CONTENT AND APPLICATION POSSIBILITIES OF EVALUATION METHODS IN REAL PROPERTY CADASTRAL ASSESSMENT IN LATVIA

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Abstract
Regulations require that real property cadastral assessment should be used internationally recognized real property evaluation methods - the method of comparison, cost method and income capitalization method. The study assessed content and nature of evaluation methods. The studied, which the evaluation methods today are likely to use in the cadastral assessment and which depends on the database of stored information. The main conclusion of the study is that the cadastral assessment using as many methods possible to obtain a more objective cadastral value.
Key words: real property, cadastral assessment, evaluations methods.

Introduction

Real property ownership performance assessment is a comprehensive objective findings, expressed in monetary terms, as far as possible reflect the ownership situation of economic, technical, legal and social point of view (*Тарасевич, 1995; Тэпман, 2002*). Cadastral value of the common cadastral assessment principles specified date according to cadastral data by the cadastral value of the object in terms of money. Cadastral value excludes the value of forestry plantations *(Nekustamā īpašuma valsts..., 2005)*. Cadastral value of the base - the cadastral value of the calculation of the required value of the characteristic set of data - the basic value and weightings based on the real property market data analysis, determined cadastral value of the object group in terms of a relatively homogeneous area - zone. Cadastral value of the base the design of the country recognized real property assessment standard method of valuation - business methods of comparison, income capitalization method and cost method. Information about the real property market transactions, use at least the last two years *(Baumane, 2009)*. Each of these methods has its own specific approach to their own values and criteria, so that each of these methods reflects the value of the property rather one-sided. Therefore, in order to obtain the most probable value of the property in a particular case is a desirable property evaluation by various methods. Comparing the results of each method and analysis of the reliability of the results and impact on the final value will probably get fairly accurate results.

The study hypothesis is real property valuation methods research ensure better use of the cadastral valuation.

Consequently, the study aims explore evaluation methods and their applications in the cadastral evaluation. The study addressed the following objectives:
• explore evaluation methods and their contents;
• assess the valuation methods application process pert survey analysis;
• to investigate valuation methods, applications in the cadastral valuation;
• provide conclusions and recommendations.
 Scientific literature, laws, the data of State Land Service are used in this research.
Monographic method, analysis method, descriptive statistics analysis method is used in the particular research.

Discusions and results

For all these evaluation methods are based on the comparison principle, differing only in a comparable size. Joint is also the message that anyone that used for evaluating the size must be justified in any area at that time and in the economic situation. The evaluator shall analyze their professionalism within its possession to the property characteristics of the situation in the market and draw conclusions *(Baltruma, Freibergs, 1996)*. The result - the larger and more comprehensive analysis is carried out, the more accurate conclusion is derived.

Comparison of methods for the fundamental principle - a prudent buyer of real estate will pay no more than about the quality and efficiency in terms of similar property. This method, also called the market data method, a similar, recently sold the real estate analysis and comparison with the rated object Approach consists of four phases (Fig. 1.):

- close the region's real property market research to find a suitable reference sites - they have recently taken place with property transactions, which is equivalent to the maximum and position, both applications and technical conditions and terms of volume;
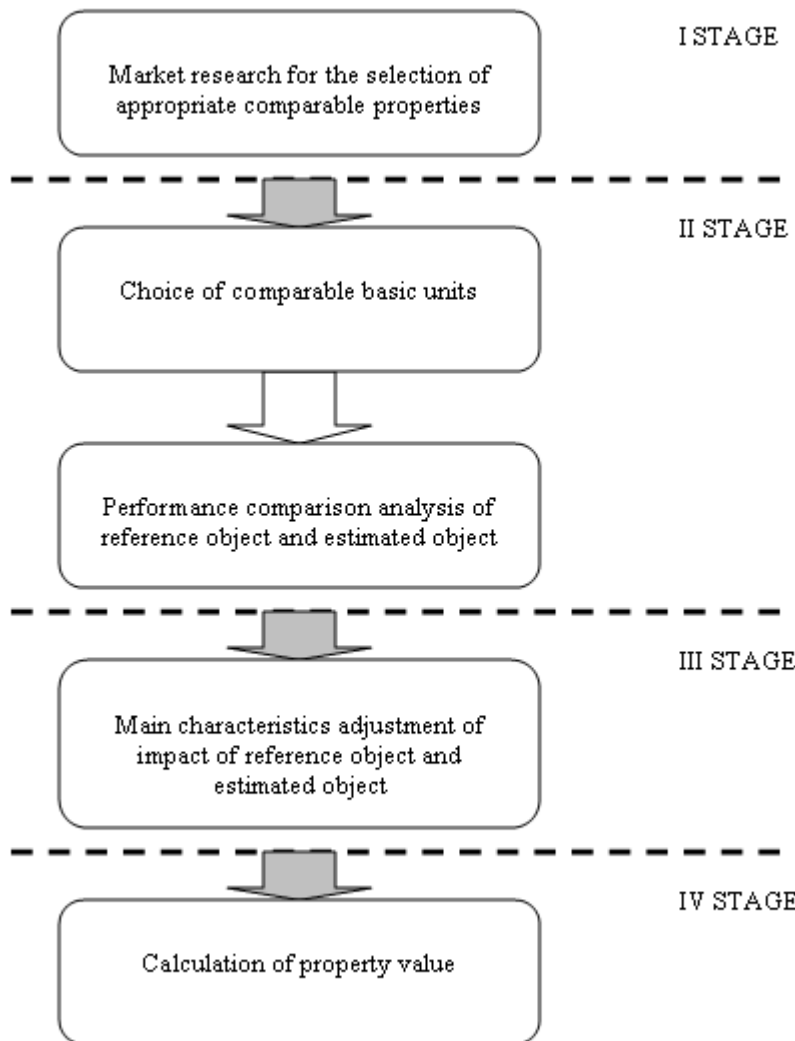
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Figure1. **Method of comparison**

- comparison and analysis of the basic choice, the basic choice depends on the type of property, the purposes and the information available, such as:
    - ownership (shared ownership or disordered is lowering the value of factor),
    - building or the total usable area,
    - number of rooms in the apartment,
    - conditions of sale (urgent sale, business partner relationship, a particular buyer's interest in unusual financial circumstances, etc..)

- location
- technical condition of the property,
- the use of options (choice of reference objects, whether, after the acquisition does not alter the intended use)
- economic characteristics (the basic unit used to compare revenue generating facilities);
- value components that are not related to real property (such as hotels, restaurants, shops - facilities, equipment, furniture, etc.);
- rated object and the reference property values of key factors influencing the determination and the effects of the adjustment to reflect what would be the comparable price of the property, where the basic units of each comparison would be closer, corecting assessed property.

In practice, this method is related to many conditions and the comparison of export difficulties. First of all - no two the same property, each is somehow unique, even those adjacent properties are located each on their own property, each with their own characteristic parameters and quality. Second - very important factors of this method is time and the real estate market trends. Third - this methods the use of market information affects the existence and availability. This method is applicable only in the asset markets.

The main problems in the methods use a sales data collection and processing.

The estimators are able to subscribe to SLS real property market data for information or access the Land Register, however, is a known fact that most of the transaction specified in the purchase amount is not true. Using the information offered on the market, but not yet sold properties may not always lead to actual results. Still as possible sources of information include the information of real property firms or private contacts.

Cost method of application of the fundamental principle of real estate valuation is that a prudent buyer of real property will pay no more than he paid for comparable property in a new erection. Usually cost method is used in the following cases *(Gloudeman , 1999; Bagdonavicius, Deveikis, 2005)*:

- to evaluate a new, recently built property value, in this case, the depreciation provided for errors in the smallest possible;
- to evaluate the special use properties, which are not normally buy or rent (such as schools, hospitals, train stations or churches) and are created for public purposes, not retention, so it is not possible to use the comparison of revenue and methods. in this case, the cost method is the only way to determine the value of the property;
- for comparison with other methods the results obtained, for example, the relatively high cost methods result might suggest that the market has little competition and future market prices;
- assessing the property markets are inactive, ie, where it is sold very rare and unique objects or in economic activity during periods when the number of sales has fallen sharply;
- to identify the property best and most effective use of - for example, to determine what type of building would give the most profit on a particular piece of land or a small rental house where the rent-recourse construction costs, or skyscraper, which would lead to large losses not to lease space;
- to assess the property tax and insurance purposes,the cost method provides a separate assessment of both the land and its improvements, which are important in insurance. In some cases, by setting building depreciation, this method is useful in improving the company's balance sheet.

Cost method of calculation time, included the following activities (Fig.2.):

- is calculated on the property market value, assuming it is free of any improvements that may be used in accordance with the best and most effective use;
- calculated for land improvement repair or replacement costs;
- estimated physical wear and tear, functional obsolescence, or external factors caused by depreciation;
- of improvement or replacement costs to be deducted the total depreciation (which consists of physical depreciation, functional obsolescence and economic (external) depreciation) will provide a plot of land improvements remaining substitution value;
- acquired at replacement value is added to the value of the land, thereby obtaining a value of the property.
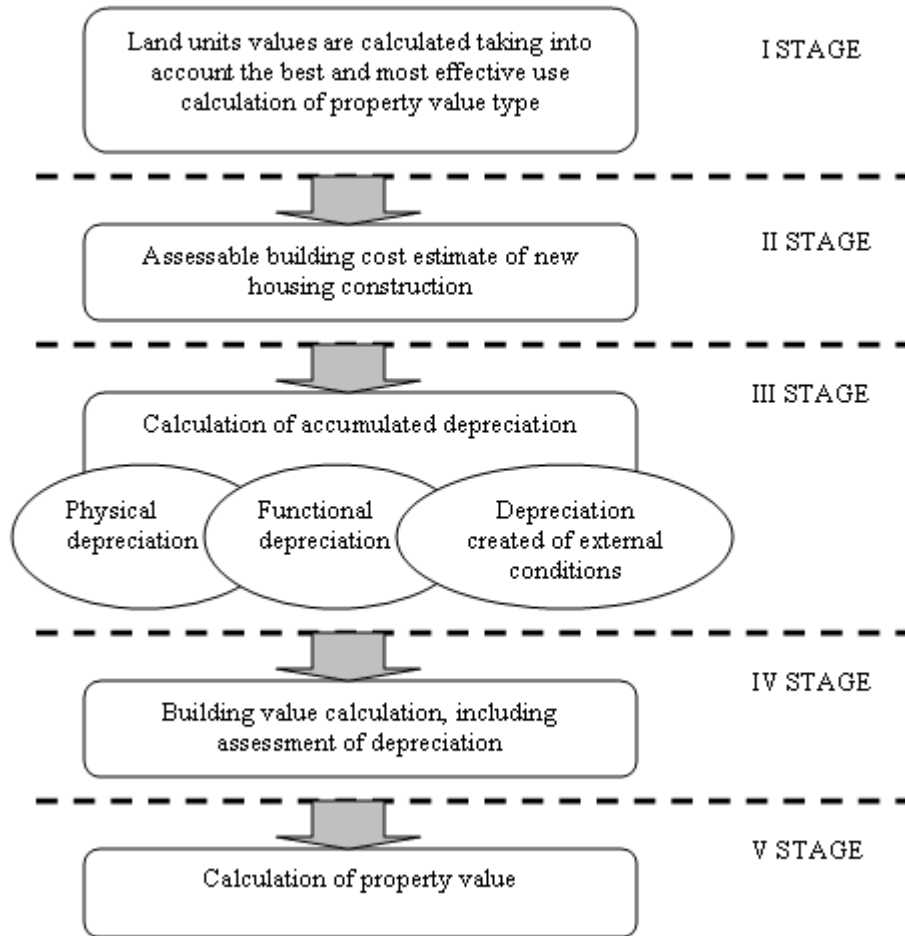
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Figure 2. **Cost method**

This method is used rarely, because usually the customers are not interested in building the total construction costs, but functionally equivalent to the building construction costs in order to decide which is better - offer to purchase property or build a new one.

Since the principal value of real property leader for the utility of this property, the cost calculation method is almost always down replacement value - land and building performance in terms of equivalent amount value of construction. Costs resulting from the direct and indirect costs as well as from the developer's profit.

Direct costs are directly related to the improvement and increase the value of: construction (design and permits), construction materials, labor costs, equipment and tool costs, security system expenses, material storage costs, energy costs (electricity, transport).

Indirect costs consist of: research and planning costs, valuation, consulting, accounting and tax expenditures, cash resources, expenditures (loans), insurance expenses, marketing expenses, administration expenses, property registration costs. In determining the facility construction costs, reflect only the expenses that are useful and thanks to which the rated property serves the best and most effective use. Calculated on the basic unit is generally assumed cost of building floor area of 1 square meter or 1 cubic meter of volume.

Today in Latvia is a relatively wide range of construction costs, which are mainly determined by the location of the object - for example, in Riga workers are substantially more expensive than the Latvian countryside.

To determine whether the facility construction costs are used variety of methods. One unit of comparison is comparing, by volume or area at object cost. For best results, choose a comparison of recently built a similar application sites for which construction costs are reliably informed. Establishing the unit construction costs, the evaluators can analyze the construction of catalogs, price lists or business information collected.
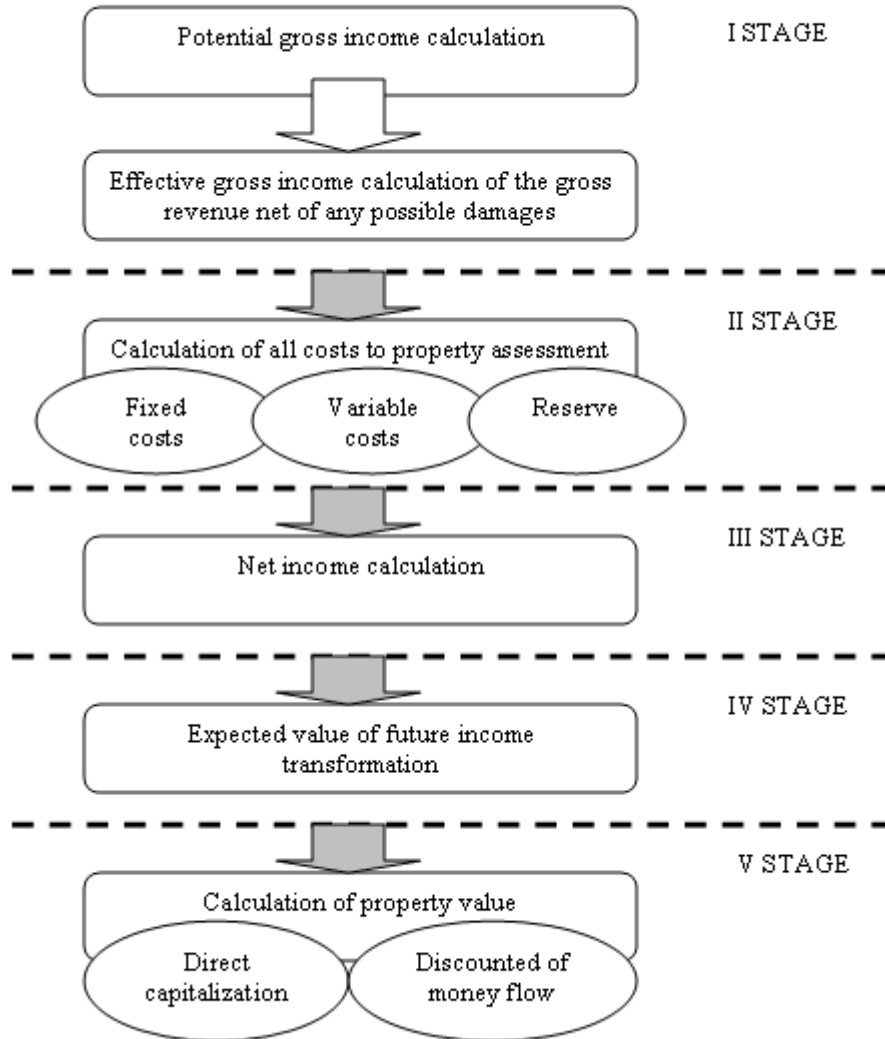
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Figure3. **Income capitalization method**

In this case, it is important to know whether the price includes the construction companies for profit. Although this method is apparently simple, the difficulties caused by adjustment costs and, in the use of type, size and quality of identical objects can be different from the rated facility with a different roof design, wall thickness or irregular perimeter. These differences can significantly affect the per-unit costs. All in all, it can be concluded that the cost method of application includes 5 stages (Fig.2). Cost method can be used in property valuation, which consists of land and buildings, but is not used for residential property valuation.

The revenue method is based on the assumption that any value of the property can be expressed as from the property acquired for the future benefit of the present value (Fig. 3) *(Фридман, Ордуей,*

1997). These benefits are understood in the right to all income from the property management at the time, as well as the income from that property. Essence of the method is associated with a commercial interest, which makes real property investments are made. This interest may be a desire to protect their excess money from the depreciation over time, and profit from property. Revenues from real property are characterized by the possibility of renting a property and making profit from rental income. It is therefore important to distinguish between rental incomes from the income of the economic activity in the property. However, there are such specific property types, whose rents are dependent on the business in some locations, as well as the specific technical solution has already determined the best and most effective uses. Often, to begin the cost analysis should first be entered into a lease agreement analysis, in calculating the market value taken into account only those costs incurred by the owner of the money you receive for your property rental.

Real-lease agreement, evidence also shows that the sharing of costs between the lessor and lessee are different. For example, a lease agreement can be concluded on the condition that the proprietor pays for utilities, with appropriate higher rents. Very often, to lease agreements, which provide that the tenant bears all the property management expenses.

Direct capitalization method is used when assessing the property, which provides a stable revenue stream constant over time. With this method, net income is divided by a capitalization rate using the formula *(Baumane, 2010)*:

$$PV = \frac{NOI}{R_0},$$

PV - rated current value of property;

NOI - the annual net income;

R_0 - overall capitalization rate.

More valuable the property, the longer the recovery time of capital and vice versa. So - more income-producing property capitalization rate will be lower - the property will be more expensive, but worse, or less profitable for the property capitalization rate will be higher and thus the lower value *(Черёмушкин, Колопотовский, Маркова,1962).*

This is related to the weaker prospects for necessary property ready for market, a higher risk for the profit-making and increased spending on property maintenance and management.

Land capitalization rate is lower than the capitalization rate construction, because land is not expected to wear and a land transaction is targeted for a longer payback period. However, remember that built up the land and buildings are common property and the land participating in income-making process.

Net income, depending on forest type are based on information prepared by the Central Statistical Bureau, in cooperation with the Ministry of Agriculture: a round timber in the average prices in lats per cubic meter of the tree species and timber assortments, the average development cost felling, the forest restoration and maintenance expenses, management expenses. Of the forest land quality, grouping according to forest site types of land values are fixed at the average of the quality group forest land value.

In assessing the valuation methods, content, it can be concluded that the screening methods in the real property depends on the type, and also from the available data.
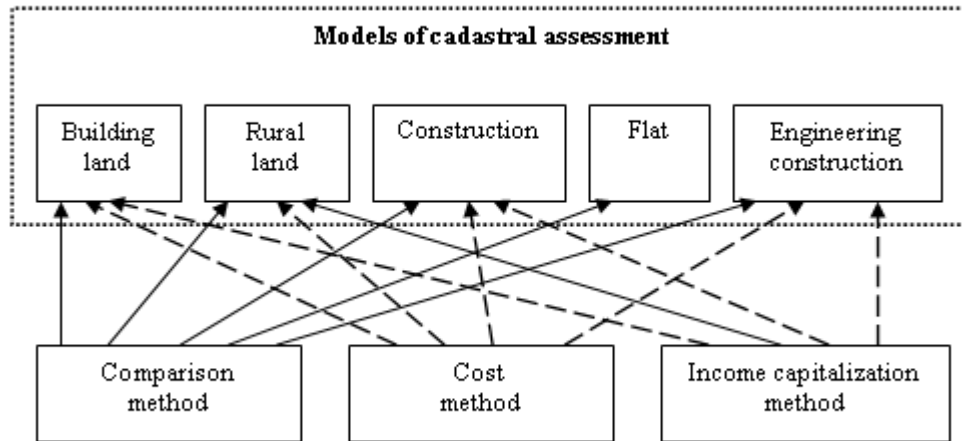
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Figure 4. **Evaluation methods of cadastral valuation models**

On the basis of the laws, evaluation methods should be applied in the cadastral assessment models (Fig.4). The study showed that the comparison method is used in all cadastral assessment models. Income capitalization method is applied only to agricultural land evaluation model. By contrast, the cost method for lack of data is not used. It is therefore necessary to carry out research on evaluation methods of application development, including both the data obtained, their accumulation.

Conclusions and proposals
1. Comparison method is related to many conditions and comparison of selection problems and the sales data collection and processing.
2. Cost method of putting them into use objective data on construction costs and depreciation.
3. To apply the cadastral income capitalization valuation method, you need to accumulate, mainly for the rental data.

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Summary (*in Russian*)

БАУМАНЕ В. СОДЕРЖАНИЕ И ПРИМЕНЕНИЕ МЕТОДОВ ОЦЕНКИ В КАДАСТРОВОЙ ОЦЕНКЕНЕДВИЖИМОСТИ В ЛАТВИИ

Правила требуют, чтобы определить кадастровою оценку следует использовать международно признанные методы оценки недвижимости - метод сравнения, затратный метод и метод капитализации дохода. Исследование оценивало содержание и характер методов оценки. Изучены методы оценки, которые возможно применить для использования в кадастровой оценке и которая зависит от данных в иформационной системе кадастра. Основной вывод исследования является то, что в определение кадастровой оценки используя по возможности всех методов, позволяет получить более объективную кадастровою стоимость.

Key words (*in Russian*)

недвижимого имущества, кадастровой оценки, оценки методов

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