



THE IMPACT OF CLUSTERIZATION ON THE DEVELOPMENT OF SMALL AND MEDIUM-SIZED ENTERPRISE (SME) SECTOR

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Abstract. The impact of clusterization on the development of SME sector has been analysed in this study. The cooperation of companies at national level and on a global scale is becoming more and more important as a tool of economic development. Companies tend to work together in order to share their competencies, reduce various costs, consolidate limited resources, and hereby increase their productivity, innovativeness, and profitability. It must be emphasized that the role of clusterization is crucial in the development of SME sector, as small and medium-sized enterprises may benefit from economies of scale and extend the operation limits (size-related limitations of operation are characteristic of most small businesses). Clusters (and similar forms of interorganizational structures) create the environment for innovation and technological advancement. Therefore, small and medium-sized enterprises may gain additional benefits that include know-how, cost-saving options, innovative solutions, etc. The authors of this scientific study have concluded that the competitiveness of SME sector is closely related to the spread and extent of clusterization processes.

Keywords: interorganizational structures, clusters, clusterization, small and medium-sized enterprises (SMEs), economic development, competitiveness.

1. Introduction

In the last decades, the concept of clusters has become popular and widespread in both theory and practice. The clusters of small and medium-sized enterprises (SMEs) have proven to be among the most dynamic ways to promote the growth of regional economic systems. As small and medium-sized firms were acknowledged as a source of jobs and income, they have gained an important position in the economic development agenda. Hereby, clusterization policies have been conceived as a framework to induce the growth of SMEs and to optimize resources used to support them. Creating clusters could help SMEs to overcome R&D, production, and marketing obstacles, and allow them to compete with large companies in distant foreign markets.

The aforementioned positive effects of clusterization would greatly contribute to the increase in the competitiveness of SMEs.

The object of the study: the competitiveness-related impact of clusterization.

The aim of the study is to investigate the impact of clusterization on the development of SME sector.

The objectives of the study are:

1. To analyse the conception and forms of interorganizational cooperation.
2. To analyse the coherence (link) between clusterization and competitiveness of economic sectors.
3. To evaluate the benefits of clusterization to SMEs.

The methods of research: systematic-logical analysis of scientific literature, synthesis, holistic approach.

The problem of research. The concept of clusters (clusterization), as well as the role of interorganizational relations have been analysed in various scientific studies, including Gundlach *et al.* (1995), Ylinenpää (1997), Dacin *et al.* (1997), Wildeman (1998), Mavondo and Rodrigo (2001), Varamäki (2001), Reuber and Fisher (2001), Park *et al.* (2002), Ekelund (2002), Rodriguez and Wilson (2002), Jones and Tilley (2003), Parrilli (2007), Pesämaa and Hair (2007), Wang and Meng (2007), Gulati and Sytch (2007), Sheedy (2007); Oliveira (2008), Damaskopoulos *et al.* (2008), Banytė, Salickaitė (2008), Aydogan (2009). However, most of

these scientific studies concentrate on interorganizational relations as a means to increase the competitiveness of large-scale networks that embrace grand corporations and fail to accentuate the growing importance of SME clusters, while the other studies analyse the development of SME sector separately from the concept of cluster-related competitiveness and its global importance. Therefore, the novelty of the research lies in the analysis of the clusterization benefits for SMEs.

2. The forms of interorganizational relations

Companies tend to cooperate in order to achieve the effect of synergy in various fields: R&D, manufacturing (production), marketing, innovation, etc. The forms of cooperation range from partnerships and alliances to networks, associations, clusters, and complex technological platforms.

Business partnerships are generally perceived as a mode of steady cooperation among vertically integrated companies. As opposed to spontaneous occasional relations of companies and organizations, partnerships result in an increased trust and more efficient coordination of activities (Edelman *et al.* 2004; Ylinenpää 1997). The main incentives to form partnerships are the possibilities to:

- reduce operation costs;
- increase personnel qualifications;
- improve technological base;
- advance in innovation field;
- create new products and businesses;
- increase sales and competitiveness.

Partnerships often are informal; thus the incentive to confirm the cooperation by a formal agreement is the first step to forming a strategic alliance. Companies that participate in this agreement have to make strategic decisions about their obligations and rights, the division of possible revenues obtained from their cooperation, and other important issues (Gundlach *et al.* 1995; Gulati and Sytch 2007). Strategic alliances have various peculiarities in comparison with partnerships:

- strategic alliances tend to form in R&D and high-tech sectors;
- strategic alliances, unlike all informal partnerships, concentrate on cooperation results rather than cooperation process;
- strategic alliances are usually created for a particular purpose and certain period of time, while partnerships can last for an undefined period of time.

Networks are often confused with clusters, because both forms of cooperation embrace a value chain as the most important element that binds their companies.

Moreover, clusters can form inside networks, while networks can operate inside clusters. Clusters, however, include a wider range of organizations, such as academic, financial, and government institutions, thus their field of operation and effect is far broader than that of networks. (Dacin *et al.* 1997; Oliveira 2008).

Technological platforms are the associations of various interest groups – public sector, government, business, science. Technological platforms have no property (equity) and operate as non-profit organizations (Wilde- man 1998). They intend to improve the competitiveness of business sectors, and competitive capabilities of their companies, as well as promote innovation and technological advancement.

Government institutions also play a relevant part in business processes (Tvaronavičienė, Korsakienė 2007). When building interorganizational relations, the role of a private business sector must be complemented by stimulating governmental initiatives in order to increase the overall efficiency of cooperation.

3. The role of clusterization as a competitiveness improvement tool

Clusters are geographically integrated companies and associated organizations that share together technological know-how, knowledge, skills, competencies, and resources. Efficient logistics, labour force supply are just a few benefits that are accessible to cluster companies that work in the same territory.

SME cluster is the centralization of SMEs in their location. Most researchers agree that one of the main powers to promote the economic development of a small territory (town, village) is a large number of SME clusters, based on the township enterprises and the private enterprises, called ‘lump economy’, such as ‘one village – one product’, ‘one town – one industry’. The lump economy is constituted of several professional towns and villages, that are concentrated on producing one product. Once some areas have set up a large scale specialized producing, they gain competitive advantage in manufacturing, marketing and selling their products (Wang, Meng 2007).

Specialization is an exceptional feature of cluster companies: they operate in vertically integrated fields in order to achieve economies of scale and improve their profitability. Therefore, clusters can be seen as a productivity improvement tool (Edelman *et al.* 2004; Oliveira 2008). Specialization also attracts highly qualified professionals, and is a perfect niche for innovation processes and activities. The professionals from cluster

companies gradually increase their competence (skills) in systematic decision making, as they constantly interact with the experienced professionals from various partner companies operating in the same cluster.

The advantages of company clusters, mentioned above, are particularly relevant to SMEs, as they can participate in innovation incentives (by initiating or imitating), even though they have limited resources (see Fig. 1).

The constantly changing business environment, decreasing product lifecycle, globalization of world economies, and fast technological development determine the need to find exclusiveness that would ensure competitive advantage, linked with innovation (Banytė, Salickaitė 2008).

Therefore, clusters of small and medium-sized enterprises can be seen as an important mechanism for spurring innovation and dynamic economic development. Cluster companies are motivated to compete with one another and it induces their innovativeness (Reuber and Fisher 2001).

The productivity of cluster companies is determined by the following factors:

- better access to specific information;
- broad supply of labour force;
- easy access to capital resources;
- reduced cost of operation (economies of scale);
- cooperation benefits – cluster company activities complement one another.

As can be noted from the aforementioned factors, clusters draw their rationale from the conception of ‘economies of scale’. The concept refers to sources of productivity that can be leveraged outside the formal boundaries of individual firms, normally embedded in regional economies (Damaskopoulos *et al.* 2008).

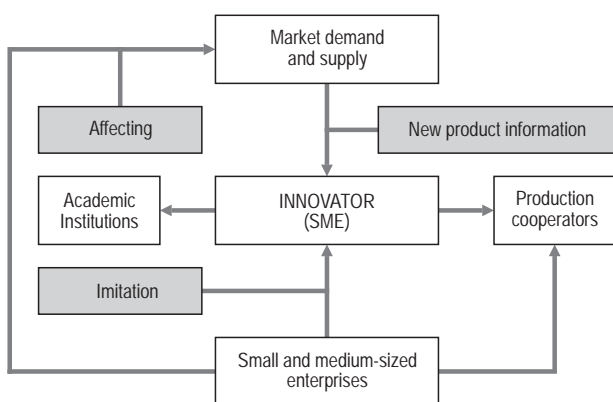


Fig. 1. The Participation of SMEs in the Cluster Innovation Process

Source: the authors, according to Guangya *et al.* (2006)

Innovativeness and productivity are greatly associated with growing competitiveness in local, regional, national, and global markets. Cluster companies are capable of successfully competing in distant foreign markets separately and as a whole. For instance, a bunch of SMEs in the same cluster can create a specific product together in order to penetrate a new market.

Therefore, the general assumption is that clusters are a positive system. It is acknowledged that cluster policies can lead to economic and social development, generating new jobs and bringing people out of poverty.

4. The benefits of clusterization to SMEs

SMEs account for around 70 percentage of employment, around 35 percentage of exports and the majority of earnings of the nation in any economy. Despite this, SMEs sometimes face problems in obtaining finance for their modernization and investment projects. The benefits of SMEs to the national economies are listed below (SME Bank 2009):

- Assist in national, regional and local development because SMEs can accelerate rural industrialization by linking it with the more organized urban sector.
- Help achieve fair distribution of wealth by regional dispersion of economic activities.
- Contribute significantly to international trade (export) revenues because of the low-cost labour intensive nature of its products.
- Assist in fostering a self-help and entrepreneurial culture by bringing together skills, competencies, and capital through various lending and skill enhancement schemes.
- Impart the resilience to withstand economic recessions and maintain a reasonable growth rate since being indigenous is the key to self-sufficiency and sustainability.

Clusterization can stimulate the development and growth of SME sector, as SMEs that participate in clusters can get advantage from:

- advanced and specialized infrastructure;
- qualified workforce;
- increased possibilities to penetrate new markets;
- increased ability to meet the needs of clients;
- cost reduction in manufacturing operations.

According to EU-supported educational research 1995-2005 (‘New Perspectives for Learning’, 2009), there are five types of SME clusters:

- **Porterian** – situated in a clearly defined historical and cultural industrial relationship with collaborative networking between SMEs in similar markets. Governance structures are flexible.

- **Segmented Porterian** – similar to above but interactions between SMEs are shaped by differentiation in producer-supplier relations and different market positions and niches. Networking is by loose associations with a central figure, association or service base and the governance structure is more formal.
- **Interlocking** – work in order to forge the links of common interest within the local economy. Networking is diverse and ranges from loose interest groups formed for promotional purposes to professional associations with a common project.
- **Induced Partnership** – is formulated by external agencies (non-community based), which coordinate organizational learning within a cluster. Development agencies provide communications and decision-making structures which central services can support.
- **Virtual Cluster** – is a national network of family enterprises bound by common history and objectives, with entrepreneurial decision-makers playing the dominant role. Alternatively, it can have a common activity base linked through an information and communication technology infrastructure.

The essence of a modern cluster lies in the fact that small and medium-sized companies have to concentrate their activities on their main competencies. It enables them to maximize the above mentioned use. Other benefits of clusterization to SMEs are presented in Table.

There is strong evidence to suggest that a cluster-based policy brings additional positive effect to existing SME policy in industrialized economies, but the positive effect has not been extensively researched in developing (transition) countries, particularly from the point of view of the SMEs, which are the main accelerators in the cluster development process, with regard to whether their performance has improved as a result of cluster effects (Karaev *et al.* 2007).

Benefits of cluster initiatives for SMEs can be wiped out suddenly by political turmoil, macroeconomic changes and international economic crises, but in general they create a positive environment for productivity, innovation, creation of new jobs and businesses, and hereby add to the growth of SME sector competitiveness.

Table. The Benefits of Clusterization to SMEs

Benefits	Explanation
Cost Economy	Cluster companies tend to minimize their costs through specialization, as they make use of their key competencies and choose only the cheapest and most efficient production alternatives.
Interdependency	Cluster companies get involved in the trade and interchange relations with other organizations outside the cluster. Cluster companies tend to operate as ‘competence packages’: they tend to create joint strategies and share resources that are obtained from the outside (cluster environment).
Strategic Choice	Cluster companies try to take on a strategic position based on their weight and influence. Other cluster companies are perceived as a tool to actualize the interests of the dominating company. It can be deduced that SMEs benefit from being part of a cluster when they are of a similar size and weight.
Knowledge and Learning	Companies form a cluster in order to learn from their partners’ experience. Thus, they can advance in technical, financial, R&D, marketing and other fields of competence.
Increased Specialization	A cluster enables association of companies belonging to different components of a value chain. It enables smaller companies to get specialized and promotes their cooperation.
Increased Rivalry	Rivalry entails innovations in the companies striving to improve their efficiency and competitive potential so as to remain ‘in the group’.
Increased Information Transfer Speed	Increased information and technology transfer speed results from the close cooperation of companies, strong relationship among them and highly competitive nature of a cluster.
Accessibility of External Resources	Cluster companies have the possibility to obtain external resources and the increased capacity to share internal resources of particular companies.

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5. Conclusions

1. Companies tend to cooperate in order to achieve the effect of synergy in various fields of operation and improve their performance in the competitive environment. The forms of cooperation range from informal partnerships and alliances to networks, clusters, associations, as well as complex technological platforms.
2. Clusters (clusterization) can be seen as a productivity and innovativeness improvement tool, while both innovativeness and productivity are greatly associated with growing competitiveness in national and global markets. Cluster policies can lead to economic and social development, generating new jobs and bringing people out of poverty.
3. SMEs that participate in clusters can benefit from specialized infrastructure, increased possibilities to penetrate new markets, qualified workforce, ability to meet the needs of clients, and cost reduction in manufacturing operations.

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