
Female Entrepreneurship Rate in Terms of Geographical Location

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Abstract:

Purpose: The current state of the world's economies and the pursuit of sustainable development goals imply attempts to undertake considerations related both to the structure and ageing of the population, as well as to verify the importance of the degree of health and gender, which, as it turns out, has a significant impact on the economic activity of individual national nations, and even within them, of individual communities and, consequently, of the economic regions of individual countries. Hence, it is female gender, linked to a geographical coefficient, i.e., the region of economic activity, that is the focus of the considerations presented in this research.

Design/Methodology/Approach: In order to realise the primary objective, secondary data were analysed by calculating the female entrepreneurship rate in Poland over 11 years (2010-2020) by region. The region of Wielkopolska was selected for further research, due to its significance and importance for the development of the country, in which own research was conducted on a sample of N=100 women running their own business.

Findings: The own research identified several important determinants for the geo-economic development of Wielkopolska in the case of enterprises managed by women. The most important of these include the range of business activities, access to finance, its diversification depending on the development phase of the enterprise, and the number of people employed. The calculated coefficient of female entrepreneurship over a period of eleven years made it possible to determine the degree of economic development of the Wielkopolska region in comparison with other voivodships and indicated the main opportunities and threats in this area.

Practical implications: The identification of leading geo-economic regions makes it possible to identify gaps in the development of other parts of both the country and the geographical region with similar parameters to those studied.

Originality: The self-reported research conducted among entrepreneurial women in Poland in the Greater Poland region made it possible to provide answers to two fundamental questions, what is the current state, and what are its determinants.

Keywords: Geoeconomics, geopolitics, regional aspect, professional activity of women, entrepreneurship.

JEL Classification: O31.

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1. Introduction

Nowadays, when positioning and creating economic rankings in terms of the level of development of individual countries, and thus assessing their economic activity in a broad economic spectrum whose main objective is primarily wealth maximisation, there is no discourse on geopolitical issues only on geo-economic ones (Żukowska, 2014). Thus, both in economic practice and in scientific activities, there is a noticeable tendency to define criteria related to: production, trade, finance and technology with increasing reference to the geo-economic characteristics of states. It is primarily about the construction of geo-economic space by the state in order to provide it with better conditions for development (Halizak, 2012).

Geoeconomics contributes to the verification of these criteria and determines the international activity of states, which makes it possible to deduce that its main objective is to gain or defend an important position in strategic industries (Potulski, 2010). On the other hand, in the assumptions of geopolitics, the more relevant aim is to focus on assessing the relationship between the influence of geographical and historical factors on the emergence and functioning of states, which in a broader perspective leads to the clarification of relevant conclusions (Dutka, 2016).

Thus, focusing on the most relevant difference between geoeconomics and geopolitics and based on the research conducted in this field, it should be stated that geopolitics focuses on the problem of competition and partnership for raising the level of economic development, while geoeconomics focuses on the problems of domination and the construction of strategic alliances to ensure national security (Parke and Lawson, 2008).

Referring to the origins of the terms, geopolitics reflects the competition between states for world domination. Geo-economics, on the other hand, is primarily concerned with the advancement of global economic ties and the global economic system (Macala, 2010; Parke and Lawson, 2008). Thus, it is possible to speak of a kind of synergy and a focus on continuous development. It can also be noted that the strategic space of the international environment in the 21st century is created by the economic and political power of the state, which directly contributes to the fact that geo-economics is rapidly gaining popularity and becoming the dominant concept for depicting the global economic space (Potulski, 2010).

By intensifying the use of the economic approach in an effort to verify the key economic coefficients of individual countries, two fundamental research questions can be attempted: *what is the current state?* and *what are its determinants?* For finding accurate answers will provide the basis for addressing the problem of determining the entrepreneurial coefficient, which is an intrinsic measure of economic growth.

The current economic state and the pursuit of sustainable development objectives even force us to consider not only the structure and ageing of the population, but also the importance of health and gender, which, as it turns out, has a significant impact on the economic activity of individual nationalities, and even within them of individual communities, and thus of the economic regions of individual countries.

Hence, it is the gender – female – linked to the geographical coefficient, i.e., the area – region – of economic activity, that is the purpose of this study in determining the female entrepreneurial coefficient in terms of geographical location.

2. Literature Review

2.1 Geoeconomics versus Geopolitics

When considering the concept of geo-economics, reference should be made to two scientific disciplines: geography and economics. The substantive criterion refers to the prefix 'geo' (*gr. geos*), meaning land, and 'economics' (*gr. oikos – house and nomos – law*) – both are Greek words, a field of knowledge dealing with the analysis of economic processes (Halířák, 2012).

The concept of geo-economics was introduced and developed in the United States, where in the 19th century the term became a substitute for the concept of economic geography. The description of the essence of geo-economics was undertaken by the American economist Henry George in his work *Progress and Poverty*, who in 1879 addressed the problem of the influence of the geographical factor on the economic development of cities in the USA (Foldwary, 1999). George's research was concerned with explaining the paradox of the issues of poverty and progress, as well as the growth of deprivation in terms of wealth multiplication through the methods of political economy (George, 1935).

The United States fit quite strongly into the framework of geo-economics. Indeed, the forerunner of the modern concept of geoeconomics was the American geographer Ray H. Whitbeck. In 1926, he published an article entitled: *A science of geonomics*, which framed the problem concerning the relationship between geography and economics. The main idea presented by the American researcher was to identify economic geography as the empirical basis for the emergence of geo-economics.

Thus, it is worth emphasising that the role of the former is to collect empirical data, while the function of the latter is to formulate principles and laws of economic action under given geographical conditions. In summary, economic geography answers the question: what is the current state of affairs, and geo-economics answers the question: what are the determinants in this state of affairs (Whitbeck, 1926). With regard to the archetype that is attributed to geo-economics, it can be described as a real phenomenon that arose from the practice of economics. This conviction

dates back to the 17th century, where mercantilism was considered the prototype of geo-economics.

The main objective of this direction of economic thought was the maximisation of wealth represented by the thoughts of the main representatives of this trend: Jean Baptiste Colbert, Adam Smith and James Steuart. Mercantilism sought to find constructive solutions to improve the economy. Before the First World War, the country operating according to mercantilism was the United States, which was regarded as the world's economic power.

In Central Europe, on the other hand, a particular intensification of mercantilist policies occurred after the Great Depression, which took place in 1929. After the Second World War, a developing mercantilist policy could be observed in the so-called Third World countries. The opportunity for rapid economic growth was seen as extremely important, making it desirable (encyclopedia.pwn.pl, 16.12.2022).

US foreign policy towards China led to the first global open door policy (open door policy). This policy is considered the prototype of geo-economic behaviour, as can be seen in the actions of American politician and 32nd President of the United States, Franklin D. Roosevelt. Applying elements of geo-economic thinking, he created a concept of state governance called the New Deal concept (Halizak, 2012; Smith, 2003).

There are many activities that have reinforced the concept of geo-economics. Among those responsible for its beginning are such actions as:

- the Cold War and the operation of the US strategic embargo
 - innovation, productivity, competitiveness
 - intensification of globalisation processes
 - the emergence of geo-economic strategies of states that are based on access and control of access to scarce resources (e.g. energy sources, capital, technology) (Żukowska, 2014, p. 2)
- and now also:
- epidemiological threats of global significance and
 - Russia's invasion of Ukraine (Malecka, 2022).

Thus, geoeconomics is closely related to the actions of states. Some researchers regard it as a sub-discipline of geopolitics. The Italian specialist in geopolitics and geostrategy, Carlo Jean, also agreed with this thought, considering that the geographical location of states influences political interests (Jean, 2003).

In summary, geographical space and the relationship between geography and politics are important subjects of scientific research, represented by the research specialty of geopolitics. The very notion of geopolitics gained thanks to the Swedish political scientist Rudolf Kjellén, who considered geopolitics right next to demopolitics, ecopolitics, cratopolitics and sociopolitics as one of the categories of the study of the

state (Kjellén, 1899). It is assumed to refer to geographical conditions and their influence on the conduct of politics (Jean, 2003).

In contrast, the German geopolitician Karl Haushofer identified geopolitics with the political study of the form of life in natural living space. He presented his reflections both in books and in the pages of the monthly journal *Zeitschrift für Geopolitik*, of which he was the founder (Haushofer, 1925).

A different approach can be observed in the definition of the American political scientist Nicholas Spykman, who believed that geopolitics is a science that allows for the evaluation of the policies of the superpowers against the background of their specific position in the world, enabling observations of national defence in geographical terms, examining the geopolitical factors that influenced the behaviour and security of highly developed states (Spykman, 2007).

And French geopolitician Pierre Marie Gallois considered geopolitics to be the science that studies the relationship between international policy and the geographical base (space) on which that policy is conducted (Gallois, 1996).

On the other hand, the Polish geopolitician Leszek Moczulski formulated geopolitics as a branch of science dealing with the changing balance of forces on an unchanging space. His publications cover the research area of spatial political structure against the background of physical geographical structure. He considered the twentieth century as the beginning of the treatment of geopolitics as an independent discipline, mainly in Germany, the United Kingdom, the United States and France (Moczulski, 1999).

Today, geopolitics is formulated in four categories as: (1) an independent science, (2) a research paradigm, (3) a political doctrine and (4) a method of policy-making, as reflected in the work of Leszek Sykulski (Sykulski, 2012; 2014; Nye, 2008). The interpretation of the issue in his work is based on the definitions of international geopoliticians highlighting the interdisciplinarity of geopolitics and working mainly in three areas of scientific work: (1) political science, (2) geography, (3) history.

However, the authors are keen to emphasise the importance of the linking element between these sciences, which is the basis and the common denominator for taking action in these three fields and their expansion, namely, the economic coefficient, i.e., the importance of economics.

The French sociologist Henri Lefebvre, on the other hand, emphasised that states produce their own space (Lefebvre, 1991). Such a statement was made by the American economist considered to be the father of geo-economics, Edward Luttwak, according to whom '*economic efficiency and economic power are the main components that determine the power of a state*'.

3. Materials and Methods

In an attempt to answer the question, what is the current state in terms of economic geography, i.e., within the scope of the own research conducted, the female entrepreneurship rate was examined in one of the EU regions - Poland. For this purpose, individual regions of Poland were separated and classified according to the height of the entrepreneurship rate. Accordingly, the formula adopted in the European Union (EU) countries was applied:

$$W_p = \frac{P}{L} \times 10000$$

where:

W_p - entrepreneurship indicator

P - number of business entities

L - population.

It should therefore be stressed that the entrepreneurship rate adopted for calculations is expressed by means of an equation taking into account the total number of business entities (e.g., registered in the REGON system) in relation to the population (e.g., of working age) per 10000 (e.g., inhabitants of a given region) (Salamon, 2009).

Searching for an answer to the question of what constitutes its determinants, i.e., what influences the female entrepreneurship rate in Poland, an analysis was made of the economic value of the selected region under study - Wielkopolska, which is in the forefront of Poland's highly economically developed regions. The significant position is influenced primarily by the dynamically increasing economic activities carried out by business entities managed by women.

The attractiveness of this region is the reason for successful investment in this economic area thanks to the wide range of facilities and investment areas on offer. One important factor influencing competitiveness is Wielkopolska's location, and consequently the availability of infrastructure.

The region's proximity to the German border means that it has a high level of potential for the business environment, which is directly linked to the professional activity of women in the region, which is increasing year on year, resulting in the economic development of Wielkopolska (Figure 1).

The self-reported research began with the definition of the research sample, which included only economically active female respondents running their own business. Using a questionnaire containing 6 open-ended questions and 45 closed questions, $N=100$ interviews were collected in different areas of Wielkopolska, which were selected according to the size of the areas of economic activity, Kostrzyn Wlkp

(≤ 10 th), Luboń [11th<50th), Gniezno [51th<100th), Kalisz [101th.<500 thousand), Poznań (≥ 500 tys). The survey covered respondents' characteristics such as type of ownership, age bracket, marital status, education, type of activity, age of the enterprise and number of employees currently employed, taking into account the territorial division.

Figure 1. Polish regions highly and economically underdeveloped



Source: Own elaboration.

4. Female Entrepreneurship Rate in Terms of Geographical Location in the Light of Empirical Studies

One of the most important determinants for successful business activity is the reach of the current business, which was classified as follows: (1) local, (2) regional and (3) national due to the lack of participation in the survey of SMEs with (4) international reach. However, the survey in terms of willingness to expand business activity showed a propensity to expand and increase cooperative influence beyond national borders (1 country) (Table 1).

It was noted that women's desire to increase their economic influence implies another economic attitude and the need to increase the number of employees. Based on the data collected through the questionnaires, it can be seen that women in sole proprietorships show both the same need to hire additional employees and to stay with the status quo. Employment at the level of 1-4 people is characterised by the need for more employees. The same upward trend as staying with the status quo can be seen in the ranges [5-9], [10-24], [25-49]. In contrast, female entrepreneurs [50-249] estimate that their number of employees could be reduced. The two business activities with the highest levels of work identify the need to remain at a given level of employment (Table 2).

Table 1. The scope of the business operated and its employment

Feature: RANGE	Internal division	Poznań	Kalisz	Gniezno	Luboń	Kostrzyn Wlkp.	Feature	Internal division	Poznań	Kalisz	Gniezno	Luboń	Kostrzyn Wlkp.
		(≥500th)	[101th< 500th)	[51th< 100th)	[11th< 50th)	(≤10th)			(≥500th)	[101th< 500th)	[51th< 100th)	[11th< 50th)	(≤10th)
		Share N [%]							Share N [%]				
Current	local	15.0	20.0	15.0	30.0	50.0	number of employees	0*	20.0	10.0	20.0	10.0	25.0
	regional	15.0	35.0	20.0	25.0	5.0		1-4	25.0	5.0	25.0	10.0	35.0
	national	60.0	55.0	65.0	45.0	45.0		5-9	15.0	20.0	15.0	20.0	20.0
	international	0.0	0.0	0.0	0.0	0.0		10-24	5.0	5.0	5.0	30.0	5.0
Target	local	10.0	20.0	10.0	10.0	25.0	number of employees	25-49	10.0	45.0	25.0	25.0	10.0
	regional	10.0	10.0	25.0	10.0	15.0		50-250	15.0	10.0	10.0	5.0	0.0
	national	65.0	60.0	55.0	75.0	55.0		> 250	10.0	5.0	0.0	0.0	5.0
	international	15.0	10.0	10.0	5.0	5.0							
Need to change	increase	45.0	40.0	45.0	30.0	45.0	Total	100	100	100	100	100	100
	decrease	10.0	20.0	15.0	35.0	15.0							
	unchanged	45.0	40.0	40.0	35.0	40.0							

Note: *self-employment.

Source: Own research.

Table 2. Employment trend

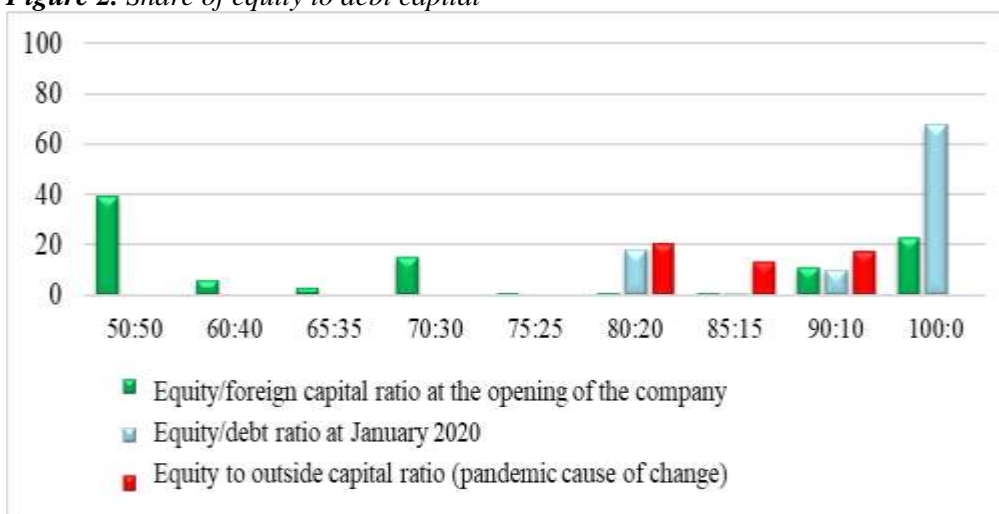
Trend				
(≥500th)	[101th< 500th)	[51th< 100th)	[11th< 50th)	(≤10th)
POZNAŃ	KALISZ	GNIEZNO	LUBOŃ	KOSTRZYN
=	=	=	=	=
=	=	=	↑	=
=	↑	=	↑	=
↑	↑	=	↑	=
↑	↑	↑	↓	=
↓	↑	↑	↑	↑
=	=	↑	↑	↑
=	↑	↑	↑	↑
=	↑	=	↓	↑
↑	=	↑	↓	↑
↑	=	↑	↓	↑
=	=	=	=	=
=	↑	↑	=	=
↑	=	↑	=	↑
↑	↓	=	↓	↓
↑	↓	=	↓	↑
↑	↓	↑	=	↑
↓	↓	↓	=	↓
↑	=	↓	=	↓
=	↑	↓	↓	=

Source: Own research.

However, when examining the most important determinant, access to a financial source for businesses, a classification of the comparison of equity to debt capital was made taking into account the start of business, in January 2020 and in the following years 2021, i.e., during the pandemic. It turned out that at the start of business, the proportion of equity capital compared to foreign capital was 50:50 in the majority of respondents.

Considering January 2020, the relationship reached such a proportion as: 100:0 in the opinion of 68% of female respondents. During the pandemic period, on the other hand, the equity/foreign capital ratio was recorded at 80:20 according to twenty women (Figure 2).

Figure 2. Share of equity to debt capital



Source: Own research.

It can therefore be concluded that either companies were able to afford, through previous effective corporate management, to draw on financial reserves or were restricted in their access to external capital raising. The notion of credit discrimination on the part of the banking system speaks of these fundamental difficulties for small and medium-sized enterprises (Mafecka, 2021).

The relationship between equity and external capital at different points in women's working lives can be distinguished between the following ways of financing a business: own savings, parents' capital, bank loan, loan from family/friends, other shareholder, EU funds, start-up or business angels. In view of this, it can be hypothesised that the second conclusion regarding limited access to outside capital is correct.

According to the female respondents, it was their own savings that were most often used as a means of financing business activities at different times in the life of the

business. The timing of the emergence of the pandemic indicates an increase in borrowing from family or friends due to the problems arising from the cessation of women's professional activity. Financing instruments such as another shareholder or EU funds appeared infrequently in respondents' answers and accounted for no more than 6% of the results.

During the pandemic period, start-ups and business angels were not used as helpful ways of financing business activities. This is significant insofar as Wielkopolska demonstrates a proficient ability to utilise EU funds. The region is the largest, after Mazovia, beneficiary of funds from the Intelligent Development Programme at the disposal of PARP, with an 11% share in the total number of applications submitted under the OPIR (2 430 out of 22 165).

The average number of submitted applications from each voivodeship is 1,400 projects (PARP, 2021). Since 2014, a positive female participation rate can be observed in almost all provinces. In Poland, measures to facilitate economic activity continued as the following were approved: (1) the Act on Standardisation of Certain Model Letters in Administrative Procedures, (2) the Act on Facilitation of Access to Exercise of Certain Regulated Professions, (3) the Act on Facilitation of Exercise of Business Activities which favours the competitiveness of business conducted by women in Wielkopolska.

5. Conclusion

In summary, the issues described in the article in the field of geopolitics mainly treat the relationship between states, groupings of states and also organisations with regard to geographical space and the impact on the formation of international relations in long-term terms. Thus, the economic activity of states is the main indicator of the geo-economic approach. Hence, the own research undertaken in the direction of entrepreneurship and economic activity of women in one of the regions of Poland - Wielkopolska. This is because countries that aim to create a geo-economic space use mainly the following relations for this purpose: technological, trade, production or financial. The geopolitical position, on the other hand, is determined by geographical associations.

In the past, a state's qualities were determined by its raw materials, military potential and territory. Today, it is more concerned with the efficient management of resources, the focus on maximising profits, the continuous growth of modernisation and innovation. Each of the elements described is nowadays also considered in age- and gender-related structures, the subject of the research presented in this publication.

A self-reported survey of entrepreneurial women in Poland's Greater Poland region made it possible to provide answers to two fundamental questions "what is the current state?" and "what are its determinants?" The calculated coefficient of female

entrepreneurship over a period of eleven years made it possible to determine the degree of economic development of the Wielkopolska region in comparison with other voivodships and indicated the main opportunities and threats in this area.

The own research indicated several important determinants for the geo-economic development of Wielkopolska in the case of enterprises managed by women. The most important of these include: the range of business activities, access to financing, its diversification depending on the development phase of the enterprise, and the number of people employed.

The identification of leading geo-econo-graphical regions makes it possible to identify gaps in the development of other parts of the country as well as geographic regions with similar parameters to the one under study. This provides an opportunity to draw on the experience and results presented in the publication and to create possible recommendations for the creation of plans to support female entrepreneurship taking into account geo-economic conditions.

References:

- Dutka, J. 2016. Geopolityczna wieża Babel. Przegląd Geopolityczny, 17.
- Jean, C. 2003. Geopolityka. Wrocław.
- Foldvary, F. 1999. Geo-economics Remedies for Urban Sprawl and Blight. Berkeley.
- Gallois, P.M. 1996. Le sang du pétrole: essai de géopolitique. Irak (Vol. 2). L'Âge d'homme.
- George, H. 1935. Progress and Poverty. Robert Schalkenbach Foundation. New York.
- Haliżak, E. 2012. Geoeconomia. Warszawa.
- Haushofer, K. 1925. Geopolitik des Pazifischen Ozeans. München.
- Kjellén, R. 1899. Studier öfver Sveriges politiska gränser, Ymer.
- Lefebvre, H. 1991. The Production of Space. Oxford.
- Moczulski, L. 1999. Geopolityka. Potęga w czasie i przestrzeni. Warszawa.
- Nye Jr, J. 2008. The powers to lead. Oxford University Press.
- Parke, M., Lawson, V. 2008. Entrepreneurial geographies of global local governance. In: A companion to political geography, ed., J. Agnew, K. Mitchell, G. Toal. Nowy Jork.
- PARP. 2021. Ponad 600 mln zł z funduszy europejskich pomogło rozwinąć się wielkopolskim firmom i ich pracownikom. Informacja prasowa, Warszawa.
- Macała, J. 2010. Czym jest geopolityka? Spory wokół jej definicji. In: Z. Lach, J. Wendt (red.), Geopolityka. Elementy teorii, wybrane metody i badania, Częstochowa.
- Małecka, J. 2021. Alternatywne źródła finansowania w zarządzaniu finansami mikro, małych i średnich przedsiębiorstw. Cechy przedsiębiorcy a wybór źródeł finansowania. Poznań: Polskie Wydawnictwo Ekonomiczne.
- Małecka, J. 2022. Knowledge Management versus Implementation of Sustainable Development during Covid-19. European Research Studies Journal, 25(3), 314-336.
- Potulski, J. 2010. Wprowadzenie do geopolityki. Gdańsk. Roczna Analiza Wzrostu Gospodarczego na 2014 rok.
- Salamon, J. 2009. Przestrzenne zróżnicowanie wartości wskaźnika przedsiębiorczości na obszarach wiejskich województwa świętokrzyskiego. Infrastruktura i Ekologia Terenów Wiejskich.

- Smith, N. 2003. *American Empire: Roosevelt's Geographer and the Globalizations*. Berkeley.
- Spykman, N. 2007. *America's Strategy in World Politics. The United States and the Balance of Power*. New York.
- Sykulski, L. 2014. *Geopolityka: Skrypt dla początkujących*. Częstochowa.
- Sykulski, L. 2012. *Przestrzeń i polityka*. Częstochowa.
- Whitbeck, R. 1926. A science of geonomics. *Annals of the Association of American Geographers*, t. 16, nr 4.
- Żukowska, J. 2014. *Geoekonomia nowej rzeczywistości*. Wrocław.