

ANALYSIS OF THE INDICATORS OF THE CADASTRAL VALUE BASE FOR RESIDENTIAL BUILDING LAND IN LATVIA

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Abstract

This article describes the indicators of the base of cadastral value and their main influencing factors.

The base of cadastral value for residential building is summarised and analysed in Latvia municipalities and its territorial units in 2015. The analysis results showed areas with the highest and lowest base of cadastral value for residential building in municipalities of Latvia. Also grouping and analysis of municipalities by the maximum and minimum base of cadastral value for residential building land in rural areas were carried out. There is clear polarisation of base value by the distribution between the municipalities. In municipalities around Riga there are areas with the highest base value of residential building land, whereas the base value decreases rapidly in the direction from Riga to the periphery.

Key words: cadastral assessment, indicators of the cadastral value base, value zoning, base value.

Introduction

In Latvia, the cadastral valuation of real property is carried out in order to determine the cadastral value of the real property which is mainly used in the calculation of real property tax. In the need of cadastral valuation, the State Land Service drew up the cadastral value base by real property groups.. The cadastral value base is a set of data characterising the value necessary for calculation of the cadastral value – base values and correction coefficients, which, on the basis of analysis of data of the real estate market, has been specified for the group of cadastre objects in terms of values within a relatively homogenous territory – zone (National Real Estate ..., 2005.). The cadastral base value uses generally recognised real estate valuation standards of the assessment methods - transaction comparison method, income capitalisation method and cost method (Freibergs, Žuromskis, 2013). Until 2015, the cadastral value base was updated annually, but starting from 2015 the base of cadastral value is updated and approved by the Cabinet of Ministers every two years in order to ensure the immutability of the cadastral value in a longer period (Regulations regarding Cadastral ..., 2006).

The cadastral value base consists of two indicators – base values and correction coefficients, which are adjusted in the calculation of cadastral value of real property. In order to develop the cadastral value base, in Latvia, just like in other countries, the information about real property market is used to set real property market prices, rent prices and the price level of property prices (Adair, Downie, McGreal, Vos, 1996). For this purpose, in cadastral information system, the real property market database is maintained, in which information about the real property market transactions is stored and processed. It should be noted that the indicators of base of cadastral value are affected by the activity of the real property market. They vary in different municipalities and territorial units of Latvia. Based on the above, the zoning of the value is being developed, there are defined zones of the value and their boundaries in which different indicators of cadastral value base, i.e. basic values and correction coefficients, are applied.

The aim of the article is to analyse one of the indicators of the base of cadastral value, namely, the base of value of individual residential building land (hereafter – residential building land) in rural areas.

Methodology of research and materials

Analysis of the land base value of individual residential building land (hereafter - the base value) is based on the base value of 2015 developed by State Land Service and approved by Cabinet of Ministers. The base values were developed for every municipal territorial units of Latvia.

In Latvia there are 110 municipalities, which consist of one or more territorial units of municipality rural territories and municipality towns, which are set in five planning regions - Kurzeme, Zemgale, Vidzeme, Latgale and Riga (Fig.1), (Law on Administrative Territories 2008).



Fig. 1. Five planning regions of Latvia (www.lvportals.lv)

The analysis includes only rural territorial units and their fixed base values. In Latvia rural territorial units by the number of zones distributed by value of zoning are very different.

Generally there are more than one value zone in one rural territorial unit; for example, in Adazi territorial unit (which is equal to Adazi municipality), there are 12 value zones with the base values ranging from 1.71euro/m² to 22.77euro/m² (Fig 2). However, there are municipality rural territories whose territory is included only in one value zone, for example, Zilupe municipality, which consists of three rural territories, each of them with one value zone and one base value of 0.28 EUR/m² (Regulations regarding base ..., 2014).

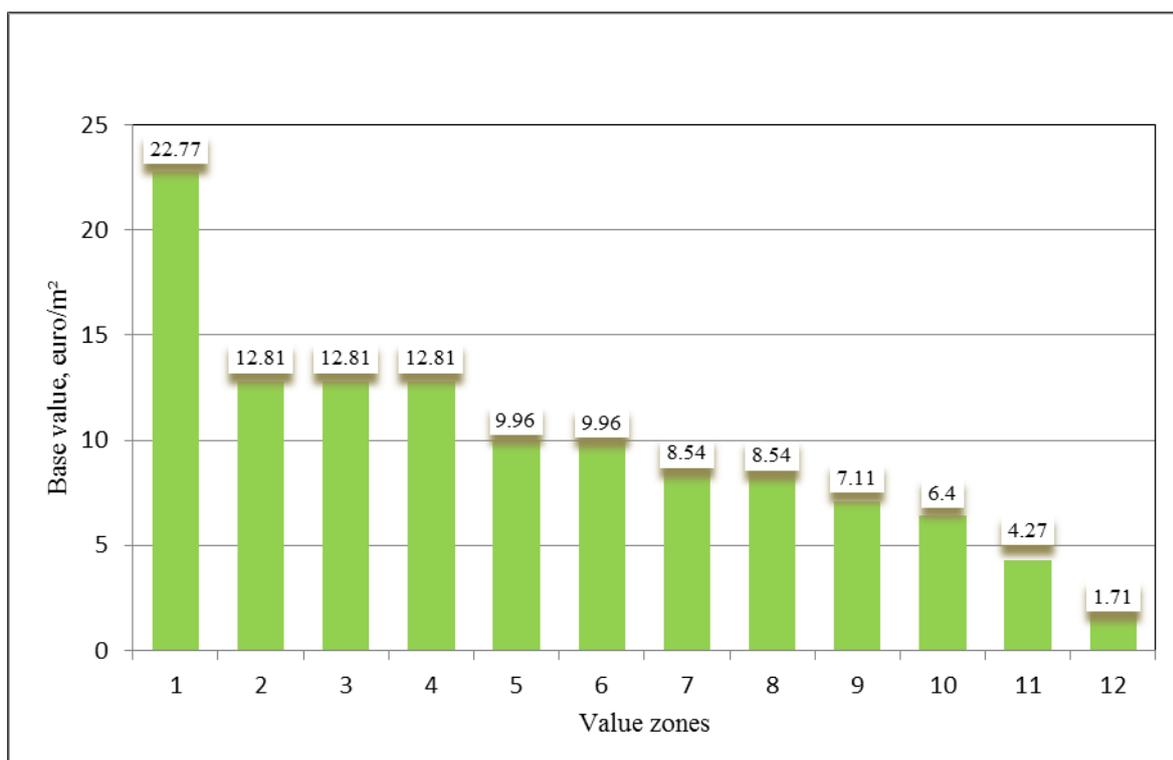


Fig. 2. Distribution of base values on value zones in Adazi municipality

The study analyses all Latvian municipalities by its minimum and maximum base values for rural territorial units. For this purpose all Latvian municipality rural territorial units were arranged by they maximum and minimum base value.

In order to collect and analyse data by municipalities and territorial units, Microsoft Excel program was used, as well as mathematical statistical data processing method was applied.

Discussions and results

As of January 1, 2015, 43.6 thousand ha or 0.7% of total land area of Latvia (6448.24 thousand ha) is registered in the Land Register for the purpose to use it for real estate, i.e. individual residential building land (Land Review of Administrative ..., 2015). In 2015, the base values for residential building land in Latvia differ for both territorial units and separate municipalities, divided by municipality territorial units. Therefore, in various municipalities the determined base values of residential building land in rural areas range from 28.46 euro/m² to 0.28 euro/m² (Regulations regarding base ..., 2014).

For the analysis, at first all Latvian municipalities were grouped based on their territorial units by the **maximum** base values of residential building land, and as a result, five groups were formed within the following base value intervals:

- below 0.50 euro/m²;
- from 0.51 – 1.0 euro/m²;
- from 1.1 – 5.0 euro/m²;
- from 5.1 – 20.0 euro/m²;
- above the 20.1 euro/m².

The results of this grouping showed (Table 1, Fig. 3) that the average maximum base value in Latvia is 3.25 euro/m². Out of the total number of municipalities (110), the largest percentage of municipalities have the maximum value in the range of 1.1-5.0 euro/m² (43.6%) and are also distributed within the range of 0.51-0.5 euro/m² (25.5%). By contrast, the percentage of municipalities with the maximum base value in the range of over 20 euro/m² is the lowest (1.8%) (Table 1).

Table 1

Grouping of municipalities based on the interval of maximal base value

Group number	Interval of base value	Number of municipalities	Percentage, %	Average base value, euro/m ²
1	below 0.5 euro/m ²	19	17.3	0.42
2	from 0.51-1.0 euro/m ²	28	25.5	0.73
3	from 1.1-5.0 euro/m ²	48	43.6	2.58
4	from 5.1-20.0 euro/m ²	13	11.8	11.82
5	over 20.0 euro/m ²	2	1.8	25.62
Total		110	100.0	3.25

The highest maximum base values involves territorial units that are located nearby Rīga, the capital of Latvia, such as the Garkalne (28.46 euro/m²), Ādazi (22.77 euro/m²), Carnikava (19.92 euro/m²), Mārupe (7.17 euro/m²), and Saulkrasti (7.17 euro/m²) municipalities in the Rīga planning region (Fig. 3).

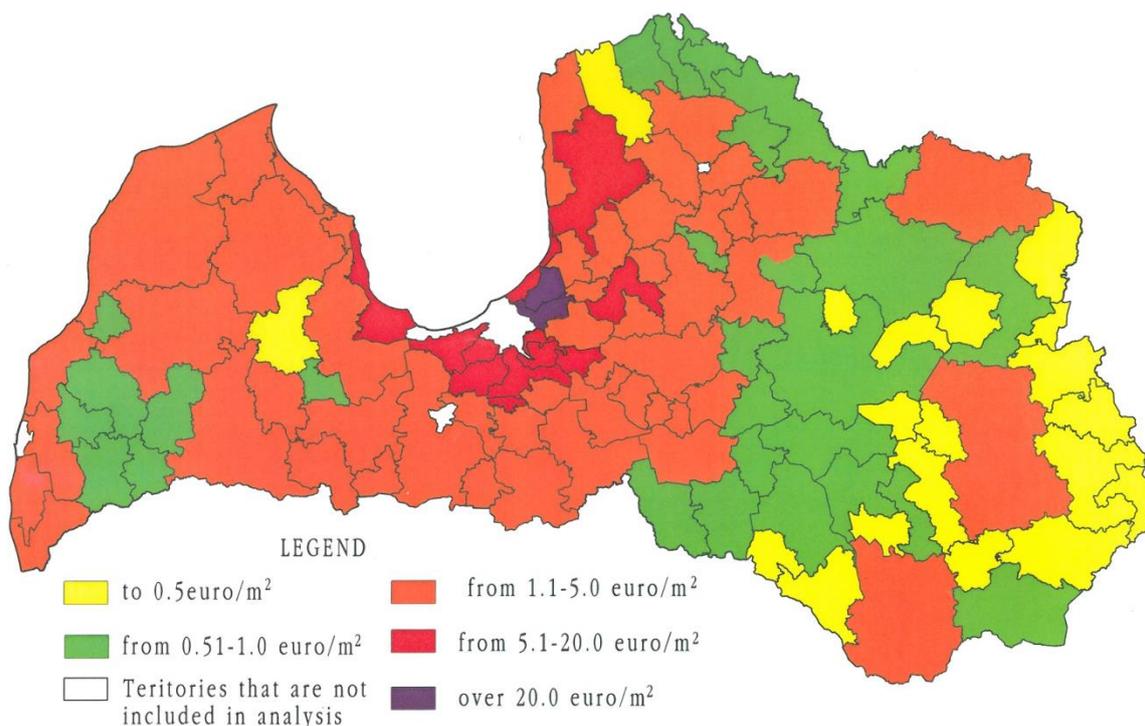


Fig. 3. Distribution of municipalities based on their maximum base values of residential building land, euro/m²

By contrast, the lowest maximum base values of residential building land involve territorial units in Dagda (0.28 euro/m²), Zilupe (0.28 euro/m²), Kārsava (0.43 euro/m²), and Cibla (0.43 euro/m²) municipalities, which are located further from the central regions of Latvia, in the east of Latgale.

Minimum base values of residential building land of municipalities and territorial units were also analysed in this study. Minimum base values of individual residential building land are set in the range of 0.28 euro/m² to 5.69 euro/m². Based on the minimum base values, the municipalities were grouped into four groups within the following intervals of base value:

- to 0.30 euro/m²;
- from 0.31 – 0.50 euro/m²;
- from 0.51 – 1.0 euro/m²;
- above 1.1 euro/m².

The average minimum base value of residential building land in Latvia is 0.74 euro/m². Most of the municipalities with the lowest minimum base value of residential building land are in the second group, but all four groups have a relatively equal share of the municipalities (Table 2).

Table 2

Grouping of municipalities based on the interval of minimal base value

Group number	Interval of base value	Number of municipalities	Percentage, %	Average base value, euro/m ²
1	below 0.30 euro/m ²	24	21.8	0.28
2	from 0.31-0.50 euro/m ²	38	34.5	0.46
3	from 0.51-1.0 euro/m ²	30	27.3	0.69
4	above 1.0 euro/m ²	18	16.4	2.03
Total		110	100.0	0.74

As shown in Figure 4, the higher minimum base values of residential building land are in the central area of Latvia, in the Rīga region. They are, specifically, Carnikava (5.69 euro/m²), Garkalne (2.85 euro/m²), Ķekava (1.99 euro/m²), and Babīte (1.99 euro/m²) municipalities, located in the central area around Rīga. Meanwhile, the lowest minimum base values are distributed over the eastern area of

Latvia, for example, the lowest base value of residential building land, 0,28 euro/m² are in 24 municipalities, of which 21 are located in the Latgale planning region (Fig. 4).

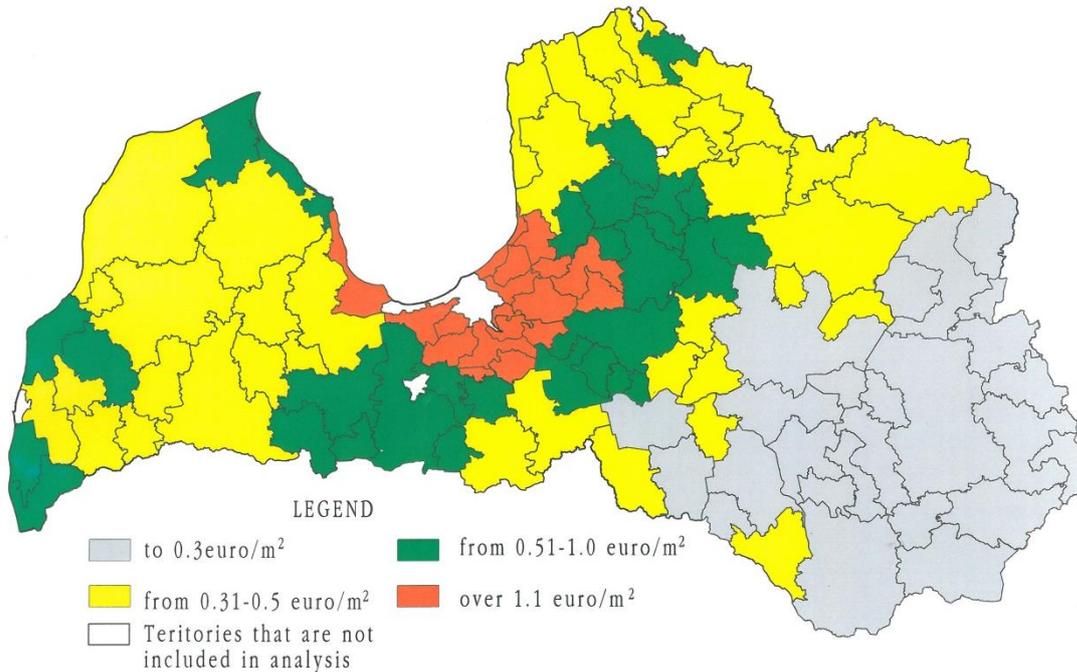


Fig. 4. Grouping of municipalities based on the minimum base value of residential building land

Results of the analysis show that base value grouping of residential building land based on municipalities exhibits a clear polarization. In the municipalities surrounding Riga there are areas with the highest base value of residential building land, but, moving away from Riga to the periphery, the base value decreases rapidly. However, in the central area of Latvia, in which municipalities with the highest base value are located, there are also areas with very different base values. For example, in the Engure municipality there are three territorial units which have different maximum base values that range from 15.65 euro/m² in the Lapmežciems territorial unit to 1.99 euro/m² in the Smārde territorial unit. Meanwhile, the minimum base value in the aforementioned territorial units have no significant difference (Fig. 5).

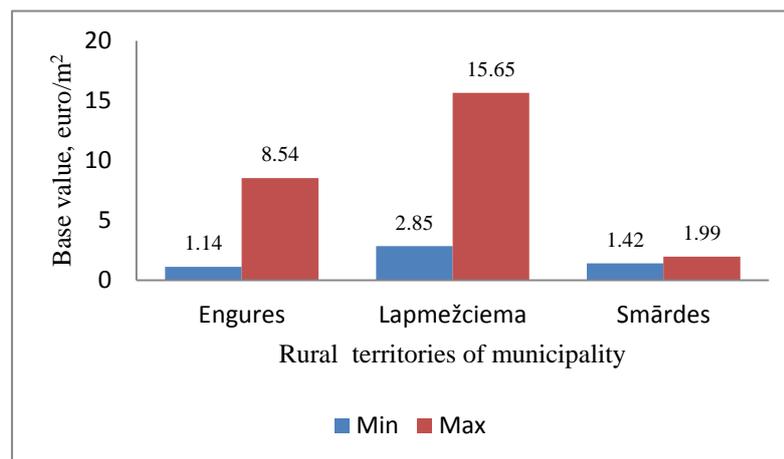


Fig. 5. Base values of the residential building land in the Engure municipality

At the same time, there are municipalities in Latvia whose territorial units has a single base value zone of residential building land and, consequently, a single base value. These are municipalities in the eastern border area, i.e. the Dagda, Zilupe and Kārsava municipalities, where the base value of individual residential building land is only one throughout all territory of municipality. It is also the lowest in Latvia, 0,28 euro/m².

When determining **the difference** between the maximum and minimum base value of residential building land in municipalities, it has been discovered that although in municipalities in Latgale the difference between the maximum and the minimum base value is minimal or equal to zero, in municipalities located in the central area of Latvia, where the maximum base value is higher, the difference between the base values is relatively high, for example, in the Garkalne, Ādaži, and Mārupe municipalities they are 25.61 euro/m², 21.06 euro/m² un 15.79 euro/m², respectively (Fig. 6).

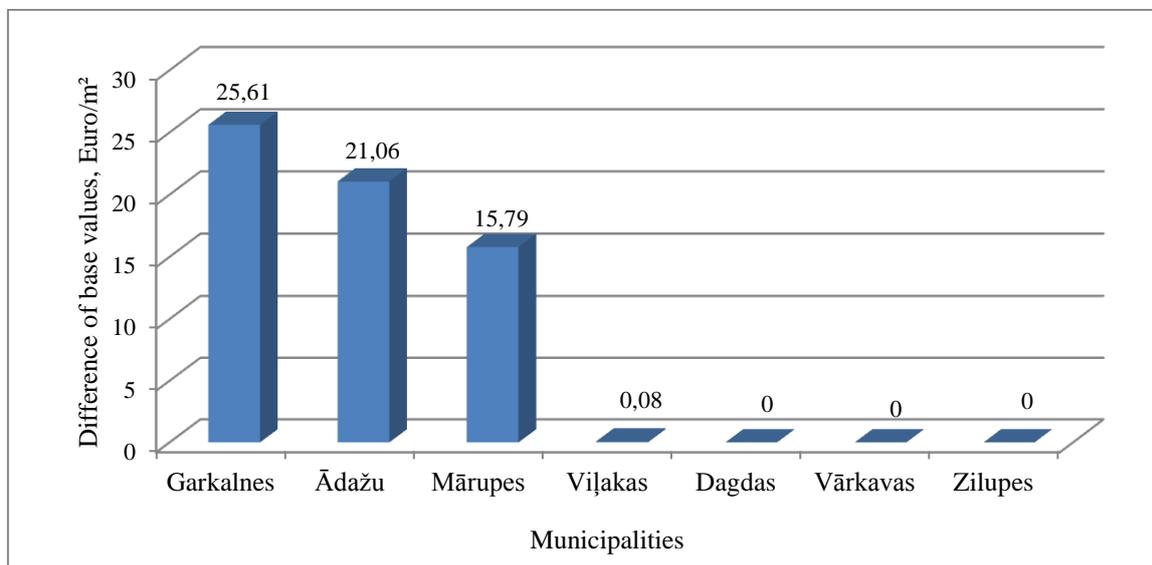


Fig. 6. The difference between the minimum and maximum base values for residential building land

The explanation for this involves various different factors influencing the base values of residential building land. In populated areas located close to Rīga, where new residential house building areas are rapidly developing, the network of streets and the support of engineering communications are developed, which contributes to creating attractive living conditions. Naturally, this increases the market value of the land property and, consequently, the base value as well. At the same time the remaining territory of the municipality, located outside the populated areas demonstrates no factors that could improve the base value, so the base value in these areas is relatively low. It also contributes to the significant difference between the maximum and minimum base value. However, even the lowest minimum base value in areas close to Rīga is ten times higher than the base value in eastern territories of Latvia, even in populated areas (villages, cities), for instance, in the Garkalne municipality the lowest base value is 2.85 euro/m², but in the Zilupe municipality it is 0.28 euro/m².

Conclusions and proposals

1. The real estate market activity varies in different territories in Latvia, so in order to determine the cadastral value of the land, value zoning has been developed value zoning, involving different base values in different value zones divided based on the purpose of real estate groups, including individual residential building land.
2. Although the average maximum base value of residential building land in Latvia is only a little more than four times higher than the minimum, an obvious polarization in terms of the distribution between the municipalities can be observed. In municipalities surrounding Rīga there are areas with the highest base value of residential building land, but moving away from Rīga to the periphery the base value decreases rapidly.
3. In the central part of Latvia, where the municipalities with the highest base value (Garkalne, Ādaži, Mārupe) are situated, there are several value zones with different base values. Meanwhile, in Latgale there are several municipalities (Zilupe, Vārkava, Dagda), whose territories have a single base value zone.

References

1. Adair A., Downie M., McGreal S., Vos G. (1996). European valuation practice: theory and technique. E&FN Spon, London, 337 pp.
2. Kadastrālās vērtēšanas sistēmas pilnveidošanas un kadastra datu aktualitātes nodrošināšanas koncepcija (Conception of Cadastral Valuation System Improvement and Ensuring of Cadastral Data Topicality) (in Latvian) (<http://tap.mk.gov.lv/mk/tap/?pid=40246861>).
3. Freibergs I., Žuromskis V. (2013). Nekustamo īpašumu vērtēšanas teorija un prakse. SIA „Eiroeksperts” 347 pp.
4. Latvijas Republikas administratīvo teritoriju un teritoriālo vienību zemes pārskats uz 01.01.2015. (Land Review of Administrative Territories and Rural Territories in Latvian Republic for 01.01.2015), VZD, 2015, 18 lp. (www.vzd.gov.lv/files/zemes_parskats_2014.pdf) (in Latvian)
5. Law on Administrative Territories and Populated Areas: Law of Republic of Latvia (2008). Latvijas Vēstnesis, No.202 (3986), 30th of December 2008.
6. National Real Estate Cadastre Law: Law of Republic of Latvia (2005). *Latvijas Vēstnesis*, No. 205 (3363), 22th of December.
7. Noteikumi par kadastrālo vērtību bāzi 2016.gadam (Regulations Regarding Base of Cadastral Value for 2016): Republic of Latvia Cabinet, regulation No.838, adopted 23 December 2014, *Latvijas Vēstnesis*, No. 4 (5322), 8th of January 2015 (in Latvian).
8. Regulations Regarding Cadastral Assessment: Republic of Latvia Cabinet of Ministers, regulation No. 305, adopted 18 April 2006, *Latvijas Vēstnesis*, No. 72 (3440), 10th of May 2006, p.3 – 4.

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