

TOMASZ RACHWAŁ
Pedagogical University of Cracow, Poland

Research Issues of the Function of Entrepreneurship in the Socio-Economic Development of Spatial Systems in Polish Economic Geography

Abstract: The issues of economic geography research are subject to constant changes, mainly corresponding to the dynamic changes in the socio-economic space, especially in Polish conditions in the period of systemic transformation. This is also reflected in taking new research directions. One of those developed intensively in Poland after 1989 is entrepreneurship and its role in the development of spatial systems. The theme of the article is, therefore, the research problem of the role of entrepreneurship in the development of spatial systems. In the light of the analysis of the literature on the subject, mainly related to geographic research conducted by Polish researchers in this field, the article analyses various views on the concept of entrepreneurship, determines international and national conditions for entrepreneurship development, and proposes a systematic approach to entrepreneurial function in the development of spatial systems of various scales. The links between entrepreneurship and geography, the significant share of geographers in research in this field and the possibilities of using in this research the model of the functioning of geographical space were pointed out. In the final part, further directions of geographic research on this subject were recommended, which may contribute to the systematic increase of the importance of this discipline in the system of sciences and application activities, in particular in the development, implementation and monitoring of development strategies for spatial systems of different scales.

Keywords: economic geography; entrepreneurship; entrepreneurship education; local development; regional development; research issues in entrepreneurship; socio-economic development

Received: 1 March 2018

Accepted: 9 October 2018

Suggested citation:

Rachwał, T. (2018). Research Issues of the Function of Entrepreneurship in the Socio-Economic Development of Spatial Systems in Polish Economic Geography. *Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego* [Studies of the Industrial Geography Commission of the Polish Geographical Society], 32(4), 149–162. <https://doi.org/10.24917/20801653.324.9>

INTRODUCTION

Entrepreneurship is widely regarded as one of the primary factors of socio-economic development of countries and various types of spatial arrangements (regional,

supra-local, local). Particular importance is attributed to it in European countries transforming their economies, i.e. those moving from the centrally controlled economies (often referred to as socialist) and implementing market economy rules. This is due to the fact that in the first half of the 1990s, Poland and other countries of Central and Eastern Europe were in the so-called transformation shock associated with the collapse of many large enterprises and a general reduction in employment, as a result of which unemployment intensified (in the sense of official statistics – it appeared). In the earlier stage of economic development, unemployment was artificially limited, which resulted from an ideological approach to the issue of working in those conditions, based on the assumption of accessibility and a work order for all citizens. A sudden break of this approach in 1989 in Poland generated a surge in unemployment, referred to as structural. The individual entrepreneurship of citizens who set up their small businesses en masse, which was allowed by law liberalised in this regard at the end of 1998, significantly mitigated the effects of structural unemployment in the 1990s and 2000s. Entrepreneurship played a significant role in the decline of unemployment, maintaining the dynamics and accelerating economic growth also in the conditions of economic crisis (2007–2015) and the recovery from the period of recession (second decade of the 21st century). The entrepreneurial spirit of citizens manifests itself not only in establishing their own business, but is also of great importance from the point of view of increasing innovation and competitiveness of enterprises and institutions. Therefore, an increasingly important role in these conditions is attributed to entrepreneurship as one of the key competencies and the factor of socio-economic development. It is manifested in the increasingly frequent considering it in the country's development programs and strategies, as well as local government units. The education system is also increasingly important (Zioło, 2012; Wach, 2013, 2014a, 2016; Rachwał, Kurek, Boguś, 2016; Rachwał, 2017), also in geography lessons (Borowiec, Rachwał, 2011) and geographical studies (Płaziak, Rachwał, 2014a, 2014b).

In the light of the outlined tendencies, the theme of the article is the role of entrepreneurship in the development of spatial systems. Based on the analysis of the literature on the subject, mainly related to geographic research in this area conducted by Polish researchers, it will aim at defining the function of entrepreneurship in the development of spatial arrangements of various scales and proposing further directions of geographic research on this subject. This seems particularly important in the Year of Polish Geography 2018, on the 100th anniversary of the Polish Geographical Society (1918–2018), when Polish geographers attempt to summarise the current achievements and outline new, important from the scientific and application point of view, directions of research.

THE CONCEPTS OF ENTREPRENEURIAL COMPETENCIES AND ENTREPRENEURSHIP IN THE LIGHT OF THE SUBJECT LITERATURE

The importance of entrepreneurial competencies in the modern knowledge-based economy has made them the subject of research and scientific discussion of specialists in various disciplines. The different perspectives of research in the process of exploration of these issues result in both a diversity of defining entrepreneurship, as well as related competencies (Piróg, 2015). D. Piróg (2015) reviews the theoretical studies devoted to the conceptualisation of competencies in the field of entrepreneurship

and attempts to synthesise them to show the evolution of the concept in the last thirty years. The author drew attention to the ambiguity and different understanding of the notion of competency/competencies and entrepreneurial competency/entrepreneurial competencies and the evolution of this understanding from the 1990s when the features related mainly to starting own business were accentuated to the broader understanding that currently prevails. Literature studies prove that competencies that are universally recognised as referring to entrepreneurship are of an extremely eclectic character, which results in conceptual pluralism and a multitude of their classifications (Piróg, 2015). As the author pointed out, in Poland – despite the great interest of scientists in the field of entrepreneurship education – research on conceptualising this concept, and discussion on which competencies should be considered fundamental for a person called entrepreneurial is relatively poor, while the studies that raise the issues of shaping entrepreneurial attitudes of students at various levels of education are dominant (e.g. Rachwał, 2005, 2006; Milewska, 2006; Borowiec, Rachwał, 2011). The characteristics of the entrepreneurial attitude in the studies as mentioned above are primarily based on the competencies held by the entity. For example, T. Rachwał (2005) includes the features that make up the entrepreneurial attitude, among others creativity, proneness to taking the balanced risk, readiness to take on new challenges. Similarly, Strojny (2007) found that the foundation of an entrepreneurial personality is its creativity and ability to solve problems. All components of the entrepreneurial attitude, then called features, today form the canon of entrepreneurial competency (Piróg, 2015). Therefore, the authors agree that entrepreneurship as a competency should be looked at more than only through the prism of willingness and ability to set up own business. This approach is in line with the approach to entrepreneurship as one of the eight key competencies in the European education system (*Key Competencies...*, 2002; *Recommendation...*, 2006; Wach, 2014b; Rachwał, Kurek, Boguś, 2016).

The competency approach is the premise for defining entrepreneurship as a personality trait of a human being. Such an understanding of entrepreneurship is universal, not only for the needs of school and university education but also in scientific research. Most scholars, however, admit that this concept is polysemic (see Brzozowski, 2007) and ambiguous, both in colloquial and scientific language, most often recognised as a feature of human personality and related skills, undertaking own business activity, as well as the ability to take advantage of opportunities in the environment and undertaking creative (innovative) activities (projects). Entrepreneurship as a research area shows exceptional multidisciplinary, which means that research conducted in many scientific disciplines is separate and interdisciplinary (researching the interface of at least two scientific disciplines (Wach, 2015). As noted by K. Wach (2015) in its essence this phenomenon is difficult to quantify – which is why in economic sciences it is more often discussed as part of management sciences rather than economics. In economy, the most common are simplified models based on the self-employment function (number of newly created companies of natural persons, i.e. sole proprietorships) or the number of entities in the SME sector per the number of inhabitants and their participation in all enterprises. The author points out that “the mainstream economic literature omits entrepreneurship as one of the variables in its models, not to mention the role of entrepreneurship in economic growth or socio-economic development” (Wach, 2015: 25). According to K. Wach (2015), in the economic literature there are four essential functions of entrepreneurship and three derivative functions, which – although quite broadly

described in the subject literature – are not sufficiently distinguished in his opinion, however, they are found in macroeconomic models at the level of enterprise operationalisation. According to K. Wach (2015) essential functions of entrepreneurship in economic sciences include: function of personality, function of managerial actions, function of an individual entrepreneur and function of the market. Three derivative functions of entrepreneurship include: entrepreneurship as an economic production factor, as a function of the SME sector and self-employment in the economy.

Such spheres of understanding entrepreneurship are widely accepted in economic sciences. In geographical research, spatial aspects of entrepreneurship development and its functions in the development of spatial systems are more emphasised. In this approach, the function is understood as an important causative factor, affecting the acceleration of positive changes in the economic structure and acceleration of the rate of economic growth, consistent with previously adopted trajectories of development. Nevertheless, it should be emphasised, after Z. Ziolo and T. Rachwał (2012), that the traditional boundaries of research fields between individual scientific disciplines are becoming more and more blurred today. This is particularly visible in the field of geographic and economic research. In economic sciences, space and its diversification are increasingly perceived as the place of new locations.

Similarly, on the basis of geographical sciences, the issue of changes in spatial structures should be increasingly explained in relation to the rules of economic, social and cultural development. The level of space attractiveness plays an essential role in this area as a place for developing entrepreneurship. It affects the level of economic development of various scales of spatial systems and determines their future directions of change. At the same time, the above authors assume that in the market economy, entrepreneurship is becoming an increasingly important feature of the society, which enables shaping a competitive geographical space to dynamise development processes, hence the role of education in entrepreneurship in the socio-economic development of spatial systems of various scales.

Therefore, in research, the concept of entrepreneurship is increasingly used in reference to spatial systems. The concepts of an entrepreneurial city or municipality and region (see Płaziak, Rachwał, 2015) are increasingly widespread in literature on the subject. In this respect, there arises a dilemma whether a spatial unit can be “entrepreneurial” or should entrepreneurship of local/regional government (“entrepreneurial spirit”) be discussed. Summarising these considerations, K. Kuciński (2010) assumes that entrepreneurship at the spatial layout (municipal) level in the context of local and regional development has two dimensions:

- entrepreneurship of the local government authorities of the municipality;
- undertaken and conducted business in its area (entrepreneurial attitude of the community and behaviour of companies).

ENTREPRENEURSHIP ISSUES IN GEOGRAPHICAL RESEARCH IN POLAND

Entrepreneurship is therefore of interest to many researchers, representatives of not only management and economic sciences, but also economic geographers. As noted by D. Piróg (2015) in Poland, the increase in scientific interest in entrepreneurial competencies began in the 1990s and mainly resulted from the very process of transformation of the economy. Market economy at that time generated demand for specialists

with skills necessary for active participation in particular stages of transformation, related mainly to the restructuring of industry, emergence of new types of enterprises, development of financial institutions, including banks and stock exchanges, followed by the process of Poland's integration with the European Union and changes resulting from the increasing globalisation. Besides, changes in the national economy management system have resulted in the emergence of new, more favourable opportunities for the development of entrepreneurship. It was favoured by new legal instruments that allowed taking over state-owned business entities through privatisation and the possibility of establishing and developing new enterprises by natural persons. Thus, economic transformations generated a demand for new entrepreneurs and enterprising employees.

A detailed analysis of the issues of entrepreneurship in geographical studies in Poland, based on the extensive literature of the subject, was carried out by Z. Ziolo and T. Rachwał (2012). They pointed out that the development of entrepreneurship was of particular interest to researchers in Poland in the years of implementing market economy. It was undertaken on the basis of economic, legal, social and geographical sciences. In individual disciplines, these issues were considered from specific points of view resulting from the subject and research goals of these disciplines. In economic sciences, the attention is mainly paid to the degree of effectiveness of individual business entities; in legal studies, attention is paid to legal instruments for stimulating economic development and conditions for running a business. In the literature on social sciences, the authors focus on the issue of quality of life and professional activity under the influence of developing the economic activity, while in geographical literature the primary focus is on the analysis of spatial diversity and conditions and opportunities for new business entities in the national, regional or local space.

An essential point of interest for economic geographers are spatial patterns of entrepreneurship development, which manifest themselves in the development of individual business activities (e.g. Ziolo, Kamińska, 1993, 1996; Ziolo, Piróg, 2000; Kamińska, 2006; Kulawiak, 2017; Płaziak, Szymańska, 2017) and socio-economic conditions to undertake and conduct it, resulting from various processes in the world, country and individual regional and local systems. Also, the studies concerned the role of entrepreneurship in raising the competitiveness of society and the economy, as well as shaping the information society (e.g. Ziolo, 2006, 2007, 2009a; Gierańczyk, 2009, 2010; Kurek, Rachwał, 2011). A special place is occupied by the issue of the impact of entrepreneurship education on the development of companies, with particular emphasis on family businesses from the SME sector and shaping entrepreneurial attitudes and business competencies of young people in the educational process, including geography lessons. Studies are undertaken to identify the essence of "entrepreneurship" of spatial systems. M. Płaziak and T. Rachwał (2015) in the light of the analysis of the role of entrepreneurship in the national, regional development strategy, outlined the concept of an "entrepreneurial region" pointing to:

- conditions of the entrepreneurial region development (including, among others, macroeconomic conditions, related to the geographical, political and legal location and related to the quality of the education system;
- its more critical components (including the vision of the entrepreneurial region included in the strategy, quality of leadership – management, innovative and competitive enterprises, well-developed network of business environment institutions,

pro-entrepreneurial education system, high-quality human capital with a significant share of the creative class);

- effects of its functioning (including entering the path of sustainable development, change of socio-economic structures, favourable image of the region as an attractive place for investment and residence, improvement of the quality of life of inhabitants, increase of regional cohesion).

It is worth paying attention to the European initiative “European Entrepreneurial Region” (EER), implemented since 2011, on the basis of which three EU regions are selected that have developed outstanding visions for the development of entrepreneurship, regardless of size, wealth, competencies and current level of competitiveness of these regions. Regions with the most convincing and forward-looking studies (proposals) of the strategy for the development of entrepreneurship obtain a special label of the “European Entrepreneurial Region of the Year”. In total, in the years 2011–2017, the title was awarded to 21 regions (including one from Poland – Małopolska in 2016). This project contributes to the popularisation of the entrepreneurial concept of the region and scientific research related to it. On the other hand, the participation of many regions in this initiative generates demand for more in-depth research on the role of entrepreneurship in regional development.

Another type of research undertaken on a geographical basis is the analysis of the place of entrepreneurship in strategies for the development of regions and local systems (cities and municipalities). The new paradigm of regional policy implemented in Poland and other European countries takes into account the change in instruments of conducting it, including the increased attention in the instruments of regional policy implementation for the business and its environment. As noted by M. Płaziak and T. Rachwał (2014c), the Polish National Strategy for Regional Development, binding for 2010–2020, lacks a direct reference to entrepreneurship in the formulated challenges and objectives, except detailed directions of measures 1.3.3. *Increasing the possibilities of introducing innovative solutions by enterprises and regional institutions* and 1.3.4. *Supporting the development of business environment institutions (BEI)*. Particular attention was paid to the development of entrepreneurship in rural areas, especially those with difficult development, and a relatively large space was devoted to the need to support business environment institutions. Comparing with the analyses (Płaziak, Rachwał, 2014c) of the Finnish and Bulgarian regional development strategies, it should be stated that in the Finnish strategy entrepreneurship is essential: it is treated as one of the foundations for the development of Finnish economy in both national and regional terms. Therefore, the fundamental task of the administration is to support and create the right conditions for business development. This strategy emphasises teaching entrepreneurship at all levels of education, in order to shape an active and creative society, open to entrepreneurial activities. However, in Bulgarian regional development strategy, attention was drawn to the weak development of entrepreneurship in comparison with other EU countries, due to the number of companies, business structure and environment infrastructure as well as public awareness – regional policy in the area of entrepreneurship development is targeted at meeting these deficiencies. In this strategy, the emphasis was put on the development of infrastructure that will support the development of the business. The development of small and medium enterprises as the essential factor of regional development was strongly emphasised. Research studies of this type allow to indicate the possibility of following good practices from other

countries, so they have application values. The effects of this strategy are already visible, as this new approach to entrepreneurship has been included in the Strategy for Responsible Development implemented since 2017 in Poland. However, its provisions and effects require more in-depth research and looking from a particular time perspective, as it is too early for such assessments.

According to Z. Ziło and T. Rachwał (2012), the role of entrepreneurship in the development of spatial systems of different scales results mainly from the following factors and processes:

- an increasingly important role is currently attributed to the entrepreneur who makes specific decisions regarding the location and directions of enterprise development, which, through its relations in spatial systems, influences the development or recession of these spatial systems,
- processes of socio-economic and cultural changes in various spatial systems result from making specific decisions, at the core of which is the entrepreneurship of specific people or teams, including entrepreneurs and representatives of the local and central government.

Thus, entrepreneurship can be treated as one of the essential factors of change contributing to increasing the competitive position of these systems (Ziło, Rachwał, 2012).

In this approach Z. Ziło proposed model approaches to the role of entrepreneurship in economic activation (Ziło, 2007), raising the competitiveness of society and economy (Ziło, 2006) and shaping the information society (Ziło, 2007). It seems that it is an excellent base for conducting empirical research, which will be a partial exemplification of these models, and on the other hand, such approaches allow for synthesising the arrangement of many detailed and often scattered surveys, not only geographical, in this scope.

CONDITIONS FOR THE DEVELOPMENT OF ENTREPRENEURSHIP IN SPATIAL SYSTEMS AND THE ROLE OF GEOGRAPHY IN ITS ANALYSIS

Analysis of the literature on the subject indicates some conditions for the development of entrepreneurship, of interest to many researchers, including geographers, because many of these factors result from the diversity of geographical space, which is a natural and primary subject of research by representatives of this discipline. These conditions should include (see Ziło, 2005, 2013, 2015; Ziło, Rachwał, 2012):

1. general tendencies of civilisation development, including:
 - a) development of information society;
 - b) building the knowledge-based economy;
 - c) volatility of market systems under the influence of innovative processes;
 - d) increased importance of advanced technology products,
2. global (international):
 - a) international economic, social and political situation;
 - b) affiliation to international groupings (mainly economic and political, e.g. the EU);
 - c) economic and political relations between countries, including neighbours;
 - d) conditions and possibilities of international flows (products, services, capital, knowledge/technology, population/labour resources);

- e) European Union development policies (including regional policy, in relation to the SME sector and others), as well as the quality and effectiveness of EU institutions and instruments;
- f) infrastructural development (with supranational functions);
- 3. internal (national, regional, local):
 - a) political and social system, internal political power and stability of the political scene;
 - b) quality and level of qualifications of political elites (legislative and executive),
 - c) efficiency of administrative structures and relations between society and power (trust level);
 - d) size, quality and structure of resources: natural, capital, human (employment);
 - e) level and quality of spatial development;
 - f) social structures – the intellectual potential of society and the resources of human and social capital;
 - g) social climate for stimulating and developing entrepreneurship;
 - h) population structures (including age, nationality, education).

There are relationships between particular conditions, which may affect the stimulation and dynamisation of synergistic processes of development or competitive relations may be observed, which may affect the limiting of development processes. Depending on the quality and potential of individual elements of this space, there are more or less favourable conditions for the development of economic activity.

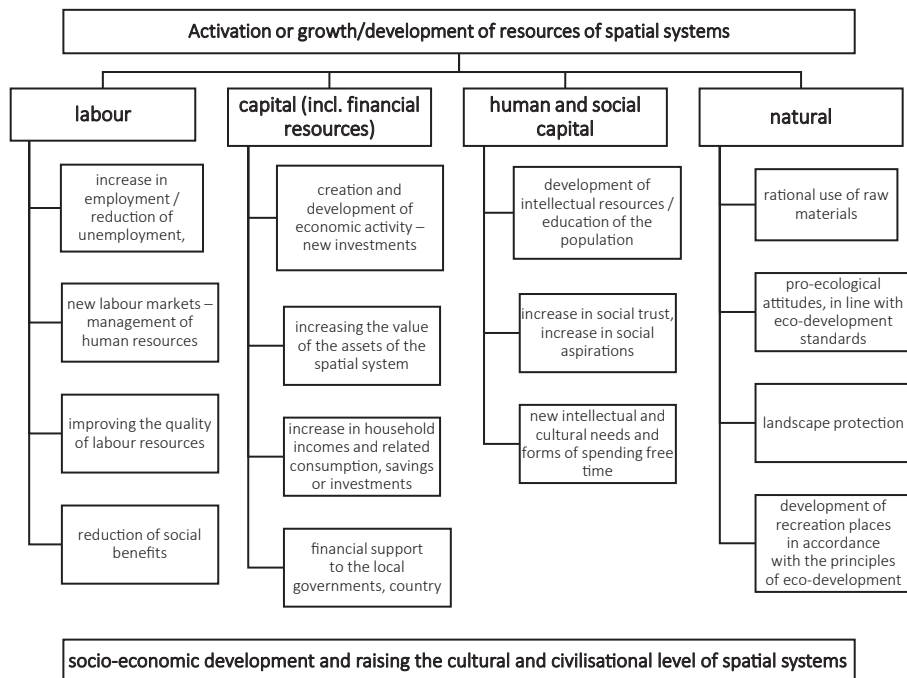
The conditions of entrepreneurship development mentioned above change in specific places of geographical space, because it often creates different conditions for the activation of economic processes. It means that the issue of entrepreneurship development shows close links with research problems and substantive content of geography. Geography, as is widely known, deals with spatial diversity, processes and relations between elements of the natural, economic, social and cultural space. The explanation of these complex relationships may take place in the light of the model of the geographical space, proposed by Z. Zioło (1999, 2009b, 2014). This model allows to adopt, depending on the subject and purpose of the research, the degree of aggregation or disaggregation of elements of the geographical space (consisting of the natural, socio-economic and cultural space). This makes it possible to treat entrepreneurship as an element of the socio-economic and cultural space. By adopting the proposed model in relation to entrepreneurship among the elements of the socio-economic space structure, entrepreneurship could be distinguished, mainly conducted in the form of individual economic activity and smaller entities included in the sector of micro-, small- and medium enterprises, while among the elements of the cultural space structure, among others, the level of education of the population, including education in the field of entrepreneurship, and those elements that make up the cultural aspects of entrepreneurship (such as entrepreneurial attitudes, population aspirations, traditions in the field of economic activity of the population, etc.). Socio-economic and cultural development of spatial systems is fundamentally connected with the entrepreneurial attitudes of the population and the economic potential of enterprises functioning in their area. In a different scale of spatial systems, it is usually done by activating specific categories of resources, assuming a rational and practical use of them.

ENTREPRENEURIAL FUNCTIONS IN SPATIAL SYSTEMS –
SYSTEMATISATION ATTEMPT

Based on the above considerations and literature review, it can be assumed that the functions of entrepreneurship in the development of spatial systems are implemented through its impact on the activation or growth (development) of the following spatial resources: labour, capital (including financial), human and social capital, and natural resources (Fig. 1).

Regarding the labour resources, this contributes, among others, to an increase in employment and reduction in unemployment, expansion of labour markets and improvement of the quality of these resources. Concerning capital, there is an increase in investment and the value of fixed assets of a given system, an increase in income of the population, as well as tax revenues to local government units and the state budget. The impact in the field of human and social capital is reflected in the development of intellectual resources (education level of population), increased social trust and social aspirations. Thus, new intellectual and cultural needs, as well as forms of spending free time, are generated. In the field of natural resources, attention should be paid to the rational use of resources, pro-ecological attitudes, landscape protection and the development of recreation and leisure places in nature following the principles of eco-development. This impact would not have been possible without a significant component of the entrepreneurial attitude, which is ethical conduct, by many authors treated as an

Fig. 1. Entrepreneurial functions in the development of spatial systems



inherent characteristic of an entrepreneurial person (see Rachwał, 2005; *Recommendation...*, 2006; Borowiec, Rachwał, 2011). Nowadays, one should reject the idea of entrepreneurship from the era of the birth of capitalist economies, where the principal and sometimes the only goal of the entrepreneur's activity was to maximise profits without taking into account social responsibility.

It can, therefore, be assumed that thanks to the activation of these four basic categories of resources entrepreneurship helps socio-economic development; it also raises the cultural and civilisational level of spatial systems.

CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

Summing up, it should be noted that Polish socio-economic geography has mainly been involved in research on entrepreneurship, but there are some gaps in research interests that representatives of this discipline could develop due to their essential competencies. Such proposals for further directions of geographic research on entrepreneurship include:

- spatial diversification of entrepreneurship indicators in various systems, due to the knowledge of advanced methods of spatial analysis; in this area, of course, the broad inclusion of geoinformation tools is necessary;
- diversification of entrepreneurship of selected sections/branches of the economy (e.g. industry, tourism);
- social determinants (including demographic, related to population structures e.g. education level), economic (national policy, level of technological development and technical and economic infrastructure) and cultural entrepreneurship (including in different countries/regions); in this respect slightly limited involvement of geographers in developing discussions on the entrepreneurship of immigrants or women may be surprising (including culturally different from Poland, e.g. Islamic), who have extensive knowledge and research experience in this area;
- entrepreneurial behaviour and attitudes of self-government authorities;
- place of entrepreneurship in regional and local development strategies (it seems worthwhile and promising to develop a universal research pattern);
- relations between entrepreneurship and eco-development in the sustainable entrepreneurship;
- consequences of entrepreneurship development for local systems: social, economic, cultural, and perhaps also natural, in which physical geographers, involved in processes in the natural space, may also be included;
- improvement of research methods and terminological findings (regarding understanding basic concepts and their systematisation);
- the role of education in the field of entrepreneurship in the development of individual businesses and enterprises, and hence the socio-economic development of spatial systems;
- qualifications of geography teachers to teach entrepreneurship, motives for acquiring these qualifications;
- links between education in the field of entrepreneurship with geographical education (in particular economic geography) – identification of cross-curricular correlations;

- objectives, assumed effects, content, education methods in the field of entrepreneurship, especially at lower levels of education (primary school, high school), because representatives of economic sciences are more focused on university education, and economic geographers have participated mainly in the construction of curricula, teaching programs, preparation of educational materials (school textbooks, methodological guides) and teachers of a new school subject, i.e. the basics of entrepreneurship.

The outlined problems point to new research fields and the necessity of its further deepening both in empirical analyses and theoretical approaches. They should be devoted to efforts to develop a concept of adopting rational development goals, making decisions (including in the area of self-government units development) and the possibility of their implementation concerning the rules of economic effectiveness of business entities. Particularly promising should be the considerations regarding various conditions that will constitute a reasonable basis for managing the processes of changes in economic activity in specific places of the diversified geographical space and the impact of entrepreneurship on the development of various elements of the spatial structure.

The above proposals do not, of course, cover the list of possible research themes to be undertaken, but the broader inclusion of geographers in research in this field seems not only possible but necessary from the point of view of a holistic, multi-aspect research into the essence of entrepreneurship and its role in the development of spatial systems.

This new approach in geographical studies on the relationship between entrepreneurship and other elements of geographical space will also allow better integration of geographic sciences, which will contribute to the systematic increase of the importance of this discipline in the system of sciences and application activities, in particular in the development, implementation and monitoring of implementation of development strategies for spatial systems of various scales.

References

- Borowiec, M., Rachwał, T. (2011). Kształtowanie postaw przedsiębiorczych na lekcjach geografii wyzwaniem edukacyjnym w procesach globalizacji [Development of Entrepreneurial Attitudes with Regard to the Principles of Sustainable Development Among Pupils Using the PowerPlayer Game Developed Within the Project SUSEN]. *Przedsiębiorczość-Edukacja [Entrepreneurship-Education]*, 7, 321–332.
- Brzozowski, T. (2007). „Przedsiębiorczość” – pojęcie polisemiczne czy niewłaściwie rozumiane? Próba systematyzacji [Enterprise Ambiguous or Misunderstood Concept? Attempt of Systematize]. *Przedsiębiorczość-Edukacja [Entrepreneurship-Education]*, 3, 196–203.
- Gierańczyk, W. (2009). Rozwój społeczeństwa informacyjnego a przedsiębiorczość w krajach transformujących się [Development of Information Society and Entrepreneurship in the Transforming Countries]. *Przedsiębiorczość-Edukacja [Entrepreneurship-Education]*, 5, 19–36.
- Gierańczyk, W. (2010). Badania i rozwój jako element przedsiębiorczości w krajach europejskich [Research and Development as Part of Entrepreneurship in the EU States]. *Przedsiębiorczość-Edukacja [Entrepreneurship-Education]*, 6, 35–48
- Kamińska, W. (2006). Pozarolnicza indywidualna działalność gospodarcza w Polsce w latach 1988–2003 [Non-agricultural individual economic activity in Poland in 1988–2003]. *Prace Geograficzne*, 203.

- Key Competencies. A developing concept in general compulsory education* (2002). Eurydice, Brussels.
- Kuciński, K. (2010). Regionalna perspektywa przedsiębiorczości In: Kuciński K. (red.), *Przedsiębiorczość a rozwój regionalny w Polsce* [Regional perspective of entrepreneurship, In: Kuciński K. (ed.), *Entrepreneurship and regional development in Poland*] Difin, Warszawa.
- Kulawiak, A. (2017). Entrepreneurship in Small Towns in the Region of Łódź in the Assessment of Business Owners. *Przedsiębiorczość-Edukacja* [Entrepreneurship-Education], 13, 41–52.
- Kurek, S., Rachwał, T. (2011). Development of entrepreneurship in ageing populations of The European Union. *Procedia. Social and Behavioral Sciences*, 19(2011), 397–405
- Milewska, M. (2006). Rozbudzenie postaw przedsiębiorczych wśród młodzieży wiejskiej [Awakening of Enterprising Attitudes Amongst the Youth in the Country]. *Przedsiębiorczość-Edukacja* [Entrepreneurship-Education], 2, 249–25.
- Piróg, D. (2015). Kompetencje z zakresu przedsiębiorczości: rozważania teoretyczne i ich ilustracje w obszarze szkolnictwa wyższego [Entrepreneurial competences: theoretical deliberations and their illustrations in higher education]. *Przedsiębiorczość-Edukacja* [Entrepreneurship-Education], 11, 364–376.
- Płaziak, M., Rachwał, T. (2014a). Kształcenie w zakresie przedsiębiorczości w polskich uniwersytetach na studiach nieekonomicznych (na przykładzie kierunku geografia) [Entrepreneurship education in Polish universities in non-economic studies (on the example of geography)]. *Horyzonty Wychowania*, 13(26), 249–266.
- Płaziak, M., Rachwał, T. (2014b). Entrepreneurship Courses in Spatial Management Studies in Polish Universities. *Procedia – Social and Behavioral Sciences*, 110, 710–718.
- Płaziak, M., Rachwał, T. (2014c). The Role of Entrepreneurship in Regional Development Strategies (based on the Polish National Strategy of Regional Development 2010–2020). *Europa XXI*, 26, 97–110.
- Płaziak, M., Rachwał, T. (2015). „Przedsiębiorczy region” – zarys koncepcji w świetle analizy roli przedsiębiorczości w krajowej strategii rozwoju regionalnego [“Entrepreneurial region” – an outline of the concept in the light of an analysis of the role of entrepreneurship in the national strategy of regional development]. *Przedsiębiorczość-Edukacja* [Entrepreneurship-Education], 11, 37–49.
- Płaziak, M., Szymańska, A. (2017). Operation of Small Businesses in Open-Air Markets in Poland Based on the Example of Kraków. *Przedsiębiorczość-Edukacja* [Entrepreneurship-Education], 13, 25–40.
- Rachwał, T. (2005). Kształtowanie postaw uczniów na lekcjach podstaw przedsiębiorczości [Shaping the attitudes of students in entrepreneurship lessons]. *Przedsiębiorczość-Edukacja* [Entrepreneurship-Education], 1, 137–144.
- Rachwał, T. (2006). Kształtowanie postaw przedsiębiorczych w edukacji szkolnej [Shaping entrepreneurial attitudes in school education]. In: B. Muchacka (ed.). *Szkoła w nauce i praktyce edukacyjnej*, t. II [School in science and educational practice, vol. II.]. Kraków: Oficyna Wydawnicza „Impuls”, Akademia Pedagogiczna w Krakowie, 427–434.
- Rachwał, T. (2017). Entrepreneurship in School in the Conditions of the Education System Reform in Poland – a Voice in the Discussion on the Directions of Change. *Przedsiębiorczość-Edukacja* [Entrepreneurship-Education], 13, 330–339.
- Rachwał, T., Kurek, S., Boguś, M. (2016). Entrepreneurship Education at Secondary Level in Transition Economies: a Case of Poland. *Entrepreneurial Business and Economics Review*, 4(1), 61–81.
- Recommendation of the European Parliament and of the Council of 18 December 2006 on key competencies for lifelong learning (2006/962/EC)*. Official Journal of the European Union, L 394, 30.12.2006.
- Strojny, J. (2007). Kształtowanie postawy przedsiębiorczej – procesy socjalizacji i autokreacji [Shaping an entrepreneurial attitude – processes of socialisation and self-creation]. In: P. Wachowiak, M. Dąbrowski, B. Majewski (ed.). *Kształtowanie postaw przedsiębiorczych a edukacja ekonomiczna* [Shaping entrepreneurial attitudes and economic education]. Warszawa: Fundacja Promocji i Akredytacji Kierunków Ekonomicznych, 205–211.

- Wach, K. (2013). Edukacja na rzecz przedsiębiorczości wobec współczesnych wyzwań cywilizacyjno-gospodarczych [Entrepreneurship education towards modern civilization and economic challenges]. *Przedsiębiorczość–Edukacja [Entrepreneurship–Education]*, 9, 246–257.
- Wach, K. (2014a). Edukacja dla przedsiębiorczości: pomiędzy przedsiębiorczą pedagogiką a edukacją ekonomiczną i biznesową [Education for entrepreneurship: between entrepreneurial pedagogy and economic and business education]. *Horyzonty Wychowania*, 13(28), 11–31.
- Wach, K. (2014b). Europeanisation of Entrepreneurship Education in Europe – Looking Back and Looking Forward. *Horyzonty Wychowania*, 13(26), 11–32.
- Wach, K. (2015). Przedsiębiorczość jako czynnik rozwoju społeczno-gospodarczego: przegląd literatury [Entrepreneurship as a factor of socio-economic development: literature review]. *Przedsiębiorczość–Edukacja [Entrepreneurship–Education]*, 11, 24–36.
- Wach, K. (2016). Edukacja przedsiębiorcza: analiza bibliometryczna polskiego piśmiennictwa [Entrepreneurial education: bibliometric analysis of Polish literature]. *Horyzonty Wychowania*, 15(34), 11–26.
- Zioło, Z. (1999). Model funkcjonowania przestrzeni geograficznej jako próba integracji badań geograficznych [The model of the functioning of geographical space as an attempt to integrate geographic research]. In: A. Lisowski (ed.). *Geografia na przełomie wieków – jedność w różnorodności [Geography at the turn of the century – unity in diversity]*. Warszawa: Wydział Geografii i Studiów Regionalnych Uniwersytetu Warszawskiego, 122–131.
- Zioło, Z. (2005). Światowe uwarunkowania rozwoju przedsiębiorczości [World conditions for the development of entrepreneurship]. *Przedsiębiorczość–Edukacja [Entrepreneurship–Education]*, 1, 9–16.
- Zioło, Z. (2006). Rola przedsiębiorczości w podnoszeniu konkurencyjności społeczeństwa i gospodarki [The Part Entrepreneurship Plays in Increasing the Competitiveness of Society and Economy]. *Przedsiębiorczość–Edukacja [Entrepreneurship–Education]*, 2, 10–17.
- Zioło, Z. (2007). Rola przedsiębiorczości w aktywizacji gospodarczej – zarys modelu [Role of Entrepreneurships in an Activation of Economy an Outline of a Model]. *Przedsiębiorczość–Edukacja [Entrepreneurship–Education]*, 3, 10–17.
- Zioło, Z. (2009a). Rola przedsiębiorczości w kształtowaniu społeczeństwa informacyjnego [The Role of the Entrepreneurship in the Forming the Information Society]. *Przedsiębiorczość–Edukacja [Entrepreneurship–Education]*, 5, 10–18.
- Zioło, Z. (2009b). Model badań procesu transformacji elementów w przestrzeni geograficznej [Research model of the process of transforming elements in geographical space]. In: I. Jażewicz (ed.). *Współczesne problemy przemian strukturalnych przestrzeni geograficznej. Książka dedykowana Profesorowi Eugeniuszowi Rydzowi w 70. rocznicę urodzin [Contemporary problems of structural changes in geographical space. Book dedicated to Professor Eugeniusz Rydz on the 70th birthday anniversary]*. Słupsk: Akademia Pomorska, 103–117.
- Zioło, Z. (2012). Miejsce przedsiębiorczości w edukacji [A place of entrepreneurship in education]. *Przedsiębiorczość–Edukacja [Entrepreneurship–Education]*, 8, 10–23.
- Zioło, Z. (2013). Uwarunkowania rozwoju przedsiębiorczości w warunkach kryzysu gospodarczego [The conditions for entrepreneurship development during an economic crisis]. *Przedsiębiorczość–Edukacja [Entrepreneurship–Education]*, 9, 10–33.
- Zioło, Z. (2014). The concept of geographical space. *Annales Universitatis Paedagogicae Cracoviensis. Studia Geographica*, 5, 6–22.
- Zioło, Z. (2015). Przedsiębiorczość jako czynnik rozwoju społeczno-gospodarczego układów przestrzennych [Entrepreneurship as a factor of the socio-economic development of spatial systems]. *Przedsiębiorczość – Edukacja [Entrepreneurship – Education]*, 11, 8–23.
- Zioło, Z., Kamińska, W. (1993). Rozwój indywidualnej działalności gospodarczej w województwach przygranicznych Polski Południowo-Wschodniej [Development of individual economic activity in border voivodeships of south-eastern Poland]. In: J. Kitowski, Z. Zioło. Czynniki i bariery rozwoju rejonów przygranicznych [Factors and barriers to the development of border regions]. Kraków–Rzeszów–Warszawa: Sekcja Gospodarki Przestrzennej Komisji Nauk Ekonomicznych Oddział Polskiej Akademii Nauk w Krakowie, Wydział Ekonomiczny Filii Uniwersytet Marii Curie-Skłodowskiej w Rzeszowie, Instytut Gospodarki Przestrzennej i Komunalnej w Warszawie, 99–116.

- Zioło, Z., Kamińska, W. (1996). Struktura branżowa indywidualnej działalności gospodarczej w Polsce Południowo-Wschodniej [Industry structure of individual economic activity in South-Eastern Poland]. In: Z. Zioło (ed.). *Wpływ procesów transformacji gospodarki narodowej na funkcjonowanie jednostek gospodarczych i układów przestrzennych* [Impact of transformation processes of the national economy on the functioning of economic units and spatial systems]. Warszawa–Kraków: Komisja Geografii Przemysłu Polskiego Towarzystwa Geograficznego, Instytut Geografii Wyższej Szkoły Pedagogicznej w Krakowie, 69–87.
- Zioło, Z., Piróg, S. (2000). Potencjał i struktura indywidualnych podmiotów gospodarczych zlokalizowanych wzdłuż drogi E-4 na odcinku Kraków–Przemyśl [Potential and structure of individual business entities located along the E-4 road on the Kraków–Przemyśl section]. In: Z. Zioło (ed.). *Działalność człowieka i jego środowisko* [Human activity and its environment]. Kraków: Wydawnictwo Naukowe Akademii Pedagogicznej, 355–373.
- Zioło, Z., Rachwał, T. (2012). Entrepreneurship in geographical research. In: P. Churski (ed.). *Contemporary Issues in Polish Geography*. Poznań: Bogucki Wydawnictwo Naukowe, 135–155.

Tomasz Rachwał, Ph.D., Head of the Department of Entrepreneurship and Spatial Management, Director of Institute of Geography of the Pedagogical University of Cracow, Rector's Proxy for Entrepreneurship, member of the Senate of the Pedagogical University of Cracow, a Deputy Chair of the Industrial Geography Commission of the Polish Geographical Society, member of the editorial board of several journals, author of textbooks for geography and entrepreneurship. His research interests focus primarily on the issue of change of spatial and branch structures of industry, the determinants for the development of various branches of industrial activity, and the role of manufacturing, selected branches of services and entrepreneurship in local and regional development, as well as geographical and entrepreneurship education.

Address:

Pedagogical University of Cracow
Institute of Geography
Department of Entrepreneurship and Spatial Management
ul. Podchorążych 2, 30-084 Kraków, Poland
e-mail: Tomasz.Rachwal@up.krakow.pl