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## Market Instruments of Communal Real Estate Management in Poland

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**Abstract:**

*The aim of this article is to assess the activity of communes in the West Pomeranian Voivodeship in the use of instruments available to administrative units regarding real estate management.*

*The spatial scope of the research covered the communes of the West Pomeranian Voivodeship in 2018. The data used in the research came from public statistics sources with the level of detail of NTS-5 (GUS, BDL, BIP). The work uses specialist literature on the subject, both domestic and foreign. The research used the taxonomic measure of development by Z. Hellwig, which replaces the description of the studied objects with the use of many variables with the description using one aggregate quantity.*

**Keywords:** Real estate management, commune, West Pomeranian Voivodeship.

**JEL Classification:** G23, L11, L26, O1, O4.

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## **1. Introduction**

The concept of real estate management has been included in a number of different definitions, each time understood slightly differently and relatively ambiguously (Cellmer and Kuryj, 2008). First, real estate management consists of two basic elements of management and real estate. Management is understood as "making choices regarding the allocation of limited resources among various competing goals (Samuelson and Nordhaus, 2004), or conscious activity of people of an individual or collective nature consisting in the allocation of limited resources among competing applications for achieving the best possible use and meeting social needs without harming the natural environment and living conditions of the society (Cellmer and Kuryj, 2008).

Real estate management in a commune is deliberate and deliberate actions of authorized entities, in the forms provided for by law, including decision-making and actual and legal actions regarding real estate spatially located in the commune, aimed at achieving specific goals, subordinate to the socio-economic development policy conducted by local authorities (Cymerman, 2011). In the literature on the subject, the authors try to define the basic elements of the influence of the political and economic activity of communes on the real estate market in various ways.

Some believe that real estate management does not have to fulfill a specific goal, as it is one in itself. Its functioning should be an integral element of the territorial unit development policy by all means of which it aims to make the most rational decisions possible in the public interest (Cymerman, 2011). Expectations towards a territorial unit are not only shared by residents, but also economic units, both those operating in the commune as well as those that are just beginning to associate their plans with a given area. For entrepreneurs it is an extremely important aspect due to the sensitivity of investment success related to numerous conditions related to the area (Szando, 2003). The physical characteristics of the property play an important role here: its actual size, topography and geographic location.

Real estate with the so-called "Favorable conditions" for the location of the investment are easy to have them adapted to the needs of the owner, also they have good access to the resources located there, and thus a greater probability of success of the planned investment. To sum up, among the basic roles of real estate management, we can distinguish the economic and even pro-economic role of local activities performed by the commune.

The lands and basically the entire areas, should be assigned a specific function, with utilities alongside the appropriate technical infrastructure and have appropriate legal conditions related to the use outlined. What is more, communes should, for their own needs, their inhabitants and investors, use the tools they are entitled to, to merger and division as well as expropriate real estate for public purpose investments, as well as to return the expropriated real estate. This enables freely and

simultaneously balanced (due to the simultaneous control of the decision-making body) disposal of the property, facilitating the achievement of the intended goals and the implementation of planned investments (Cellmer and Kuryj, 2008).

Another role that a commune can fulfill by means of an appropriate real estate management is meeting the needs of the local community. The commune, thanks to the management of its property, can not only actively meet the living needs of its inhabitants, but also warehouse, service and other public purposes. This allows, among other things, to reduce problems related to the deficit of usable space and the problems of poverty or homelessness among the local community. Moreover, the commune is equipped with a number of instruments enabling it to obtain an additional source of income thanks to real estate. Among these sources, we can distinguish:

- taxes and public-law fees;
- civil law fees;
- one-off fees and taxes;
- periodic fees and taxes (Trojanek M, 2015).

It is also worth that these fees apply to both real estate owned by a specific unit of local government and other real estate owned by the public or a private person. Rationally conducted real estate management is a multitasking instrument that allows you to control the development potential of a territorial unit. However, the basic roles of the commune in real estate management include:

- creating appropriate conditions for the development of the economy by means of legal and planning instruments;
- use, management, disposition, creation and development of real estate included in the municipal real estate resource;
- shaping the commune income (Cymerman, 2011).

The commune has a number of instruments thanks to which it fulfills the active management of real estate, and thus carries out its own tasks, shapes the spatial order, and also increases revenues to its budget. The notion of an instrument in the subject literature is understood as a variety of methods, defined by the law, by means of which a subject can achieve the intended goal or induce other subjects to adjust their actions towards him (Cymerman, 2011). Instruments can also be classified based on the direct effect of the changes they cause, as proposed in Needham's study:

- instruments affecting spatial structures (i.e planning instruments);
- instruments that change the financial circumstances of the operation (i.e financial instruments);
- instruments changing legal circumstances and the degree of administrative order (i.e legal and administrative instruments);

- information instruments that change an individual's knowledge of the environment (i.e information instruments designed to encourage or discourage specific actions) (Needham, 1982).

## 2. Research Methodology

The main research problem this work presents is the activity of communes in the West Pomeranian Voivodeship in the use of real estate management instruments. The aim of the article is to assess this activity by using a taxonomic measure of development. Taxonomic measures of development replace the description of the studied objects with the use of many variables with the description using one aggregate quantity. As a result, the classification of multi-feature socio-economic objects, based on synthetic measures of development, comes down to the division of a set of objects according to one variable.

The starting point for dividing a set of objects is to arrange them according to the decreasing value of the synthetic measure of development. The division of the set of objects into four typological groups is based on two parameters calculated for the value of the taxonomic measure of development: the arithmetic mean  $\bar{z}$  and the standard deviation  $s_z$ . Individual typological groups containing objects with the values of the development measure belonging to the following ranges:

- group I: 
$$z_i \geq \bar{z} + s_z \quad (1)$$

- group II: 
$$\bar{z} + s_z > z_i \geq \bar{z} \quad (2)$$

- group III: 
$$\bar{z} > z_i \geq \bar{z} - s_z \quad (3)$$

- group IV: 
$$z_i < \bar{z} - s_z \quad (4)$$

A more detailed breakdown is obtained assuming the width of the interval is 0.5 of the standard deviation. Then the set of examined objects will be divided into eight typological groups<sup>2</sup>.

An important advantage of this classification is the possibility of immediate identification of individual typological groups in terms of the level of development of the studied phenomenon, achieved by the objects included in these groups. Objects belonging to a given group are ordered according to the value of the synthetic measure. It is also possible to immediately compare different typological groups in terms of the level of development of the objects included in these groups<sup>3</sup>. In order to identify the key factors characterizing the general situation in communes, fourteen characteristics determining the real estate management were determined, with particular emphasis on data directly related to the instruments at the disposal of the commune (Table 1).

Available and complete measurable variables were used to assess the activity of communes. Hence, some variables, significant in terms of content, were not included in the group of analyzed variables due to their lack of availability, as they are aggregated only to the poviats level. Each of the diagnostic features was characterized in terms of the relationship between a given explanatory variable and the dependent variable, i.e. it was determined whether it was a stimulant or a destimulant.

**Table 1.** Diagnostic variables characterizing the conditions of real estate management in municipalities

Lp.	Feature name	Entety	Variable characteristic
1.	Number of issued decisions on building conditions and land development	[-]	stimulant
2.	Usable area of real estate from the commune's housing stock per capita	[%]	stymulanta
3.	Number of issued decisions on the location of public investment	[-]	stymulanta
4.	Number of local spatial development plans in force in the commune	[-]	stymulanta
5.	Number of municipal flats per capita in a commune	[-]	stymulanta
6.	Number of social housing in communes per capita	[-]	stymulanta
7.	Number of real estate from the housing stock in the commune per capita	[-]	stymulanta
8.	Share of land area covered by local spatial development plans in a commune	[m <sup>2</sup> ]	stymulanta
9.	Percentage of municipal stock flats that are in debt	[%]	destymulanta
10.	Number of flats sold from the commune's real estate resource	[-]	stymulanta
11.	Land belonging to the municipal real estate resource	[ha]	stymulanta
12.	Land transferred to permanent management	[ha]	stymulanta
13.	Land put into perpetual usufruct	[ha]	stymulanta
14.	The degree of commune involvement in the real estate management policy	[-]	stymulanta

*Source:* Own study.

The stimulants were those variables whose value increase led to an increase in the dependent variable, while as destimulants those variables whose value increase led to a decrease in the dependent variable.

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<sup>1</sup>Nature of the explanatory variable: Encyklopedia,  
<http://encyklopedia.naukowy.pl/Predyktor>.

<sup>1</sup>Dziekański P., Wykorzystanie wskaźnika syntetycznego do oceny poziomu rozwoju samorządu na przykładzie gmin wiejskich województwa świętokrzyskiego, materiały pochodzące z: IX Kongresu Ekonomistów Polskich, s.2.

The values of the determined indicators for each of the analyzed communes were determined with the use of publicly available data from the Local Data Bank, afterwards they were entered into a Microsoft Excel 2013 spreadsheet for further calculations. Quasi-constant variables for which the coefficient of variation calculated using the formula below did not exceed 10% were eliminated from the set.

$$\text{coefficient of variation} = \frac{\text{standard deviation}}{\text{average}} \times 100\%$$

In the analyzed data set, statistical measures necessary to create the so-called synthetic values of the indicator were defined. For this purpose, the following values were used: minimum and maximum values and the range for each of the analyzed features. Then the obtained results were substituted into the following formulas, the selection of which was determined by the nature of the variable:

- formula for stimulants:  $z_y = \frac{x_{ij} - x_{min}}{x_{max} - x_{min}}$ ;
- formula for destimulants:  $z_y = \frac{x_{max} - x_{ij}}{x_{max} - x_{min}}$ ;

where:

$z_y$  - artificial variable value,

$x_{ij}$  - variable value,

$x_{max}$  - the maximum value of the variable,

$x_{min}$  - the minimum value of the variable.

Using standardized variables, a synthetic variable was determined ( $z_i$ ) according to formula (5) for each municipality.

$$z_i = \frac{1}{K} \sum_{k=1}^K z_{ik} \cdot \quad (5)$$

Then the values were normalized to the interval [0.1] according to formulas (6) and (7).

$$1) z'_i = z_i - \min_i \{z_i\}, \quad (6)$$

$$2) z''_i = \frac{z'_i}{\max_i \{z'_i\}},$$

The values of the variable  $z_i''$  were used to create a ranking of the examined communes and to determine the affiliation of communes to typological groups according to formulas (1) - (4).

### 3. Research Results

As a result of the research carried out on the basis of 14 measures in the field of real estate management, the following synthetic indicators were obtained for the Zachodniopomorskie Voivodeship (Table 2).

**Table 2.** Affiliation of communes to particular typological groups

Typological group	Commune	indicator value
I high activity	Szczecin, Świnoujście, Międzyzdroje, Dziwnów, Rewal Kołobrzeg miejska, Ustronie Morskie, Mielno, Koszalin miejska, Świdwin miejska, Goleniów, Dobra (Szczecińska), Stargard miejska	31,3 - 66,8
II average activity	Wałcz wiejska, Dębno, Myślibórz, Gryfino, Kołbaskowo, Darłowo miejska, Police, Stepnica, Nowogard, Kamień Pomorski, Trzebiatów, Gryfice, Sianów, Borne Sulinowo, Choszczno, Kalisz Pomorski, Drawsko Pomorskie, Złocieniec, Białogard miejska, Ustronie Morskie, Choszczno	25,5 - 31,3
III activity below average	Barwice, Boleszkowice, Czaplnek, Dolice, Drawno, Drawsko Pomorskie, Gryfice, Lipiany, Mieszkowice, Moryń, Myślibórz, Nowogard, Połczyn-Zdrój, Recz, Resko, Sianów, Sławno, Mieszkowice, Cedynia, Chojna, Wieduchowo, Resko, Łobez, Suchań, Stargard wiejska, Recz, Drawno, Mirosławiec, Czaplnek, Połczyn Zdrój, Barwice, Wolin, Barlinek, Gościno, Karlino, Malechowo, Sławno (miejska), Postomino, Polanów, Szczecinek, Biały Bór, Będzino, Bobolice, Świeszyno, Biesiekierz, Myślibórz, Kołobrzeg wiejska, Białogard wiejska	20,3 - 25,5
IV low activity	Moryń, Trzeińsko Zdrój, Banie, Kuzielice, Bielice, Stare Czarmowo, Kobylanka, Maszewo, Radowo Małe, Węgorzyno, Dobra, Chociwel, Stara Dąbrowa, Człopa, Świerczno, Warmice, Nowogródek Pomorski, Rąbino, Sławoborze, Darłowo wiejska, Sławno wiejska, Tychowo, Świdwin wiejska, Grzmiąca, Wierzchno, Dolice, Karmice, Tuczno, Marianowo, Dobrzany, Ploty, Rymań, Siemyśl, Gościno, Widuchowo, Wierzchno, Brojce, Ostrowice, Brzeżno, Wałcz miejska	12,0 - 20,3

*Source:* Own study.

The best result among units was achieved by the commune of Szczecin (index value 66.8423%), afterwards the commune of Koszalin (index value 42.0694%) and the rural commune of Rewal (index value 39.1893%). The rural commune of Brojce (recorded value 14.9118%), then the rural commune of Ostrowice (doc value 14.5716%) and the rural commune of Brzeżno (value 12.0253%) were listed last. The average value of the synthetic index for the voivodeship is 23.5375%, which means that less than half of the communes obtained the result above the arithmetic mean.

At this stage of the analysis, the interpretation was also deepened by classifying the data according to the types of municipalities. Among urban communes, as in the case of the entire data set, the first is the commune of Szczecin with the value of the indicator equal to 66.8423%, and the last is the commune of Białogard (municipal) with the value of the indicator equal to 22.4438%. The calculated statistical parameters showed the greatest convergence with the average parameters for the entire voivodship. The arithmetic mean for the set of municipal communes turned out to be higher by as much as approx. 10% than the voivodship average of 23.5375% (33.8045%).

According to the calculations of the standard deviation, the values differed on average from the average by approx. 11.7335%, while the differentiation in the group based on the value of the coefficient of variation was equal to 34.7099%, which proves its moderate strength. In urban-rural communes, the best result, with the value of 36.9245%, was obtained by the commune of Goleniów, and the smallest- with the value of 16.1483% - by Tuczno. The arithmetic mean for this group of communes was 24.0990%, which is slightly higher than the voivodship average.

However, the standard deviation turned out to be relatively low, at the level of 4.78979%, while the coefficient of variation reached the level of weak differentiation of 19.8754%. In the case of rural communes, the leader turned out to be the Rewal commune, with the value of the index equal to 39.1893%, and the lowest result of 12.0253% was achieved by the commune of Brzeźno. The arithmetic mean was 20.6137%, standard deviation 5.1937% and a moderately different coefficient of variation of 25.1954%.

To sum up, in terms of real estate management, the municipalities with the highest result of the synthetic index turned out to be: Szczecin, Koszalin and Rewal. Szczecin stands out significantly from other communes, which may be related to its metropolitan nature, which gives more opportunities in the field of real estate management, as well as enabling the acquisition and disposal of more funds. The high position in the Koszalin and Rewal communes may be related to the seaside location and tourist attractiveness, which includes the real estate market and financial consulting. The lowest results were achieved by rural communes. In this case, the reasons for the low position in the ranking can be seen in the smaller stock of real estate available, and thus less management possibilities.

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