

## THE CLUSTER AS A SOCIALLY RESPONSIBLE ENTITY

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**Abstract:** Corporate Social Responsibility (CSR) is gaining more and more importance. It involves activities that is associated with the organization's ethical behavior towards society, in particular its recipients, employees, other stakeholders as well as its impact on the environment. Universities deserve special attention in the field of CSR activities which play a huge role in shaping society, its development and are source of information for it. The aim of the paper is to analyze the three examples of polish clusters in the social responsibility context. In the paper the authors also described short history of clusters, their main ideas and the conception of CSR in the theoretical aspect.

**Keywords:** Cluster, CSR, networks, social responsibility.

### 1. Introduction

Competition is a very important element in the operations of enterprises, it is the engine of technological progress, and also drives the development of regions and countries. But the bonds that develop between entities in economic reality are not just a competitive form. This approach is also very important in the last fifty years, in a situation of ever-growing globalization, the development of information technologies, as well as the growing role of innovation, which is a key factor for success in business operations. It is a paradox that the increase in the intensity of competition has resulted in greater interest in relationships where partnership is interspersed with competition. The concept of clusters has also gained popularity due to the continuous spread of the idea of benefits resulting from the joint action of economic participants and the understanding that competition and cooperation do not have to be mutually exclusive.

The concept of clusters is a manifestation of the interest of economic entities in the phenomenon of simultaneous cooperation and competition, which is an effective strategic attitude. Considering the scientific point of view, clusters are quite a broad issue, which is why they also offer a number of research possibilities. Regarding the popularity and timeliness of this research topic, it can be evidenced by the fact that, according to Maskell and Kebir (2005)

estimates, nearly 700 scientific articles have been created in the time range from 1990 to 2004 that talked about this phenomenon. It should also be noted that clusters are a very current research field, which appeared only in the last twenty-five years, but this idea was previously known to researchers, practically from the end of the 19th century.

The purpose of the article is to present the 3 examples of clusters, which are social responsible. An additional goal of the work is to review the literature on the history of clusters, their main purpose, and to present the concept of CSR in clusters in the theoretical aspect.

## 2. The history of clusters

The initial concept of clusters can be seen as far as neoclassical economics and A. Marshall's work "Principles of Economics" from 1890. Marshall, for the first time, discusses the operation of industrial districts (expression from Industrial districts) in Great Britain, where available, which were in geographical links available with each other in confrontational relations, but also. According to it, company clusters in the Yorkshire region, which were specialized in the production of wool, were characterized by "available variants of ideas between the creators and users of machines" (Skawińska, Zalewski, 2009, p. 21). Marshall found that small available ones that are located in districts had similar effects when applied to large companies. These benefits can be attributed not to economies of scale, but to regional externalities, and their occurrence was described by Marshall through (Knop, 2013):

- easier diffusion of knowledge,
- an advantage created by the local labor market, which focuses on people with specific skills,
- networks of connections between the supplier and the recipient within large regional markets.

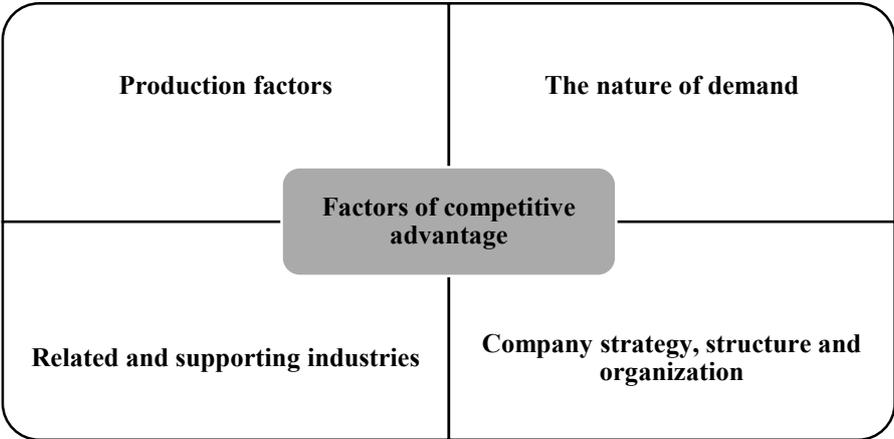
It is interesting that Marshall noticed the phenomenon of concentration of industries in selected sectors, bearing in mind that the observed high concentration of sectors did not make the market unattractive. It was quite the opposite, in the clusters studied the concentration was a factor that encouraged subsequent investors to open factories (Szultka, 2004). According to Marshall, industrial districts, by creating positive externalities, had a very important role in building the economic power of regions. According to him, these effects are divided into (Marshall, 1920):

1. agglomeration advantages – they result from the scale of overall economic activity in selected regions,
2. location advantages – are the result of the geographical proximity of enterprises that produce similar goods.

The theory of external Marshall effects was the starting point of many current theories of regional development. During the Marshall research, so-called agglomeration theory, and other researchers followed it, highlighting the essence of location and the associated positive externalities. These researchers were: A.C. Pigou (1920), B. Ohlin (1933), F. Perroux (Sandretto, 2009), G. Becattini (2002), P. Krugman (1991). Ohlin pointed out that agglomeration benefits that resulted from building clusters were the result of (Gorynia, Jankowska, 2008; Skawińska, Zalewski, 2009):

- internal economies of scale associated with the production technique or production function of an individual enterprise,
- location benefits that resulted from the industry's impact on individuals,
- the benefits of urbanization, which were based on the size of the economy in a particular region, having an external character in relation to the industry and companies,
- links between industries involved in exchange transactions.

Krugman saw the benefits of location as a result of the interaction between economies of scale that create increasing revenues, transport costs, "geographical transaction costs" (these are costs that are incurred due to the distance from business partners), as well as the potential of the selected region (Gorynia, Jankowska, 2008; Krugman, 1991). Krugman became a precursor of new economic geography, he was also the first to present a model of the general spatial balance of economic activity. All these concepts have made their own unique contribution to the development of knowledge about clusters, but a breakthrough in research on the phenomenon of clusters was the publication of the work "The Competitive Advantage of Nations" by M.E. Porter in 1990. At this point, it can already be said about the widespread popularity of cluster theory, as well as the undertaking by scientific institutions of research in this direction. In his work, Porter presented the concept of the diamond of competitiveness (the so-called diamond of competitive advantages), where he also distinguished four factors of competitive advantage (Fig. 1).



**Figure 1.** Factors of competitive advantage. Adapted from: Porter, M., 1990, The Competitive Advantage of Nations, The Free Press, Nowy Jork.

Clusters have been characterized in the form of a manifestation of the interaction of each of the diamond components (Porter, 1990). Also proposed is a definition of clusters that have been described as 'geographical clusters of interrelated companies, specialized suppliers, service providers, companies operating in related sectors and related institutions (for example universities, standardization units and industry associations) competing with each other, but also cooperating" (Porter, 2001). According to Porter's definition, to be able to talk about the cluster five features must appear, so-called cluster attributes:

1. concentration of entities that compete with each other in the region,
2. companies are grouped around one or several related industries, the jointness of suppliers and customers,
3. cooperation between enterprises as well as regional and formal institutions,
4. specialized entities in the cluster,
5. flow of knowledge, technology and innovation between cluster participants.

According to Porter, this form of cooperation can guarantee: ease of access to market information, more efficient division of work between companies, creation of incentives for local governments that induce them to invest in infrastructure, as well as the need to constantly compare themselves with rivals, which results in stimulating innovation (Porter, 2001). Two groups of conditions influence the development of clusters: external and internal (Table 1). The cluster's development is quite significantly determined by how the cluster was coordinated. Networking of an organization, in contrast to a hierarchical organization, requires a radical change when building relationships, in thinking about the cooperation network itself, whose structure is dynamic and resembles a communication node. The network structure is dominated by horizontal connections, and they eliminate the need to create leadership as well as to build unity of organization only around the leader.

**Table 1.**  
*Cluster determinants*

<b>Cluster determinants</b>	
<b>Internal</b>	<b>External</b>
<ul style="list-style-type: none"> <li>• the role of clusters in the region (their place in regional political development),</li> <li>• key challenges arising from national and European policy,</li> <li>• possible support for the cluster.</li> </ul>	<ul style="list-style-type: none"> <li>• cluster identity (vision, mission, strategic goals and cluster specialization),</li> <li>• cluster relations (horizontal, vertical, based on trust and procedures)</li> <li>• cluster dynamics (life cycle of the cluster, the emergence of new and disappearance of relations in the cluster and the managed model).</li> </ul>

Adapted from: Porter, M. 2001. Porter o konkurencji, Polskie Wydawnictwo Ekonomiczne, Warszawa.

### 3. CSR w clusters

CSR (Corporate Social Responsibility) "means a specific sensitivity to external environment issues (social, ecological sensitivity), the ability to maintain a balance between the interests of customers, employees and shareholders, as well as the provision of certain services to the local community" (Żemigala, 2008, p. 32). CSR is a way of conducting business not only through economic entities, but also other organizations from various environments and sectors: medicine, culture, public administration, scientific and research units, and non-governmental organizations. Corporate social responsibility is part of the management strategy, it is a very important element in building the image and identity of the organization, as well as an important element of organizational culture. It is implemented and implemented at the level of autonomous units.

The Polish Agency for Enterprise Development, which implements activities and projects, focused on the development of clusters in Poland, has created and published cluster management standards - principles that have the desired characteristics of management and functioning of cluster coordinators (Mendel, 2016). The publication aims to increase the quality level of cluster management, as well as access to a tool that will allow diagnosing cluster management processes, identifying deficiencies, as well as the possibility of making corrections. As a result of the research that she conducted, five main areas were identified (resources, organization, processes, services for cluster members, cooperation with the environment), within which there are sub-areas (19 in total) to which relevant standards are assigned.

In the area of processes, and in the sub-area the principle of sustainable development, the Corporate Social Responsibility (CSR) standard was placed (Adamczyk, 2009), according to which the cluster's activities in the spirit of CSR say that it is pursuing the development of human resources, taking into account environmental protection, as well as creates relationships with the environment in his own daily practice. A special role in this case was assigned to the coordinator, who should implement CSR assumptions in his activity. An additional effect from the implementation of CSR principles may be image and economic benefits resulting from energy and material savings. Obtaining a positive assessment of the implementation of this standard by the cluster is possible once one of the following indicators has been met:

1. the development strategy holds provisions on CSR activities, related to creating friendly workplaces, developing and implementing new technologies that are environmentally friendly, increasing energy efficiency, greatly reducing the use of natural resources, conducting various types of social campaigns, etc.,
2. the coordinator undertakes to promote CSR principles. The frequency, form and scale of activities is adequate to the development status of the cluster, the industry represented and the needs and capabilities of its members,

3. the coordinator supports the implementation of activities aimed at implementing CSR principles (e.g. conducting actions aimed at building CSR awareness, implementation of definitely low-emission technologies, reducing the consumption of natural resources, etc.). The frequency, form and scale of activities is adequate to the state of development of the cluster, the industry represented and the needs and capabilities of its members.

Such interpretation and assessment of the implementation of the standard makes it possible to state that the cluster uses CSR elements for its own operations, conducts operations by including CSR, however, it does not entitle the cluster to be defined as the so-called socially responsible. You can ask the question: why? The answer is relatively simple, being socially responsible (enterprise, office, cluster, theater) is a comprehensive, not just random application of CSR principles. For a cluster to be considered socially responsible, the following conditions must be met:

1. relevant entries must appear in the most important documents (regulations, strategy, code of ethics),
2. the coordinator must be involved in the promotion and implementation of socially responsible activities, he must also convince the cluster members about the need and rightness of acting in the spirit of CSR, especially micro, as well as small enterprises, because sometimes they have no knowledge in this field,
3. training and information campaigns at the level of each entity/cluster member must be carried out.

Being a socially responsible cluster requires an authentic (not only declared) impact on the local environment in this respect, by promoting modern technologies that eliminate negative effects on the natural environment and human health, and actions on the behavior of residents and municipal authorities. Referring to the definition of the World Bank, which defines CSR as "(...) The commitment of business to contribute to sustainable development, in cooperation with employees, their families, local communities and the entire society, aiming to improve the quality of life, which serves both business and social development" (odpowiedzialnybiznes.pl) – examples of socially responsible clusters that deliberately go beyond the search for economic efficiency, entering the social sphere, in internal as well as external relations.

## **4. Case studies**

### **4.1. Clean Energy Valley Cluster**

The Clean Energy Valley cluster was created in April 2014 in Gdańsk by private economic entities that form the Founding Group. The cooperation of cluster members and partners is focused on promoting and implementing innovative technical solutions, while respecting the

principles of sustainable development. The cooperation network consists of economic entities, business environment institutions, scientific and research units, local government units, as well as non-governmental organizations that aim to conduct activities that do not have negative effects on the environment. To become a cluster member you must accept the Cluster Regulations and the Code of CSR Rules. Non-compliance with the regulations results in exclusion from the group of cluster members.

Economic activity conducted by entities of the cluster assuming is related to clean energy, energy efficiency, elimination of technology and industrial solutions degrading the natural environment. The cluster carries out its activities in four specializations: renewable energy sources, energy-saving construction, smog management, waste disposal. Cooperation with local government units, implementation of comprehensive projects, which, in addition to cost optimization, is also to improve the quality of life of residents, is rooted in the spirit of CSR and consists – in accordance with the 3P principle, i.e. People-Planet-Profit – to search for synergy effects between three areas of cluster members.

To achieve this goal, the cluster is involved in conducting educational activities in municipalities. It organizes meetings with local authorities, representatives of local business and local communities, during which comprehensive solutions for municipal infrastructure, public buildings as well as for individual and collective housing construction, aimed at energy optimization and elimination of low emissions are presented. Meetings aim to make all stakeholders in the local environment aware that only comprehensive solutions and joint efforts can bring concrete results in the form of a better environment for life (klasterip.pl).

#### **4.2. Recycling Cooperation System – not for profit system Ltd and Waste Management and Recycling Cluster**

On the other hand, Recycling Cooperation Center – not for profit system Ltd in the years 2014/2015 implemented the project "Recycling Cooperation Center – not for profit system – a socially responsible coordinator of the Waste Management and Recycling Cluster", which was based on the implementation of CSR under the project "Increasing the competitiveness of regions through corporate social responsibility (CSR)", which was co-financed from the Swiss-Polish Cooperation Program. The project ended on February 28, 2015.

It can be said that his goal was to create a long-term coherent CSR strategy, as well as to start its implementation by taking into account three areas of activity: environmental protection, good relations with company staff and social involvement. In 2014, a corporate social responsibility strategy was developed and the goals contained in it were set by 2022. It includes social, ethical and environmental aspects of business operations, as well as tasks that allow achieving a balance between the effectiveness and profitability of the organization and the social interest (klasterodpadowy.com).

Acting as the Cluster Coordinator, the company has taken actions to build better relationships with recipients of services rendered, both within the Cluster and with new entities, promoting the idea of CSR in business operations. Also, employees who are very important for the organization to work well, are valuable to the company and allow its development. The implementation of the quality management system according to the ISO 9001: 2008 standard made it possible to organize the scope of activities and internal procedures, as a result of which the employees' involvement was increased, as well as their participation in the company management process (klasterodadowy.com). A lifecycle environmental audit (LCA) has been carried out that has identified the company's main environmental concerns.

Each of the actions taken has led to a balanced use of goods in everyday work, and thus are expected to reduce the negative impact on the environment, but also to reduce the costs associated with the operations of the company and Cluster partners. RCC continues to implement its development strategy towards sustainable development in order to become a socially responsible coordinator of the Waste Management and Recycling Cluster.

#### **4.3. Chemical Cluster Green Chemistry**

The West Pomeranian Chemical Cluster "Green Chemistry" is an association of individuals and institutions, and their goal is to integrate the environment of West Pomeranian chemical industry entrepreneurs, as well as related companies and cooperating with this industry. Cluster companies are recognized enterprises with a long-term trade and business tradition. Their products are sold on foreign markets of Europe, Asia or America. The companies have their own experimental laboratories and also cooperate with the research and development sphere. Cluster members support the development of entrepreneurship and counteract unemployment in the region, increase the innovativeness of companies, but also provide personnel consulting. They also support the development of the cluster through promotional activities implemented in the region, Europe and the world.

The cluster is an ambassador of activities to promote specialized research laboratories as well as scientific services, has its own products and intensively develops their line. The most important products promoted through the cluster include:

- Polish heart valve – working with a polymer material enabling the production of artificial elements of the human body, including tendons, prostheses or hearts.
- Materials for hydrogen technologies, nanofillers for polymeric materials, as well as technical use of polymer waste (klasterip.pl).

## Conclusion

Clusters can be used in the spirit of CSR to become socially responsible. The coordinator (or cluster council) should become the initiator, who must also be responsible for the implementation of CSR principles into the cluster's practice, as well as be responsible for monitoring their compliance. After analyzing the connection from the cluster, the next step is to attach records to the cluster documents, apply the CSR strategy to the overall strategy of the cluster, and apply it to the long-term nature. The coordinator's role is also provided continuous substantive and organizational support for these cluster members during CSR activities in the activities of their activities. A set of financial reports should be prepared that will focus on externalities related to the activity. The greater trust of stakeholders in the cluster as a cooperation network, as well as in each of its members is the expected effect of responsible social activity.

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