

REAL PROPERTY VALUATION IN LATVIA

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Abstract .В статье рассмотрены принципы индивидуальной и кадастровой оценки недвижимости в Латвии. Анализирован процесс оценки недвижимости. В исследовании изучены источники данных и, чтобы отделить оценку недвижимости, необходимы данные кадастра накопленные в информационной системе кадастра недвижимости и рынка недвижимости, накопленные в информационной системе о рынке недвижимости. В исследовании проанализированы цены сельскохозяйственной земли, как главный показатель оценки. Основным выводом исследования является то, что для качества оценки недвижимости необходимы реальные данные кадастра и рынка недвижимости.

Key words: Cadastre object, Cadastral value, Mass valuation, Real property, Real property valuation.

INTRODUCTION

The concept of real property has always been associated with a person or government ownership and is an essential component of the national economy (Kothari S.P., Zimmerman J.L., 1995). Today, any state element in successful economic development is normal, world-standard real property market relations formation, and the value of the property may be used as an objective and reliable indicator to assess the tax payer - civil status and solvency of a particular period. The concept of generalized mean value of all things understood properties expressed in monetary terms. Change peoples attitudes to property, change its value.

The value of real property may be determined by the buying or selling in the calculation of the individual or the market value when calculating the compensation money in terms of loss of property or transfer the case when the real property registry, or a massive amount of tax, etc (Bahl R., Martinez-Vazquez J., Youngman J., 200). In any case, today's economy, real property value is conceptual linked.

Cadastral valuation is in accordance with the laws and regulations to implement the principles of operation of a set of objects to determine the cadastral and real property tax value of the object to be used for the purposes of the laws and regulations. Cadastral valuation processes include cadastral value of the basic design and cadastral value of the calculation. Cadastral valuation carried out by the State Land Service.

Cadastral valuation basis is used for property tax calculation. European and other market economy countries mass (cadastral) valuation is based on the real property market information. According to Property Valuation Standards (LVS-401), market value is determined using valuation procedures and methods that reflect the character of the property and the most believable conditions under which a particular property could be sold on the open market.

Individual property valuation, or an individual evaluation of a particular property value in the valuation date. Cadastral valuation of the property group is a systematic evaluation of a certain date, mostly from January 1, through the evaluation of standardized procedures and statistical analysis.

Cadastral value of the detection process and the method is essentially similar

to the individual evaluation, but given the fact that the cadastral valuation simultaneously evaluate a large number of objects and evaluation costs should be low, the value is used to calculate standardized calculation models.

Real property tax cadastral value of the object is used to calculate the cadastral information system data to the state on January 1. If the real property tax created after January 1, the object, its value is used to calculate the cadastral information system data at the state values for calculating the day. Real property tax cadastre value of the object is up to date until a new cadastral value of the base's entry into force or until the following January 1.

Writing is to provide understanding of cadastral valuation process, cadastral valuation models, along with appropriate data analysis. To achieve the objectives put forward the following tasks-evaluate cadastral valuation process and cadastral valuation calculation models, to analyze the data necessary for cadastral value, make recommendations for improving of cadastral valuation process.

MATERIAL AND METHOD

To solve the research objectives, the following research methods were used:

- *monographic descriptive method, analysis and synthesis methods* are used in the research of historical development, theory aspects and problem elements;
- *dynamic time row analysis* are used for data analysis;
- *logical construction and interpretation method* are used for developing conclusions.

The data of Cadastre information system and database of the Real property market maintained by Land State Service in this research are used.

RESULTS AND DISCUSSIONS

Cadastral values in Cadastre information system are calculated automatically. It allows to exclude the human errors, but also to save up human resources (Betts Richard M., Ely Silas J., 2004). Cadastral valuation process is showed in fig.1.

Since calculation of the cadastral value is calculated automatically, the process of calculation ensures:

- the estimated value of actuality, taking into account changes in the rated object to the performance indicators;
- simultaneous mass converting of cadastral value for all cadastre objects after new base of cadastral value coming into force;
- the reliability of the cadastre data used for calculation of the cadastral value;
- the mutual comparability of cadastral value of cadastral objects in the frame of one group of objects.

Cadastral valuation system implemented in Latvia was developed in collaboration with the Swedish, Finnish and Danish experts. Analysis of principles of cadastral valuation system of Latvia demonstrates its common similarity with orresponding valuation systems in other European countries (Baumane V., 2009):

- cadastral valuation is based on data of the Real property market information system - being developed zoning and the value of the base values;

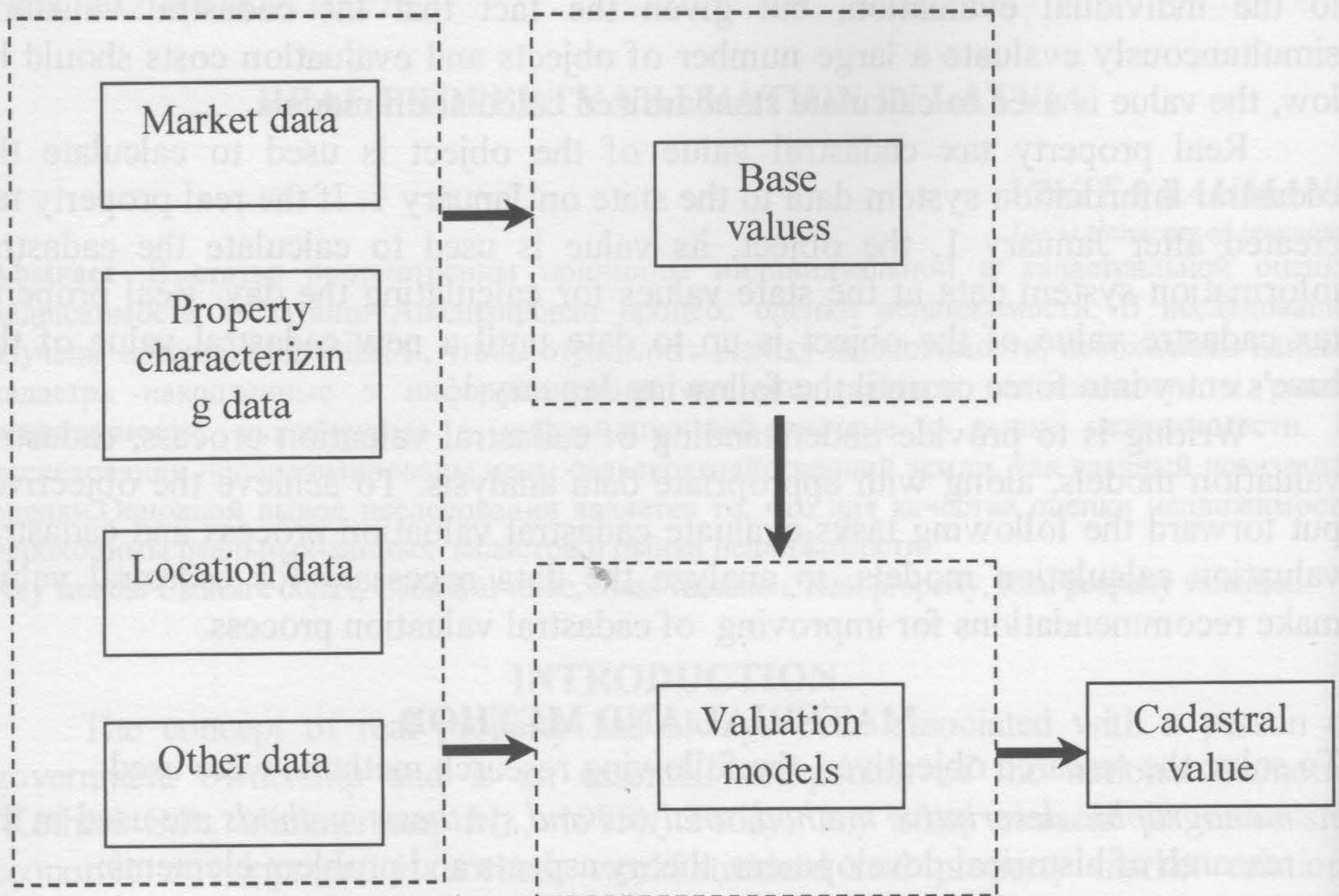


Figure.1. Cadastral valuation process model

- the methods of internationally recognized valuation are used;
- cadastral value is calculated using similar criteria in accordance to all cadastre objects.

In some countries, for example in Sweden a unified model of valuation is used: the land together with buildings on it is valued as a common undivided property. In Latvia cadastral value is calculated separately for a unit of land, building and engineering structure. Cadastral value of real property is calculated as a sum of the cadastral values of a unit of land, buildings and engineering structures forming a separate real property. Western European countries (Sweden, Denmark), value-based design is being used for commercial real property rents in the country is firmly established arrangements for income from rents accounting. Latvian current information on the income from the rental of premises and buildings from natural and legal persons linked to the leased items are not guaranteed. For calculation of the cadastral value of cadastre objects four valuation models shall be used. Valuation models are accepted on level of Cabinet of Ministers by corresponding Regulations. These valuation models are for rural land of the rural area, building land, buildings, incl. groups of premises, engineering structures.

Valuation models are created from (Baumane V., 2010):

- market data - data on sales, cost information, income data, etc.
- data characterizing real property - data about land, buildings, groups of premises, location .

To cadastral valuation could be realized, the country needs computerized information on cadastral objects and characterizing data, reliable information about transactions with real property laws and regulations concerning special assessment

procedure, and calculation models. Study confirmed that Latvia has the necessary requirements are met (Baumane V., 2011):

- information about cadastral objects is registered in Cadastre Information System (fig.2);
- information about real property market transactions is registered in database of the Real property market;
- Saeima and Government have adopted necessary legislative acts.

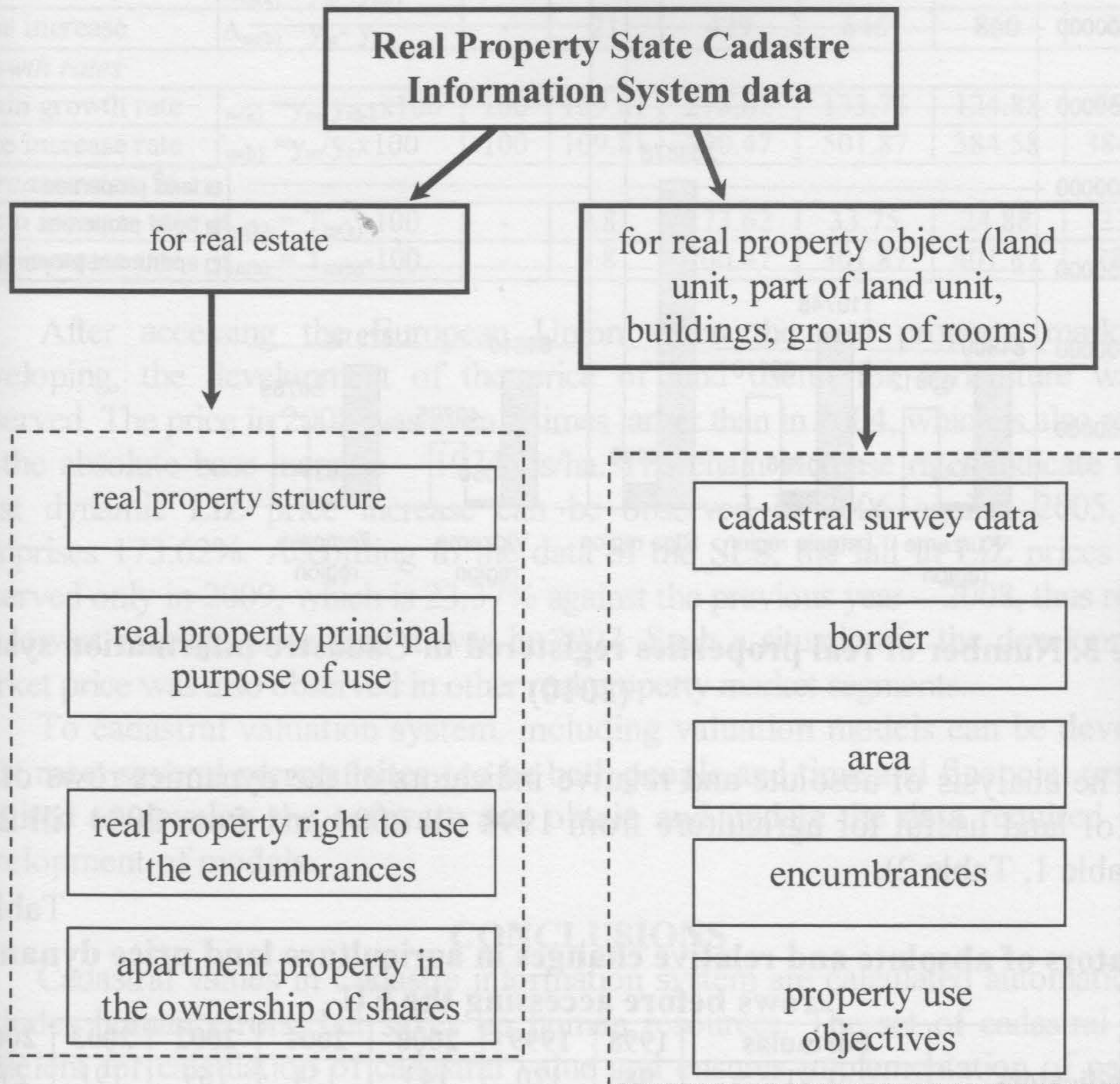


Figure 2. Mainly used in the Real property state cadastral information system data for cadastral valuation model calculations

In order to use the data (qualitative and quantitative indicators) of Cadastre Information System for development of cadastral valuation models, these data should be objective and reliable about each real property and its object. On November 1, 2010 approximately 1.5 million real properties and 5 millions of real property objects are registered in Cadastre Information System. Largest its number is registered in the Riga region (fig. 3.). Due to subdivision of real property objects tendency of increasing of number of properties is in progress. That means that more objects will be involved in valuation process. For this purpose data of good quality are necessary.

To use the data of the real property market stored in the information system

of the Real Property Market for the purposes of cadastral assessment, data assessment, selection and analysis should be performed. Initially, it is important to assess the number of deals and the price in the analyzed period, as well as to compare the number and price of the deals with the number of the price in the previous periods in total in the country and in particular territories.

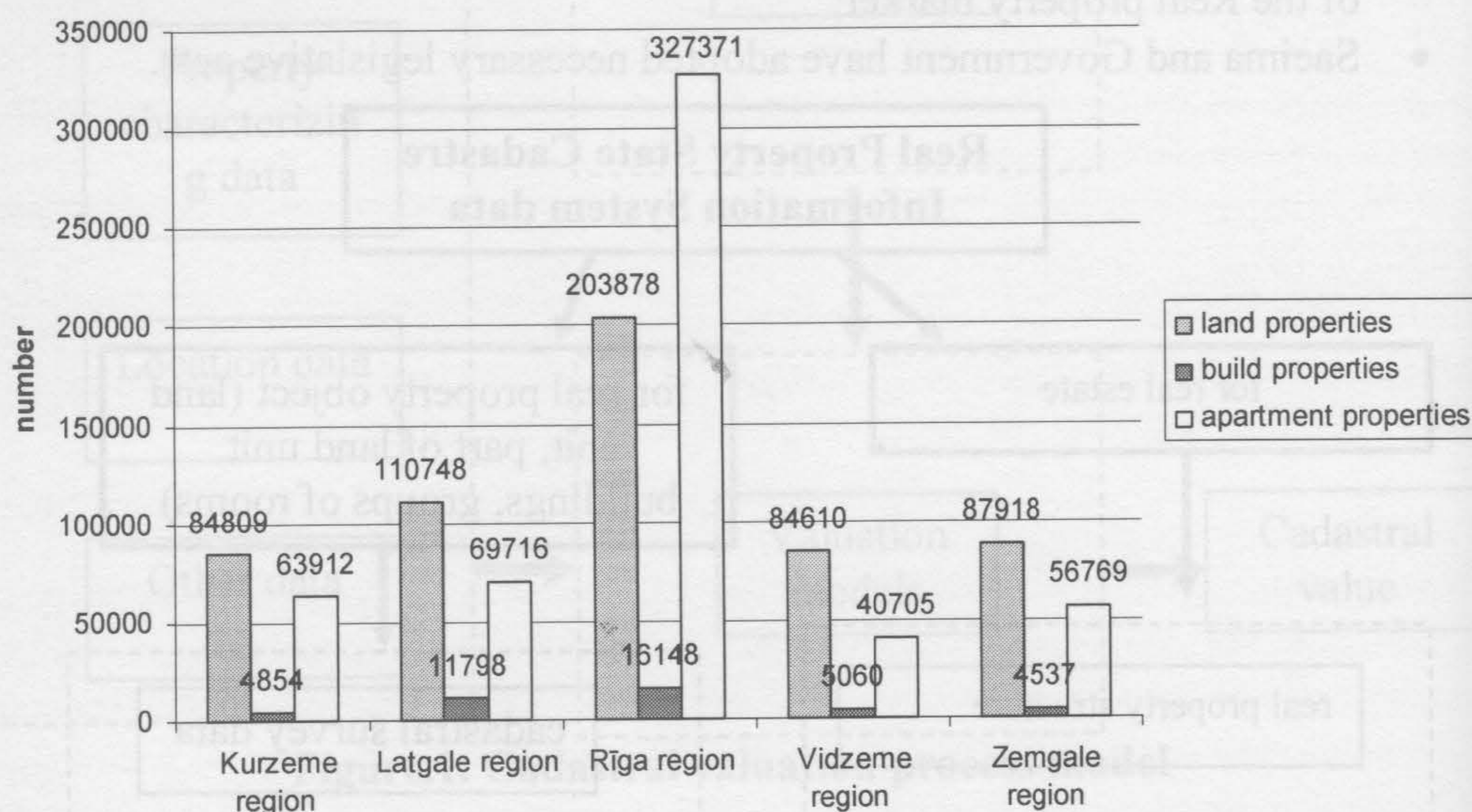


Figure 3. Number of real properties registered in Cadastre information system (2010)

The analysis of absolute and relative indicators of the dynamics rows of the prices of land useful for agriculture from 1998 till 2004 and from 2004 till 2009 (see Table 1, Table 2).

Table 1.

Indicators of absolute and relative changes in agriculture land price dynamics rows before accessing the EU

Indicators	Formulas	1998	1999	2000	2001	2002	2003	2004
	LVL	98	120	143	154	169	191	214
<i>Absolute increase</i>								
Chain increase	$\Delta_{m(k)} = y_m - y_{m-1}$	-	22	23	22	15	22	23
Base increase	$\Delta_{m(b)} = y_m - y_1$	-	22	45	56	71	93	116
<i>Growth rates</i>								
Chain growth rate	$r_{m(k)} = y_m / y_{m-1} \times 100$	100	122,45	119,17	107,69	109,74	113,02	112,04
Base increase rate	$r_{m(b)} = y_m / y_1 \times 100$	100	122,45	145,92	157,14	172,45	194,90	218,37
<i>Increase rates, %</i>								
Chain increase rate	$t_{m(k)} = T_{m(k)} - 100$	-	22,45	19,17	7,69	9,74	13,02	12,04
Base increase rate	$t_{m(b)} = T_{m(b)} - 100$	-	22,45	45,92	57,14	72,45	94,90	118,37

The average absolute price increase rate in the first period is 165.17 Ls/ha, but the average growth rate is 111.80 Ls/ha. The most rapid chain increase rate against the previous period can be observed in 1999, which is 22.45%.

Indicators of absolute and relative changes in the rows of agriculture land price dynamics after accessing the EU

Indicators	Formulas	2004	2005	2006	2007	2008	2009
	LVL	214	235	643	860	1074	823
<i>Absolute increase</i>							
Chain increase	$\Delta_{m(k)} = y_m - y_{m-1}$	-	21	408	217	214	-251
Base increase	$\Delta_{m(b)} = y_m - y_1$	-	21	429	646	860	609
<i>Growth rates</i>							
Chain growth rate	$r_{m(k)} = y_m / y_{m-1} \times 100$	100	109.81	273.62	133.75	124.88	76.63
Base increase rate	$r_{m(b)} = y_m / y_1 \times 100$	100	109.81	300.47	501.87	384.58	384.58
<i>Increase rates, %</i>							
Chain increase rate	$t_{m(k)} = T_{m(k)} - 100$	-	9.81	173.62	33.75	24.88	-23.37
Base increase rate	$t_{m(b)} = T_{m(b)} - 100$	-	9.81	200.47	301.87	401.87	284.58

After accessing the European Union when the real property market was developing, the development of the price of land useful for agriculture was also observed. The price in 2008 was even 5 times larger than in 2004, which is also reflected by the absolute base increase – 1074 Ls/ha. The chain increase rates indicate that the most dynamic LIZ price increase can be observed in 2006 against 2005, which comprises 173.62%. According to the data of the SLS, the fall in LIZ prices can be observed only in 2009, which is 23.37% against the previous year – 2008, thus reaching the lowest average price than it was in 2007. Such a situation in the development of market price was also observed in other real property market segments.

To cadastral valuation system, including valuation models can be developed, must meet several prerequisites - to be both people and time and financial resources required to develop the software and obtain and update the data required for the development of models.

CONCLUSIONS

Cadastral values in Cadastre information system are calculated automatically. It excludes human errors, but saves up human resources. The set of cadastral data is sufficient for calculation of cadastral value and ensures implementation of particular valuation model. Cadastral valuation model takes into account not only necessary parameters, mutual obligations and real property market situation, but also data collection and updating, too. To ensure right real property taxation cadastral or mass valuation is very important, and therefore the principles of equality have to be taken into account for development of cadastral valuation models.

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MODELAREA MATEMATICĂ A PROIECTULUI DE AMPLASARE A SPECIILOR ȘI SOIURILOR ÎN PLANTAȚIILE POMICOLE

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Abstract: We described the mathematical model used when projecting territory arrangement. We calculated the optimal components of fruittree assortment. We gave recommendations to agricultural beneficiaries who deal with fruittrees growing.

Key words: Model, The method of mathematical modeling, Optimal component, Species, Kind.

INTRODUCERE

Republica Moldova este situată între paralelele 47° și 49° latitudine nordică și între 27° și 30° longitudine estică, aceste condiții sunt socotite cele mai favorabile pentru dezvoltarea horticulturii, deoarece plantațiile multianuale cresc și fructifică în diverse zone ale globului care sunt amplasate între 20-52° latitudine nordică și 30-45° latitudine sudică.

Durabila și istovitoare perioadă de tranziție la economia de piață, numeroasele greșeli comise în această perioadă de timp, îndeosebi în efectuarea privatizării în mare măsură au dus la un dezastru în pomicultură, la destrămarea reală a potențialului de producție pomicolă.

Actualmente în Republica Moldova, pentru prima dată, oamenii au libertatea de a gândi și a hotărî singuri ce suprafețe de teren pot fi atribuite plantațiilor multianuale, ce sortiment de soiuri și ce sistem de cultură să practice pentru obținerea recoltelor de fructe.

Înființarea plantațiilor noi înalt productive, se află în centrul atenției, se pune accent pe alegerea sortimentului, amplasarea pe direcții de utilizare.

Pentru renovarea ramurii pomicole a fost nevoie de a elabora un Program de Stat pentru dezvoltarea pomiculturii până în anul 2020, care prevede înnoirea tuturor plantațiilor pomicole.

Veriga cheie în aplicarea pomiculturii adaptive este elaborarea proiectelor de înființare a livezilor noi luând în considerație specificul ecologic al terenurilor concrete.

MATERIAL ȘI METODĂ

La elaborarea proiectului de amenajare a teritoriului plantațiilor pomicole pentru alegerea sortimentului se utilizează diverse metode, inclusiv metodele variantelor, de balanță, planing, modelării matematice, etc.