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Analysis of the Influence of Properties Management in the Region on the Transaction Prices Level of Unbuilt Land Properties – Case Study

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Abstract. This article presents the results of analysis of the influence of selected economic, legal and environmental factors on the level of transaction prices of unbuilt land properties, in two randomly selected districts of the southern Poland. The results of the research allowed extraction of a group of factors influencing the spatial distribution of the average prices of the surveyed properties. They gave also the answer to the question about the extent to which the unit prices are confirmed by the state of properties management in the region. An analysis of the existing state in the selected region based on the analysis of the local market was performed. Furthermore, the conformity of local plans for the studied areas was examined, as well as an analysis of spatio-temporal distribution of transaction prices of real estate was performed. The research has shown that the level of transaction prices on the local real estate markets is related to the real estate management of the surveyed areas. The state of the economy is affected by many factors, most important of which seems to be the location in relation to urban areas and the condition of the access roads. The undertaken tests correspond with the directions of the world research.

Keywords: real estates management, transaction prices, unbuilt real estates.

Conference topic: Technologies of geodesy and cadastre.

Introduction

Real estate management is a complex set of relationships and procedures taking place between a subject and an object of property rights. It primarily concerns spatial relationships, but not only. The subject of real estate management, is widely understood possessions defined as ownership and other property rights. And the object are the authorized persons having certain rights to these things.

The main objectives of real estate management are:

- creating conditions favorable to achieving the objectives of spatial policy,
- acquisition of land necessary for the implementation of programs and spatial plans,
- creation of legal and administrative conditions for the use of land by natural persons, legal persons, as well as organizational units without legal personality,
- blocking the use of land not in accordance with the provisions of zoning plans,
- ensuring an adequate income from real estate management,
- creation and enlarging land resources for the implementation of public tasks.

In Poland, the nature of the real estate economy depends on the degree of investments and on land use. The real estate management is functioning otherwise in rural areas, and otherwise in urban areas and areas subject to urbanization, because it is governed by separate implementing provisions.

According to the Law on Real Estate Management (1997) the basic type of real estate is a land property. They are parts of the earth's surface which are separate objects of ownership (land). Buildings, other equipment and plants located at them and permanently attached to them as well as the law relating to property ownership are components of the given land property.

For the purposes of this study it is important to define the unbuilt land, which is agricultural land. According to the Civil Code they are "*properties that are or may be utilized for the production activities in agriculture in the field of plant and animal production, including the horticultural, orchard and fish production*".

The concept inextricably linked to the property, as a subject traded on the real estate market, is its market value. It is the basis for calculating fees and taxes. Moreover, the value is a forecast of a price achievable on the market for a given property after the conclusion of the purchase – sale transaction. Table 1 shows the factors affecting both the value and the price of the property at the local market.

Table 1. Factors affecting the value and the price of the property (Source: Own elaboration based on Kucharska-Stasiak E. 2000)

Physical factors	Economic factors	Legal factors	Environmental factors
topography	state of economic development	tax system	demography
insolation	level of unemployment	tax incentives	lifestyle, fashion, habits
wind directions	state of wealth	Spatial Development Plan	size of families
natural resources	availability of credit forms		availability of services
climate		environmental protection	neighborhood
the size and shape of the property	credit interest rates	Form of property ownership	environmental pollution
technical condition		freedom to participate in transactions and real estate trade	communications availability
functionality	level of prices		

The factors listed in Table 1 are closely linked to real estate management in the region. For the studied group of unbuilt land properties of an agricultural nature, particularly relevant seem the economic and environmental factors. In the world literature the subject of faulty spatial structure of agricultural land and rural problems take, among others (Bentley 1987), (Hung, Murata 2001), (Kawasaki 2010), (Rahman, S. Rahman, M. 2008). The quality of life of rural residents and the analysis of social factors relating thereto were considered inter alia in (Bentley 1987), (King, Burton 1989). From the national analyses results that an important factor influencing the economy of the region is the quality of data recorded in the local databases of real estate cadastre (Hanus *et al*. 2014), (Leń, Mika 2016), (Mika, Leń 2016), (Przewięźlikowska, Buśko 2014), (Siejka 2016).

Materials and research methods

In order to investigate the potential of the region, resulting from the way of management of particular group of unbuilt agricultural properties an analysis of the existing situation in the selected region on the basis of market analysis was performed. Furthermore the establishment of local plans for the studied areas was performed as well as checking of variants of development based on the development strategies of communes. At the next stage functions and forms of development for the studied group of real estates were verified, as well as the analysis of spatio-temporal distribution of transaction prices of real estate.

The study area includes two randomly selected districts in southern Poland, shown in Figure 1. The area of the first district equals 676.7 km^2 and is created by seven communes: Miechów, Charsznica, Kozłów, Książ Wielki, Słaboszów, Racławice and Gołcza. Farmlands here represent 76% of the total land area. Society of Miechów District is employed primarily in agriculture. Especially rapidly are growing organic agriculture, agro-food services and agrotourism.

The terrain relief is highly varied and is rich in good quality soils affecting positively the agricultural character of the area. Furthermore, there are numerous monuments of religious architecture and manor and park complexes there, making the analyzed area attractive for tourists.

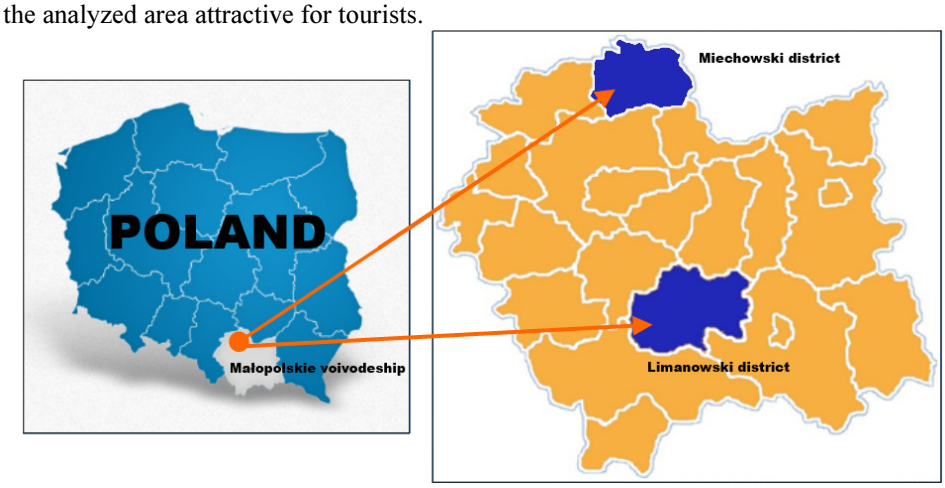

Fig. 1. Location of Miechowski district and Limanowski district in the Małopolskie voivodship (Source: http://www.zasoby-ludzkie.wup-krakow.pl/powiat-1-malopolska.html on 10.12.2016)

The second tested district covers an area of 951 km^2, it represents 6.3% of the total area of the Małopolskie voivodeship. In terms of size it is on the 6th place in the voivodship and 142nd place in Poland. [www.stat.gov.pl/bdl [2016-04-20]] Limanowski district consists of 12 communes: 2 urban communes (Limanowa, Mszana Dolna) and 10 rural communes (Laskowa, Limanowa, Łukowica, Tymbark, Jodłownik, Słopnice, Dobra, Kamienica, Mszana Dolna and Niedźwiedź). Limanowski district is a typical agricultural area, where the agricultural land and forests prevail (they represent about 95% of all district land). In the Limanowski district poor soils classified into IV, V and VI quality class prevail. Classes I and II do not occur, III takes a small percentage of the area of the district. The area of Limanowa district lies in the Western Carpathians. The land cover is dominated by mixed forests (pine, spruce, fir, beech, alder and birch). In the forest clearings the protected plants can be seen. The area is attractive in terms of tourism and landscape. Limanowski district has a mountainous nature.

Input data for these analyzes were obtained from the Register of Real Estate Prices and Values (RCiW), maintained by the Department of Geodesy, Cartography, Cadastre and Real Estates the District Offices. This register represents the most reliable source of data on the real estate prices in Poland, obtained on the basis of notarial acts and values of properties, determined by the appraisers in the appraisal reports.

The analysis of data from RCiW allowed obtaining a range of statistical information for the purpose of:

- studying the structure of the real estate market features,
- studying the seasonal phenomena in the real estate market,
- studying of trends in the real estate market,
- studying the interdependecies on real estate market.

The obtained data included transaction prices of unbuilt land properties, located on the analyzed areas, during the period of five years (from 2010 to 2015). For the purpose of study, information such as: the name of the territorial unit, the date of the transaction, parties to the transaction, the form of sale, the transaction price, the area of real estate and the property type were specified. Selected data are summarized in the table and enriched with supplementary information, ie. the code of the territorial unit (TERYT), year, and price per m^2 of real estate. Then, these data were systematized within each commune according to the purchase price from lowest to highest (in the annual breakdown for years included in the study). Due to the agricultural nature of the areas of research, for the analysis the unbuilt land properties with one type of use, multi use and those intended for construction purposes were selected. Some of the data obtained from the Register of Real Estate Prices and Values had to be removed from the analysis primarily due to incomplete information package. Also significantly outlying values of transactions were removed. As a result of these actions, the analysis covered more than 5,000 of data (In the form of transaction prices) for selected areas.

Results

The following figures, tables and graphs present the main results of the research.

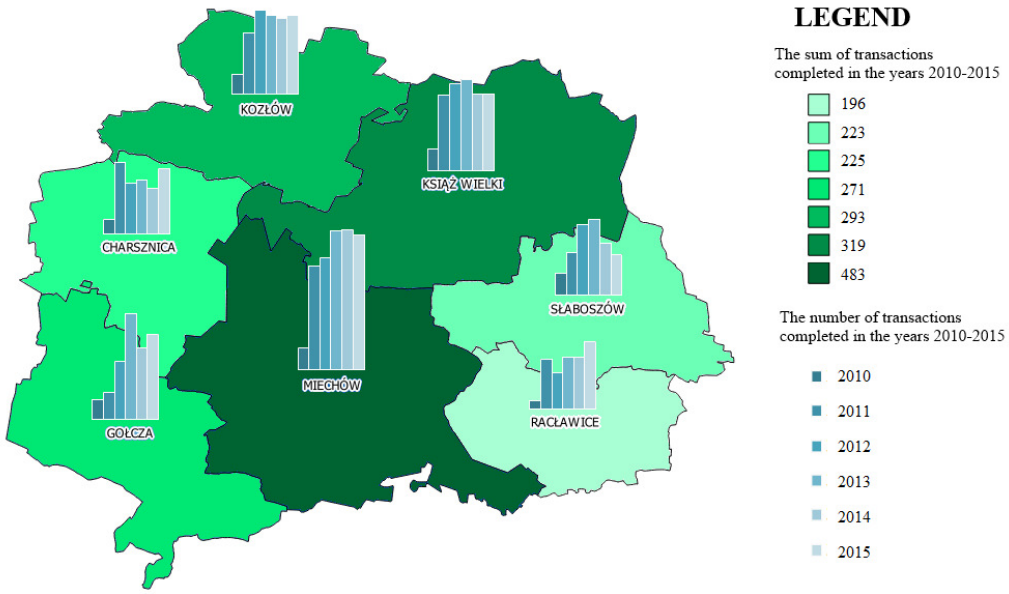

Fig. 2. Number of sale and purchase transactions of unbuilt land in the Miechów district completed in 2010–2015 (Source: Own research based on data obtained from the Register of Real Estate Prices and Values in District Office in Miechów)

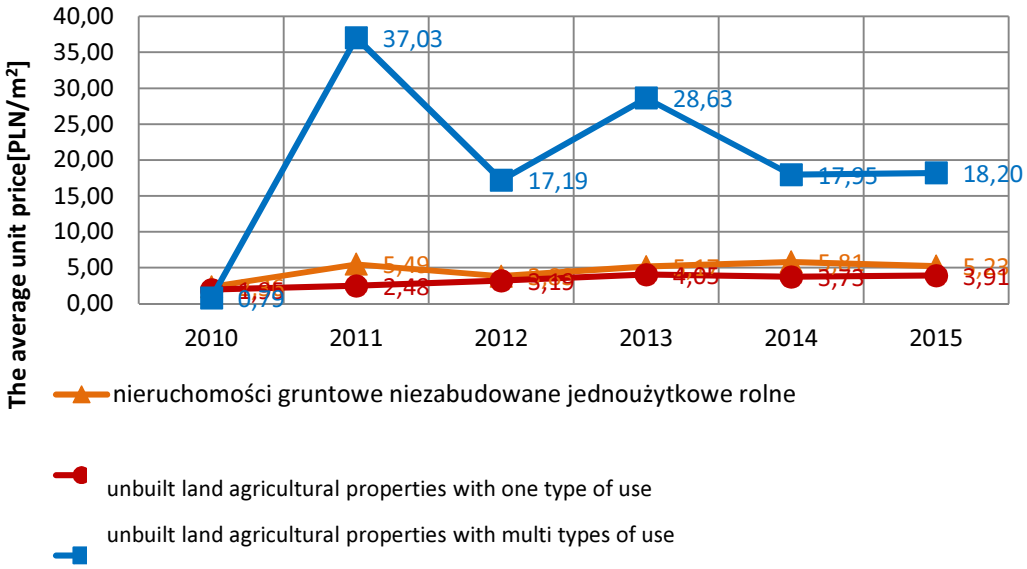

Fig. 3. Average unit prices of undeveloped land covered by purchase and sell transactions in the Miechów district in years 2010–2015 [PLN/m^2]

Table 2. Average transaction prices for unbuilt land properties in the years 2010–2015 in Limanowski District [PLN/m^2] (Source: own study based on data obtained from the Register of Real Estate Prices and Values of the district office in Limanowa)

Year	Property prices [PLN/m^2]		
	Agricultural	Intended for construction purposes	Total
2010	11.09	28.81	17.70
2011	16.66	27.75	21.87
2012	13.81	24.30	16.67
2013	16.66	26.86	20.69
2014	12.30	30.62	22.43
2015	13.55	32.28	24.24

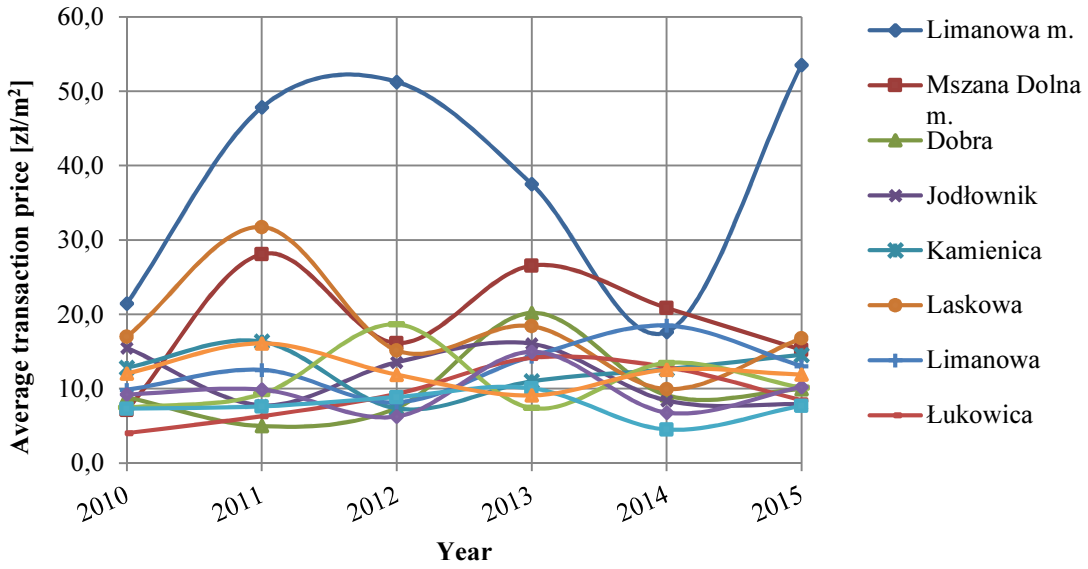

Fig. 4. Average transaction prices for unbuilt agricultural land properties in individual rural communes of Limanowski District for years 2010–2015 (Source: own study based on data obtained from the Register of Real Estate Prices and Values of the district office in Limanowa)

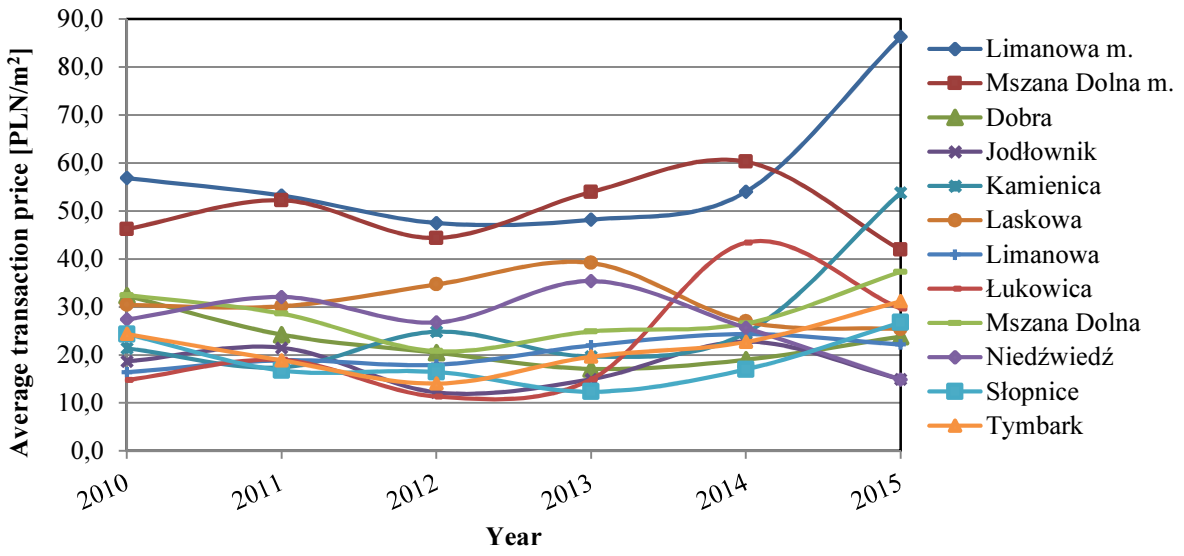

Fig. 5. Average transaction prices for the unbuilt land properties intended for construction purposes in individual rural communest of Limanowski District for the years 2010 to 2015 (Source: own study based on data obtained from the Register of Real Estate Prices and Values of the district office in Limanowa)

Transaction prices of unbuilt agricultural land in Limanowski District are rather low (Table 2, Fig. 4). The exceptions are municipal communes where prices are significantly higher. The cause of adverse price trends is the geographical location of the district. It is an area of the Carpathians and Gorce, where there are a lot of undulations and hills, not favorable to the development of agriculture. Due to the location of the district in the area of the Western Carpathians, the grading of soil class also is not high, which adversely affects the cultivation. On the other hand, the transaction prices of unbuilt land properties, intended for construction in urban communes, are the highest, because they are generally economic and cultural centers (Fig. 5). Recently in Poland there is observed nationwide tendency to leave the cities as places of residence because of pollution and traffic nuisance. City dwellers move to the rural areas in search of clean air and landscape features. To avoid significant prolongation of access to the city (to the work) the most often the communes bordering the city are selected. Examples are the rural communes Mszana Dolna and Limanowa, where the number of the purchase – sale transactions of the discussed properties increases. Also in other communes, for example Kamienica or Laskowa, thanks to their landscape features, the transaction prices for the purchase of real estate for built-up increase. Another factor, which determines the rise in prices of real estate designated for built-up is national road DK 28 leading through their area providing a relatively quick and convenient way to travel to Nowy Sacz and Krakow. Examining the spatial distribution of transaction prices of unbuilt land properties it is necessary to consider the factors that may affect the distribution of prices. The average transaction price of land properties, both agricultural and for built-up, depends largely on their location in the commune. Average property prices in all these years, are the highest in urban communes. This involves the fact that urban areas (even small as Mszana Dolna or Limanowa) are socio-economic centers. In their area there are the most important institutions for the entire county (offices, schools, hospitals), cultural institutions and private enterprises. They are located by the major traffic routes (by the national road DK 28 Zator-Medyka). In the communes that surround the city, the higher prices also can be noticed (an example is a rural commune Mszana Dolna). This is due to a relatively quick and good access to the city center and location of large industrial plants on the outskirts of cities. The technical infrastructure is another factor determining the spatial diversity of transaction prices. In communes where the level of sewage and the water supply development is lower, also lower transaction prices for property held for built-up are observed. An example may be the communes: Jodłownik, Dobra and Łukowica, where the average transaction price for the six-year period ranged from 18.50 to 22.50 PLN/m^2, 20% of the commune area was covered with sewers, and the water supply was on 11–30% of the area (comparing to the municipality of Limanowa: the average transaction price is almost 2.5 times higher, and the level of sewage system is 61% and the water supply system almost 81%). On the other hand, the spatial distribution of the average unit prices in the county Miechów (Fig. 2, Fig. 3) depends primarily on the degree of urbanization, availability of roads of supra-local importance, the level of development of the technical infrastructure and the distance and ease of communication with larger settlement units in nearby voivodeships. Miechów district is located between three major cities: Krakow in Małopolskie Voivodeship, Kielce in Świętokrzyskie Voivodeship and Katowice in Silesian Voivodship. These directions have a noticeable influence on the spatial distribution of the average unit prices in the Miechów district. Charsznica and Gołcza communes from its western side are adjacent to the Silesian Voivodship. The same applies to Miechów commune and again Gołcza commune, which of their southern sides are adjacent to the Krakow district.

Książ Wielki commune from its north side is located at a distance of approx. 70 km from the town of Kielce, which in comparison to the agglomeration of Krakow and the Silesian conurbation is far less developed, which is also reflected in the fact, that the Książ Wielki commune in the aforementioned group II is on the last place. For the Książ Wielki commune not without significance is the fact that through its central part passes the road of national importance.

Conclusions

Analysis of environmental, economic and social factors, performed on the basis of GUS materials showed that with increasing degree of areas urbanization the interest in buying agricultural real estate in the local markets grows. The prices of unbuilt land are increasing slightly in comparison with the prices of built-up land or designated for built-up, therefore, the high activity of agricultural land market can be observed. Further observations of the studied real estate markets behavior will show whether they will be used for agriculture or gradually transformed into areas for construction. Mechanism impeding such behavior seems to be restrictions introduced in 2016 concerning the rules for the purchase of agricultural land on the territory of Poland. These issues will be an important aspect of further research and is not the subject of this discussion. Trend analysis of unit prices of agricultural unbuilt land can be used to assess the degree of property management in the region. This is proved by the results of tests carried out for two different areas of the Southern Poland.

On the basis of the research, it can be stated that the level of transaction prices on the local real estate markets is related to the real estate management in surveyed areas. The state of the economy in the examined region is affected by many factors, most important of which seems to be the location of the areas in relation to urban agglomerations.

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