

INVESTMENT PROJECTS AND CHANGES IN PRICES OF LANDED PROPERTIES AS REFLECTED IN THE CADASTRAL VALUE

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Methods of determination of cadastral value have been widely discussed in the literature for a dozen or so years. In each case what is proposed is the application of the mass valuation method based on the analysis of transaction prices which characterise the so-called local market. In such a situation the attributes that affect the cadastral value are the attributes which influence transaction prices. One of the attributes which play the most important role in price formation is the location of a given real property and, hence, its surroundings and neighbourhood. This article is an attempt to carry out an analysis to show the impact of new investment projects on the level of prices of land situated in the vicinity of such projects.

1. Introduction

In Poland, actions aimed at the establishment of rules related to the introduction of a cadastral tax have been taken for many years. On one hand these pertain to the rules for the establishment of a cadastre of real properties and development of a coherent system of land registers, land and mortgage registers and registers of real properties for fiscal purposes, and, on the other hand, they are related to the rules for determination of the value based on which such a tax would be calculated. Such a value, referred to as the cadastral value, should approximate, to the largest possible extent, the market value of the subject of taxation. Rules governing determination of the cadastral value are laid down in the Act on Real Property Management and the Ordinance of the Council of Ministers on Mandatory Taxation of Real Property. It follows from the provisions of these legal acts that the characteristic features of land, influencing the cadastral value, include, in addition to the land's intended use specified in the local spatial development plan, is where the real property concerned is situated. Such a feature, also referred to as the location, should take account of both general location in relation to the centre of a given area, and detailed location, namely the immediate surroundings in relation to the type and nature of the real property.

2. Value of the real property

Value of the real property performs specific functions and is an important factor in the system of real property management. It is an economic category created in the process of valuation. Currently, value of a real property is usually identified with that property's market value (Wiśniewski, 2007). Such a value should be understood as the most probable price of the real property that could be achieved on

the market with an assumption being made that parties to the transaction (purchaser and seller) are independent of each other, are not forced to enter into the transaction and have a strong intention to execute the agreement, and also that the time needed to present the real property on the market and negotiate the terms and conditions of the agreement has elapsed (Standardy Zawodowe Rzeczoznawców Majątkowych, 2003, Siejka, 2007).

The real property's market value so defined has been divided into five groups depending on the type. The Professional Standards for Property Valuers define the particular types of the value in the following way. Group one is the market value which takes account of the current manner of use. Group two pertains to the market value for an alternative manner of use and stands for the market value which reflects prospective use of the real property for purposes other than the current one. Such a value should be based on specific information and data which determine the possibility to change the manner of use. No unjustified or unreal assumptions may be made.

The third group of the market value is the value calculated with an assumption that the real property is used in an optimal manner. It is a special type of market value applicable to an alternative manner of use and it is to be determined when an additional assumption is made, namely that the real property is to be used in the most effective and best manner possible, provided that such a manner of use is real, legal, physically possible, financially viable and generates the highest value. Such a value should be applied mostly with respect to undeveloped land intended for developmental purposes.

The fourth group is the market value for forced sale, meaning a market value determined with an assumption that there is limited time needed to finalise the transaction or there are some other constraints resulting in a situation where the marketing period or the time needed to negotiate the selling price cannot be considered sufficient or reasonable.

The last, fifth group is the market value for future sale. It is the market value forecast as valid as at the date of the real property sale. Here, the necessary period of time should be determined, encompassing all the activities related to the placing of the real property on the market as available for sale, characteristic for a given type of real property, and the market value as at the final date of such period should be calculated.

In all the cases listed above the basis for the calculation of the market value as the result of a compilation of all the attributes characterising a particular real property, is transaction prices. Changeability of prices is a consequence of both the social and economic changes that have taken place as well as from changes occurring in the surroundings in connection with the implementation of local investment projects (Wiśniewski, 2007).

A similar view of the price changeability is expressed by Cellmer who also argues that prices are formed at a particular level by the environment of the real property market, but they differ only due to the differences in the particular attributes, which implies that these attributes themselves do not directly create the price. Real properties having the same attributes may achieve different values on different local markets. While searching for the appropriate real property a prospective purchaser follows few criteria only (Cellmer, 1999, Malczewska, 2003).

Therefore, the foregoing analysis seems to show that the taxation value of a real property is inextricably related to the transaction price and to the factors which influence that price.

3. Research material and its analysis

Due to a low stability of transaction prices on the real property market as well as the fact that the number of features real properties can differ in is, indeed, indefinite (Senetra, Cieślak, 2004), the research material collected was verified. In order to allow as accurate as possible demonstration of the impact of investment projects on the market value and, hence, the cadastral value of the real property, investment projects were divided into two groups.

The first group comprises commercial investment projects, while the second group multi-family housing investment projects. The period under analysis covers the years 1998-2006; the investment projects were carried out in Cracow. The years 1998-2002 are the period when a number of leisure,

shopping and services centres were established, whereas the period 2003-2006 was intensified development of multi-family housing facilities.

Two facilities were selected as examples of commercial investment projects. The first one is the shopping and services centre located in Cracow at ul. Kapelanka. It is a Tesco hypermarket released for use in September 1999. The other investment project is the M1 shopping and services centre situated in Cracow at Al. Pokoju. The centre commenced its operation in October 2001. The second group is made up of two housing estates. One is located in the Krowodrza district; the housing facilities situated there were released for use in 2005, and the other one is the housing estate located in the Podgórze district where the last building was completed also in 2005.

The research material collected comprises 350 transactions of sale of undeveloped land situated in the land districts bordering the land district where the investment project under analysis is located. In order to make the transaction data for the purposes of the analysis more uniform, only the land where multi-family housing facilities or commercial facilities were to be developed was accepted for the analysis. Moreover, any land of the area below 400 m² was excluded. The value-generating attribute, relating to the access to the network of technical infrastructure, was estimated as equally important in all the cases as all the real properties under analysis had access to the full range of utilities.

In thus verified research material, in the first place, price adjustment was carried out due to the transaction date. The adjustment was made with the linear regression method and the date for which the price adjustment was carried out was 31 December of the year following the year in which the investment project was completed. Therefore, for the commercial real properties the date was 31 December 2001 and 31 December 2000, whereas for both housing real properties – 31 December 2006.

Application of the linear regression method is, first, preceded by the calculation of the correlation coefficient and, depending on its value, classification of the research material collected into the appropriate group depending on the relevance of the time factor for the real properties' transaction prices. For the material under the present analysis, the value of the said factor stood at 0.4652, which is indicative of the fact that the "time" attribute influences transaction prices to a moderate extent. That extent is considered an important factor and that is why the price adjustment was carried out for the research material.

As a result of the verification process a database of transaction details, uniform in terms of all the features that influence transaction prices except for the location understood as the vicinity of a new facility, was generated. Given the fact that in each of the cases selected the analysis covered a period of three years, namely a period encompassing one year prior to the start of the investment project, the year when the investment project was implemented and one year after completion of the investment project, it can be easily noticed how transaction prices changed in that aspect.

Owing to an ample database and a limited space that can be devoted to it here, we decided to present only the final results obtained instead of presentation of the research material. These results have been presented, for convenience, in the form of diagrams. The particular figures show a change in the transaction prices of undeveloped land, occurring due to its special location – namely vicinity of a new investment project. In the first two cases we have investment projects of a commercial type as these are shopping centres. In the other two we present changes in transaction prices of land in connection with a development of new housing estates. The first housing estate is situated in the Krowodrza district, commonly regarded as highly attractive, while the other facility is located in the Podgórze district, considered to be a moderately attractive place.

The results of the analysis, presented in the diagrams above, show explicitly that emergence of new investment projects stimulates increase in transaction prices of land. The volume of such increase is varied and represents 47% for the M1 commercial investment project, 50% for the Tesco commercial investment project, 45% for the housing investment project in the Podgórze district and 37% for the housing investment project in the Krowodrza district. The results shown prove that commercial investment exerts a higher (by more than 7%) impact on the prices than housing investment.

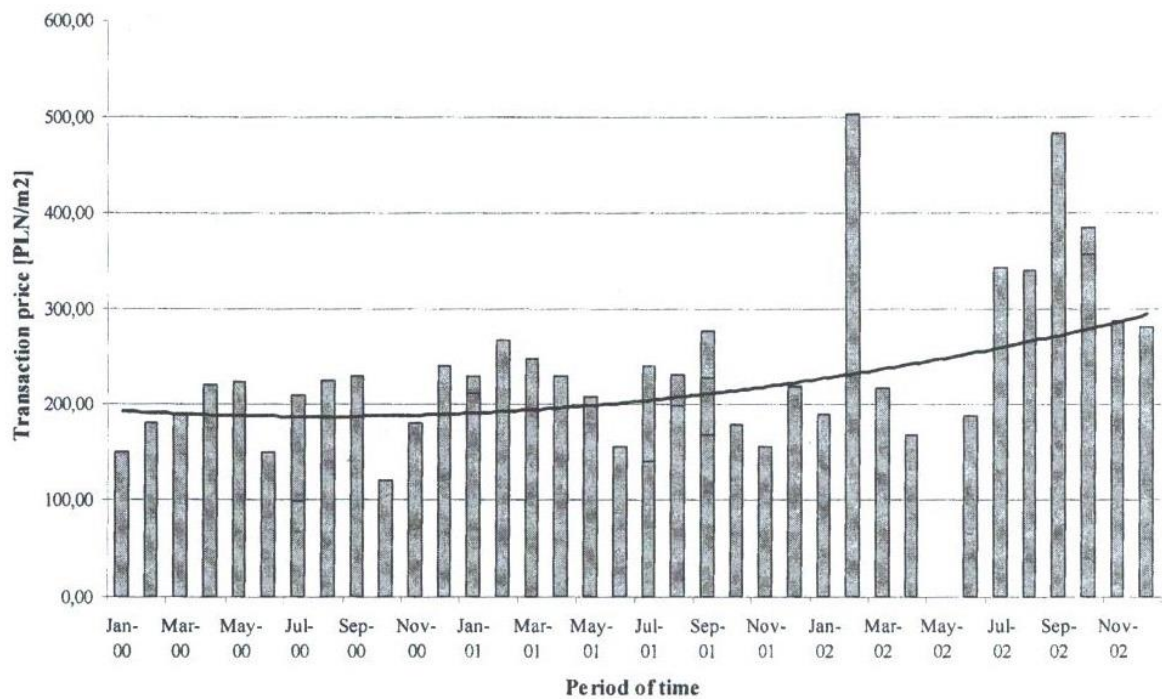


Fig. 1. Change in transaction prices of land as a result of a development of the M1 shopping and services centre.

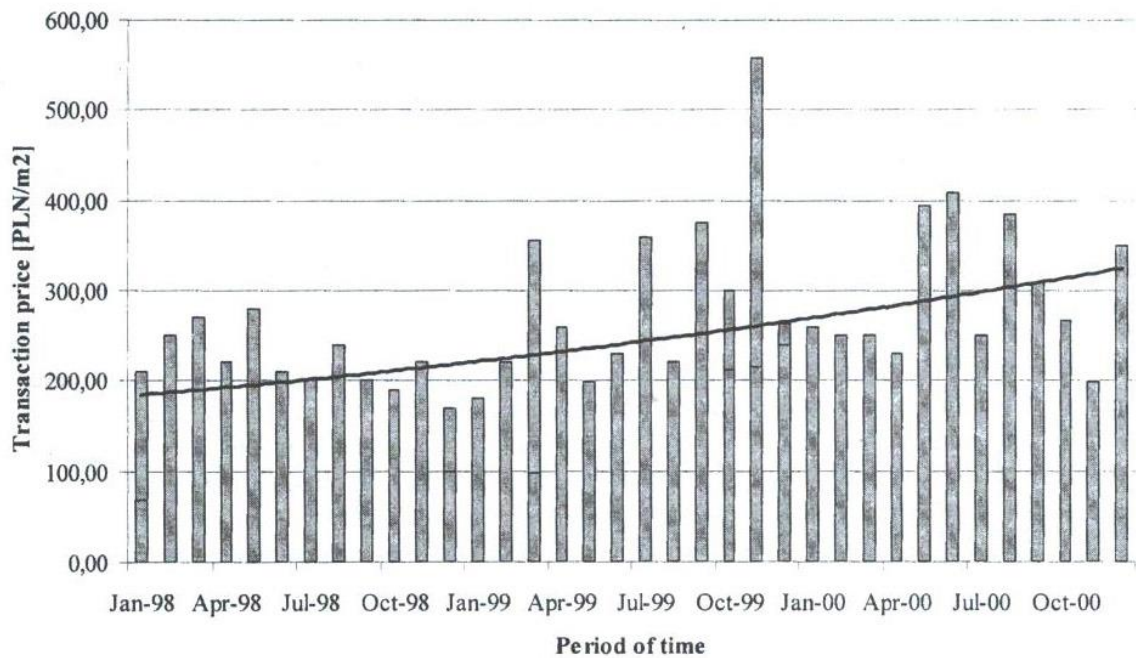


Fig. 2. Change in transaction prices of land as a result of a development of the Tesco shopping centre.

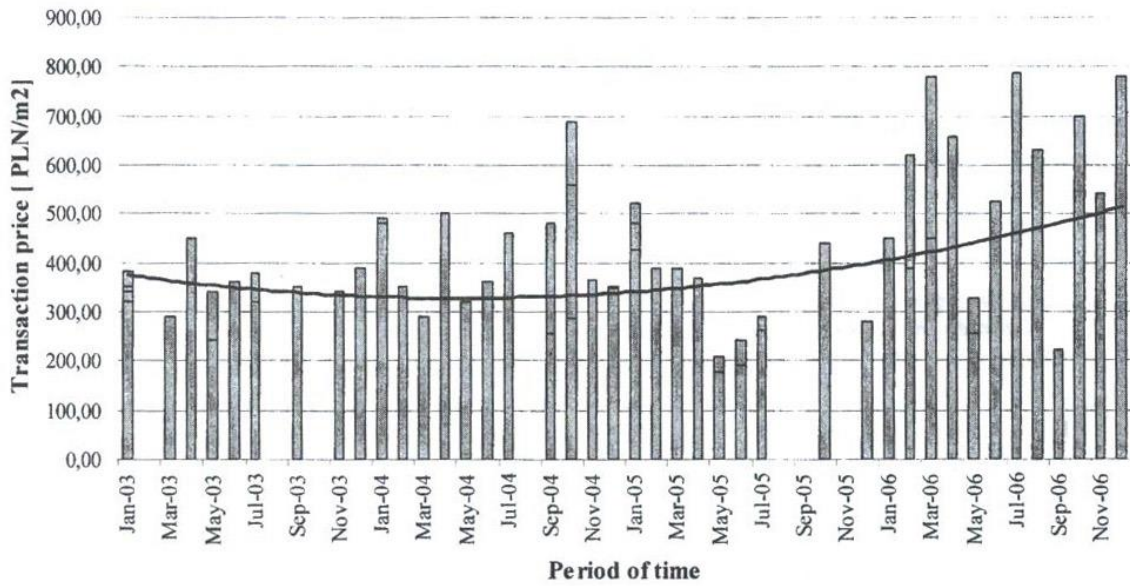


Fig. 3. Change in transaction prices of land as a result of a development of a housing estate in the Krowdrza district.

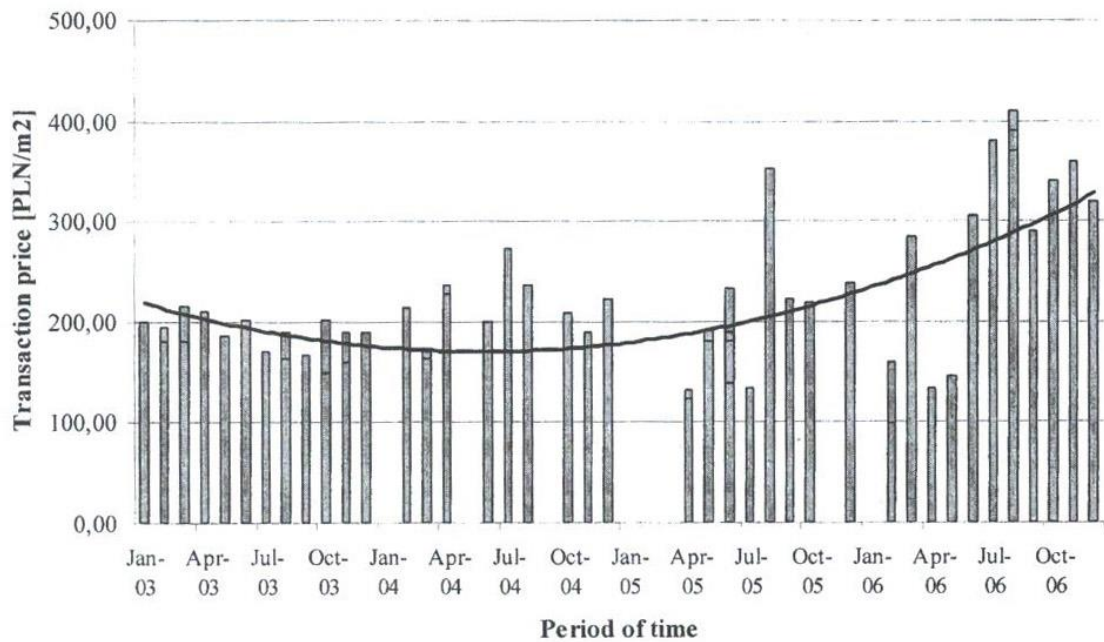


Fig. 4. Change in transaction prices of land as a result of a development of a housing estate in the Podgórze district.

4. Conclusions

Further, it was noticed that at the initial stage of implementation of the investment project transaction prices remained on a stable level (as in the case of the M1 commercial facility) or slightly decreased (as in the case of the housing investment projects). And it is only in the period when the

investment project is completed and released for use that a substantial increase in the transaction prices is recorded. A somewhat different situation is presented in Fig. 2 where a marked increase in the transaction prices was noticeable from the very start of the investment project (Tesco commercial facility).

Interestingly, despite the fact that the analysis pertained to facilities situated in various parts of Cracow and developed in different periods of time, similar results were obtained. The changes in the transaction prices, described above, are particularly important from the point of view of their impact on the cadastral value of the real property as it is the real properties' transaction prices that will influence the cadastral value of the representative real properties and, at the same time, the value of real properties subject to taxation. Therefore, each factor that brings about a considerable change in the transaction prices, induces a change in the cadastral value.

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