SILESIAN UNIVERSITY OF TECHNOLOGY PUBLISHING HOUSE

SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY 2023
ORGANIZATION AND MANAGEMENT SERIES NO. 174

SOCIO-INSTITUTIONAL CONDITIONS AND THE DEVELOPMENT AND COMPETITIVENESS OF THE REGION

Arkadiusz TUZIAK

University of Rzeszów, Institute of Social Sciences; atuziak@tlen.pl, ORCID: 0000-0003-3984-4318

Purpose: The main objective of the article is to describe and analyze the selected regional socio-institutional circumstances and to identify the way and extent of their impact on the development and competitiveness of the region.
Design/methodology/approach: The article uses a method of targeted analysis of source literature in the wider field of regional studies. The subject-matter of the article covers issues of social capital, the role of the university in the development of the region, the role of public institutions and public policies, and innovation in terms of development and increased competitiveness of the region.
Social implications. The impact of the characteristics and analyzes contained in the article may be highlighted in the field of public policies implemented by local authorities, in particular as regards greater awareness of the role of soft, endogenous development factors in the form of social capital, the sphere of science and knowledge, the quality of public administration and the stimulation of regional innovation.
Originality/value. The value of the article is to identify and analyze how and to what extent the socio-institutional factors chosen affect the development and competitiveness of the region. The review of these issues and the general and synthetic considerations carried out are part of the development of regional studies, highlighting the importance of internal, social resources and potential influencing the direction and pace of development of the region.

Keywords: regional development, social capital, regional university, public institutions, innovation.

Category of the paper: General review.

Introduction

Regional development is influenced by a number of factors which affect to varying degrees the nature, dynamism and direction of the processes which shape the socio-economic situation of the region (Tuziak, 2013, pp. 126-146). There are many classifications and characteristics of conditions and factors for local and regional development in the literature of the subject (among

others Blakley, 1989; Jałowiecki, Szczepański, Gorzelak, 2007; Gorzelak, 2009; Gałązka, 2017; Adamowicz, 2020).

There are two main considerations of regional development factors (Korenik, 2003, pp. 64). One classification is dichotomy and it divides development factors by their origins into endogenous and exogenous ones. The first group comprises all own resources (internal) of the region which are relevant to its economy. They occur in the region and are somewhat reshaped. Most often they are specific to and produced by the region. On the other hand, exogenous factors are macro-economic and involve the development of the entire national economy. They are external to the region and therefore cannot influence their strength and direction. It is difficult to clearly determine which group of factors – endo or exogenous ones – have the greatest impact on the development of the region. It is emphasized that both types play an important role in development, although different types of regions have different hierarchy and dependency systems.

There are several types of regional development factors: Economic, social, technical, environmental, political ones (Korenik, 2003, pp. 65). Economic factors concern growth: capital, demand (and changes in its structure), population and corporate income, employment, labor productivity, investment, specialization in production and the use of modern management methods. Social factors include growth and changes in the pattern of consumption, the pace and nature of urbanization, changes in regional awareness, increased levels of education, increased activity and the spread of entrepreneurial and innovative attitudes, as well as improved efficiency in public administration. The most important factors among the technical ones are: modernization of the physical structure of the manufacturing equipment, development of technical and implementation facilities, diversification and improvement of production quality, development of the high-tech industry, development of production innovation and improvement of technical infrastructure. Environmental factors include progress in environmental protection, rationalization of its resource management and the implementation of recycling. The political factors relate to the nature of the power, the extent of its competence, the way in which it is exercised and the level of legitimacy of the public.

The development of the region depends on the size of its socio-economic potential. This potential is defined as opportunities and possibilities, defined on the basis of factors such as economic development, infrastructure, communication links, demographic structure, educational institutions and institutions of the business environment, the level of entrepreneurship and innovation, the quality of the natural environment and many others. The development of the region is strongly influenced by the level of social capital that determines the scope and efficiency of network cooperation, as well as by the efficiency of public institutions, in particular local and regional authorities.

Analyzes and studies on m.in. new factors and conditions for regional and local development and the variation in its pace, nature and results (Jałowiecki, Szczepański, Gorzelak, 2007; Korenik, 2012; Gałązka, 2017) highlight the change in the criteria for the

location of economic activities. Since the last decade of the past decade, quantitative criteria for the location and conduct of business (low-skilled labor, natural resources, financial assistance, industrial specialization, etc.) have been gradually replaced by qualitative criteria. Among others social capital, knowledge resources (universities, research centers), the quality of regional public administration, and innovation are becoming increasingly important.

Social capital

The concept of social capital is often found both in scientific literature and in publicism. It is also present in various documents relating to the practice of social life, including planning and implementation of regional development strategies. The popularity of this concept, frequency and multi-context (Dasgupta, Seragеldin, 2000) of its use have resulted in a wide range of different definitions (cf. incl. Paldam, 2000; Bartkowski, 2007; Bhanduri, Yasunobu, 2009).

There are three main theoretical perspectives that explain the origin and the essence of social capital (Trutkowski, Mandes, 2005, pp. 48).

These are: (1) the cultural perspective - explains the origins of social capital through the influence of culture; social capital is a collective ethos, i.e. notions (social representation) shared by communities, norms and patterns of cooperative action, internalized by individuals through social impact; (2) the prospect of theory of rational operation - according to this theory, social capital is an emergent, spontaneous, unplanned and unreconciled whole product of countless individual strategies and rational individual actions; (3) historical and institutional perspectives - in this context, social capital is recognized as a result of a complex, multi-layered historical process, influenced by a wide variety of factors; it follows from the changing patterns of organization of human and institution activities, the changes in the availability of resources necessary for collective action, as well as changes in the structure of power and dominance, i.e. the pattern of relations between the elites and the rest of society.

The most well-known social capital theories in sociology include: Pierre Bourdieu (1986), James Coleman (1988) and Robert Putnam (1995). Each of these authors analyzed and defined social capital differently. The idea of social capital by Robert Putnam (1995) clearly refers to regional development. Social capital inperceived by R. Putnam is not so much a new proposal to call social relations and networks, but rather a comprehensive, psychosocial model to help solve the problem of the differences in the efficiency of the activities of identical institutions, but often counter-productive activities. Putnam assumes that effective governments are only possible if both the ruling and the government have a strong internal predisposition to cooperate. Cooperation skills are acquired by people through participation in various types of learning associations, through interaction and direct contacts, trust which over time exceeds the

association framework and shifts to other areas of social life. Social capital is a collection of competences and capabilities that are valuable not only for individuals but for the entire population. This is the capacity of society as a whole to develop a rich association life within the legal framework of civil society, as well as to create and strengthen intermediary structures between economic and political institutions.

For social capital according to P. Putnam is made up of the quality of association life in a given society, such as networks, standards and trust, which enable members of regional and local communities to increase the effectiveness of collective action and achieve their shared objectives more effectively (Putnam, 1995, pp. 56). In this respect, the author considers social capital to be collective and views it in the context of collective rather than individual objectives. Social capital is not something that is intended to replace state institutions or something that is intended to supplement the shortcomings of state policy and public governance. On the contrary, without the social capital that had been originally developed, it is difficult to manage society efficiently, because it "oils" the economic and political institutions and improves their operation. R. Putnam distinguished between bonding and bridging forms of social capital. Bonding social capital refers to relationships between people similar to each other and is therefore a factor in strengthening the homogeneity of the group (Community). Strong ties and frequent social interactions are characteristic of this form of social capital. It also implies a tendency to build barriers to protect against those who are not recognized as their own, and to exclude them from the group. In contrast, bridging social capital refers to building links between heterogeneous groups separated from each other. Bridge links are much weaker, but at the same time more inclusive, allowing them to cross the barriers to social structures and reduce the distance between people.

R. Putnam's analysis shows that the greater the social capital, the better the governance (and at the same time the more effective development of the regional community). This is based on the idea that active participation in relation networks gradually reorients the motivation of individuals. Special interests, selfishness, self-gain and career orientation are being given away by the concern for the common good, the issues of neighbourhood, municipalities, cities, regions, etc. the center of interest of the individual moves from ‘me’ to ‘us’. In this process, an individual learns to better articulate collective needs and issues of common interest, and to place them above his own interests. A society that is connected by strong, high-trust, horizontal ties, thus gains greater empowerment, becoming civil society. The fundamental thesis of R. Putnam is that the social capital of civic communities characterized by a high degree of trust, norms of commitment to the public good and a dense network of associations promotes economic growth (Putnam, 1995, pp. 258-276).

The level of social capital has a decisive influence on the autonomous economic and civilizational development of human groups - local and regional communities - and determines the ability to adapt to changes caused by global factors. The declaration of a strong link between social confidence as a fundamental component of social capital and local and regional

development and the efficient functioning of the institutions has been reflected in many scientific studies (Szczepanski, Bierwiaczonek, Nawrocki, 2008) and was supported by empirical research (Herbert, 2007). One of the well-known social capital researchers, Francis Fukuyama (1997), from its analysis of the determinants of socio-economic growth, concludes that social capital and a culture of trust are a key factor in development.

Regional and local environments through grassroots associations and initiatives are places of allocation of social capital resources, which enables new types of links to be generated and innovative actions to be launched. Trust – as part of social capital – at regional and local level is both cultural (through tradition, historical experience, collective identity) and institutional – depends on the style and efficiency of the institutions, especially public administration.

Social capital shall be classified and analyzed taking into account its quantitative or qualitative dimension. In the first case, account shall be taken of social cooperation and indicators demonstrating activities in this field, including the number of social organizations, the number of members of these organizations. The frequency of contacts within cooperation networks, etc. in the latter case, the effectiveness of social cooperation shall be examined in the form of the quality of the achievement of the common objectives of the community concerned. It is stressed that the quantitative consideration of social capital does not always amount to the quality of achieving social objectives. According to the findings of researchers (Florida, Cushing, Gates, 2002; Tura, Harmaakorpi, 2005), it is possible to have situations where a high level of social capital may hinder certain entrepreneurial and innovative activities of individuals, due to excessive social control or rigid social cooperation rules. In this connection, a distinction is made between social capital that is conducive to innovation and one that limits the creative and innovative activities of individuals.

Whether social capital takes the form of so-called creative social capital, which stimulates innovation and competitive development in the region, depends on a number of factors. The formation of such capital is facilitated by flattened social structures, characterized by equalized levels of income and education, as well as limited hierarchical management. The cooperation of diverse actors and the exchange of different social experiences have a positive impact on the development of creative social capital. Social capital based on bridging networks is more important for innovation. Networking enables the transfer of knowledge both codified and hidden. This will enable the region to launch an interactive learning process and create favorable conditions for the creation of regional innovation systems.

Cultural considerations are also important for the efficiency of social capital. Among these, social standards that reward cooperation, innovation and openness, as well as the ability to compromise in the name of the common good, are particularly important. However, if the common good is dominated by rivalry in defence of its own interests and a compromise in social dialogue is considered to be weak, then it means that it is impossible to combine the interests of the individual with the general interest. Thus, the cultural understanding of the individual interest and the general interest is essential for regional development. Regional

cooperation between enterprises is more important in building competitive advantages in the region by increasing innovation levels than competition between them (Grosse, 2007, p. 115).

Social capital is an important social and cultural resource facilitating regional development. However, the problem is that some regions have a deficit of this resource. The development of business-to-business networking is facing a serious barrier to lack of trust in mutual relations. It is important that local authorities in the regions mobilize social cooperation and encourage cooperation both on a formal and informal basis. Both types of cooperation play an important role in innovative development. The creation of regional cooperation networks and the improvement of the quality of social capital are encouraged by projects and programs requiring cooperation between various actors - enterprises, public administrations, scientific institutions (universities, research centers), financial institutions. Such networking requires, for example, the preparation and implementation of a regional innovation strategy aimed at building a regional innovation system. The functioning of the regional innovation system shall include the scope and mechanisms for implementing innovation that is self-produced or from outside the region, the diffusion of innovation and the cooperation of enterprises with R&D units, business environment institutions and public administrations. The result of innovation production and dissemination is the development of a regional innovation environment, which is created by research centers (universities, universities, R&D units), innovation and technology transfer centers, business incubators, science and technology parks, consulting institutions. The regional innovation environment is both a pro-innovation-oriented institution and a network-based collaboration system that integrates this environment and generates further innovation.

Innovation

Innovation is a feature of both individual actors and economies as a whole. Means the ability to create broadly understood innovations. It is an active commitment to innovative processes that demonstrate how to take action in this direction. It is conditioned by the resources available and the ability to participate in the processes of creation, implementation and absorption of innovations. Innovation can be expressed on a per-unit, organizational and macro-economic basis, and innovation in the national or regional economy is being considered in the macroeconomic perspective. On this scale, innovation is derived from pro-innovation resources – human, physical, capital, information – and skills and ability to continuously search for and exploit in economic practice the results of research, research and development, new concepts, ideas, inventions, introducing new methods of organization and management, improvement and development of infrastructure and knowledge resources (Niedzielski, 2008, pp. 150-151).

Innovation in the region is the ability to implement reforms, changes, improvements in various aspects of socio-economic life. Its aim is to improve the efficiency of the mechanisms to support regional development (Przygodzki, 2007, pp. 142-144). The concept of innovation is linked to the concept of innovation capacity. At the regional level, innovation capacity is a set of internal conditions and characteristics for a region, enabling the launch and implementation of innovation processes. It is a team of regional features and resources that are critical to the efficiency of resource creation and innovation processes. On a subjective basis, the innovation capacity of the region is the sum of the innovation capacity of the various actors in the regional innovation system, together with the synergy mechanisms in the region. These capacities are created by actors in the regional innovation stage, i.e. economic operators, research and scientific bodies, business community institutions and public authorities. In process terms, the region's innovative capacity can be considered as the sum of the component processes leading to innovation. The most important of these processes are learning, adaptation, dissemination and interaction. These processes are conducive to pro-innovative attitudes: creativity, openness, flexibility, entrepreneurship (Nowakowska, 2009, p. 24).

Innovation is a prerequisite for dynamic development and for building a strong competitive position in the region. It is most fully implemented through regional innovation networks. Several factors are crucial in their creation (Cooke, 1997, pp. 12-13). The first factor is interaction – both business and learning can have a two-way influence on the innovation process: push (push) and suction (*pull*). Small regional businesses, as well as users of products, processes, and services, can be important stakeholders in interaction. The second factor is the grouping, and experience has shown that in areas of greatest economic growth there are large networks of companies cooperating with each other and with state-owned business support agencies. The third important element of regional innovation is the creation of networks within which economic coordination takes place. Their forms are neither clearly hierarchical nor market-based, but rather stimulating reciprocity, exchange and trust, are often used by companies in innovative environments. Fourthly, at regional level, all elements of the innovative economy are important – from basic research to market information.

Research by the European Research Team on Innovation Communities (GREMI) has identified and described the interdependencies between innovation development and the development of the territory (region) concerned (Tuziak, 2013, pp. 76-79). The starting point of the GREMI research initiative was that innovation is organic in relation to the local business environment, is a product of innovation in this environment and meets the needs of local (regional) development. Innovation is not so much a company as an environment (*milieu*) in which it functions (Aydalot, 1986). Innovation is widely understood as a factor in the productive and endogenous development of the regional community (Tuziak, 2017, 2021). Studies and analyses of regional development disparities have shown that regions differ in their capacity and efficiency to create competitive and enabling conditions (environment) for innovative entrepreneurship (Storper, 1995; Florida, 2004; Aula, Harmaakorpi, 2008).

An environment in which cooperation and developed networks are a generator of innovation is an innovative environment (*innovateur milieu*) of entrepreneurship. The environment as such is not *a priori* innovative, conservative or inhibitory. It is innovative when it is able to actively rent, absorb and use information to produce new products or to organize an improvement in the production process (Jewtuchowicz, Pietrzyk, 2003). To do this, he must use his relations with the environment and interact with the outside world. The creative combination of the information obtained with local skills and competencies leads to the development of environmental-specific skills that provide the foundation for competitive advantage. The internal organization of the innovation environment and the various links and networks between businesses, customers, suppliers, research centers, public administrations are important for the efficiency of the impact of the innovation environment, business environment and competences, knowledge, norms of behaviour, etc. (Pietrzyk, 2000, pp. 49-50). An innovation environment is a defined whole with a territorial dimension, corresponding to a certain geographic space, which, however, does not have top-down boundaries and does not always coincide with a region in the generally accepted sense of the term. This territorial whole is characterized by unity and cohesion, expressed in clearly identifiable and specific attitudes and technical culture, understood as developing, transferring and accumulating practices, knowledge and skills, standards and values related to economic activity. In an innovative environment, there is a territorial convention respected by local actors in the form of an unwritten agreement. It enables integration and promotes the development of flexible forms of cooperation that are essential to the process of creating and implementing innovation.

The innovative process taking place in the innovative environment takes the form of innovation networks, in organizational terms, i.e. the intended relationship of cooperation between many actors, based on mutual trust and innovation-oriented. Within the network, there is a process of individual and collective learning that defines the creativity of the entire interactive set of network actors. Innovative processes are complex, dynamic and non-linear, almost always risk-related and provide some uncertainty about the final results. They require both a high level of expertise and diverse, specialized knowledge and a climate of cooperation and trust. Innovation networks are the optimal organizational form to link the activities of many actors (institutions), the exchange of knowledge (also referred to as hidden), experiences and ideas, and thus acquire collective skills that are higher than the sum of individual skills.

The regional innovation is a process of resource creation, the final result of which is technology and which involves the enterprise and its environment on an equal footing. The territory does not play an exogenous role in creating innovation and technology, but participates directly in it. The ‘territoriality’ of innovation is the result of a cumulative process that, by trial and error, leads to specific modifications and new developments in products or process (Pietrzyk, 2000, p. 51). Innovation is territorial, systemic and cultural. The region is the place of interaction needed to develop innovative processes, which means that innovation as their products is geographically rooted (Nowakowska, 2009, p. 37). Innovation and knowledge

are systemic and collective, they are created within the framework of the cooperation network. Through interactive, collective learning, local and regional environments are becoming a stimulus and a driver for innovation.

In a globalized economy, the development and competitiveness of regions depend mainly on the possibilities of using their knowledge, skills, creativity and entrepreneurship. Regional authorities play a crucial role in this process by mobilizing and developing endogenous resources, especially in the area of development of enterprises. They support networking between local companies, as well as their relationship with regional research facilities and the institutional business environment, and develop inter-regional links. Regional authorities have the best understanding of the strengths and weaknesses of local industry and can identify the most urgent needs for intervention and the mobilization of public sector resources (Tuziak, 2013, p. 211). Regional innovation strategies are the main instrument for regional policy in line with global development trends. They are used by regional authorities to assess the needs and possibilities for the use of knowledge and new technologies in the region and to plan and implement action programs aimed at improving the competitiveness of the region by increasing the innovation capacity of enterprises. An important objective of enabling authorities is to create an innovative environment in the region, which is made up of a number of elements to foster innovation. They are linked to among others technical infrastructure, human (human and social capital), social and cultural resources and technological, administrative and organizational resources.

Regions treating innovation as a priority of their development policy and therefore implementing innovation strategies record an increase in competitiveness, progress in the creation of an innovation system and a friendly climate for the establishment and development of companies, as well as an increase in the willingness of enterprises to undertake innovative activities The innovation strategies implemented in the regions mobilize diverse and distributed regional resources to achieve consensus and synergies leading to increased regional competitiveness through integrated and comprehensively planned instruments and mechanisms to stimulate innovation-based and modern technology-driven development processes.

Knowledge resources – regional universities

Organizational and productive innovation and the introduction of modern technologies into businesses are important elements in developing and boosting regional competitiveness and entrepreneurship. The innovative economy in the regions is developing to a large extent through cooperation with regional universities (Boguski, 2008; Huggins, Kitagawa, 2012; Olechnicka, 2012; Piotrowska-Piątek, 2017). When analyzing this issue, reference can be made to studies on the changing perception of the role of universities in the context of regional development

(Grosse, 2007, pp. 106-107). Regional universities were initially seen as a place for the development of regional human resources, the accumulation of science and research, and as centers of knowledge and experience. Over time, the question of building contact with entrepreneurs and implementing development research from university directly to enterprises was first raised (Lawton-Smith, 2006). It is claimed, using an image comparison, that a university based on research plays the same role in the information economy as coal mines in the industrial economy (Castels, Hall, 1994).

The development of university-business cooperation is facilitated by the simultaneous launch of three types of public activities (Grosse, 2007, p. 107). Firstly, to support the development of universities themselves. State policy in this area should cover a longer time horizon and focus in particular on: developing academic and scientific infrastructure in universities; attracting highly qualified staff; stimulating cooperation with national and foreign centers. Secondly, support for cooperation between regional enterprises and universities. Thirdly, the creation of specific public institutions and programs aimed at transferring knowledge from universities to regional enterprises. Such knowledge transfer instruments may include university business incubators, technology centers and technology parks; regional agencies; public or public-private enterprises and other public-private partnership institutions involved in the transfer of knowledge and external experience.

In a knowledge-based economy, universities are viewed in a holistic manner (Etzkowitz, Leydesdorff, 1997; Etzkowitz, 2002; Tether, Tajar, 2008), in terms of their relationship with the external environment. The concept of the so-called triple helix (*triple helix)* outlines a broad perspective of research and analysis on the relationship between the three actors: The spheres of science, business and administration (Bojar, Machnik-Słomka, 2014; Puślecki, 2017). These three institutional spheres are entering into ever closer relations and interdependencies. The situation within each sphere and the relations between them form a system of interactions, having a significant impact on the functioning of the region's socio-economic system. They produce positive results m.in. in the form of the creation of many institutions and intermediate organizations operating in the functional space between science, business and public administration (Olechnicka, 2012, pp. 35-36). Not only spin-offs, business incubators and technology parks are being developed, but also institutions for the commercialization of research, technology transfer, patent rights, etc. they are centers for regional knowledge accumulation, improving the human resources of the regional economy and making development research available to businesses. As a result, the development processes in the region receive comprehensive support, with a clear strengthening and acceleration. The university can work with local authorities to develop regional development strategies and regional innovation policies, can build staff for local administrations and co-create networks of regional institutions to boost innovation and competitiveness in the region (Prawelska-Skrzypek, 2012).

The university plays an important role in identifying local development potential and shaping public policy for endogenous development. It also aims to transfer external experiences and apply them to regional circumstances in order to strengthen the internal resources of the region. Tomasz G. Grosse (2007, p. 108) recalls the examples of Australian (Guasear, 2006) and Finnish (Hayrinen-ALEStalo, Peltola, 2006) experiences which demonstrate the key importance of universities for the development of the outermost regions. They illustrate, m.in., the participation of universities in the creation of regional cooperation networks and the development of regional and local development strategies, and their involvement in business cooperation. Relations between the economy and universities in the outermost regions have also been the subject of empirical studies on Spanish researchers (Garcia-Aracil, Fernandez de Lucio, 2008). They show that universities have an important role to play in the development of regions, not only because they are active in research, knowledge transfer and technology, but also because they are training graduates in accordance with the requirements and expectations of the regional labor market. Polish universities are also involved in regional development. For example, the involvement of academia in research and consultation work in developing regional innovation strategies is an example (Tuziak, Tuziak, Bobrecka-Jamro, Jastrzębska, 2006; Gorzelak, Bąkowski, Kozak, Olechnicka, Płoszaj, 2006), implementation of which is aimed at making development more dynamic and raising the level of innovation and regional competitiveness.

Public institutions and public policies

In order to accelerate the development and competitiveness of regions, it is very important to link national government public policies and regional authorities' actions. Studies and analyzes of regional development disparities show that the division between the northern and southern countries is clearly visible in the European Union. In general, the outermost regions of the North of Europe are examples of the success of public policies and the stimulation of innovative entrepreneurship. On the other hand, the peripheral and less developing areas in the southern countries of the continent have serious difficulties in launching long-term development processes based on modern, innovative technologies. The reasons for the diversification of the outermost regions in the northern countries and in the southern countries of Europe are diverse. They concern, among others national capitalist institutions, the potential of the national economy, as well as cultural and social phenomena, including the efficiency of the functioning of the public administration (Grosse, 2007, p. 132).

There are several features of public policies that are important for development success. Firstly, a well-targeted and long-term policy of the national government, especially toward the outermost regions, is essential. Public support from central authorities allows for the adoption

and implementation of activities and development objectives which are sufficiently prioritized from the point of view of strategic importance. Appropriate targeting of development processes in peripheral areas, within the framework of public policies, should encourage the activation of the factors and own resources needed to launch a self-sustaining endogenous development process. It is also important to implement public programs that stimulate the development of an innovative economy, including through the formation of regional clusters and the development of cooperation networks between regional actors.

Secondly, appropriate coordination of public policies at both central and regional level is needed to launch effective regional development processes. Cooperation between the regional innovation system and the programs and activities of the national innovation system is also important. Thirdly, regional policy should have an appropriate level of decentralized implementation, as it allows programs to be better adapted to regional needs and implementation mechanisms that take account of regional specificities. Fourthly, the national model of capitalism (Grosse, 2007, p. 135) has a significant impact on the shape of public policies for regions (especially those classified as outermost regions). Public policies are particularly important when there are disparities and inequalities in development at the regional level.

Summary

The dynamic, harmonious and sustainable development of the region, as a complex socio-economic system, can be characterized by the capacity to act and the pro-development behaviour of the actors involved in the system. In this context, the level of innovation of the various factors that affect the production, diffusion, absorption and transfer of innovation in the region is important. The factors affecting the level of innovation and competitiveness are, in particular, companies located in the region, their R&D potential (universities, research centers) and the quality of the broader business environment, mainly created by public institutions (local authorities, business community institutions, etc.). The innovative development of the region is largely a product of the innovativeness of the entities that make up the regional innovation system - enterprises, universities, research and development units, business environment institutions and public administration.

The article’s characteristics and analyzes confirm that the level and nature of social capital as an internal resource of the region is a significant factor in its development. Social capital (in combination with human and intellectual capital) is integrated into a broader institutional and cultural context – value systems, rules and norms of behavior that organize social cooperation between individuals, groups and institutions based on trust, responsibility and reciprocity.

For the development of the region, it is important to develop a network of acting actors in the region, which consists of public authorities, enterprises, scientific and research institutions and institutions from the business environment. Thus, a regional innovation environment is developing, consisting of both tangible elements - enterprises and extensive technical infrastructure - and intangible elements - in the form of knowledge resources, social capital, values, norms, rules and behavioral patterns. Through regional actors' cooperation, it is possible to make better use of common endogenous development resources and increase the competitiveness of the region.

It should be stressed that public institutions, especially in the area of regional administration (self-government and government), can only effectively stimulate the growth of innovation and the competitiveness of the regional economy, when they are actively involved in the system of inter-related promotional initiatives undertaken by business, science and business Community actors. The level of effectiveness of enabling actions and the involvement of regional authorities in the process of improving the region's wider competitiveness is largely dependent on the ability to develop and effectively implement regional policies and public programs on a broader national and European scale.

References

1. Adamowicz, M. (2020). Uwarunkowania rozwoju lokalnego w kontekście kształtowania społeczno-ekonomicznego rozwoju Polski. *Studia Ekonomiczne i Regionalne Economic and Regional Studies, no. 2, vol. 13*, pp. 145-169. DOI: https//doi.org/10.2478/ers-2020-0011.
2. Aula, P., Harmaakorpi, V. (2008). An Innovative Milieu – A View on Regional Reputation Building: Case Study of the Lahti Urban Region. *Regional Studies, vol.42(4),* pp. 523-538.
3. Aydalot, P.H. (1986). Trajectoires technologiques et milieux innovateurs. In: P.H. Aydalot (ed.), *Milieux innovateurs en Europe.* Paris: GREASE.
4. Bartkowski, J. (2007). Kapitał społeczny i jego oddziaływanie na rozwój w ujęciu socjologicznym. In: M. Herbst (ed.), *Human capital and social capital and regional development.* Warszawa: Scholar.
5. Bhanduri, H., Yasunch K. (2009). What is social capital? A comprehensive revive of the concept. *Asian Journal of Social Science, nr 37,* pp. 480-510.
6. Blake, E.J. (1989). *Planning Local Development. Theory and Practice.* London-New Delhi: Sage Publishing.
7. Boguski, J. (2008). Rola uniwersytetu w regionalnym systemie innowacji. *Nauka i Szkolnictwo Wyższe, 1(31),* pp. 55-64.

8. Bojar, M., Machnik-Słomka, J. (2014). Model potrójnej i poczwórnej helisy w budowaniu współpracy sieciowej dla rozwoju innowacyjnych projektów regionalnych. *Zeszyty Naukowe Politechniki Śląskiej. Seria Organizacja i Zarządzanie, z. 76,* pp. 99-111.
9. Bourdieu, P. (1986). The Forms of Capital. In: J.G. Richardson (ed.), *Handbook of Theory of Research for the Sociology of Education.* New York: Greenwood press.
10. Castels, M., Hall, P. (1994). *Technopoles of the World.* London-New York: Routledge.
11. Coleman, J.S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, vol. 94 (supplement).*
12. Cooke, P. (1997). Planowanie regionalnej sieci innowacyjnej: doświadczenia regionalnej polityki innowacyjnej Unii Europejskiej w Południowej Walii. In: W. Kozak, A. Kukliński, J. Szlachta (eds.), *Polityka rozwoju regionalnego; innowacje i restrukturyzacje.* Warszawa: Polska Agencja Rozwoju Regionalnego, Uniwersytet Warszawski, EUROREG.
13. Dasgupta, P., Serageldini, I. (eds.) (2000). *Social Capital; A Multifaceted Perspective.* Washington, DC: The World Bank.
14. Etzkowitz, H. (2002). Incubation of incubators: innovation as a triple helix of university-industry-government networks. *Science and Public Policy, vol. 29,* pp. 115-128.
15. Etzkowitz, H., Leydesdorff, L. (1997). Introduction Universities in the global knowledge economy. In: H. Etzkowitz, L. Leydesdorff (eds.), *Universities and the Global Knowledge Economy: A Triple Helix of University-Industry-Government Relations.* London: Printer.
16. Florida, R. (2004). *The Rice of the Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Live (Paperback).* New York: Basic Books.
17. Florida, R., Cushing, R., Gates, G. (2002). When social capital stifles innovation. *Harvard Business Review, vol. 80(8),* pp. 30-31.
18. Fukuyama, F. (1997). *Zaufanie: kapitał społeczny a droga do dobrobytu*. Warszawa-Wrocław: PWN.
19. Gałązka, A. (2017). Teoretyczne podstawy rozwoju regionalnego – wybrane teorie, czynniki i bariery rozwoju regionalnego. *Studia BAS, nr 1(49),* pp. 9-61.
20. Garcia-Aracil, A., Fernandez De Lucio, I. (2008). Interactions in Peripheral European Region: An Empirical Study of Valencian Firms. *Regional Studies, vol. 42(2),* pp. 215-227.
21. Gorzelak, G., Bąkowski, A., Kozak, M., Olechnicka, A., Płoszaj, A. (2006). *Polskie regionalne strategie innowacji: ocena i wnioski dla dalszych działań.* Warszawa: Regional Studies Association – Sekcja Polska.
22. Gorzelak, G. (2009). Fakty i mity rozwoju regionalnego, *Studia Regionalne i Lokalne,* Nr 2(36), s.5-27.
23. Grosse, T.G. (2007). *Innowacyjna gospodarka na peryferiach?* Warszawa: Foundation for the Institute of public Affairs.
24. Gunasekara, Ch. (2006). Universities and Associative Regional Governance: Australia Evidence in Non-core Metropolian Regions. *Regional Studies, vol. 40(7),* pp. 727-741.

25. Hayrinen-Alestalo, M., Peltola, U. (2006). The Problem of a Market-oriented University. *Higher Education, vol. 52, no. 2,* pp. 251-281.
26. Herbst, M. (ed.) (2007). *Kapitał ludzki i kapitał społeczny a rozwój regionalny*. Warszawa: Scholar.
27. Huggins, R., Kitagawa, F. (2012). Regional policy and university knowledge transfer: Perspectives from devolved regions in the UK. *Regional Studies, no. 46(6),* pp. 817-832.
28. Jałowiecki, B., Szczepański, M.S., Gorzelak, G. (2007). *Rozwój lokalny i regionalny w perspektywie socjologicznej*. Tychy: Śląskie Wydawnictwo Naukowe, Wyższa Szkoła Zarządzania i Nauk Społecznych w Tychach.
29. Jewtuchowicz, A., Pietrzyk, I. (2003). Rozwój terytorialny. Teoria a polska rzeczywistość (przykład regionu łódzkiego. In: A. Klasik (ed.), *Zarządzanie rozwojem terytorialnym w kontekście integracji europejskiej,* Katowice – Chorzów: KPZK PAN, Komisja Studiów nad Przyszłością Górnego Śląska PAN, O/Katowice, Akademia Ekonomiczna im. K. Adamieckiego w Katowicach, Górnośląska Wyższa Szkoła Przedsiębiorczości im. K. Godenki.
30. Korenik, S. (2003). *Dysproporcje rozwoju regionów Polski – wybrane aspekty*. Wrocław: Wydawnictwo Akademii Ekonomicznej im. Oskara Langego we Wrocławiu.
31. Korenik, S. (2012). Współczesne uwarunkowania rozwoju regionalnego i lokalnego w realiach polskich. *Zeszyty Naukowe Uniwersytetu Szczecińskiego. Ekonomiczne Problemy Usług, nr 99,* pp. 111-123.
32. Lawton-Smith, H. (2006). *Univercities, innovation, and the Economy*. London: Routledge.
33. Niedzielski, P. (2008). Innowacyjność. In: K.B. Matusiak (ed.), *Innowacje i transfer technologii. Słownik pojęć.* Warszawa: Polska Agencja Rozwoju Przedsiębiorczości.
34. Nowakowska, A. (2009). Regionalny kontekst procesów innowacji. In: A. Nowakowska (ed.), *Budowanie zdolności innowacyjnych regionów*. Łódź: Wydawnictwo Uniwersytetu Łódzkiego.
35. Olechnicka, A. (2012). *Potencjał nauki a innowacyjność regionów*. Warszawa: Scholar.
36. Paldam, M. (2000). Social capital: One or many? Definition and measurement. *Journal of Economic Surveys, no. 14*, pp. 629-653.
37. Pietrzyk, I. (2000). *Polityka regionalna Unii Europejskiej i regiony w państwach członkowskich.* Warszawa: PWN.
38. Piotrowska-Piątek, A. (2017). Trzecia misja szkół wyższych w Polsce w kontekście ich roli w rozwoju regionalnym. *Edukacja Ekonomistów i Menedżerów, 44(2)*, pp. 111-129. https://doi.org/10.5604/01.3001.0010.5936.
39. Prawelska-Skrzypek, G. (2012). Zmieniająca się rola uniwersytetów w regionalnej polityce innowacyjnej. *Samorząd Terytorialny, no. 10*, pp. 21-27.
40. Przygodzki, Z. (2007). Konkurencyjność regionów. In: J. Chądzyński, A. Nowakowska, Z. Przygodzki (eds.), *Region i jego rozwój w warunkach globalizacji*. Łódź: CeDeWu.

41. Puślecki, Z.W. (2017). Model potrójnej helisy (*triple helix*) we wzroście efektów innowacyjnych i konkurencyjności. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, nr 475,* pp. 238-257, DOI: 10.15611/pn.2017.475.21.
42. Putnam, R.D. (1995). *Demokracja w działaniu. Tradycje obywatelskie we współczesnych Włoszech*. Kraków-Warszawa: Znak, Fundacja im. S. Batorego.
43. Storper, M. (1995). Regional "worlds" of production: learning and innovation in the technology districts of France, Italy and the USA. *Regional Studies, vol. 27*, pp. 433-455.
44. Szczepański, M.S., Bierwiaczonek, K., Nawrocki, T. (eds.) (2008). *Kapitały ludzkie i społeczne a konkurencyjność regionów.* Katowice: Wydawnictwo Uniwersytetu Śląskiego.
45. Tether, B.S., Tajar, A. (2008). Beyond industry – university – links: Sourcing knowledge for innovation from consultants, private research organizations and the public science – based. *Research Policy, no. 37*, pp. 1079-1095.
46. Trutkowski, C., Mandes, S. (2005). *Kapitał społeczny w małych miastach*. Warszawa: Scholar.
47. Tura, T., Harmaakorpi, V. (2005). Social Capital in Building Regional Innovative Capability. *Regional Studies, vol. 39(8*), pp. 1111-1125.
48. Tuziak, A. (2013). *Innowacyjność w endogenicznym rozwoju regionu peryferyjnego. Studium socjologiczne*. Warszawa: Scholar.
49. Tuziak, A. (2017). Innowacyjność i kapitał ludzki w rozwoju regionu. *Nierówności społeczne a Wzrost Gospodarczy, no. 52/4*, pp. 106-120, DOI: 1015584/nsawg.2017.4.7.
50. Tuziak, A. (2021). Innovativeness as a resource for the development of a peripheral region. *Scientific Papers of Silesian University of Technology. Organization and Management Series, No. 152*, pp. 219-231, DOI: 10.29119/1641-3466. 2021.152.17.
51. Tuziak, A., Tuziak, B., Bobrecka-Jamro, D., Jastrzębska, W. (2006). *Innowacyjność i rozwój. Zakres i formy aktywności innowacyjnej administracji publicznej Podkarpacia w procesie trwałego rozwoju regionu.* Rzeszów: Wydawnictwo Uniwersytetu Rzeszowskiego.