered in Cadastral information system (ISKN) with different types of land: building parcels (parcels meant for building), rural land, vineyard, hop garden, meadow, etc. Tax base depends for one

thing on the type of land and for the other on value (in CZK - Czech Crown) in rural areas or elsewhere on area in square meters (m²). For different types of land there are different tax rates. The primary rate on the building parcels is adjusted by correction coefficient according to the population size of the settlement, where is the land located. Thus the tax equals the tax base (CZK) x tax rate (%) x settlement coefficient. This tax is also paid to the Local Tax office one time per year in May.

Transfer tax: The transfer tax is paid when a seller (owner) sells his property to buyer. The tax base is the higher of price in sale contract and the value in the mandatory appraisal report. Tax rate is 3% from value of property. The seller has to pay the Transfer tax from the sold property within 3 months after the transfer was registered in the cadastre.

Seller gets the empty Tax form at the Tax office, or at the municipality office, or from Internet pages. The tax form is annexed with a copy of Sales contract or other agreement, which confirms the transfer of ownership and with the Appraisal report. The transfer tax can be read from the publicly available assessment ordinance. If the Transfer tax is lower than 100 CZK, the seller has to complete and return the Tax form with annexes, but he need not pay any amount. Due date is May 31st at least.

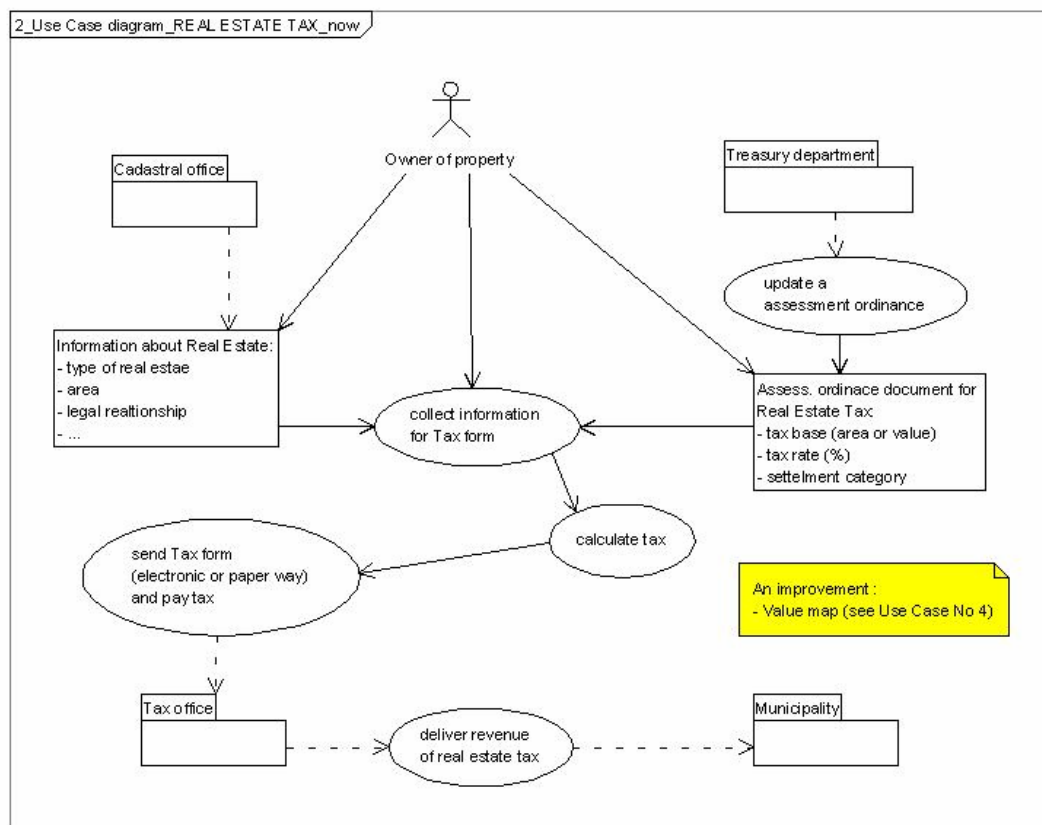


Figure 2: Use Case diagram - Real Estate tax (based on normative value)

Seller delivers the Tax form personally or through the Internet. It is even possible to pay the tax through the Internet, when the payer has a digital signature. The tax office gets a notification from Cadastral office with recorded information, in addition to the Tax form with the annexed Appraisal report and Copy of sale contract.

Finally, the tax officer compares all documents and register information in the Tax IS (ADIS)

Sales price vs. normative value

An investigation has been made in order to compare the sales prices with the normative values used for taxation according to the Assessment ordinance. The result appears from the table below. The substantial differences document a deviation from the policy objectives of real estate valuation.

Divergence of value in %	Number of cases in %
< 10	24
10 - 100	46
>100	22
>200	8
	100%

Table 5: Divergence between normative and common value.

Source: Magazine Ekonom 11/2002, from 894 sales

2.3. Bodies related to real estate taxation

The chapter summarises the most important actors and databases, which keep information on real estate and real estate prices.

1) The Ministry of Finance - ADIS

The Ministry of Finance is the central government body responsible for the State Budget, the State Final Account, the Treasury of the Czech Republic, the financial markets, taxes, customs duties and fees, the financial economy, financial supervision, etc. The Computerised Tax Information System which is called ADIS is used by Treasury department for manage the all tax system in the Czech Republic. ADIS contents among others these registers: *Real Estate Register*; *Building Register*; *Flats Register*; *Real Estate Valuation Register*; and the *Common price register* (which is under testing process in Pilsner tax office).

The tax offices collect real estate price data primarily from sale contracts and appraisal reports. These data are transferred in aggregate file to the Statistics Office, CSO. CSO prepares and determines sale coefficients, which are updated and used in the assessment ordinary. The assessment ordinary is then used by the private appraisers for preparing the mandatory Appraisal report. The appraisers use the comparative method of valuation where possible. These data are obtained in tax proceedings and have according to law to be kept secret (Law 337/1997 on tax administration and charges. *Ministry of Finance - Holmes A. 2006*). Unfortunately, this information is thus not available for market analyses.

Complex data base in Pilsner municipality

The Pilsner municipality has collected all administrative data into one data base. The integrated information system PROXIO with information collected on city districts is used by the municipality, together with a traffic enterprise. The connection to governmental is established through a component called Complex data base (KDB), which provides access to

basic governmental registers (Real Estate register, Building register, etc.). The KDB system is integrated with a GIS.

The mentioned information structure could be very useful as a base for real estate market analyses and for other complex analyses.

2) Cadastral office within the Czech Office for Surveying, Mapping and Cadastre (COSMC)

The real estate register, which contains information about properties and ownerships, is a main part of the Cadastral Information system (ISKN). A data connection between ISKN and other state information systems is in operation, namely between Cadastral offices and Tax offices (once a month data transfer between ISKN and ADIS). Data connections are being prepared between the Cadastre offices and various city GISs, e.g. the PROXIO system in Pilsner, which was mentioned above.

3) Czech Statistical Office - Statistical System of Real Property Price

The Czech Statistical Office (CSO) is in charge of the Statistical System of Real Property Price. The main purpose of this system is to provide information about the value level of the individual real estates, taking the location and others important factors into consideration. The outcome is expressed as an *average unit sale price* of the real estate unit type concerned. The data source is the above mentioned Tax forms, which are collected by the Tax offices.

This source provides the actually paid (confessed) prices across the whole country through a regular flow, which reflects the real estate market. A drawback is that the result is published about a year later, which due to inflation makes it more relevant for macroeconomic purposes than for value assessment.

4) Union of Towns and Municipalities

If representatives of towns and communities wish to achieve positive changes with regard to general questions in the field of local administration, a certain degree of unity, a coordinated approach and a legitimate lobbying is needed and applied. Currently 2475 municipalities, or 39% of all municipalities, are members of the UTM. The other 61% of municipalities are mostly smaller cities and villages. This appears from the fact that more than 7 million people, or 72% of the Czech population in the UTM municipalities.

The UTM has set up specialized committees. The *Finance Committee* closely cooperates with the Ministry of Finance in preparing budgetary rules and regulations for their members and also in preparation of new legislation regarding taxation with bearing for the municipalities. The *Committee for information systems of towns and municipalities (ISMO)* similarly facilitates the use of information systems in the municipalities. The committee is intensively promoting the use of Internet in the daily work of the UTM member offices.

5) Czech Association of the Certified Property Appraisers (CACPA)

The main aim of the association is to prepare appraisals of real estates, primarily estimates of the common (market) value. The association has installed district valuation committees and county valuation committees. The committees are collecting information for updating the databases of realised sales prices and of land value, and for the creation of value maps. The database includes the value of land parcels in more than 55% of districts of Czech territory. Members of Czech Association of the Certified Property Appraisers made more than 200 value maps of towns and villages until now. (*CACPA 2006*)

6) Institute for Regional Information (IRI)

The Institute for Regional Information (IRI) is an important independent company, which is focused on drawing up, processing and presentation of information concerning spatial development. The activities of IRI includes: Urban planning, the preparation of land value maps; complex analyses concerning the state of housing in various Czech regions and towns.

7) Czech Banking Association (CBA)

Czech Banking Association associates currently 33 banks and branches of foreign banks with full membership status, forming 99 per cent of the banking sector. The key objective of the CBA is to represent and to promote the common interests of its members relative to the Parliament, the Government, the Czech National Bank, and towards other legal entities.

At the beginning of the year 2005, a Working Group for Property Appraisal was established to replace a former "Sub-commission for appraisal of real estate". Its concern for proper appraisal of property relates to the fact that the property serves as security for liabilities. Important is the co-operation with the Czech National Bank in preparing provisions and recommendations for property appraisals and also with the governmental bodies in the preparation of databases on the real estate market. The Basel II agenda, implemented through an EU directive, requests from the banks a more elaborated risk management, which further motivates the said cooperation.

A negotiation on exchange of files with sale prices between the Cadastral IS (ISKN) and the Banking Association took place a few years ago, but did not materialise in exchange agreements (*Suchánek, COSMC 2005*). Recently, negotiations were resumed between the Bank Association, the Treasury department and COSMC. The task is rather complicated, because the reported sale price regards a compound of immovable property unit, e.g. building parcel, building, and garden.

8) Association of Real Estate Offices of the Czech Republic

The Real Estate offices usually have very rich knowledge about prices of property and in addition private databases with information of real estate prices.

The Association of Real Estate Offices of the Czech Republic is the largest professional association of service providers in the field of real estate, which is active on the real estate market in the Czech Republic. It was founded in 1991 and now has more than 200 members - real estate offices, real estate managers and administrators, and auctioneers from all over the Czech Republic, which mean about 1200 individuals working as real estate brokers as members of ARK CR. (*AKR, 2006*)

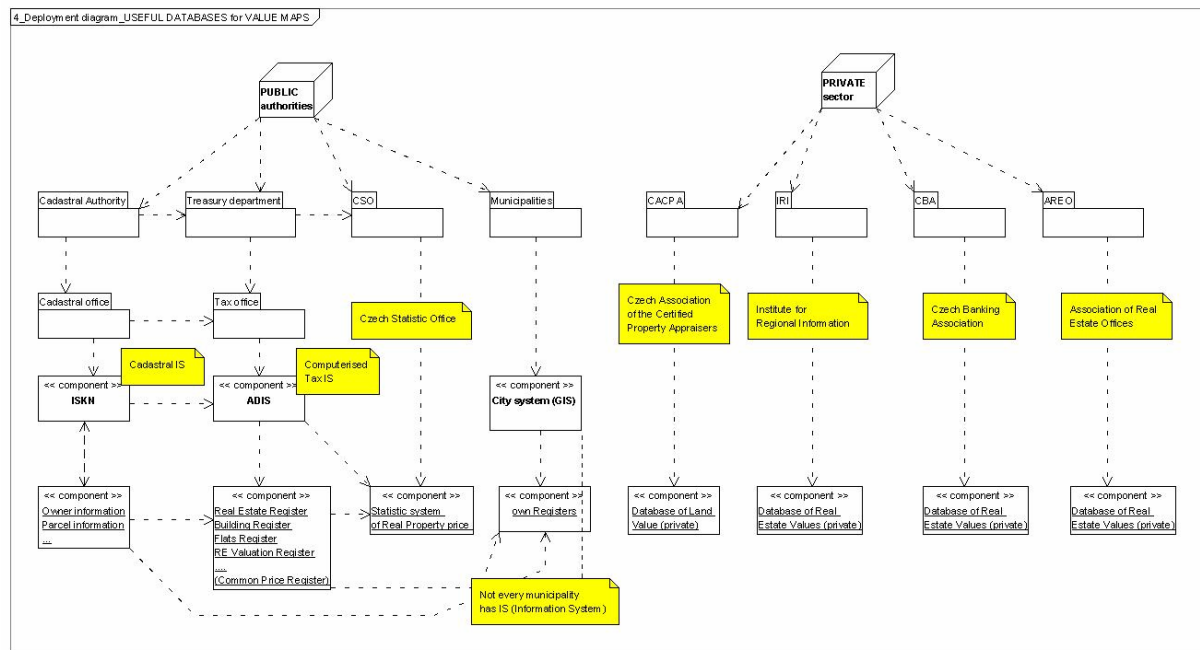


Figure 4: Deployment diagram - Bodies concerned with real estate tax and their databases.

Summarising, the above Figure 4 presents bodies in charge of property information. Presently, there exist rather many databases with information regarding real estate and its value, but they are not connected, and the information is not available outside the organisation. On the left part of the figure are depicted the public authorities and the information systems, which they use for administrating their duties. The Computerised Tax Information System (ADIS) includes a Valuation register and a Common Price register, which is presently under construction.

Generally every provincial or district town has some kind of city information system, where the municipalities collect also spatial data. On the right part of the figure are examples of private sources. However, the depiction is not complete. For example, some real estate agencies and banks could be mentioned, which have private databases about land value information, used for their own purposes.

3. IMPROVEMENT EFFORTS AND THE LAND VALUE MAPS

The improvement efforts are presented as a basis for the presentation of arguments, which may support a wider application of land value maps.

3.1. Political interest

Many specialists have emphasized the relevance of the market value based approach since the beginning of the nineties (*May et al, 1993*). Reflecting that, many efforts were made in trying to implement such approach to taxation of real estate, however, not with much success. As main barriers are counted the imperfect real estate market and the related rent control scheme introduced after the Velvet revolution in 1989. During the last 16 years, competition and transparency of the market has increased, but rent control still prevails. The following provides an overview of efforts made:

1992 – Parliament passes act 357/1992 on transfer, gift and inheritance tax, which request an appraisal report prepared for every transfer of immovable property, and also act 338/1992 on tax on immovable property, that is the building tax and land property tax mentioned in section 2.2.

1997 – Parliament passes act 151/1997 on property valuation. It details the methods to be used for the appraisal reports, and introduces also the notion of value maps, see below.

1997 – A draft act is prepared, where the real estate tax is based on market value of property

1998 – The draft passes internal and external proceedings, cf. Figure 6.

1999 – Government blocks the act

2000 – A revised draft emphasises that the tax rate is determined by the municipalities, but Parliament blocks the act

2003 – Most of the 2000-proposal is reintroduced: The new act applies the market (common) value approach, while the tax rate and tax revenues depend on municipal decision.

2003 – The act is blocked in the internal governmental process, cf. figure X.

2006 - A new draft is in preparation.

The above description confirms the intention to introduce a new market based scheme, but a manifest hesitation is evident as well. The intention of the new tax legislation was not to increase the taxes. This appears also from the freedom given to municipalities in regulating the tax rate according to their local conditions. The hesitation may partly be due to the difficulties for municipal politicians in explaining the taxation technicalities to their constituency. In many cases, the property taxes are considered obnoxious by the inhabitants, especially those who do not gain profit from their property.

3.2. Current state of value maps in Czech republic

The notion of value map is formally established in Czech Republic through act 151/1997: "The value map of building land is a graphic representation of building lands with marked prices within the municipality territory or parts of it in the scale 1:5000, or more detailed. The value of the building lands in the value map is evaluated from prices in the contract of purchase."

However, about 50 towns had already before 1995 established value maps, corresponding to approximately 1% of the number of the towns and 24% of the population in the Czech Republic (*CACPA, 2006*).

In 1995 the Treasury department issued a new assessment ordinance, requesting that the price on the value map should be derived from realized sales. After that, about 30 of the 50 towns did not continue the updating of value maps, as predicted by May et al (*1993*). Of those about 20 towns, who still update their value maps, 10 make the value map available on the Internet.

3.3. A land value map for real estate taxation

The following specifies the land value map in more detail than the legal definition. Requirements for the land value map may be specified as follows:

1. The map should be prepared according a set of generally agreed methods and should cover all territory of the country
2. Existing sources on land price should be available for preparation of the map, see Figure 5.
3. The land value map should be related to the urban plan
4. The municipalities should be in charge of maintaining the value map, but they should be entitled to outsource the mapping task to a private company
5. The land value map should be available for taxpayers and tax offices as a means for enhancing the real estate market in the following forms:
 - a. Paper version (at the municipality)
 - b. Electronic version (on the Internet)
6. Bigger cities (county and district) might have the value map included in their GIS
7. Smaller cities and villages should have value map in form of
 - a. Text tables (list of parcels and their values)
 - b. Paper map with marked zones and their values

A critical demand is the collection of data, cf. point 2 above and Figure 5.

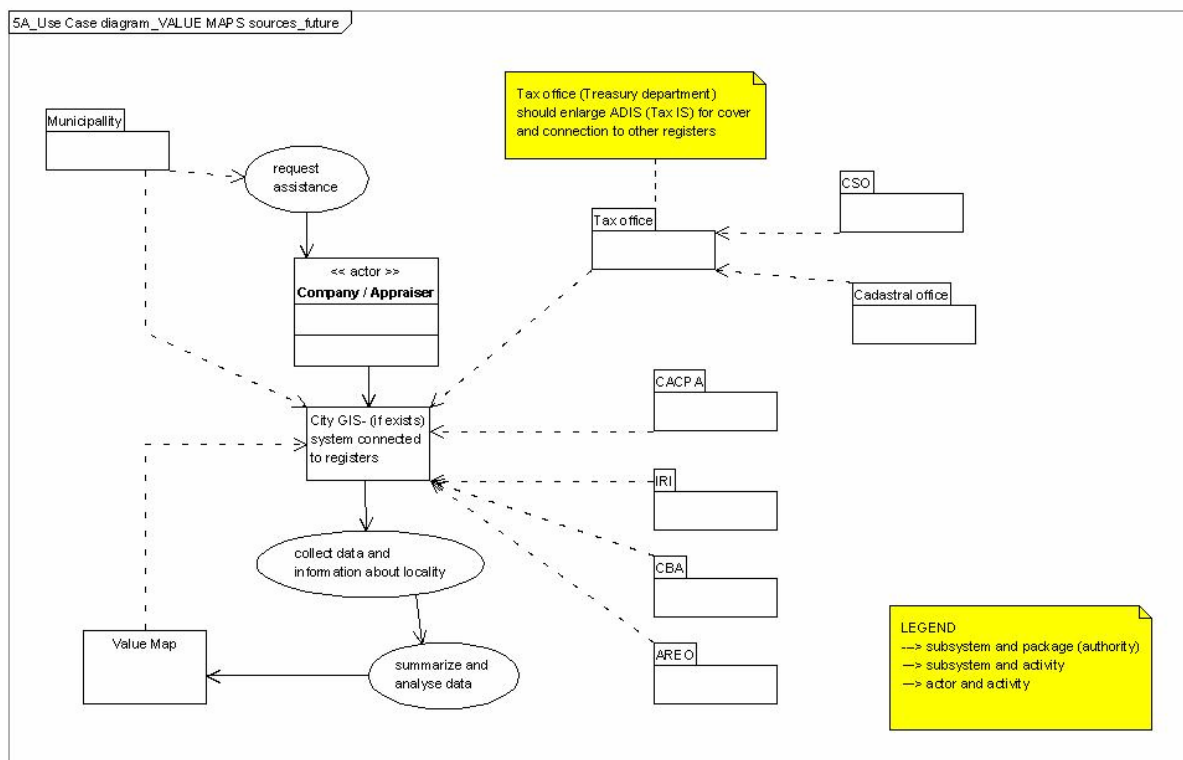


Figure 5: Use Case diagram - Potential value maps sources.

The data collection task has a legal and a technical component: The Tax offices and the Statistical Office are not entitled to share their detailed price data. Also, the technical system is missing, which could transfer data on real property (Cadastral Office) and on property

value or price (Tax office, Czech Statistical Office) to the municipalities, who are proposed to have the key function, cf. point 4.

The proposal to give the municipalities a key function is in accord with the policy statements, which were quoted in the introduction. In addition, they know their locality very well and stores already related data, e.g. on spatial planning, cf. point 3, and on roads and utilities. The private associations have also relevant databases, but usually they do not cover the whole territory of the Czech Republic and also the quality of their information very considerably. The municipalities can collect the data for the value map themselves or they can request assistance from a private company, which prepare the complete value map or only perform parts of the task. If the municipality has their own GIS, the collection and manipulations with data should be easier and more effective, cf. above section 2.3.1 on Pilsner. Thus, there is a need of negotiation with state authorities as well as with private associations and companies relative to data collecting and connecting of existing databases and registers as well.

4. THE POLITICAL PROCESS

Having sketched an improvement at the technical level, the task is now to address the political level. As mentioned in section 2.3, the Treasury department of the Ministry of Finance is in charge of taxation and the preparation of new acts. Basically, ‘anybody’ can propose new legislation: A group of parliamentarians, senators, institutions, an association or e.g. the Union of Towns and Municipalities; essential is that they address the Treasury department. If the Treasury is interested, it establishes a Ministerial Committee, which is managing the task and discussion between the concerned actors. The Treasury then prepare a ‘Legislative task of government’, which is followed by an internal commentary proceeding among departments of the Ministry of Finance. Every department of the Ministry comments on the proposal and then convenes to a session of heads of departments with the minister. This group may decide to initiate an external commentary proceeding. The external proceeding engages other ministries, municipalities, and selected institutions. If these bodies strongly disagree or present substantial comments, the proposal may be recommitted to another internal proceeding for revision.

Having passed the internal and external deliberations, the next step is a check of the proposal by the Legislative government committee. The committee comments only on legislative (administrative law) issues, no on objective tasks. After that, the proposal goes to the government, than to Parliament and to Senate, and finally the President signs the act.

As described in section 3, parts of the above process were performed during the 1990s without resulting in a new act. Some explanation was found in the difficulties of communicating the taxation technicalities to the constituency. The above description of the complex proceedings may contribute to the explanation exercise: It is extremely difficult to devise one solution fitting all. An obvious reaction is to propose a more flexible approach, reducing the demand on uniformity to the minimum, and allowing municipalities a greater freedom in deciding the pace and the way of achieving the adoption of market standards. Provided municipalities are sufficiently assisted, including getting advice from UTM, companies, and/or more experienced municipalities, it is reasonable to assume that every year a growing number of municipalities will prepare for value maps and the related changes in tasks and information flow. When 50-70% of municipalities after some years have found their solution, experience is available to draft an act, which could pass the stony path to a presidential signature.

An important component of assistance to the municipalities is the provision of data on property attributes and on sale prices. These data are available in governmental files. Rather than focusing on the tax issue, the question could be raised to what extent privacy concerns object to the dissemination of more or less aggregated sales data. The availability of the above-mentioned information would most likely make it an accomplishable (but not trivial) task to prepare value maps in those municipalities, who are willing and able to prioritize that task.

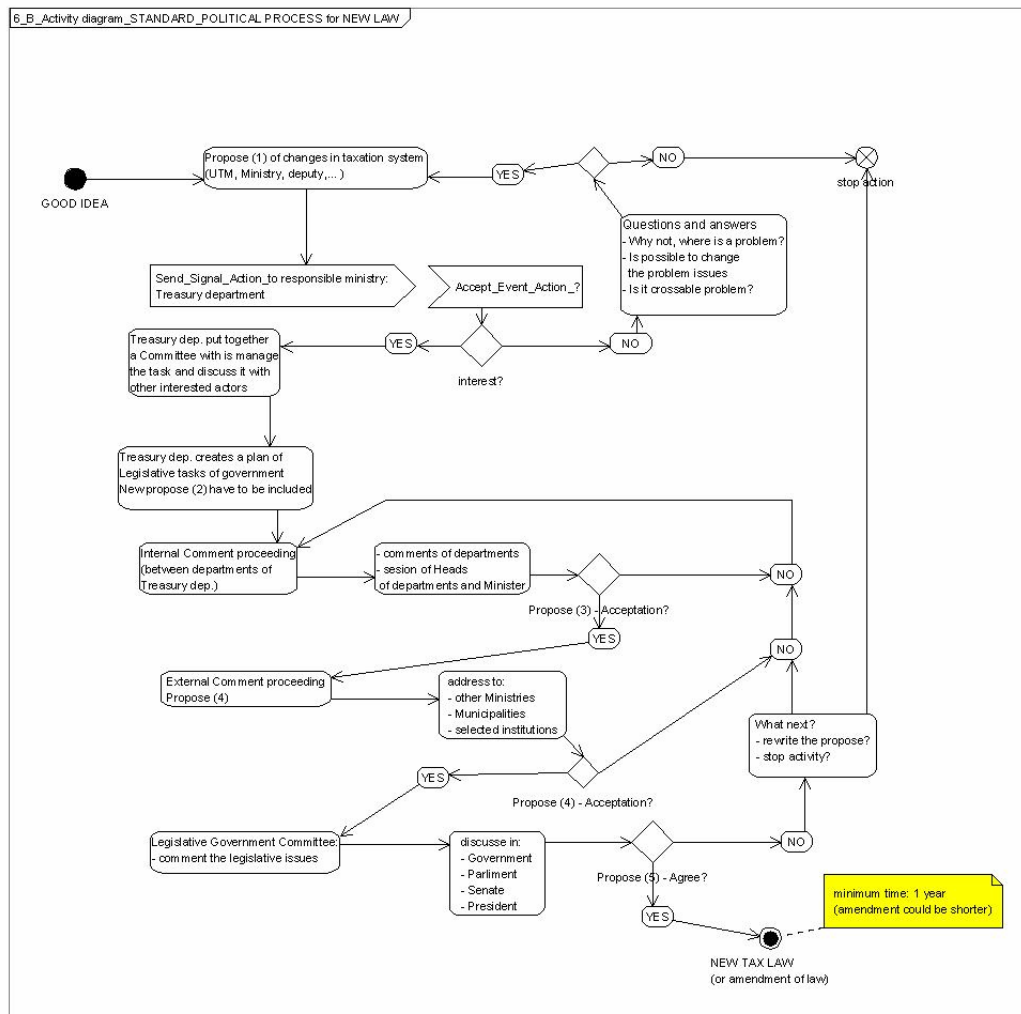


Figure 6: Activity diagram - Standard political process for passing an act.

In addition to lifting the restriction on use of data, there is an essential need to establish technical connection between existing registers and systems, which contain price information. The solutions adopted and planned for the cooperation with Pilsner, cf. section 2.3.1, may well show the way ahead. Such information systems need to be developed with the whole country in mind. A coordination effort may be organised as depicted in the Figure 7 below.

Essential is that administrative skills available in UTM is allocated to the task of facilitating information exchange among municipalities. Again, the municipal information exchange should address both of the two levels described at the outset: the political as well as the

technical. The experiences gained can then be reaped to fuel the standard political process, accomplishing the task of switching from a normative to a market based taxation approach.

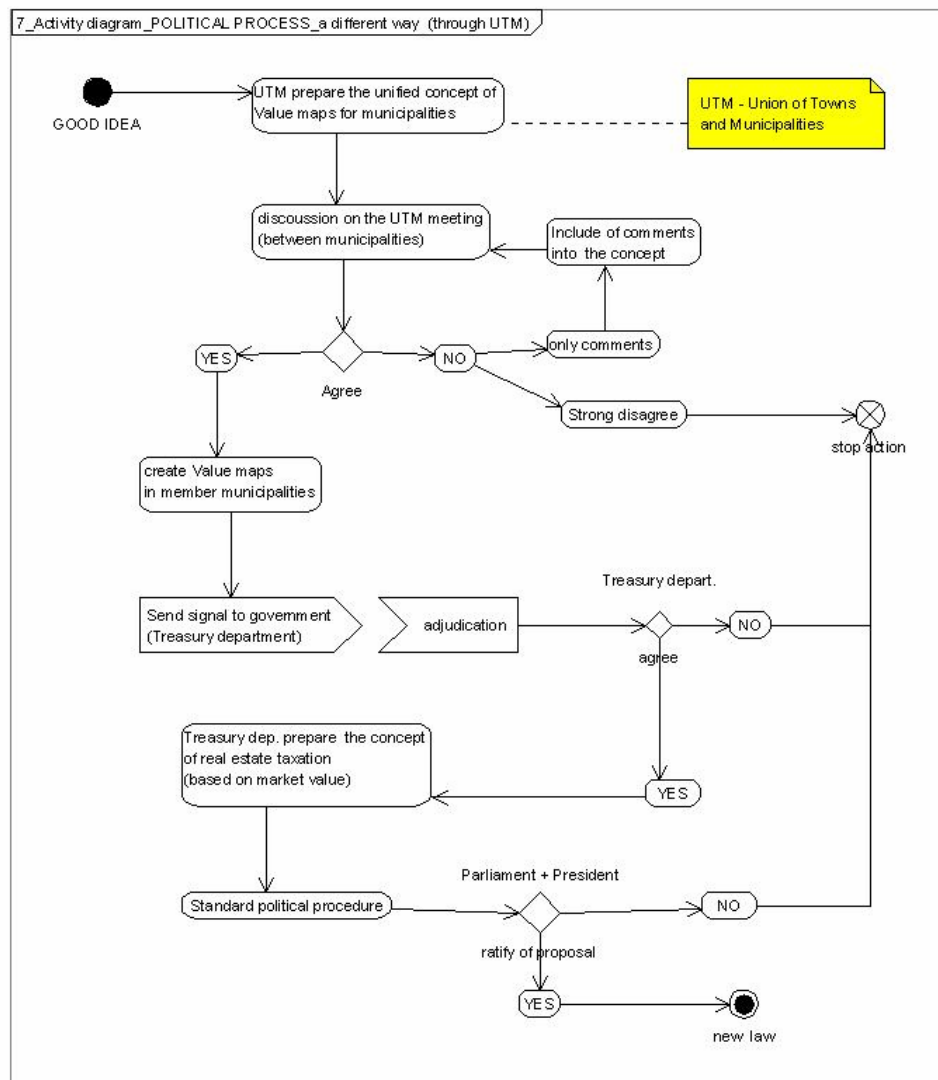


Figure 7: Activity diagram - Political process in a different way (through UTM).

5. CONCLUSION

The introduction of the paper quoted important policy statements on the need to shift from a normative to a market based approach to taxation of immobile property, and on the importance of involving the municipalities in this change process. Czech experience confirms that policy statements, needed as they are, do not bring about change by their very existence. So the question was addressed: “Who wants this market-value based system?”

For many *politicians* it is like a ‘hot potato’. It is indeed a demanding task to explain to people the relevance of an alternative tax system and thus a substantial hesitation prevails. This compares with *citizens*, who of course do not want to have a potentially higher tax and get more worries for their property, because not every property can make a profit. For *experts* like urban planners, appraisers, and other specialist the change is a logical step, which leads to

stronger relation between municipality and taxpayer, more effective usage of land, and generally to the development of the real estate market. However, the change is not simple: Characteristics like efficiency, fairness and simplicity do not always join in a property taxation system, because while efficiency and fairness increase, complexity may well increase as well. For the *banks and other of the financial services industry*, a gradual de facto introduction will assist the industry to comply with demands of rational risk management, and support the market in credits and mortgages.

For the *municipalities*, the introduction of value map provides a potential for improving urban planning and land management, and for the *Union of Towns and Municipalities* a successful management of the change process means increased visibility and legitimacy, both relative to the member municipalities and to the governmental circles. Finally, for those who traditionally were the authorised keepers of information on real estate: *The Treasury department, the Cadastre (CMOS), and the Statistical Office*, the analysis raises the question on whether and on what conditions the authority over data can be shared in wider circles.

The hypothesis of the paper was that a two-level analysis would enhance the change process by providing for a more comprehensive view of options. The outcome of the analysis was the proposal to shift the attention from providing a legal base for a countrywide, uniform taxation scheme to the (still complex) issue of allowing for wider access to data on sales prices and immovable property attributes. Wider access to these data will support the broad adoption of the land value map and thereby accelerate the implementation of a market economy in real estate.

REFERENCES

- ARTN - Association for real estate market* (2004): Trend Report 2004. www.artn.cz.
- Bromley, Daniel W* (1989): Economic Interests and Institutions - The conceptual foundation of public policy. New York, Blackwell. 274 p.
- CACPA - Czech Association of the Certified Property Appraisers* (2006): www.cscom.cz
- Collective of authors and May J.* (1993): Investment and locality, prices - flats - property.
- COSMC - Czech Office of Surveying, Mapping and Cadastre* (2005): Annual Report 2004
- Dale and Baldwin* (1998): Land Market Indicators.
- IRI - Institute for Regional Information* (2006): www.iri.cz
- Kadlecová M. and Poledník* (1999): Real estate tax models
- Ministry of Finance* (2005): Assessment ordinance no. 279/1997
- Ministry of Finance, Holmes A.* (2006): Real Estate Tax Information.
- Modern municipality Journal* (2005): Complex database in Pilsner
- Müller A.* (2000): Property taxes and valuation in Denmark
- Musgrave R. and Musgrave P.* (1989): Public Finance in Theory and Practice
- North, Douglass C* (1996, 1990): Institutions, Institutional Change and Economic Performance. New York, CUP. 152 p.
- OSMD - Association of Czech Real Estate Owners* (2005): Application to the European Court of Human Rights in Strasburgfiled
- Protocol* (1992): Protocol on the application of the principles of subsidiarity and proportionality, annexed to the Treaty establishing the European Community. <http://europa.eu.int/eur-lex/en/treaties/selected/livre345.html>
- Proxio Ltd.* (2005): Complex Data Base, www.proxio.cz
- Stuckenschmidt H., Stubkjaer E., and Schlieder Ch.* (2003): The Ontology and Modelling of Real Estate Transaction. Asghate.
- UNECE* (2003): Workshop on Mass Valuation Systems, November 2003. HBP/2002/9, HBP/WP.7/2003/3 <http://www.unece.org/env/documents/2002/hbp/hbp.2002.9.e.pdf>

UNECE (2004): Real property administration review in Lithuania

http://www.kada.lt/wpla_vilnius/conclusions.php

Váňa L. (2003): Real Estate Tax, <http://denik.obce.cz/go/>

Williamson, Oliver E (2000): The New Institutional Economics *Journal of Economic Literature* 38 (3) 595-613

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