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IDENTIFICATION AND DELIMITATION OF PROBLEM AREAS ON THE EXAMPLE OF THE WEST POMERANIAN VOIVODESHIP (POLAND, EU)

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ABSTRACT: In Poland, even though there is already richer literature on the subject of the regional economy, there is still a need for knowledge on various dimensions and aspects of the development of problem areas. The reason for this is to search for ways to boost the country's development, to find new opportunities to activate both growth centres, as well as, and perhaps above all, to activate underdeveloped, backward areas burdened with hidden unemployment in agriculture and to activate those areas which lack features that favour the development of the modern, knowledge-based economy of the 21st century. The key problem addressed in this article is „what criteria should be taken into account when delimiting the problem areas in order for public intervention to be effective and to contribute to the desired changes?”

This article presents the method of delimiting problem areas on the example of the “Five Capitals” model. The case study is the West Pomeranian Voivodeship in Poland (EU).

KEYWORDS: problem areas, delimitation

Introduction

The problem area and development in a sustainable aspect: what connects these two phenomena, and what makes the interactions between them interesting and an important subject of study? The answer can be found in many fields: what today determines the nature of problematic areas, how to achieve the assumptions of sustainable development, especially in the social aspect, in a situation where there is a tendency of increasing differences in socio-economic development and increasing inequalities on various levels (economical, social, educational, digital/technological, income levels, etc.); what criteria should be taken into account when delimitating problem areas? The scale of these differences is increasing and becoming a contemporary challenge for the policy of sustainable development (7th Report, 2017). In research on the spatial differentiation of socio-economic development, one of the most important threads vividly discussed in the literature on the subject is the question of the causes of this process. Questions about the causes, i.e. the conditions, determinants or factors favouring the emergence and, in principle, the deepening or eliminating the degree of socio-economic differentiation in geographical space, seems to be of fundamental nature (Chojnicki, 2011).

The subject of this article is part of the issue of sustainable development because the sustainable development postulate assumes such an approach to planning and the decision-making process, which is aimed, among others, at achieving a real and lasting reduction of social and economic differences, and at meeting the needs of the present generations without reducing the possibility of meeting the needs of future generations, and at the same time providing the society with a long-term vision of development. In Poland, even though there is already a richer amount of literature on the subject of the regional economy, there is still a need for knowledge on various dimensions and aspects of the development of problem areas. The reason for this is to look for ways to boost the country's development, to find new opportunities to activate both growth centres, as well as, perhaps above all, to promote the underdeveloped, backward areas burdened with hidden unemployment in agriculture and lacking features that favour the development of the modern, knowledge-based economy of the 21st century. The key problem addressed in this article is what criteria should be taken into account when delimiting the problem areas for public intervention to be effective and contribute to the desired changes.

An overview of the literature

There are many different proposals for defining this concept in the scientific literature. Problem areas in scientific literature are also called conflict, depressive, peripheral, difficult, handicapped, delayed in development (underdevelopment), areas of threats or production reserves, or simply less developed areas (Śleszynski & Mazurek, 2020). For example, according to Zagożdżon (Zagożdżon, 1988), a problem area is that part of the geographical space that is characterised by negative phenomena of the social, economic and technical spheres, causing specific internal anomalies (in the spatial structure) and the abnormal nature of that said area. On the other hand, according to Ciok (1996), the problem area is characterised by the low effectiveness of socio-economic and spatial structures. It, therefore, requires solutions to the existing problems as part of planning and regional policy.

Generally speaking, the problem area is a part of the geographical space characterised by the occurrence of negative phenomena from the socio-economic and technical spheres, causing internal anomalies and abnormalities in that area (Bański, 1999). There are many criteria and ways of delimiting problem areas (e.g. high unemployment, depopulation, low GDP per capita, etc.).

In Poland, problem areas are most often considered to be areas characterised by a low level of economic development, showing poor development dynamics and characterised by negative social effects of the transformation process. In the EU, problem regions are defined as regions with a low GDP per capita and persistent crisis structures that require the restructuring of the economy. Without government intervention programs, these regions cannot overcome their problems and cannot generate sufficient funds for development on their own. Their chances for development derive from:

- the ability to use their own economic potential and to create income opportunities (apart from agriculture and forestry),
- their connection to the cross-regional (supra-regional) network of technical infrastructure,
- the improvement of a nearby supply of services (hospitals, schools, shops, offices),
- the care and restoration of natural advantages of the environment and their good usage.

The problem region is characterised by specific geographical, economical and cultural features. The geographical features are:

- few means of transport of the residents,
- high absolute and relative access costs (of getting into and out of that area),
- weak status in the local transport network,

- difficult access to other problem matters,
- peripherality,
- lack of natural resources.

The economical features are:

- raw material production,
- uncomplicated production system,
- lack of entrepreneurial attitudes,
- export of labor,
- import of final goods,
- predominance of traditional sectors of business (mainly agriculture) with little added value per employee,
- low income of households and the public sector (weak tax base),
- poor infrastructure,
- low qualifications of the population (including the elite), mainly due to the long-term migration outflow of the most ambitious and educated people,
- low organisational culture resulting from the underdevelopment of public institutions or low investment attractiveness.

Cultural features are:

- the need to bear the consequences of other social models,
- using symbols created outside the region.

In rural areas, the phenomenon of social marginalisation is increasing. This phenomenon is related not only with the process of exclusion, but also with adapting to life in marginal conditions. The main cause of marginalisation lies in the set of phenomena that make up the deactivation process, which causes a withdrawal to the basic dimensions of existence, to self-limitation, to living on benefits and pensions, to looking for sources of income in activities typical of the pre-agricultural era, i.e. gathering, fishing and hunting as well as theft. In the mental sphere, such an attitude may lead to the phenomenon of “self-taught” or “unconsciously acquired” helplessness. In the social sphere, this disintegrates rural communities and the occurrence of social pathologies. Therefore, rural areas can be classified as problem areas.

Economic capital includes everything that is traditionally understood as capital (resources produced that are used to produce other goods and services). This capital includes, for example, machines, tools, buildings, and infrastructure (Józefowicz et al., 2020).

Natural capital includes all forms of the ecosystem and natural resources that contribute to creating social well-being. Thus, apart from the traditionally understood natural resources (such as wood, water, energy and mineral resources), natural capital also includes natural resources that cannot be easily assessed, e.g. biodiversity, or an ecosystem that provides ecological services such as filtering water and air.

Natural resources used in the production process create specific goods. Their consumption affects the level of social welfare, measured by the general utility. Fully conscious use of the environment does not negate human access to its natural resources. They can be a factor of material production and a source of satisfying various human needs. Broadly understood, social capital is necessary for the proper functioning and development of societies; it is the essential element of the natural environment, next to human capital (Łuszczuk, 2010).

Natural values constitute the conditions defined as development-generating conditions, which affect the possibilities of the region's revival. However, it should be remembered that specific segments of the natural resources create an obstacle in implementing development plans, thus limiting their prospects. Resources have their value, depending on the accessibility to a given area, location, physical properties and development (Józefowicz et al., 2020).

One of the most important issues in the ongoing debate on regional policy is defining the main factors influencing regional development. According to G. Gorzelak (Gorzelak, 2007), the contemporary economy is shaped by three interrelated processes: globalisation, competition and innovation. Permanent competitive advantage is gained by those countries, regions and cities where enterprises capable of creating innovations are concentrated (because innovations create demand on the market). Quantitative factors of location (availability of natural resources, workforce, mass transport infrastructure, etc.) have been replaced by qualitative factors (qualifications, reliable, modern and fast infrastructure, research and development facilities, friendly and efficient public authorities, business support infrastructure, good living conditions and the beauty of the surrounding nature). As it is known, the concept of innovation was first introduced into the world economic literature by J. A. Schumpeter (Schumpeter, 1960), who at the same time formulated the thesis that the motivation and the ability to create, absorb and imitate innovation determines the development of an enterprise to a much greater extent than just mere financial capital of an enterprise and therefore determines its innovation level. Progressive globalisation forces enterprises and national economies to search for ways and solutions to strengthen their innovativeness. This is the main strategic goal for most enterprises, which, as J. Schumpeter proves, comes down to introducing a new product to the market, a new production method, opening a new market, launching a new source of raw materials or semi-finished products, and implementing new organisation or structure in the enterprise. Innovation can therefore be of a technical, economic or organisational nature.

Drucker (1992) sees innovation as "a specific entrepreneurial tool that gives resources new opportunities to create wealth." However, such a tool is not created in a vacuum. It is rarely the result of spontaneous, unorganised

activities. The source of innovation in enterprises may be the work of their own design offices, laboratories, R&D (Research and Development) works carried out by them, as well as the knowledge of managerial staff and employees who submit their proposals in the form of rationalisation, proposals, design, technological and organisational changes. However, the more complex the undertaking and the more modern the technology, the stronger the need for creating connections and interdisciplinary contacts and efficient organisation enabling partnership cooperation between the enterprise and the institutions surrounding it. However, the constant changeability of the economic reality surrounding us requires a less technical and more social approach to the issue of innovation. This is reflected, *inter alia*, in the views of Drucker, who believes that innovation should be considered together with the role of the individual person in the production and organisational processes and that innovation should be treated as a specific instrument of entrepreneurship, giving resources new opportunities to create wealth. The link between innovation and entrepreneurship is so strongly emphasised by him that he makes innovation the primary tool and characteristic of entrepreneurial people, enabling them to transform emerging changes into opportunities to start new business activities or to provide new services. Innovation, and Industry 4.0 in particular, is gaining much attention because of its potential impact on humanity, how we will live, work and how economies will function in the future. Available studies indicate that innovation and artificial intelligence (AI) have a substantial impact on achieving sustainable development goals (SDGs), in particular, on reducing poverty in underdeveloped areas (Mhlanga, 2021).

Nowadays, the role of intangible resources of an organisation is increasing, which contributes to the success of the market. Until now, most organisations have focused their activities primarily on material resources, *i.e.* financial resources, treating intangible resources as not economically measurable components. The constant changes in the organisation's environment, however, contributed to a new perspective on intangible resources. Organisations understood that it was they themselves who influenced the creation of external effects for their entire organisation. Among the intangible resources of an organisation, one can mention, among others, social capital, which is one of the components of intellectual capital, and currently, this subject enjoys a lot of attention from researchers. Despite the great interest in the subject of social capital, there is no single, universally accepted definition of this concept. Many authors dealing with this issue also disagree with the components of social capital. This term is understood both in relation to an individual and to the entire group of people and can also be applied to economic or political, social and cultural relations. Some researchers treat social capital as simply capital, and it is associated with a set of elements enabling its further deve-

lopment, while others treat it as a resource, i.e. something that can be exhausted.

The concept of social capital was popularised by R. Putman (Putman et al., 1995, p. 258), according to which social capital concerns such features of society and organisation as trust and loyalty, social responsibility, general norms of good social behaviour that can increase the efficiency of society by facilitating coordinated actions: "Like other forms of capital, social capital is productive because it enables the achievement of certain goals that would not be possible to achieve without it". Nahapiet and Ghoshal (1988) interpret social capital as "the sum of current and potential resources involved in the available (and obtained through them) networks of ties possessed by individuals and as well as by the social unit." In the modern economy, the market mechanism is supported by social capital, which is treated as a co-determining factor in economic development, determining the ability to compete and innovate at the micro- and macro-economic levels (Wildowicz-Giegiel, 2008). The social capital of civic communities, characterised by high levels of mutual trust, norms of commitment to the public good and a dense network of public associations, promotes economic growth (Pachura & Kozak, 2006). It is a factor that determines the differential level of wealth of societies under conditions of the same or similar development potential.

As argued by Wolfe and Nelles, social capital is a key factor in the success of many rapidly growing clusters and economies. Social capital, which they also call "civic capital", grows out of the intense interaction of key local individuals, sustaining cluster social dynamics of groups of people centred around that person. Local communities characterised by this level of integration can formulate strategies that change the trajectory of regional economic development. The initiation of this process depends on the ability to cooperate and the ability to cross boundaries, both geographic and social boundaries. This level of community-economy relationship brings lasting benefits and supports effective cluster development (Wolfe & Nelles, 2008, p. 374).

An analysis of selected definitions of social capital shows that this concept is an extension of human capital. This is because its scope includes human resources and the network of connections between them. Among the important elements of social capital are competence (knowledge, skills, experience), norms, commitment, networks, trust, the community and reciprocity of actions. Accordingly, social capital is defined as competencies and shared social norms, including trust and commitment, which, thanks to the network of connections, contribute to the achievement by the organisation or economy of measurable benefits in the form of profit or increased competitiveness. Among contemporary development factors, governance and cultural endowment are increasingly attracting attention in addition to those factors mentioned above.

It is assumed that new methods of governance are characterised by one of the following features (Kolarska-Bobinska, 2009):

1. Non-hierarchical management method, deviating from the command instruments in favour of incentives, encourages voluntary cooperation.
2. We are introducing the mechanisms of social participation to the practice of carrying out tasks.
3. We are striving for greater transparency and openness in administration and a better flow of information between society and the administration.
4. The high degree of computerisation. Without this element, one cannot talk about the formation of a knowledge-based economy and full empowerment of regions and the creation of new elements of the modern economy from them, which significantly affect contemporary socio-economic life (Korenik & Mempel-Śniezyk, 2006, pp. 343-344).

In the World Bank's "Monitoring Environmental Progress Report" (World Bank, 1995), we find an attempt to estimate the sources of world wealth in the context of three types of capital: (natural, economic and human – the latter includes social and human capital in the sense of the four capitals model). According to this source, 20% of the world's wealth goes to Natural Capital, 16% to Produced Assets, and the rest, 64%, to Human Resources. So, as you can see from the example above, people and their abilities are the most important resource and the basis for the functioning of the economy.

Research methods

The research concept assumes the delimitation of problem areas based on contemporary factors of regional development – the model of the five capitals. The basic assumption of the model of this study was the gradability of the analysis of the effects. The study was multidimensional and multi-stage, as shown in Figure 1. Since modern human and social capital is decisive for development, actions should be taken to support and develop the capital mentioned above. Considering this, several recommendations relating to the analysed issue are formulated below.

Effective creation of development potential requires that problem areas be designated based on the contemporary development paradigm. This means that the main criteria for delimiting them should be innovative, human and social capital. An additional criterion is a natural and economic capital.

In practice so far, problem areas have been designated based on the effects (ex-post), i.e. the assigned scope of the intervention should concern the effects, e.g. low GDP, high unemployment, etc., based on the causes (ex ante) of their formation and determination of cause-effect relationships. Therefore, to properly target public interventions, regional and local systems

should be diagnosed in terms of innovation, human and social capital, and natural and economic capital.

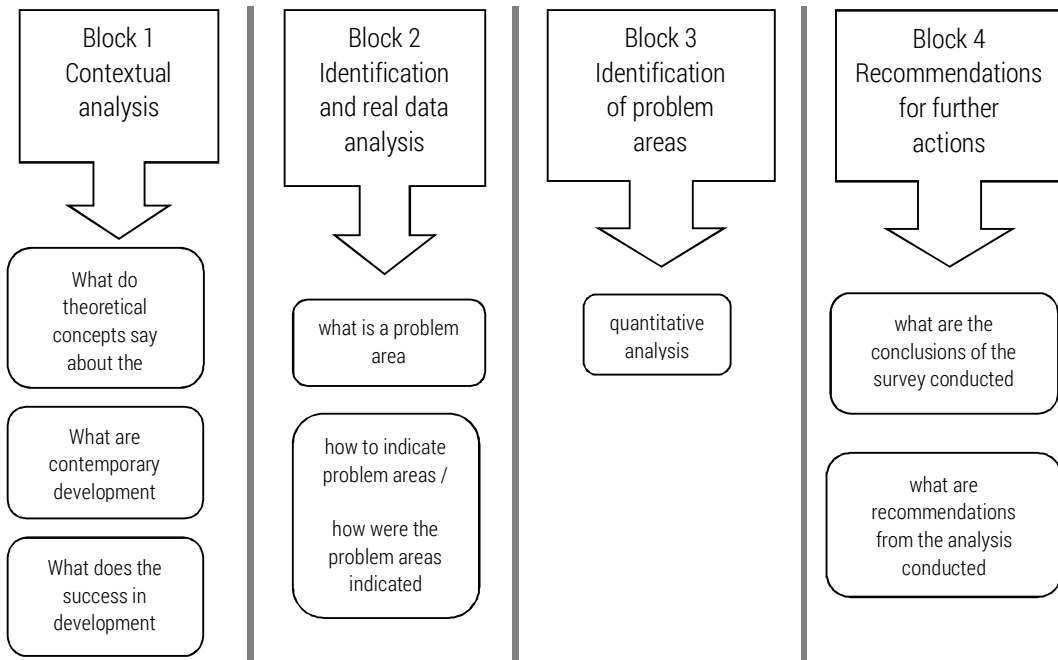


Figure 1. Phases of research

Additionally, when delimiting problem areas, quantitative-secondary research was supplemented with primary-qualitative research, as shown in Table 1.

Table 1. Linking research questions with the modules present in the quantitative and qualitative research

No.	Module	Research Question
1	Economic Capital	How do the respondents assess the areas that make up the development of the economy in the area managed by a given local government unit? Which areas require special improvement / attention on the part of the voivodeship self-government / central authority?
2	Social Capital	How do the respondents assess the areas that make up the development of social capital in the area managed by a given local government unit? Which areas require special improvement / attention on the part of the voivodeship self-government / central authority?

No.	Module	Research Question
3	Human Capital	How do the respondents assess the areas that contribute to the development of human capital in the area managed by a given local government unit? Which areas require special improvement / attention on the part of the voivodeship self-government / central authority?
4	Natural Capital	How do the respondents assess the areas that make up the development of natural capital in the area managed by a given local government unit? Which areas require special improvement / attention on the part of the voivodeship self-government / central authority?
5	Innovative Capital	How do the respondents assess the areas that make up the development of innovative capital in the area managed by a given local government unit? Which areas require special improvement / attention on the part of the voivodeship self-government / central authority?

The research was carried out in accordance with the adopted scope of the subject. Three techniques were used:

- DESK RESEARCH (analysis of existing data).
- CATI/CAWI (telephone interviews / Internet survey).
- ITI (telephone in-depth interviews).

The use of triangulation allowed to obtain exhaustive research material, which allowed for a thorough analysis of the scope of the subject research by capturing various aspects of the subject matter. The strengths of each method were used while neutralising their weaknesses. Consequently, both quantitative and qualitative techniques were used in the data collection process. In this way, empirical material was obtained, which contributed not only to static data analysis, but also to the possibility of collecting explanatory information.

For the purposes of this study, the desk research analysis included a statistical analysis (grouping of communes, counties – on the basis of publicly available CSO data, the grouping of 3 counties with the smallest and the greatest development perspective and 10 communes with the smallest and greatest development perspective). Depending on the availability of CSO data, the analysis covered the level of counties and/or communes of the West Pomeranian Voivodeship (Poland, EU):

Economic capital

- The share of the registered unemployed in the working-age population (data for 2019).
- Entities entered in the REGON register (i.e. National Business Registry Number in Poland) for 10,000 population (data for 2016).
- Investment outlays in enterprises in PKD (Polish Classification of Business Activities, meaning what type of business it is, e.g. production, trade, education, etc.) 2007 (data for 2018).

- Built-up and urbanised land, communication areas, and roads [ha] (data for 2014).
- Income to the budget of local government units (data for 2019).

Human capital

- The population at post-working age per 100 persons at working age (demographic burden, data for 2016).
- The population at post-working age per 100 people in pre-working age (demographic burden, data for 2016).
- Number of children aged 3-5 covered by preschool education per 1 thousand total children (data for 2018).
- The natural increase of all inhabitants (data for 2019).
- The share of the long-term unemployed, i.e. registered by the duration of unemployment – for a period of over 12 months (data for 2019).
- Higher education – (data for 2011).
- Secondary education – (data for 2011).
- Vocational education – (data for 2011).
- Primary education – (data for 2011).
- Quality of education / maturity exam pass rate in general for secondary schools [%] – (data for 2016).
- Quality of education / maturity exam pass rate in upper secondary vocational schools [%] – (data for 2016).
- Percentage of children aged 3-5 covered by preschool education – (data for 2018).

Social capital

- Number of foundations, associations and social organisations per 10 thousand.
- Inhabitants (data for 2017).
- Election turnout – local elections in 2018 – voivodship assemblies.
- Election turnout – 2018 local elections – powiat councils.
- Election turnout – local elections in 2018 – municipal and city councils.
- Election turnout – local elections in 2018 – meirs, mayors, village leaders (1st round of elections).

Natural capital

- Forest area – forest cover in % (level: counties, communes; data for the year: 2019).
- Area of legally protected areas (level: counties, communes; data for the year: 2019).

Innovative capital

- Investment outlays in enterprises (counties; data for the year 2018).
- Financing and co-financing of EU programs and projects (communes; data for the year 2019).

The interviews were conducted using the CAWI technique (Computer-Assisted Web Interview). CAWI is a face-to-face interview technique conducted over the Internet. The respondent receives a message via e-mail with a link to complete the questionnaire, in which he is asked to complete the questionnaire himself. To increase efficiency, a telephone reminder will be used to remind you about the test.

If the respondents did not answer to other forms of an interview, the CATI (Computer Assisted Telephone Interview) technique was implemented. It is a quantitative research technique that uses the work of interviewers contacting respondents by phone. During the contact, the interviewer reads out to the respondent the questions included in the electronic version of the questionnaire, including the answers.

As part of the study, 131 interviews were carried out, including 113 interviews with representatives of communes (mayor, commune head or a person directly indicated by him) and 18 interviews with representatives of counties (the starost/district governor or a person directly indicated by him). It was assumed that representatives of individual communes, cities and counties taking part in the survey will undertake to evaluate the individual factors that contribute to the development of economic, social, natural and innovative capital. Then, they will present the areas that, in their opinion, require special improvement and attention from the voivodeship self-government or the central government. As a result of the research, it turned out that it was not possible to reach all units within the prescribed period. The table below shows the assumed structure of the sample and the completed sample.

Table 2. The assumed sample structure vs. Realized sample in the CAWI / CATI survey

Group of respondents	Established sample structure	Realized attempt
Municipalities	113	103
Counties	18	14

Individual in-depth interviews are one of the basic methods of qualitative research, consisting in a detailed, in-depth conversation with the respondent. The interviews were conducted based on a standardised scenario.

The aim of the study using the technique of individual interviews was to obtain the precise information and to expand knowledge related to the topic. The basis for the interpretation of the results is an in-depth analysis of the information obtained in the series of interviews.

The adopted research methodology provided for the implementation of in-depth interviews with the use of targeted selection with representatives of communes with the highest and the lowest development potential (areas of growth and stagnation). Within each capital, 4 interviews were carried out ($n = 3$ in communes with the lowest development potential and $n = 1$ in communes with the highest development potential).

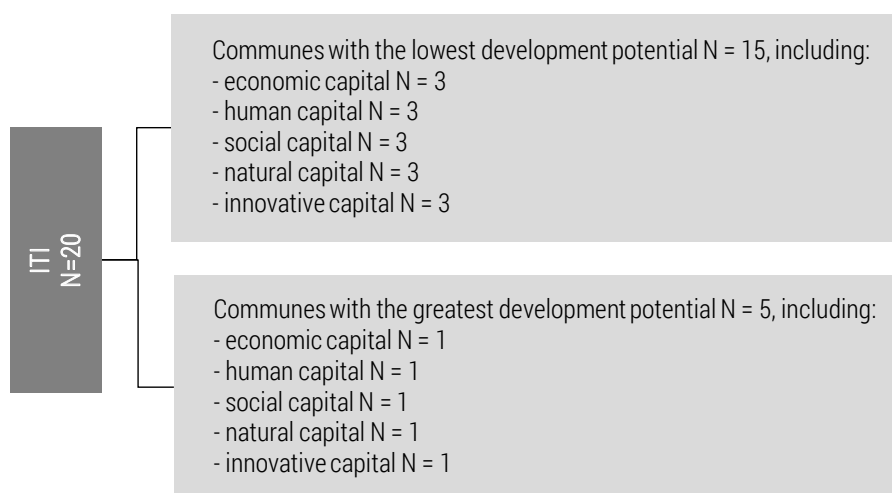


Figure 2. The structure of the realised sample in the ITI survey

Supplementing the secondary quantitative research with qualitative-primary research allowed for a more complete analysis of the causes of the low development potential of the studied area and the diagnosis of the sources of the “problematic area”.

Correct diagnosis of the causes of a low level of development will allow for the proper use of impact tools as well as effective and efficient public policies.

According to the administrative division currently in force in Poland, the West Pomeranian Voivodeship consists of 113 communes.

After determining the order of communes in a given criterion, from 1 to 113 points were awarded in each of the 5 areas. In total, 452 points could be obtained (in points A to D). On this basis, a collective list of communes with the largest and the smallest development potential was prepared.

Table 3. Development potential of communes – economic capital

Communes with the greatest development potential	Communes with the lowest development potential
Szczecin (urban commune)	Brzeźno (rural commune)
Goleniów (urban-rural commune)	Dobra (urban-rural commune)
Gryfino (urban-rural commune)	Krzęcin (rural commune)
Koszalin (urban commune)	Białogard (rural commune)
Stargard (urban commune)	Świdwin (rural commune)
Wałcz (urban commune)	Radowo Małe (rural commune)
Kołobrzeg (urban commune)	Rąbino (rural commune)
Gryfice (urban-rural commune)	Szczecinek (rural commune)
Mysłibórz (urban-rural commune)	Sławoborze (rural commune)
Dobra (Szczecińska) (rural commune)	Świerzno (rural commune)

After determining the order of communes in a given criterion, from 1 to 113 points were awarded in each of the 5 areas. In total, 452 points could be obtained (in points A to D). On this basis, a collective list of communes with the largest and the smallest development potential was prepared.

Table 4. Development potential of communes – human capital

Communes with the greatest development potential	Communes with the lowest development potential
Koszalin (urban commune)	Szczecinek (rural commune)
Stargard (urban commune)	Białogard (rural commune)
Szczecinek (urban commune)	Darłowo (urban commune)
Kołobrzeg (urban commune)	Stargard (rural commune)
Sławno (urban commune)	Marianowo (rural commune)
Wałcz (urban commune)	Wałcz (rural commune)
Międzyzdroje (urban-rural commune)	Sławno (rural commune)
Białogard (urban commune)	Świdwin (rural commune)
Darłowo (rural commune)	Stara Dąbrowa (rural commune)
Dziwnów (urban-rural commune)	Kołobrzeg (rural commune)

The analysis of social capital did not take into account the turnout in the local government elections for the functions of president, mayor and commune head in the second round during the 2018 elections. In the territory of the West Pomeranian Voivodeship, there were communes where the second round of elections was not necessary (the head of the commune, mayor, and

president were elected already in the first round), therefore only the results of the voter turnout in the first round were taken into account to make the analysis more consistent.

After determining the order of communes in a given criterion, from 1 to 113 points were awarded in each of the 5 areas. In total, it was possible to get 565 points (in points A to E). On this basis, a collective list of communes with the largest and the smallest development potential was prepared.

Table 5. Development potential of communes – social capital

Communes with the greatest development potential	Communes with the lowest development potential
Nowe Warpno (urban-rural commune)	Rymań (rural commune)
Ustronie Morskie (rural commune)	Przybiernów (rural commune)
Kobylanka (rural commune)	Suchań (urban-rural commune)
Rewal (rural commune)	Siemysł (rural commune)
Cedynia (urban-rural commune)	Stepnica (urban-rural commune)
Mielno (urban-rural commune)	Dolice (rural commune)
Stare Czarnowo (rural commune)	Resko (urban-rural commune)
Trzczańsko-Zdrój (urban-rural commune)	Dobrzany (urban-rural commune)
Dobra (Szczecińska) (rural commune)	Dygowo (rural commune)
Postomino (rural commune)	Banie(rural commune)

Table 6. Development potential of communes – natural capital

Communes with the greatest development potential	Communes with the lowest development potential
Człopa (urban-rural commune)	Warnice (rural commune)
Drawno (urban-rural commune)	Stargard (rural commune)
Manowo (rural commune)	Pyrzyce (urban-rural commune)
Wierzchowo (rural commune)	Stawno (rural commune)
Mirostawiec (urban-rural commune)	Darłowo (urban commune)
Kalisz Pomorski (urban-rural commune)	Kołobrzeg (rural commune)
Borne Sulinowo (urban-rural commune)	Kołbaskowo (rural commune)
Tychowo (urban-rural commune)	Przelewice (rural commune)
Przybiernów (rural commune)	Bielice (rural commune)
Kobylanka (rural commune)	Świdwin (rural commune)

During the analysis of natural capital, the forest area was taken into account – forest cover in % (data for 2019).

After determining the order of municipalities, 1 to 113 points were awarded in this area. In total, 113 points could be obtained in the entire area. On this basis, a collective list of communes with the largest and the smallest development potential was prepared.

During the analysis of innovative capital, the financing and co-financing of EU programs and projects were taken into account (data for 2019). After determining the order of communes in a given criterion, from 1 to 113 points were awarded. In total, 113 points could be obtained

in this area. On this basis, a collective list of communes with the largest and the smallest development potential was prepared.

Table 7. Development potential of communes – innovative capital

Communes with the greatest development potential	Communes with the lowest development potential
Kołobrzeg (urban commune)	Świnoujście (urban commune)
Myślibórz (urban-rural commune)	Nowe Warpno (urban-rural commune)
Gryfino (urban-rural commune)	Bielice (rural commune)
Szczecinek (urban commune)	Postomino (rural commune)
Darłowo (urban commune)	Mieszkowice (urban-rural commune)
Koszalin (urban commune)	Polanów (urban-rural commune)
Widuchowa (rural commune)	Tuczno (urban-rural commune)
Tychowo (urban-rural commune)	Marianowo (rural commune)
Karlino (urban-rural commune)	Białogard (rural commune)
Drawsko Pomorskie (urban-rural commune)	Rymań (rural commune)

On the basis of the above lists of communes in each of the areas, a collective analysis was made. 5 capitals were analysed: economic, human, social, natural and innovative capital, in 15 areas in total. In each of the areas, 113 to 1 points were awarded (as shown in tables 3 to 7). In the collective summary, each commune could obtain a maximum of 1695 points and a minimum of 15 points.

Results of the research

Based on the information collected as a result of the methodology used, Table 8 presents the development potential of the analysed communes of the West Pomeranian Voivodship. There is the ranking of communes with the highest and the lowest development potential, along with the total number of points obtained.

Table 8. Development potential of communes – in total (including economic, human, social, natural and innovative capital)

Communes with the greatest development potential	Number of points	Communes with the lowest development potential	Number of points
1. Szczecinek (urban commune)	1349	1. Białogard (rural commune)	353
2. Koszalin (urban commune)	1340	2. Szczecinek (rural commune)	414
3. Wałcz (urban commune)	1296	3. Dolice (rural commune)	430
4. Kobylanka (rural commune)	1265	4. Pełczyce (rural commune)	430
5. Rewal (rural commune)	1252	5. Stargard (rural commune)	434
6. Kołobrzeg (urban commune)	1236	6. Rąbino (rural commune)	438
7. Ustronie Morskie (rural commune)	1226	7. Suchań (urban-rural commune)	447
8. Stargard (urban commune)	1201	8. Siemysł (rural commune)	458
9. Gryfice (urban-rural commune)	1167	9. Sławno (rural commune)	459
10. Dobra (Szczecińska) (rural commune)	1164	10. Stepnica (urban-rural commune)	472

Figure 3 shows the average score of all capitals (economic, human, social, environmental and innovative). The communes with the lowest development potential, identified at the Desk Research stage, were taken into account. Among the communes with the lowest development potential in the voivodship, only one commune (rural commune – Szczecinek) was rated above the average (3.2).

Communes with the lowest development potential

Development potential



□ boundaries of counties
□ borders of communes

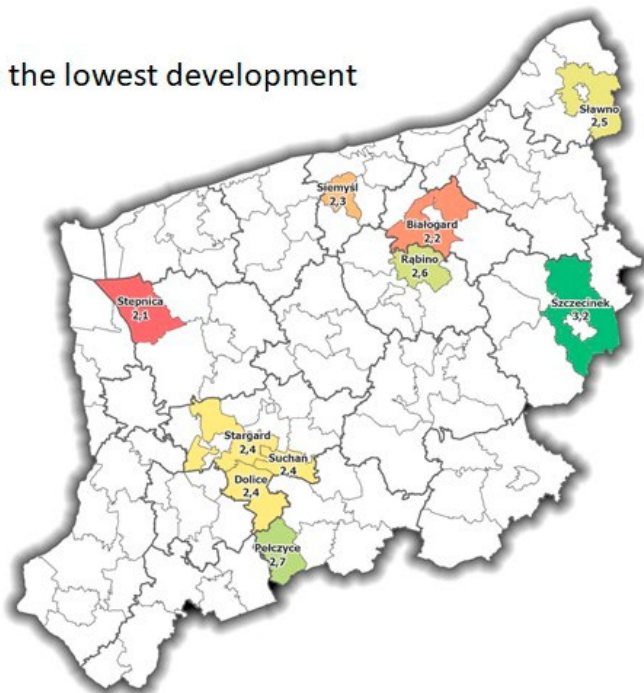


Figure 3. Assessment of the development potential of communes with the lowest development potential. The communes with the lowest development potential, identified at the Desk Research stage, were taken into account. The presented average score includes the assessment of all capitals (economic, human, social, natural, innovative)

Conclusions

The model of five capitals used to designate problem areas assumes that sustainable development (i.e. meeting human needs and aspirations) takes place thanks to various services provided by human, economical, innovative, social and natural capital. Satisfying people's needs and increasing the quality of life can be seen as an increase in social welfare or utility (through consumption, satisfactory work, good health, satisfactory interpersonal relationships and well-functioning social institutions, and ensuring access to the full range of resources and services provided by the natural environment). Maintaining the sustainability of development requires that the capital resources, thanks to which human needs are met and the quality of life increases, be kept at a constant level or increase over time. The use of the five capitals model allows us to structure the analysis of the local system easily. A particularly useful feature of the model is the ease of identifying development con-

traditions between individual capitals. Clear capture of development contradictions (trade-offs) is particularly important in the context of the sustainability of the development of a given system. The use of the model for strategic planning makes it possible to minimise the risk of development contradictions in the future, and is also an analytical tool that can help minimise the negative effects of existing contradictions. The model of five capitals allows for a clear presentation of the dynamics of a given system, capturing the most important relationships and indicating the most serious threats to the stability and durability of the development of a given system. Additionally, by using methods such as stakeholder surveys, we can obtain a good starting point for the strategic planning process. It should be emphasised that the method presented in this article, based on the example of the local system, has also proven to be successful at the regional level (for the evaluation of the region's development strategy, the regional spatial development plan and the regional operational program) and as such can be used for various ex-ante evaluations. The proposed method of determining the level of socio-economic development of communes can also be used to determine development paths and changes in their trends for individual local government units and thus more precisely indicate potential areas and types of needed interventions supporting development. Nowadays, the problem area should be determined and defined based on the causes (ex ante) of their occurrence and the determination of cause-effect relationships. Therefore, to appropriately target public interventions, regional and local systems should be diagnosed in terms of innovation, human and social capital, and natural and economic capital.

The conducted primary and secondary studies indicate that:

1. Problem areas are still stuck in the old paradigm of development, in which development is seen in hard factors, i.e. in the technical infrastructure (water supply, sewage, roads, shop areas, etc.), and this in turn translates into decisions made and directions of spending financial resources.
2. Little importance in developing soft factors such as leadership, cooperation, social participation, quality of education.
3. The level of financing and co-financing of innovative programs is low and basically comes down to the purchase of modern equipment by individual farmers and the expansion of the scope of crops.
4. Despite the fact that communes in problem areas are leaders in obtaining external funds, this does not translate into an improvement into their economic situation. This is probably due to the privileged nature of these areas in acquiring funds on the one hand, and spending directions on the other hand. Acquiring financial resources becomes the goal of governing, not a tool to improve the socio-economic situation of a problem area.

5. According to the contemporary development paradigm, the socio-economic situation of an area is influenced by qualitative factors (quality of social and human capital).
6. Therefore, a problem area should be delineated and defined on the basis of causes (*ex ante*): a problem area is an area characterised by a low level/quality of human and social capital.
7. Therefore, problem areas in strategic documents should be delimited on the basis of human and social capital.
8. Territorial development is (to a small extent) determined by exogenous factors, while the main factors influencing the potential of local development are human and social capital, and later natural resources, infrastructure, etc.
9. Since innovative, human and social capital determines development today, actions should be taken to support and develop the above-mentioned capitals.

The proposed method of determining problem areas, describing the level of socio-economic development using the five capitals model, is part of the research on the delimitation of functional areas, areas of strategic intervention and problem areas, success or broadly understood regional development (e.g. Tomczak et al., 2021; Śleszyński et al., 2017; Stanny et al., 2018).

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