

Impact of the Distance between Settlements and Regional Center of Chelyabinsk Region on the Amount of Ground Rent

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Abstract

A goal of the present paper is to consider how a differentiation of cadastral values of land plots and different distances from major cities create preconditions for a larger volume of a rental income at a minimum remoteness from a major city. In order to test this hypothesis, a relationship between an increase in land tax rates while reducing the distance of land settlements of the Chelyabinsk Region from Chelyabinsk was evaluated. To verify this assumption, we have analysed some results of a state cadastral evaluation of land settlements of the Chelyabinsk Region. For our calculations, we used land settlements with the highest cost per square meter based on permitted uses. We analysed the cost for these types of permitted use of land. The study and analysis of the results of the state estimation of land settlements in the Chelyabinsk Region have showed that in most cases the hypothesis was confirmed. The closer the plot is to the regional centre, the higher is its cadastral value and, consequently, the amount of a land rent.

1 Introduction

Investment incomes are important when forming budgets of various levels where a rent, in its various manifestations, has a high specific weight in a total income. A rent arises in conditions of ownership of resources, as well as in case of their lack. Sizes of a land rent also depend on the nearness of land plots to large cities where there are production sales markets. A tax rate also can depend on this distance. There exist a number of difficulties while determining the size of a land rent, it is connected with a cadastral assessment of land plots which may be carried untimely or fail with respect to a number of sites. Thus, an investigation of distances from settlements to regional centres has an important theoretical, methodological and practical value. Some attention is also paid to this research in the present paper.

2 Problems of Rental Relations

There exists an opinion that «the earth available in the structure of a city yields a bigger income than fertile earth of the same kind, which is far from the city. Although both land sites require, perhaps, identical work, but a delivery to the market of a product from a more remote land site is naturally more expensive. And, consequently, « ... the rest from which both a profit of a tenant, and a rent of a landowner are accrued respectively decrease. » (Smith, 1993).

The differentiation of the cadastral cost of land plots located at different distances from the large cities creates prerequisites for obtaining a bigger volume of investment incomes in the event of a minimum remoteness of the land plots from a large city. However, not only a distance is capable to have an impact on both the rents. An opinion of a famous canonical scientist states: «Any production is an appropriation by an individual of nature's objects within the bounds of a certain public form and by means of it. So, the main source of production is an ownership of benefits and resources. Thus, a rent is formed due to the possession of a limited resource» (K. Marx). «Without gaining an opportunity of disposing of land, a right of private property of the latter is not full» (Shmelyova, 1997). It is a right of property of certain benefits and resources that permits a respective owner to receive a special type of income in the form of a rent. (Sagitova, 2013). (Pletnev, Sagitova, 2014).

Also, problems of rental relations are being studied by modern scientists, in whose works some attempts aimed at developing a mechanism of economic disposal of land property are traced, which will promote strengthening incentives for rational use of land and achieving high efficiency of agricultural work (Buzdalov, 1996).

A rent proper does not exist, it is derived under the impact of tools to which belong:

- price;
- profit;
- salary.

The size of a land rent is defined with the help of a lease agreement in which a price of the use of a rent resource is prescribed.

The following rent-forming factors influence the size of a land rent:

- monopolistic position of a resource;
- demand for a resource;
- resource offer;

- ecology;
- seasonality;
- intensity of service;
- availability of infrastructure;
- proximity of sales markets;
- quality of a resource. (Sagitova, 2013)

3 A Calculation of an Influence between Population Centres on the Amount of a Land Rent

The efficiency of rent relations in the course of the formation of a land rent in many respects depends on a distance of sites from large cities and regional centres. One of practiced forms of deriving a land rent is a land tax (Barkhatov, 2007). A land rent going into the budget manifests itself in the form of a land tax which is a local tax. A calculation of a land tax depends on a differentiated rate of a tax, which cannot exceed 0.3% of a cadastral cost with regard to lands of agricultural use and production, housing stock, engineering infrastructure, private household plots and horticultural and livestock husbandry. Also, the rate of a tax cannot exceed 1.5% with respect to other lands.

In order to verify the hypothesis, an interrelation was estimated between an increase of a land tax rate and a reduction in the distance of population centres' lands in the Chelyabinsk Region from Chelyabinsk.

To this effect, the results of the state's cadastral assessment of population centres' lands in the Chelyabinsk Region have been analysed. Land plots of population centres with the highest cost for one square meter were used for calculations, proceeding from types of permitted use. With this end in view, the types of permitted use of land plots were analysed cost-wise.

As a result of the analysis, it became clear that land plots of the following types of permitted use have the highest cost per one square meter (in a descending order):

- 1) land plots intended for locating hotels;
- 2) land plots intended for locating houses with an average and small number of storeys;
- 3) land plots intended for locating objects of trade, public catering and domestic services;
- 4) land plots intended for locating office buildings of business and commercial application;
- 5) land plots intended for locating ports, water terminuses, railway stations, road terminuses, airports, airfields and air terminals;
- 6) land plots intended for locating garages and parkings;
- 7) land plots intended for locating production and office buildings, structures, industrial constructions, municipal services, material-and-technical and food supply, sales and intermediate goods;
- 8) land plots intended for locating power plants and facilities which service them;
- 9) land plots intended for developing mineral resources; locating railway tracks, highways, artificially created internal waterways, moorings, piers, railway and motorway precincts, waterways, pipelines, cable, radio relay and aerial lines of communication, lines of broadcast networks, overhead electric lines of structural elements and facilities, installations necessary for the operation, maintenance, construction, reconstruction, repair and development of surface and underground buildings, structures and facilities, means of transportation, power engineering and communication; locating surface structures and infrastructure of satellite communication, objects of space activity, military facilities;
- 10) land plots intended for locating low-storeyed houses, including individual housing estates.

In order to calculate the hypothesis, the structure of 10 large city districts was analysed, taking into account the least distance from Chelyabinsk. Trend analysis of the cadastral value of the properties held by studying its dynamics and in clusters section. Total three clusters were formed. Conditions related sites permitted uses different clusters was the approximate value of the properties match the dynamics on these cities. Charting in each cluster was determined average value of the properties value. The first cluster hit areas following permitted uses: land plots intended for the placement of trade, public catering and consumer services, land intended for placement of garages and parking lots, land plots, designed to accommodate power, serving their installations and facilities. The second cluster was formed such areas as : land, designed to accommodate the business office buildings and commercial , land ,designed to accommodate middle-rise and low-rise buildings and homes, land , designed to accommodate hotels , land , intended for placing ports , water , rail and road stations, airports , airfields , air terminals. And finally, in the third cluster were following sections permitted use: land, designed to accommodate low-rise residential development, including individual residential development, land intended to accommodate industrial and office buildings, constructions industry, public utilities, land held for development of mineral resources, organize railways, highways (see Figure 1).

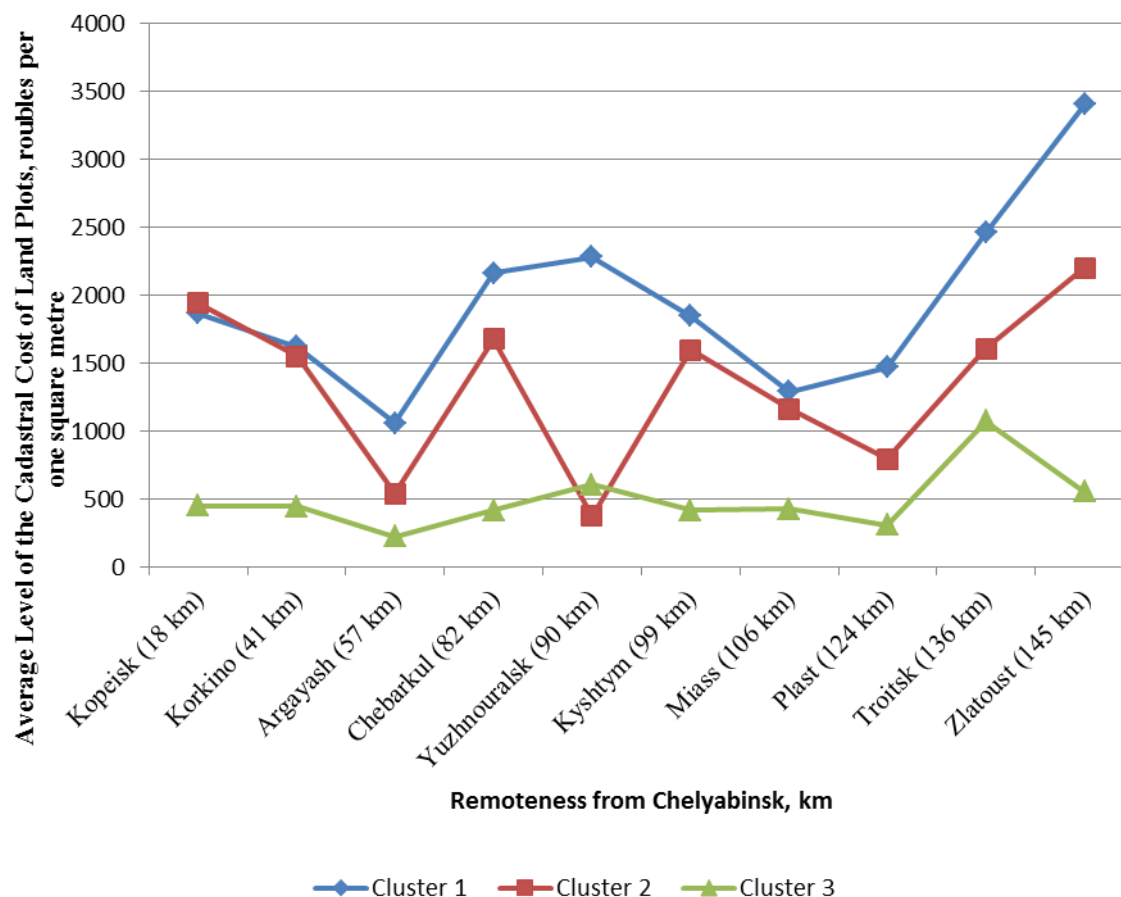


Figure 1. Influence a distance from city districts to the regional centre on an average level of the cadastral cost of population centres' lands

Distance from population centres of the Chelyabinsk Region to the City of Chelyabinsk influences the cadastral cost of these land plots, and, consequently, on the volume of a land rent as well, which is estimated by multiplying the cadastral cost of land plots and a land tax rate. Results presented in Table 1:

Districts of the Chelyabinsk Region	Distance from Chelyabinsk, km	Average cadastral cost, cluster-wise, in roubles		
Kopeisk	18	1863.92	1938.98	449.545
Korkino	41	1617.62	1547.743	445.3575
Argayash	57	1054.44	537.1767	219.2675
Chebarkul	82	2160.18	1676.407	412.88
Yuzhnouralsk	90	2277.01	372.8433	602.1
Kyshtym	99	1846.20	1593.383	413.85
Miass	106	1285.33	1159.323	423.97
Plast	124	1465.25	791.1	303.905
Troitsk	136	2459.30	1603.07	1072.21
Zlatoust	145	3399.87	2199.3	553.117

Table 1. Data on the remoteness of cities from Chelyabinsk and an average cadastral cost of land plots, cluster-wise. *Source:* State Cadastral Assessment (2011)

Thus, the analysis of the state assessment's results regarding land plots of the Chelyabinsk Region's population centres, as well as the analysis of the distance of population centres from the regional center confirm the constitution of the hypothesis. The hypothesis fails in the event of the Zlatoust City District, and in a number of cases in the event of the Troitsk City District. The high cost of land plots of these city districts is associated with the following: deficiency of land, existence of tourist routes, proximity to the border ...

The least differentiation of a land tax rate in the Chelyabinsk Region is traced with respect to land plots of agricultural destination, a housing stock and a subsidiary farm where the tax rate in most cases makes 0.3% of the cadastral cost of land plots.

The greatest differentiation of a land tax rate is represented with regard to land plots occupied for garages, parkings, as well as for apartment houses.

At the moment, there exist a number of problems connected with a withdrawal of a land rent. First of all, it is connected with the following:

- existence of waste lands;
- existence of lands which are out of turnover;
- inadequate use of land;
- lack of a cadastral assessment of land plots.

A solution of the above problems is possible only in case of working out measures aimed at improving the quality of land plots, which require considerable capital investments and which will have an impact on the reduction of a rent level in a short-term period and bring incomes in the future. One of problems of land use is that of shadow economy since land relations create prerequisites for concealing incomes obtained from the possession and use of land, because of which there arises a need of toughening the supervision over rent operations. Also, there are a number of problems connected with an inefficiency of land use, after the Law «On Privatisation of State and Municipal Property», as of December 21, 2001 Vol. 178-FZ, came into effect. On the basis of this law, there appears a possibility of privatising land, except for the alienation of land plots on which real estate structures are located, among them property complexes.

4 Conclusions and Prospects of the Research

The privatisation of land plots creates conditions under which it is far more difficult for the state to trace the legitimacy of the use of land plots. In these conditions, an incorrect and inefficient inflow of a land tax into the budget may take shape, which is connected an inadequate use of land plots. Owners of land plots may have shadow incomes which are formed as a result of rent relations with rent perners, in case of a concealment of these relations from tax authorities. And all this leads to a leakage of investment incomes with respect to a land rent.

Thus, the research of the influence of a distance from city districts to regional centers on the volume of a rent regarding a land tax is of great importance. The problems revealed during the research can be successfully solved and may positively affect the efficiency of rent relations in the field of land use.

In order to solve the revealed problems of an inefficiency of rent relations in the field of land use, the following measures may be recommended:

- toughening the supervision of appropriate use of land plots;
- carrying out a full cadastral assessment of all land plots without exception;
- carrying out the supervision over the use of privatised land plots;
- checking the tax base concerning the calculation of a land tax;
- supervising over rent transactions;
- making improvements of land plots by means of fertilizers and other similar measures.

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