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# CONCENTRATION OF ENTREPRENEURSHIP IN RURAL DISTRICTS OF THE MAZOWIECKIE VOIVODESHIP

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**Abstract.** The article research problem was to present the theoretical issues and statistics of entrepreneurship in all the rural districts of the Mazowieckie voivodeship. The article was to show the level and concentration of companies' number in the examined districts. This made it possible to identify the districts with the highest and the lowest level of entrepreneurship as well as the changes in its concentration that took place in the examined period. The research was conducted in 2014, and the main statistical material consisted of the data obtained from the Local Data Bank of the Central Statistical Office. The research outcomes indicate that there was a slight but steady increase of the number concentration of enterprises located in the examined districts in the studied period.

**Key words:** entrepreneurship, the level of entrepreneurship, district, Mazowieckie

## INTRODUCTION

At present entrepreneurship inspires interdisciplinary research of the representatives of numerous sciences, especially economic and social sciences, such as: management, sociology, psychology, philosophy, and economics. The increase of private enterprise number, which has been observed since 1989, is one of the most visible manifestations of entrepreneurship nowadays. The companies are dominated by micro and small businesses, which significantly contribute to the economic development of both the state and particular regions (Moczydłowska and Pacewicz, 2007).

Individuals who run a business are perceived by the society as those who play a significant role both for the enterprises established and managed by them and for the whole economy. Entrepreneurship is treated as one of the factor contributing to the economic growth of a country and thus creating its competitiveness. A multi-faceted character of entrepreneurship results in the lack of a uniform scientific theory of entrepreneurship. Neither is there a general, cohesive and universally accepted definition of an entrepreneur. It is because sciences focus on another aspect of this issue.

The research problem concerns presenting the theoretical issues and statistics of entrepreneurship in all the rural districts of the Mazowieckie voivodeship. The article was to show the level and concentration of companies' number in the examined districts. This will make it possible to identify the districts with the highest and the lowest level of entrepreneurship as well as the changes in its concentration that took place in the examined period.

## THEORETICAL ASPECTS OF ENTREPRENEURSHIP

If you refer to the specialist entrepreneurship literature, you can notice that it has existed since a human appeared. Discussions concerning this issue cover both the phenomenon of entrepreneurship development and the role of an entrepreneur. These terms are interrelated because entrepreneurship cannot exist without an

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entrepreneur and vice versa. The existence of an entrepreneur and his actions implies entrepreneurship, given favourable conditions set by the general principles of a particular society and economy.

At present, entrepreneurship is understood very widely, and it covers economic, technological, psychological and many other aspects, bringing new behaviours, attitudes and values. It is related to business and to other forms of human activity where creativity, initiative, and innovativeness are necessary. It is becoming “a way of life” for all the actors in the market economy, both households and business units. Such a situation is caused by the market, which is a natural creator of entrepreneurial behaviours in the market economy. What is more, entrepreneurship, at a state, regional, or global level, is of the utmost importance to social and economic progress. It is also a sophisticated process of organized activity based on many people’s cooperation and accomplishment of their initiatives.

Thus entrepreneurship can be considered as a multi-faceted phenomenon playing a significant role in today’s management process. That is why it is impossible to present one general definition of this issue accepted by scientists.

According to B. Nogalski, entrepreneurship can be defined as a skill to see the opportunities in your environment and to take advantage of them to start and run a business in the form of an organized enterprise. This skill is an internal (subjective) predisposition of a person, meaning an entrepreneur (Nogalski, 2003).

P. F. Drucker, who is a renowned world expert in the field of entrepreneurship, understands it as an inter-relation of entrepreneurial and innovative activities which make it possible to reach your goal – to succeed in a specific segment of the market or in the business you run (Drucker, 1992).

On the other hand, entrepreneurship as an encyclopaedic term is understood as a type of activity that involves creative thinking and creative attitude to human and material resources which a company has at its disposal to take advantage of all the chances that result from science and technology development (Penc, 2008).

Entrepreneurship is also understood as human capital feature consisting in introducing innovations, finding “new combinations” and thus creating a new use of existing solutions. Given the above, supporting entrepreneurship development does not mean creating preferences for a particular group at the expense of other

social groups, yet it means creating favourable conditions for one group to improve the living conditions of other groups (Saar, 2011).

The significance of an entrepreneurship process, especially for an economic boom, is then an important factor. The development of entrepreneurship understood as encouraging people to show enterprise and as creating conditions to start and run a business contributes to the increase of economic development, especially in less developed regions. Thus entrepreneurship should become a long-lasting element of each economy basis (Piecuch, 2010).

## THE RESEARCH MATERIAL AND METHODOLOGY

The empirical study was conducted in 2014 in all the rural districts of the Mazowieckie voivodeship, and the main statistical material consisted of the data obtained from BDL GUS.

Appropriate computations had to be done to make a graphic presentation of the examined districts regarding their entrepreneurship rates.

Entrepreneurship rate ( $W_p$ ) was expressed as a ratio of the number of business entities registered in the REGON system to 1000 inhabitants at economically productive age. The calculations were made by means of the following formula:

$$W_p = \frac{P}{L} \times 1000$$

where:

$W_p$  – entrepreneurship rate,

$P$  – number of business entities registered in the REGON system,

$L$  – number of people at economically productive age.

The computations allowed to classify the districts as regards the value of their entrepreneurship rates and to order them from the best to the worst ones. The districts described as the best ones had high entrepreneurship rates whereas the districts categorized as the worst ones had the lowest values of this rate. The computed values of  $W_p$  were the starting point for linear ordering of the examined objects (rural districts) as well as distinguishing their typological groups. The value of arithmetic mean  $\bar{W}_p$  and its standard deviation  $S_z$  were the criteria of categorizing districts into a particular class as regards the level of entrepreneurship. The set of objects was divided into four classes, presented in table 1.

**Table 1.** The class division of districts depending on the level of entrepreneurship

**Tabela 1.** Klasy podziału gmin pod względem poziomu przedsiębiorczości

Class Klasa	Criterion Kryterium	Class description Opis klasy
I	$W_p \geq \bar{W}_p + S_z$	high level of entrepreneurship wysoki poziom przedsiębiorczości
II	$\bar{W}_p + S_z > W_p \geq \bar{W}_p$	medium level of entrepreneurship średni poziom przedsiębiorczości
III	$\bar{W}_p > W_p \geq \bar{W}_p - S_z$	low level of entrepreneurship niski poziom przedsiębiorczości
IV	$W_p < \bar{W}_p - S_z$	very low level of entrepreneurship bardzo niski poziom przedsiębiorczości

Where – Gdzie:

$$\bar{W} = n^{-1} \sum_{i=1}^n W_p$$

$$S_z = \left[ n^{-1} \sum_{i=1}^n (W_p - \bar{W}_p)^2 \right]^{0.5}$$

Source: own elaboration based on Nowak, 1990, p. 93.

Źródło: opracowanie własne na podstawie Nowak, 1990, s. 93.

The next stage of research consisted in the assessment of number concentration of companies in the examined districts. It was done by means of Gini coefficient, which was computed in Microsoft Excel. It is the most popular and the most commonly used parameter of concentration. It is also closely related to Lorenz curve, which is the coefficient graphic interpretation (in the literature, the coefficient is also called “Lorenz concentration coefficient”). It is mainly used as a measure of income disparities; however, in the empirical study, Gini coefficient was used to assess the level of differences in the number of companies divided between the examined districts. It was expressed by the following formula:

$$G = \frac{1}{2\mu n^2} \sum_{i=1}^n \sum_{j=1}^n |x_i - x_j|$$

$\mu$  – number of businesses

$n$  – number of districts in the sample (Lissowski, 2008).

Gini coefficient takes values from 0 (for an egalitarian distribution) to 1 (in case of extreme disparities). The above formula indicates that it can be interpreted as

a relation of a half of the absolute difference of the number of companies between all the districts to an average number of companies. This coefficient fulfils the postulate of Pigou-Dalton transfer, symmetry, homogeneity, and replica. Yet it does not fulfil the decomposition postulate (Lissowski, 2008).

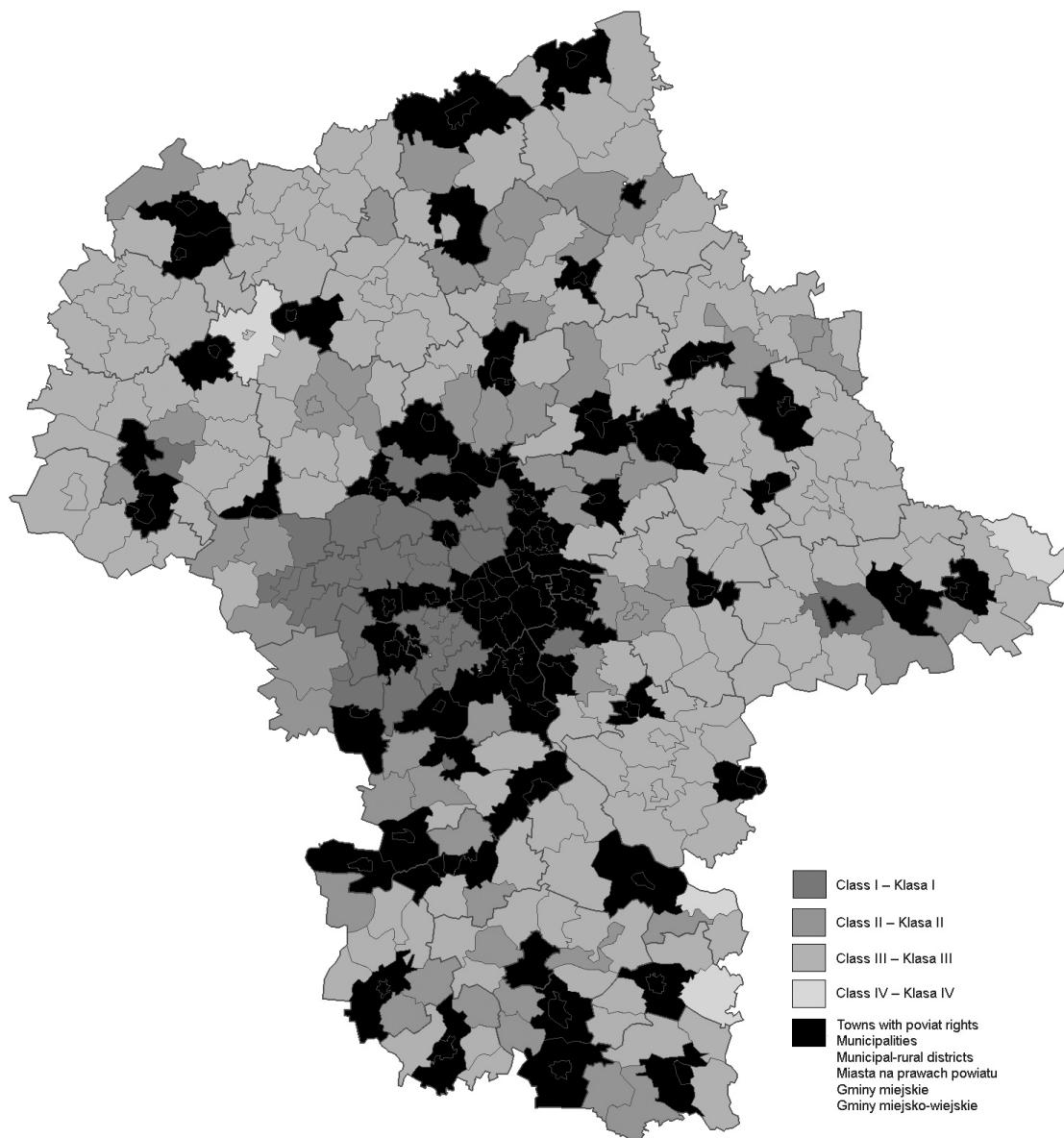
## RESEARCH OUTCOMES

Entrepreneurship is undoubtedly an interdisciplinary issue which is an object of research in many science fields, especially in management and economic sciences. In Poland, entrepreneurship appeared when the market economy foundations were created. At that time the number increase of private companies was a visible manifestation of entrepreneurship. Micro and small businesses dominate. They contribute to the economic development of both the state and regions where they are situated. That is why to develop entrepreneurship, it is significant to create favourable conditions and to encourage people to start and run a business. Individuals and entities taking entrepreneurial initiatives contribute to overcoming economic crises, minimize the scale of unemployment in a given region, and enable fulfilling one's own aspirations. Starting entrepreneurial activity depends on numerous factors whose sources can be found both in internal predispositions of individuals who decide to run their own company and in external conditions. Entrepreneurship in today's world should become a long-lasting element of each economy basis.

Picture 1 presents a spatial distribution of the value of entrepreneurship rate for the last year, which was examined.

As far as the location of the examined districts is concerned, the most units with the highest entrepreneurship rate were situated in Warsaw subregions, for example, the districts of: Lesznowola, Raszyn, Michałowice, and Nadarzyn. In 2014, there were 6375, 4230, 3561, 2325 companies in these districts respectively. On the other hand, the class with the lowest entrepreneurship rate included the districts from Radom and Ciechanów-Płock subregions, for example, Raciąż, Przyłęk, and Sieciechów. In 2014, there were 325, 211, 159 registered companies in these districts respectively.

The level of entrepreneurship in the examined districts can be discussed according to the location theory, which leads to explaining the stagnation and the distribution of



**Fig. 1.** Division of the Mazowieckie voivodeship rural districts depending on the level of their entrepreneurship rate in 2014

Source: own elaboration.

**Rys. 1.** Podział gmin wiejskich województwa mazowieckiego według poziomu wskaźnika przedsiębiorczości w 2014 roku

Źródło: opracowanie własne.

various business categories. It can be looked into in the micro- and macroeconomic sense. In the microeconomic sense, it refers to a particular enterprise which looks for the most favourable location for its business, taking

costs and benefits into account. From the macroeconomic point of view, the location theory concerns searching for the economy's effective spatial structures, namely a certain territory as a whole. The factors determining

**Table 2.** Gini coefficient for the number of companies in the examined districts in 2005–2014  
**Tabela 2.** Współczynnik Giniego dla liczby przedsiębiorstw w badanych gminach w latach 2005–2014

	Years – Lata				
	2005	2006	2007	2008	2009
Gini coefficient Współczynnik Giniego	0.354412	0.359146	0.363207	0.368337	0.383279
	2010	2011	2012	2013	2014
	0.429826	0.434348	0.437553	0.440492	0.441487

Source: own elaboration based on the GUS data.  
 Źródło: opracowanie własne na podstawie danych GUS.

enterprises' location cover benefits from the characteristics of a given spot and from its spatial order. Entrepreneurs, while looking for an appropriate location for their business, considered particular factors to various extent. The traditional location factor, namely transport access, stopped being the most important and gave way to new location factors that were desirable in specific conditions (Budner, 2003). The studies confirmed that the traditional location factor was essential.

Table 2 presents Gini coefficient for the number of companies in the examined districts.

In the examined period, Gini coefficient amounted to 0.35 in 2005, and it rose to 0.44 in 2014. Such a value of the coefficient indicates a significant concentration of the examined characteristic (number of companies in a given district) (Tatarzycki, 2007). Gini coefficient takes values from 0 for an egalitarian distribution to 1 in case of extreme disparities. The analysis indicates that there was a slight but steady increase in the concentration of enterprise number in the examined period.

In the study, the rise in concentration of enterprise number can be referred to the mutual influence theory, also called the gravity or attraction theory (Chądzyński et al., 2007). Aiming to reach the balance by a given social and economic system is characteristic of this approach. This balance is influenced by two contradictory forces: centripetal (concentrating) and centrifugal (deconcentrating) force. The first of the forces leads to the concentration of particular business units in a small number of larger centres while the other force concentrates business in numerous smaller centres. That is why "a certain spatial system of relative chances of development appears and it consists of a 'dense' subsystem of locations with lower development chances and a 'scarce' subsystem of locations with high chances. This means

that each town possesses, theoretically, a determined development chance although it is different in kind and importance" (Parysek, 2001).

## SUMMARY AND CONCLUSIONS

To sum up the discussion on entrepreneurship, it can be indicated that its further development in Poland will be conditioned by both individual efforts of potential investors and corresponding government and local authorities' policy. In numerous studies concerning this issue, it is pointed out that a macroeconomic situation creates not only a system of legal and economic regulatory tools, but also a psychological climate, examples of success that can be an incentive for new entrepreneurs able to work at their own risk. The economic condition of the existing companies, a good level of their operations and development opportunities are also highly important to entrepreneurship progress.

Based on the research, the following general remarks and conclusions can be articulated.

1. The class with a high entrepreneurship rate included the districts from Warsaw subregions. Units categorized to class II belonged to districts from suburban zones. On the other hand, class IV included districts situated far from urban areas, and they were from less developed subregions, namely: Radom and Ciechanów–Płock subregion.

2. A high number concentration of companies in the examined districts was found. It is indicated by Gini Coefficient, with its values from 0.35 in 2005 to 0.44 in 2014. A slight but steady increase of the number concentration of enterprises located in the examined districts was observed in the studied period.

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## KONCENTRACJA PRZEDSIĘBIORCZOŚCI W GMINACH WIEJSKICH WOJEWÓDZTWA MAZOWIECKIEGO

**Streszczenie.** W artykule problemem badawczym było przybliżenie zagadnienia przedsiębiorczości w ujęciu teoretycznym oraz statystycznym we wszystkich gminach wiejskich województwa mazowieckiego. Celem artykułu było przedstawienie poziomu i koncentracji liczby przedsiębiorstw w badanych gminach. Pozwoliło to na identyfikację gmin o najwyższym i najniższym poziomie przedsiębiorczości oraz zmian, jakie zaszły w jej koncentracji w badanym okresie. Badania przeprowadzono w 2014 roku, a głównym materiałem statystycznym były dane pozyskane z Banku Danych Lokalnych Głównego Urzędu Statystycznego. Wyniki badań wskazują, że w badanym okresie zaobserwowano niewielki, lecz stały proces zwiększania koncentracji liczby przedsiębiorstw zlokalizowanych na terenie badanych gmin.

**Slowa kluczowe:** przedsiębiorczość, poziom przedsiębiorczości, gmina, Mazowieckie

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