

## Inter-sectoral cooperation as a factor of the regional development

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*Abstract: The aim of this article is to formulate an answer to the following question: which factors strengthen inter-sectoral cooperation and its significance in regional development? Due to the significant breadth and variety of forms of inter-sectoral cooperation, in this article an analysis was carried out primarily of the functioning of clusters in Poland. The main conclusion is, that the growth of cluster significance in regional development in Poland have no chance of being realised without the support of public funding both on a centralised and on a regional level.*

*Keywords: inter-sectoral cooperation, cluster, regional development, Poland*

### 1 Introduction

Inter-sectoral cooperation is increasingly often becoming the subject of research within the context of regional and local development. This is a result of the currently popular paradigm of development, based on an assumption of the significance of cooperation and innovation in creating positive change in the regional economy. Confirmation of this can be found in literature on the subject of spatial science, economics, social studies, and management.

One of the best-known and often-cited conceptions of local development was proposed by A. Pichierri, who distinguished four main types of local growth [1]:

1. Endogenous development – based on maximising the use of local resources by local actors. This can be carried out in an area with the institutional and organisational possibilities to self-mobilise the human and financial resources and raw materials that are found in a given area in the appropriate quantities and of the appropriate quality.
2. Exogenous development – a process that is based on the utilisation of external resources by external entities. This occurs in areas in which there is a lack of local entities that are able to mobilise the local workforce, or where there is a lack of appropriate financial resources or raw materials. It is based on the utilisation of such external materials as: technology, capital, and sometimes raw materials, while simultaneously exploiting the local

labour market, mainly because of its lower cost. The market outlet in this situation is typically external.

3. Development that stimulates internal resources – this is a type of situation in which local development results from the involvement of external entities, which utilise the resources of a given area. For instance, external firms can, thanks to their own capital and technology, involve local employees with the appropriate qualifications, as well as local raw materials. The effectiveness of global, external firms often results from their economic ties, which ensure promotion and sales in external markets.
4. Development that attracts external resources – based on the activation of local entities thanks to the availability of external resources, which usually take the form of financial resources or “know-how” – that is, knowledge, methods or training.

This division takes into account two types of factors concerning local development: resources and entities, as well as their origin (internal or external) and the relations between these factors. This division is influenced by not only classical, but also modern theories and conceptions of regional and local development. The classical theories, mainly localisation and economic base theories, were based on traditional growth factors such as raw materials, energy, workforce, distance from the market outlet, the responsiveness of the market outlet etc. Modern theories, however, in the search for growth and regional development stimulators, highlight the role of non-traditional factors increasingly often. The emergence of analyses of transactional costs and external effects has caused the cooperation of entities, networks and cooperation to become the subjects of research – that is, assets or relational/specific resources [2] have gained in significance. S. Korenik and A. Zakrzewska-Póltorak highlight that in observing the conceptions of regional development from the turn of the 20<sup>th</sup>/21<sup>st</sup> century of, among others, P. Veltz, M. Fujit, R. Florid or B.A. Lundvall, we can notice that the basic direction of the evolution of regional development theory concerns the growth of the knowledge-based economy, “learning” regions and creative economies [3]. In these theories, different accents are placed regarding both factors and institutional conditions of development. With regard to the former, the most significance is currently placed on knowledge, technological advances, innovation, new services and new jobs, soft infrastructure, social capital, quality of life, cultural image and the inclusion of private funds in investments of public benefit. However with regard to the latter, significance is placed on activities that lead to a strategic link between economic and social development factors, as well as to a partnership for development, the formation of local cooperation networks, collaboration and the formation of clusters, which ultimately leads to the utilisation of regional heritage. J. Hausner and A. Giza-Poleszczuk underline that this approach strengthens the endogenisation of regional development, nevertheless it does not signify self-isolation, autarchic closure or finding oneself in the developmental backwaters. Partnership and joint management strengthens and empowers the population of the given territory, simultaneously opening it up to the exterior [4]. This means that the cooperation of various

organisations, often belonging to different sectors, becomes an important regional development factor.

## **2 Objectives, material and methods**

The aim of this article is to formulate an answer to the following question: which factors strengthen inter-sectoral cooperation and its significance in regional development? The hypothesis that a basic condition of the positive effect of intersectoral cooperation on regional development is public financial support of partnerships that have arisen from this cooperation was adopted.

This article provides an overview of the issue, however due to its interdisciplinary nature, in the search for an answer to the question posed in the research and the verification of the hypothesis, literature from the fields of management, public management, sociology, and economic and regional development theory was used. To shed light on the scale of the analysed phenomena occurring mainly in Poland, primarily used were results from the research of other authors as well as secondary source materials in the form of reports and studies carried out by Polish institutions, such as the Polish Agency for Regional Development or Main Statistical Office.

Due to the significant breadth and variety of forms of inter-sectoral cooperation, in this article an analysis was carried out primarily of the functioning of clusters. This choice was supported primarily by the fact that in Poland, the history of clusters is relatively short, and their formation and functioning is to a large extent stimulated by financial and administrative instruments.

## **3 Results of the research**

### **3.1 Inter-sectoral cooperation and its theoretical aspects**

Cooperation, a term often used interchangeably with “collaboration”, is generally and colloquially understood as “the joint action of people, institutions or countries” [5]. However, the academic definition refers to relations and ties between entities, social groups or organisations, which we can be divided into three types based on the objectives of the cooperation [6]: 1) cooperation, that is, positive cooperation, 2) competition, that is, rivalry, 3) conflict, that is, negative cooperation.

As far as this article is concerned, the basis for further discussion is cooperation defined as the realisation of objectives and functions as agreed in previous arrangements – that is, positive cooperation. The roots of this cooperation are in inter-organisational relations. According to L. Krzyżanowski, these relations take the form of inter-organisational connections or interactions, but only with regard to interactions can we speak of inter-organisational links [7]. These differ from other

ties primarily in that they have a greater level of organisation and stability and are a specific type of relational resource, generating a competitive edge [8]. These types of relations include: commercial agreements, agreements of non-profit organisations, joint business endeavors, joint projects and programs.

An attribute of every organisation is the ability to engage in cooperation. It is thanks to cooperation that objectives which would be impossible to reach alone, or which would require considerably greater amounts of effort and resources, can be achieved in a more effective, and therefore more efficient and economic manner. Additionally, dynamic changes of the environment, such as globalisation, regionalisation, technological IT advances, and the diffusion of innovation increasingly often create the need to reorientate the development strategies of organisations towards creating inter-organisational ties. Taking theoretical bases on the basis of which factors are analysed as a criteria for division, P. Klimas presents the factors stimulating the creation of inter-organisational links, and therefore encouraging cooperation (Table 1).

Factors stimulating the creation of inter-organisational links		
Resources	Accessing	
	Restricted access	
	Appropriating	
	Participation in spillover	
Efficiency	Lowering costs	
	Sharing costs	
	Synergy effect	
	Value increase	
Learning	Acquiring knowledge	
	Use of knowledge	Improving processes
		Improving competence
Improving skills		
Developmet	Organization	Assurance
		Acceleration
	Sector	
Eliminating barriers	Legal	
	Administrative	
Risk sharing		
Limiting uncertainty		

Table 1.  
Factors stimulating the creation of inter-organisational links

Source: [9]

Hence this is how, in recent times, the role of inter-organisational links has been growing, and behind different forms and characteristics of cooperation there is a

different logic, which depends on the type of organisations affected – businesses, public entities or NGOs. The cooperation of businesses stands out as no matter which kind of form it takes, competition can always be observed, only with businesses not engaging in this cooperation. However, the cooperation of public entities stems from their very essence, causing obligatory cooperation, regulated by law, with other organisations, regardless of whether they belong to the same or different sectors. A similar situation can be observed in the case of social organisations, with one difference – in theory, decisions about cooperation with other organisations are fully voluntary and independent. Nevertheless, in reality the conditions in which these organisations function create a need for cooperation, as this often facilitates the achievement of their objectives. This means that inter-organisational cooperation increasingly often goes beyond the boundaries of individual sectors, taking the form of intersectoral cooperation.

According to A. Kalegaonkar i L.D. Brown „inter-sectoral cooperation consists of bringing actors from the state, market and civil society sectors together to achieve mutual understanding on an issue and negotiate and implement mutually agreeable plans for tackling the issue once it is identified” [10].

The evolution of public management models has aided the popularisation and growth of inter-sectoral cooperation. In the Governance and New Public Governance models, the fundamental mechanism of achieving outlined strategic goals is turning to innovation and creating the appropriate conditions for inter-organisational and inter-sectoral cooperation [11]. In a model arrangement, cooperation can take the form of various types of formalised actions (letters of intent, contracts, alliances etc.) or those which are less formalised (dedicated meeting, professional forums, social and business networks etc.). As a temporary or permanent way of achieving common initiatives, it can also be a point of interest and engagement of two or more organisations, who value something more than just a transaction or contact. Nevertheless the key manifestation of cooperation are partnerships. These are defined in many ways and may take various forms<sup>1</sup>, however in literature their four fundamental characteristics are highlighted [12]:

- they are a coalition of more than one sector aiming to reach an agreement,
- they have common objectives and strategies for achieving these objectives,
- they share risk, resources and skills,
- they enjoy mutual benefits and synergy.

A. Pawłowska, A. Gąsior-Niemiec and A. Kołomycew add another characteristic: a relatively equal status of partners [13]. S. Barczyk and A. Ochojski underline,

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<sup>1</sup>

For example, one of the first definition proposed in the report of the OECD [23], according to which the partnership is a formalized cooperation between several institutions, based on a legally concluded contract or an informal agreement, the bindings in the context of cooperative and jointly adopted plans.

however, that the issue of the stability of cooperation has a high significance for partnerships [14]. This becomes particularly important when making localisation decisions connected with running a business in a given space and territory. The dynamics of a territory (eg. a region) are the dynamics of its firms, industrial systems and management systems on various levels, and this in turn determines not only the speed, but also the period during which benefits can be obtained.

The advantages generated by inter-sectoral cooperation led a partnership-focused approach to creating and carrying out various public policies on different territorial levels (country-wide, regional, local) to become one of the most significant developmental principles in the majority of highly developed countries, and also in the European Union, at the end of the 20<sup>th</sup> century. This principle, along with its implementation, was (and still is) stimulated to a large degree by administrative and financial, or legal and economic instruments. Their usage aims to decrease or eliminate entirely the existing barriers to the creation of inter-organisational ties and cooperation. A systematic set of these restrictions according to P. Klimas is presented in table 2.

Factors hindering creation of inter-organisational ties		
Resources	Financial	Deficit
	Human	Resistance to change
		Lack of trust
		Introvert culture
	Technological	Heterogeneity
		Inompatibility
		Patent protection
	Knowledge	Heterogeneity
		Homogeneity
		Asymetr
		Protection of intelectual property
	Competences	Lack of relational competence
No experience in cooperation		
Low level of absorption capacity		
Organisation and management	Dissimilarity	Philosoph of action
		Strategy
		Management styles
		Management concepts
	Organisational culture	
No need for interaction		

Table 2.  
Barriers to the creation of inter-organisational ties.  
Source: [9].

Since supporting inter-sectoral cooperation requires the use of public funds, in this context an analysis of the benefits which stem from this cooperation becomes important – with regards to regions or territories this concerns not individual projects or initiatives, but the entirety of benefits that can be achieved by the given territory<sup>2</sup>. One type of benefits that has been reasonably well discussed in literature is those that arise from a concentration of firms in a given area and the effect of this on the development of regions. Theories of industrial districts, groups, clusters, innovation networks, “learning” regions and many others explain these dependencies, simultaneously indicating recommendations for public policies. The experiences of many other countries have led to a situation in which in the last 10 – 20 years in Poland, much attention has been given to the creation and functioning of clusters, and a specific instrument encouraging the development of regions has become cluster policy.

### **3.2 Clusters as an example of inter-sectoral cooperation on a regional level**

A particular manifestation of inter-sectoral cooperation are clusters (groups, agglomerations)<sup>3</sup>. This is clearly underlined in the definition of a cluster, used in program documents in the Polish system of the election of Key National Clusters. According to this definition, a cluster is “a geographical agglomeration of independent entities representing a particular economic specialisation, cooperating and competing with one another in a value chain. Cooperation in a cluster is formalised and carried out both vertically and horizontally, with the aim of reaching previously agreed-on common objectives. Clusters are a source of benefits and create a new value for all types of entities participating in the cooperation, such as businesses, universities and educational institutions, business environment institutions, public administration and other supporting organisations” [16]. Using this definition has allowed for a clear distinction of well-developed and efficiently functioning clusters in order to give them the title of Key National Clusters (of which there are currently 16) with the aim of helping them to acquire additional support for the implementation of projects that often cross national borders and in order to increase their competitiveness. In favour of this policy are primarily the need to strengthen the innovation and competitiveness of the Polish economy through intensified cooperation, interaction and the flow of knowledge in clusters, as well as supporting the development of strategic economic

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<sup>2</sup> Such research is carried out by GREMI, the European Innovation Environment Research Group. The subjects of their interest are technological and organisational changes in certain territories, which result from the grouping of firms and innovative processes. Further on this topic [14].

<sup>3</sup> The most well-known definition is that of M. E. Porter, according to which a cluster is a “geographical agglomeration of mutually linked firms, specialised suppliers, entities providing services, firms from related sectors and the institutions linked to them in individual fields, competing with each other but also cooperating” [15].

specialisations, but also the need to concentrate public funds in those areas which will yield a considerable developmental impulse (above all in areas of so-called intelligent specialisation) [17].

The PARP report [18], which contains a detailed „inventory” of clusters in Poland, states that in Poland there are currently 134 clusters functioning (these are the clusters that took part in the study<sup>4</sup>). Established between the years 2003 – 2015, the majority (over 60%) are young clusters, that is, those which emerged in the years 2011 – 2015. The oldest clusters have been in existence for 12 years, and the average age of clusters is over 4 years. The low age of clusters in Poland points to the need to strengthen basic functions, such as building relationships and trust, the professionalisation of management and the creation and stable development of cluster structures. This in turn requires above all tremendous effort and engagement on the part of the coordinators of clusters, which, without public funding, is very difficult.<sup>5</sup> This is supported by previous research carried out in 2010 [19], which shows that cluster initiatives functioning in Poland are quite strongly dependent on public financing, since the withdrawal of this funding often results in the ending of the initiative. This is also demonstrated by the fact that 47 active, formal clusters qualified to take part in the benchmarking, out of a total number of around 170-180 initiatives of various kinds that had been established in Poland before 2010.

The geographical distribution of clusters reflects the economic potential of regions – 48% of clusters were identified in the four most developed voivodeships: mazowieckie (13 clusters), dolnośląskie (11), wielkopolskie (12) and śląskie (28 – the highest number in the country). This could suggest that these regions offer the best conditions for the establishment of structures of this type. It is also worth noting the significant, when compared to the remaining voivodeships, number of clusters identified in the podkarpackie and lubelskie voivodeships (12 and 11 respectively), which could be a result of support for the development process of clusters at both a regional and a national level (Operational Programme for the Development of Eastern Poland 2007 - 2013). In the identified cluster population, a total of 5 868 entities are active, whose number in each individual cluster ranges from 8 to 171 (average number of members: almost 44). Over 78% of these are businesses, 5.71% business environment institutions, 8.74% educational institutions and 7.53% other entities. The identified clusters have various different organisational and legal

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<sup>4</sup> These entities fulfil the criteria that characterise clusters to the largest degree. Aside from them, during the research a group of 106 entities, which (on the basis of the information collected) had characteristics that would allow them to qualify as potential clusters, was singled out [18].

<sup>5</sup> In this context it is worth underlining the opinion expressed by experts. “*It must be remembered that the function of coordination has the characteristics of a public good – that is, it benefits all entities in a given agglomeration, including those which have not yet been established. This justifies the co-financing of coordinative functions from public funds, so that the activities of the coordinator are not limited to being of sole service to those entities which form the cluster initiative and pay the premiums.*” [17].



forms. The majority work on the basis of various types of contract, including agreements and consortiums (74) and in the form on associations (41). The remaining forms include limited liability companies (10), foundations (5), chambers of commerce (3) and one joint-stock company [18].

Clusters represent a large variety of sectors, from traditional to highly technological – in total 28 sectors/specialisations were distinguished. The majority of the clusters analysed were in the ICT sector (14%), followed by the energy and renewable energy sector (12%), construction (9%) and medicine, biomedicine and medical tourism (8%). Their regional differentiation generally corresponds to intelligent specialisations [18].

The research carried out also showed that clusters have a low rate of activity in terms of the number of projects carried out, which could be a sign of relatively weak business cooperation (developing a joint offer, distribution or a single standard product of the cluster). At the same time, a relatively weak area in Polish clusters is innovativeness and cooperation with the research and development sphere. Clusters also do not to a large degree take advantage of the potential offered by cooperation with foreign institutes or other clusters. This signifies that activities undertaken by cluster initiatives do not lead to an improvement of innovation or the competitiveness of their members<sup>6</sup>.

## Conclusions

In conclusion, it can be stated that past activities aimed at assisting the development of clusters in Poland primarily brought about an increase in awareness that clusters are one of the most significant factors of regional development which, allowing benefits typical for inter-sectoral cooperation to be reached, generates added value that strengthens the territory in which they function.

The aim of this article was to formulate an answer to the question: which factors strengthen inter-sectoral cooperation and its significance in regional development? From a theoretical point of view, primarily all activities which lead to a reduction of barriers restricting the creation of inter-organisational links not only in the area of resources and competence, but also in issues surrounding organisation and management, should be indicated. However, from the point of view of the case study used in this article, in order for clusters to become a source of benefits not only for their members, but also for the environment, using M. Citkowski's conclusions it should be indicated that areas such as the following should undergo verification [21]: a) the role of the coordinator of the cluster in shaping strategic network cooperation in each dimension of the cluster's development; b) searching for and shaping the competencies of the cluster and its members in each phase of

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<sup>6</sup> However, research from other authors states that one of the main reasons why firms enter clusters is the expectation of a rise in competitiveness and economic results [20].

the cluster's development; c) a measurement of the benefits linked with participation in a cluster. Also significant are: increasing the size of existing clusters, a clear growth in innovative processes and the internationalisation of clusters [22]. In general, a large proportion of the indicated conditions have no chance of being realised without the support of public funding both on a centralised and on a regional level. It can therefore be acknowledged that the hypothesis was verified positively.

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