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ORIGINAL CONTRIBUTION

Elements of Social Responsibility in Clusters

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Abstract— The aim of the research work is to identify the existing strategies of selected clusters and develop recommendations for taking into account the principles of Corporate Social Responsibility (CSR) in cluster operations. CSR gains these days more and more attention. It is connected with the activity that includes the ethical conduct of the organization towards the public, in particular its recipients, employees, other stakeholders as well as the impact on the natural environment. One of the main barriers to the development of cages is the lack of mutual trust. The literature of the subject and the opinions of practitioners indicate trust as a key factor in the success of cluster initiatives. For this reason, creating an environment friendly to its construction should be one of the first steps taken by cluster participants. Considerations about the role of trust in the cluster's construction process and the related barriers to cluster development result in the thesis that one of the obstacles to the cluster's activity is the lack of faith that its participants will behave in a socially responsible way. In addition, the progressing promotion of CSR is playing an increasingly important role in stimulating the emergence and development of cooperative relationships such as clusters. The work includes the collection, processing and analysis of data, information and knowledge necessary to develop final conclusions. In the research, qualitative and quantitative methods as well as literature analysis from the studied area is used. The work takes into account cluster strategies in which elements of CSR are identified. The findings aim to contribute in building recommendations for the implementation of the principles of CSR in the activities of clusters.

Index Terms— Clusters, Cooperation, Social responsibility, CSR, Strategy.

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Introduction

Statement of the problem

Strong globalization processes, currently visible on a global scale, have developed and strengthened the position of clusters as one of the key factors in the development of regional and national economies. Market compliance with processes of globalization increases the tendency to locate specific resources in regions that could stimulate the development and specialization of a given region. This way, thanks to clusters, many European regions were able to use their potential e.g., in the area of fruit and vegetable processing and the tourist services industry (Italy – South Tirol), petrochemistry (Antwerp), flowers (Netherlands), biopharmaceuticals (Denmark-Sweden border region) (Karas & Piasecka-Gluszak, 2018). Developing clusters, gradually increasing their reach, attract people, new technologies and investments, while looking for other market partners, with whom they establish cooperation in the field of providing complementary goods and services. This way, specific networks are created between enterprises wanting to cooperate in selected local, national or international markets. In business practice, most often the cluster is co-created by three sectors: business, local governments and units of the scientific and research field. Thanks to the creation of such cooperating companies and institutions, it is possible to achieve high market efficiency.

The phenomenon of building cooperative enterprise networks was first described by Porter (2001) in the publication: "Competitive advantage of nations". While conducting research on companies operating on the international market, Porter noticed that some specialized clusters of competing and simultaneously cooperating companies achieve high market efficiency. The source of their competitive advantage is the use of the synergy effect, resulting from the cooperation of enterprises and various other research institutions and units. All these entities form a specialized structure, in which there is a specific kind of knowledge transfer and exchange of experience based on direct contacts. The quality and nature of relations between cooperating enterprises within a cluster translates into the increase of both their own competitiveness and that of the entire cluster network, which, in the long run, may contribute to the development of the entire region. Due to the nature of the relationship, geographical proximity is very important here, as the cluster refers to a cluster of related enterprises and other institutions in a given region.

Contemporary reality, in which economic entities have to function, is characterized by a large amplitude of changes. In this dynamically changing environment, companies are trying to move towards their goals, basing their actions on strategy. A properly developed and skillfully implemented strategy often determines the success of an organization. This action also applies to clusters. It is important to include a large group of stakeholders

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in the strategy design process, so that it is possible to look for opportunities to meet their expectations already at the strategy preparation stage (Dewi et al., 2017; Purba & S., 2017; Wolczek, 2011). The need to take into account the expectations of stakeholders of a given entity is associated with the increasingly popular statement that enterprises are active participants in the communities in which they operate, and their actions cannot be guided only by the criterion of maximizing profit. In this sense, one can observe the growing popularity of the concept of Corporate Social Responsibility (CSR) in the world, as well as in Poland. As part of this concept, voluntary involvement of business entities in actions aimed at improving the social and environmental context in which they operate is often discussed. Areas of the CSR concept include corporate governance, human rights, workplace practices, environment, market practices, consumer issues, social involvement and community development. The organization's activity in this area takes various forms and there is a need to determine the relationship that exists between the organization's strategy and the concept of corporate social responsibility.

The purpose of the article is to present the idea of clusters and to identify existing strategies of selected clusters in terms of the concept of corporate social responsibility. An additional goal of the work is to develop recommendations for taking into account the principles of corporate social responsibility in cluster operations.

Literature Review

The concept and significance of clusters

A cluster is a form of cooperation of dual-nature organizations combining competition with cooperation. The term comes from the English word cluster, which means bunch, bundle, or local production system. Cluster substrates are sought in the concept of A. Marshall's industrial districts from the beginning of the 20th century, in which the main source of enterprise productivity is the easy and fast flow of knowledge between organizations, creation of specialized factors of production and services, as well as the creation of a specialized market of highly qualified workforce (Szultka, 2009). The period of rapid development of cluster theory and attempting empirical verification of this concept was introduced by Porter (2001).

The multitude of cluster definitions has resulted in attempts to organize the approach to defining clusters. Gordon & McCann (2000) distinguished 3 cluster concepts: the classic agglomeration model, the industrial complex and the social network model. The development of cluster theory allows to distinguish another area – the knowledge network model (Knop, 2013). Detailed characteristics of the 4 concepts for defining clusters are presented in Table I.

Table I
Concepts for defining clusters

Concept	Characteristics	Represetative	Cluster definitions
A classic agglomeration model	In this model, the labor market is a reflection of the possibilities of using economies of scale and an indication that external effects are the result of both local market activity and external effects. It concerns industry concentration, where administration, local and regional authorities play an important role.	A. Marshall	The cluster is a "spatially concentrated cluster of interrelated enterprises of one or related sectors, within which there is a positive agglomeration effect, based on three basic sources: knowledge flow between enterprises, creating specialized production and service factors through supporting industry sectors, and the emergence of a specialized labor market adapted to the needs of the district."
Industrial complex (model)	Refers to specific (special) relationships in the sales and purchases of companies that seek to reduce transaction costs and improve competitiveness.	M. Porter	A cluster is: "A geographical cluster of interlinked companies, specialized suppliers, service providers, companies operating in related sectors and related institutions (for example universities, standardization bodies and industry associations) in specific areas, competing with each other, but also cooperating."
Social network model	A "club" model focused on social bonds and trust that facilitate cooperation and innovation. This model emphasizes the activity of various organizations with a special distinction from civil society.	M. Granovetter	A cluster is a "spatial set of relationships between individual environments and 'embedded' social communication networks and influences."
Knowledge network model	It is an "expert" model, based on the cooperation of a group of scientists, researchers and practitioners, whose goal is to create new knowledge and revolutionary innovations. It focuses on the flow of knowledge and competences rather than on the flow of goods and services.	A. Melberg P. Maskell	A cluster is: "A specific configuration of the spatial economy that allows the creation, transfer and use of knowledge; a network or networks of entities cooperating in a given technology area to generate, diffuse and use these technologies."

In addition to that, the definition adopted by the European Union says that a cluster is a way of organizing the production system, caused by the geographical concentration of economic entities and other organizations specialized in the same areas of action, developing mutual market and non-market relations, contributing jointly to the development of innovation and competitiveness of cluster participants and their area of action (European Commission, 2003).

According to the aforementioned definitions, it can be concluded that clusters are formed based on three main indicators (Lachiewicz, 2008):

1. Focusing on the same area of organizations operating in the same or related sectors
2. Mutual interaction and functioning of these organizations
3. Vertical and horizontal ties between cooperating parties

The cluster is an economic initiative, in which partners from various environments should participate. Of course, the key role is played by enterprises from a given industry and companies operating in related and economically linked sectors. For the cluster's efficiency and complementarity, it is necessary to participate in the cluster of business environment institutions, non-governmental organizations and public administration. A very important partner and member of the cluster is a scientific and research unit (Knop et al., 2011).

Clusters are usually established between small and medium-sized enterprises, focused on the same region, forming part of the subsequent value

chain, as well as producers of complementary goods, industry associations or bodies with a specialized structure. Thanks to direct contacts of people between associated organizations, knowledge transfer is taking place, which is the main factor in the development of a new innovative and competitive system. This creates huge opportunities for strengthening the regional area and technological development, leading to an increase in the importance of local organizations on the international market. Clusters are currently emerging in all sectors of the economy, occurring in both high technology and traditional sectors. They are characterized by a different level and scope of innovation, which results from the way and type of knowledge transferred (Karas & Piasecka-Gluszak, 2018).

Cluster development is a complex and very diverse process. It can be said that there are no two identical clusters that would develop in the same way. Clusters differ in size (potential), area of activity, composition of entities, branch in which enterprises operate etc. Cluster initiatives and their actions also differ-this is influenced by both the cluster's potential and the composition of entities and leaders that make up the given initiative. Despite this diversity, however, several stages, or components, of the cluster initiative development process can be distinguished (Fig. 1) (Borowicz et al., 2009).

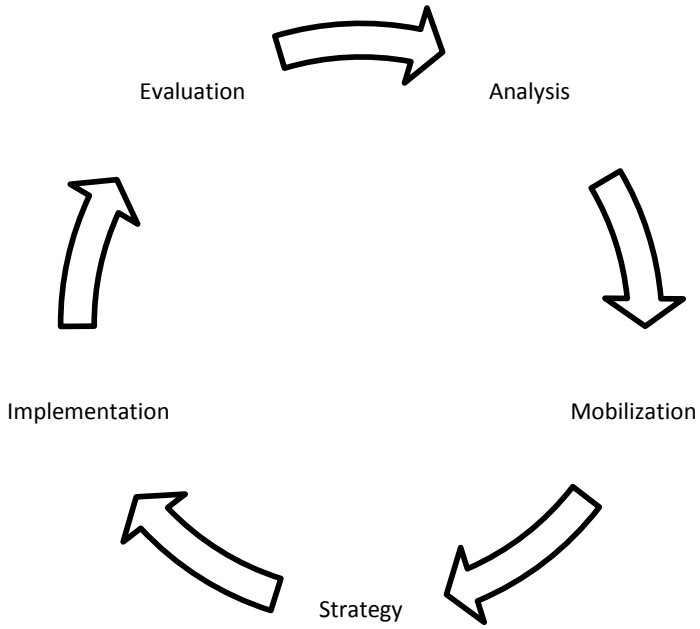

Fig. 1. *Stages of cluster initiative development. Source: Borowicz et al. (2009).*

However, the development of a cluster initiative is a continuous process, which means that after the end of a given stage, you cannot go to the next one and forget about the previous one. In practice, these stages often occur in parallel, while the implementation of individual actions may need to be repeated or complemented with analytical activities. The individual stages are interrelated. For example, the strategy formulation phase can and should develop in parallel with the mobilization phase, which is very important for the integration of involved entities. Strategy formulation is, by itself, also a form of mobilization and integration of cluster entities. The mapping and analysis phase could also be treated as an element of strategy mobilization and formulation (Borowicz et al., 2009). The implementation phase is key to achieving the set objectives and building credibility of the initiative, although some actions are also taken at the beginning of the initiative to launch simple incentives to mobilize participants. Evaluation is necessary to monitor the degree of achievement of the set objectives and, if necessary, redefine them. It should be noted that not in all cases will the individual stages follow the presented sequence. There may be a situation where an entity, e.g., a local government body or a scientific institution, carries out a study of the development potential and needs of a particular industry. At the next stage, based on the analyzes carried out, we elaborate on the cluster development strategy, and only in parallel with the implementation process will we start building the involvement and mobilization of entities. In turn, if the initiators of the undertaking are entrepreneurs, the stage of analysis or formulation of the strategy may often be omitted (the reason for this may be e.g., the sense of inadequacy of the analysis or the lack of adequate financial resources)-after the mobilization phase of the initiative, we can immediately proceed with the implementation of projects that were considered significant. However, even if a stage is initially skipped, sooner or later this deficiency is often supplemented (Borowicz et al., 2009).

Cluster strategies

Creating a strategy for a cluster is a difficult issue because literature on the subject is poorly expanded on. However, there are many discussions in the scope of cooperation strategies, network strategies, which are a continuum of the organization's strategy. Clusters are not only a strategic choice, but an inter-organizational network that considers joint actions and a common strategy for various actors, connected by a “cobweb” of relationships, characteristic for a given territory and largely using endogenous resources. The basic elements of clusters are their entities, which translate into strategies based on their key actors (Knop, 2013). Knop (2013) in his book “Cluster management. Concepts, strategies, models”, broadly describes the process of shaping strategies with extensive strategic analysis of the cluster, types of strategies and strategic goals. Referring to her research, three basic components of the strategy can be identified.

1. Strategy context component-a set of conditions and system of connections with the environment within the ecosystem that affect the process of shaping and content of the strategy

2. A component of the strategy shaping process – based on the questions: who deals with the strategy, how and when, how should it arise and be shaped, analyzed, invented, formulated, implemented, changed and supervised?
3. Strategy content components – understood as the specific concepts applied and the effects of the strategy creation process, including choices, decisions and strategic models.

The above-mentioned components create a holistic approach to creating and implementing a cluster strategy. These components are not stages, but interrelated, coupled processes that run simultaneously and intertwine depending on the needs and stage of cluster development. Knop (2008) also indicates the existence of three key processes that describe the process of shaping the cluster's strategy, namely: strategic thinking, strategy development and strategic change. The process is subordinated to concepts that help create strategy content and make specific decisions. This means single actions that are aimed at developing a strategy, but also analysis, data collection, strategic choices and changes in the cluster architecture. Understanding the cluster and its strategy is the result of assessing its development, learning and dynamic response to new challenges, using openness to launch and create new enterprises and innovative ventures.

Methodology

Polish Agency for Enterprise Development (PARP), implementing activities and projects focusing on development of clusters in Poland, developed and published cluster management standards-rules defining desirable management and functioning features of cluster coordinators. The objective of the publication is to improve the cluster management quality level and to make available a tool that will allow for the diagnosis of cluster management processes, identification of gaps and possibility to introduce correction. As a result of the research, five main areas were identified: organization, resources, processes, services for cluster members, cooperation with the environment. Within these areas, there are subareas (19 in total), to which specific standards were assigned (Kepka & Kacperek, 2017).

In the first area, i.e., the organization, two sub-areas were distinguished. One of them is the sub-area of the operating strategy, which specifies that "the operating strategy is a key document from the point of view of cluster development. It specifies, among other things, the vision, mission, scope of activity, as well as strategic and operational goals" (Kepka & Kacperek, 2017). There are two standards in this sub-area:

1. The cluster has a development strategy and an action plan.
2. The coordinator complies with the provisions of the applicable cluster documents.

The first standard says that every cluster should have a development strategy that should be periodically reviewed and updated if necessary. The frequency of strategy verification and updates should be adequate to the degree of cluster development, changes taking place in its structure and external environment, actions taken, as well as the needs of its members (Podgorska, 2016). In addition to the above-mentioned information, the strategy should also take into account: key competences, elements of the external environment, such as partners, clients, location, regional and internal conditions, such as resources, profile of members (Piotrowski, 2014). The document should be created in a participatory way. The development strategy is one of the most important documents, as it organizes the cluster's activities in the long term. This standard is obligatory in all phases of the cluster, i.e. embryonic, development and maturity. Indicators of this standard include:

- There is an up-to-date cluster development strategy, approved by the cluster members and/or its body representing the cluster members,
- The strategy was developed with the participation of all cluster members,
- The coordinator, together with the cluster members, periodically verifies the validity of the development strategy, analyzes the potential directions of the cluster's development in the future,
- There is an action plan approved by the cluster members and/or its body, including, among others, operational goals resulting from the adopted strategy and a list of projects / undertakings with the sources of financing.

The second standard says that the cluster should operate in accordance with the specifics and assumptions regarding its actions, specified in the documents establishing the cluster and development strategies and operational plans. Similarly, to the first standard, this standard is obligatory in all phases of the cluster. Under this standard, one indicator is defined:

- In order to ensure compliance of actions undertaken by the coordinator with the provisions of the above-mentioned documents, at least once a year the cluster members and/or the body representing the cluster members should assess his work in this respect.

In the area of processes, five sub-areas have been distinguished. In the fifth sub-area, i.e., the principle of sustainable development, the CSR standard is placed (Kepka & Kacperek, 2017). In line with this standard, the activities of cluster within CSR mean that this standard aims to develop human resources, takes into account environmental protection and builds relations with the environment in its everyday practice. In this case, a specific role was assigned to coordinator that should implement the CSR assumptions in their activity. An additional effect stemming from the implementation of CSR rules can be image and economy benefits resulting from savings in energy and materials. This standard is optional in the embryonic phase of the cluster, but it is obligatory in the development and maturity phase. The cluster can obtain a positive assessment on the implementation of this standard if it meets one of alternative indicators (Kepka & Kacperek, 2017):

- Our development strategy includes provisions for CSR actions, related to, for example, creating employee-friendly workplaces, developing and introducing new environmentally friendly technologies, increasing energy efficiency, limiting the use of natural resources, carrying out various types of social campaigns etc.
- The coordinator undertakes actions to promote CSR rules, for example organizes workshops or technological meetings, carries out activities aimed at building and strengthening CSR awareness. The frequency, form and scale of these activities is adequate to the cluster development state, represented industry, as well as needs and possibilities of its members.
- The coordinator supports the implementation of actions, aimed at the implementing of CSR rules (e.g., undertaking actions aimed at familiarizing the environment with CSR rules, implementing low-carbon technologies, limiting the use of natural resources etc.). The frequency, form and scale of the activities is adequate to the cluster development state, represented industry, as well as needs and possibilities of its members.

Assuming that a cluster strategy is a set of meanings and/or goals, one should pay particular attention to how they are formulated and in which areas. Clusters are the subject of many studies, an example is the 2003 study – The Global Cluster Initiative Survey (GCIS), in which 500 clusters were identified, mainly from Europe, North America, New Zealand and Australia. 238 clusters responded to the online survey. Goals identified in the study were grouped into six areas: cluster expansion, innovation and technology, education and training, trade cooperation, political activities, research and networks. Among the dominant common goals were, among others, developing relationships between people, establishing contacts between companies, promoting innovation and new technologies, creating a brand for

the region, promoting the expansion of companies, supporting the growth of innovation, attracting new companies and talents, promoting cluster exports (Solvell et al., 2006).

Currently, there are over 700 clusters in Poland. One can distinguish such clusters as: technological, business, knowledge, cultural, creative and tourism. The largest number of clusters occurs in the Silesian and Masovian voivodeships. Turning to the example of the functioning of Polish clusters, Hołub-Iwan & Małachowska (2008) conducted research in 2008 on a group of 18 out of 56 clusters identified. Studies have shown that the goals of cluster initiatives are most often (Hołub-Iwan & Małachowska, 2008):

- Promotion and development of existing companies (93.3%)
- Striving to increase the level of innovation in the form of implementations of new technologies and management systems (93.1%)
- Building the region's brand (89.7%)
- Ensuring easier access to consulting and training services (86.2%)
- Promoting new, competitive and innovative companies (79.3%)
- Providing training at the managerial and highly specialized level (72.4%)
- Attracting new talents and companies to the region (71.4%)
- Conducting market research and analyzes (71.4%)

Two years later, a team of Polish scientists carried out benchmarking of clusters, where the research sample concerned 47 out of about 100 clusters identified (Polish Agency for Enterprise Development, 2010). Comparing these studies with the objectives of Silesian clusters surveyed in 2011 (Stachowicz et al., 2011). It can be stated that clusters in Poland are mainly focused on the promotion and development of the industry, greater design opportunities, knowledge exchange, promotion and development of companies and the region. In turn, Silesian clusters mainly focus on the joint work on new products and technologies of promotion and development of companies, knowledge exchange and greater design possibilities. Both studies agree that economies of scale, technology transfer and education are of the least importance.

In 2015, PARP carried out research on clusters in Poland. After a preliminary analysis of 714 clusters, 64 clusters were selected for further study, of which 5 were in the embryonic phase, 1 in the maturity phase, while the vast majority were in the growth phase (over 90%). Taking into account the aforementioned cluster management standards in the subarea strategy of operation (1.2), standard one, i.e. the current development strategy of the cluster, research shows that 11 of the studied clusters declare its absence, therefore almost 83% of clusters have a current development strategy. It is worth mentioning that only 3 of the clusters declaring the absence are in the embryonic phase, the remaining 8 clusters are in the development phase. Taking into account the 1.2.2 standard, i.e., the coordinator's activity is consistent with the provisions of the documents establishing the cluster and with the current strategy, it can be indicated that only 4 clusters declare non-compliance in this respect, 3 of them are in the embryonic phase, 1 in the development phase. In turn, in the sub-area, the principle of sustainable development (3.5) in the CSR standard, only 6 of the studied clusters declare that this standard is not met. Thus, as much as 90% of clusters ensure that they implement the rules of Corporate Social Responsibility in their activities.

Moving on to specific examples for the purposes of this publication, two clusters were analyzed in greater depth . The first is the Baltic Eco-Energy Cluster, the second is the Sustainable Infrastructure Cluster. Both these clusters are in the development phase, taking into account the above mentioned standards, these clusters fully implement them, i.e. they meet all standards successively related to the strategy and Corporate Social Responsibility, i.e.,

- Standard 1.2.1 Current cluster development strategy
- Standard 1.2.2. The coordinator's activity is consistent with the provisions of the documents establishing the cluster and the current strategy
- Standard 3.5.1 CSR

The Baltic Eco-Energy (BKEE)

The BKEE was founded in 2007 on the initiative of the Institute of Fluid-Flow Machinery named after Robert Szewalski, Polish Academy of Sciences (IMP PAN) in Gdańsk, University of Warmia and Mazury in Olsztyn, Gdańsk University of Technology, Koszalin University of Technology, Marshals of Pomeranian and Warmian-Masurian Voivodeships, as well as several business entities and associations. A consortium was adopted as the organizational and legal form of BKEE. The agreement on the establishment of a consortium under the name “Baltic Eco-Energy Cluster” was signed by 31 founding entities on June 11, 2007 in Gdansk.

Pursuant to the consortium agreement establishing the cluster, the basic goal of BKEE is to coordinate the implementation of Regional Energy Strategies (RSE) in the field of broadly understood eco-energy, mainly by increasing the efficiency of absorption of regional and central EU funds in the macro-region and facilitating contacts as part of EU interregional cooperation. The effect of BKEE's actions will be a significant increase in the use of Renewable Energy Sources, in particular biomass for energy purposes in Northern Poland, development of biomass recovery technology from municipal and industrial waste, reduction of the environmental pollution burden on biological areas in rural areas, as well as development of new technological and production implementations, resulting in increased competitiveness of enterprises in the northern Poland macro-region. It was also pointed out that the increase in environmentally friendly production of the so-called green energy would also be an important element of the energy security of the region and the country. The mission of BKEE is the implementation of the concept of widely understood distributed cogeneration, i.e., simultaneous production of heat and electricity on a small and medium scale, and the development of renewable energy sources, based in particular on biomass, biogas, as well as the use of wind, solar, water and hydrothermal energy, as well as hydrogen technologies. A special mission of BKEE is also the transfer of knowledge and technology based on direct contact between companies, educational and scientific bodies, as well as public sector entities. BKEE actions are aimed at:

- reducing the share of fossil fuels as primary energy sources, with a significant increase in the use of biofuels and other renewable energy sources,
- stimulating the development of new technologies in areas of green energy and training specialists,
- supporting the production of equipment for bioenergetics,
- development of social and ecological awareness and professional activation of the population from rural areas.

BKEE is a supra-regional cluster covering the area of the Pomorskie and Warmian-Masurian voivodeships. It is currently the largest cluster of this type in Poland in the field of Renewable Energy Sources, which includes a number of key entities, creating a developed triad “science–industry–local authorities”, oriented towards the development and implementation of the latest technologies, in particular based on biomass, biomethane, but also wind, water and solar energy. Pursuant to the agreement, the cluster is to be an instrument for implementing the economic development of the Northern Poland macro-region by increasing the direct relationship between entities responsible for the fulfillment of specific tasks and infrastructure transformations in the energy sector, with the actions of R&D entities and universities. The consortium agreement also indicates strategic goals (Table II).

Table II
Strategic objectives of Baltic Eco-Energy cluster

Sphere	Strategic objectives
Raw material sphere	●stimulating the increase in the use of biomass for energy purposes, ● stimulating the development of rural areas, among others through the development of energy plantations, ● development of biomass recovery technology from municipal and industrial waste, ● reduction of pollution through the development of biogas plants, ● intensification of the production of natural fertilizers, ● stimulating the development of ecological awareness,
Research & Development sphere	● stimulating the development of new technologies, ● increase in producers' competitiveness of devices for bioenergetics ● training specialists in the field of eco-energy,
The sphere of electricity and heat generation	● stimulating the growth of green energy production, ● development of small biomass cogeneration plants ● production of devices using thermal energy from biomass,
The sphere of production of devices for bioenergetics	● supporting module production and assembly: complete biogas plants with a cogeneration module, biomass processing device, ● design and delivery of complete and small (up to 10 MW) biomass cogeneration plants, ● designing "intelligent" systems for heating districts with heat energy – taking into account local conditions.

Source: Sulzycki (2009).

The strategic goals and mission contained in the cluster agreement clearly indicate its socially responsible nature. When referring to the areas of CSR, you may have noticed some links, such as:

- Reduction of pollution through the development of biogas plants (CSR area: environment),
- Stimulating the development of new technologies (CSR area: social involvement and community development),
- Production of devices using thermal energy from biomass (CSR area: environment),
- Training specialists in the field of eco-energy (CSR area: workplace practices),
- Increase in producers' competitiveness of devices for bioenergetics (CSR area: consumer issues),
- Stimulating the growth of green energy production (CSR area: environment)
- Transfer of knowledge and technology (CSR area: market practices),
- Stimulating the development of ecological awareness (CSR area: social involvement and community development),
- Professional activation of the population from rural areas (CSR area: social involvement and community development).

The sustainable infrastructure cluster

The second studied cluster is the Sustainable Infrastructure Cluster, i.e. a project jointly executed by entities (enterprises, scientific and research units and business environment institutions) interested in the development, implementation and commercialization of innovative technologies in the field of building and indoor building automation, as well as the promotion of ecological construction in Poland. The cooperation was formalized by signing a cluster agreement in 2011. The main goal of the cluster is to develop products and services supporting human activities in its environment. The cluster develops and provides solutions useful in areas related to the construction, IT and industrial automation sectors.

Launching joint activities of the Cluster members serves to create particularly favorable conditions for the development of enterprises by providing knowledge, supporting innovation, stimulating cooperation between companies and institutions, and implementing joint strategic goals, such as:

1. Creating a cooperation network in the area of Sustainable Infrastructure, enabling effective connection and use of the potential of people, enterprises, higher education institutions, scientific and research units, business environment institutions, local government bodies.
2. Developing technologies for the construction of an Autonomous House, together with intelligent building control systems, in order to popularize the technology of intelligent autonomous construction on the market as an element of sustainable infrastructure.
3. Developing competences and resources in the field of Sustainable Infrastructure for the purposes of optimal use of existing opportunities and creating potential for further multi-directional development.
4. Creation of the Competence Center for acquiring and distributing specialist knowledge in the field of autonomous construction and automation, constant monitoring of emerging global innovations and their transfer to the Polish low-energy construction market.
5. Building a chain of cooperative links between entities necessary to produce an Autonomous House.
6. Building methodologies and tools to optimize design and energy management in buildings, as well as consulting the development and distribution of projects in the field of energy-saving and autonomous construction.
7. Preparing the Cluster's research and development program,
8. Development of electronic components and software, enabling the development of the offer for "Sustainable Infrastructure".

In accordance with the cluster's policy, achieving the above goals requires the Cluster Leader to initiate actions aimed at obtaining external funding and actions related to the promotion of the Cluster's idea as an opportunity for a lasting change in construction trends on the domestic and foreign market. In connection with the above, the Cluster intends to establish cooperation with a wider group of business environment institutions, scientific and research units, as well as take advantage of the experience of other entrepreneurs on an international forum. Dynamic development of all branches of the economy, especially those related to the so-called modern technologies, it allows creating solutions that effectively support humans functioning in their place of residence, in the immediate vicinity (urban agglomerations, rural areas), as well as in the workplace. Additionally, in the age of rising energy prices, there is also a visible increase of the interest in energy-saving technologies, "green" technologies, and those that can be useful in improving the lives of not only able-bodied people, but also

disabled people and the elderly.

In the case of the second examined cluster, the indicated main objective and strategic goals contained in the cluster's agreement also determine its socially responsible nature. When referring to the areas of CSR, you may have noticed some links, such as:

- Building methodologies and tools to optimize design and energy management in buildings (CSR area: environment),
- Creating a cooperation network in the area of Sustainable Infrastructure, enabling effective connection and use of the potential of people, enterprises, higher education institutions, scientific and research units, business environment institutions, local government bodies. (CSR area: workplace practices, market practices),
- Creating solutions that effectively support humans' functioning in their place of residence, in the immediate vicinity, as well as in the workplace (CSR area: environment),
- Constant monitoring of emerging global innovations and their transfer to the Polish low-energy construction market (CSR area: consumer issues),
- Developing competences and resources in the field of Sustainable Infrastructure (CSR areas: workplace practices; social involvement and community development),
- Supporting innovation (CSR areas: market practices, consumer issues)
- Increased interest in energy-saving technologies, “green” technologies (CSR areas: social involvement and community development)
- Developing products and services supporting humans' actions in their environment (CSR areas: social involvement and community development; consumer issues).

Limitations and Future Research Directions

This study investigated cluster strategies in Poland. The analysis of available literature and case study of two selected Polish clusters indicates the need for a deeper examination of the connection between the concept of CSR and cluster actions. This study could be extended further with investigation of CSR and cluster actions in different regions of the world.

Conclusion

CSR is a concept becoming more and more popular globally. Over time, the organization's approach to corporate social responsibility also changes-from empty declarations, moving on to strategic activities. There is a growing number of entities where one can observe strategic approach to CSR-enterprises try to establish their knowledge, mission and strategy based on social responsibility. Changes taking place in this area are noticed by, among others, the European Commission, noticing that corporate social responsibility is a crucial element of business strategy, deemed as relevant, to use its principles as an effective way to establish the most competitive economy in the world (Kulawczuk & Poszewiecki, 2007). It can be, therefore, assumed that organizations that include the CSR rules in their visions and missions and implement strategies that are socially responsible increase the potential of their growth.

Comparing the data from PARP's research on Cluster management standards and, in particular, the 3.5.1 standard, it can be pointed out that the concept of CSR plays an increasingly important role in the life of every organization, including clusters. Comparing the examples of selected cluster strategies in Poland, i.e., the Baltic Eco-Energetic Cluster and the Sustainable Infrastructure Cluster, it can be seen that they are consistent with the areas of the CSR concept, i.e., corporate governance, human rights, workplace practices, environment, market practices, consumer issues, social involvement and community development.

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