

CLUSTERS – A SPECIFIC FORM OF CONNECTING BUSINESS ENTITIES IN ORDER TO IMPROVE THE MARKET POSITION

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Abstract: *Clusters represent the economic base, which promotes regional development. The formation of cluster organizations is the result of real needs for the satisfaction of economic interest of their members. The purpose of this paper is to promote positive changes that result from the action of clusters. By studying the specifics of the process of connecting businesses, functioning, and development of clusters, we will set guidelines for improving the business efficiency of business entities. Undertaking the measures and actions to improve business efficiency can stimulate balanced regional development. The achieved results of the joint operations of agricultural entities may be of use to regional development policy-makers, cluster management, and cluster members, but also those businesses that are in a dilemma whether to operate independently or within clusters in order to improve their position on the market.*

Keywords: clusters, regional development, business efficiency, the market, the agricultural sector

JEL classifications: R58, Q10, R11

Introduction

Permanent changes in the business environment greatly influence the behavior of market participants. Business entities can respond to changes in the environment in different ways. Modern business conditions have boosted the development of clusters as a specific type of linking business entities in order to increase business efficiency. In developed market economies, cluster organizations represent one of the most relevant microeconomic factors that influence the development of the industry or the region. It can be said that the balanced regional development is encouraged with the appearance and operation of clusters. Therefore, we can conclude that the cluster policy is gaining in importance with increasing regional disparities.

Clusters can be seen as a significant source of differentiation and market success, given that joint activities of business entities increase business efficiency. Geographic concentration of available capacity affects: upgrade of existing resources, improving production processes, increasing business efficiency, which ultimately results in increased market power. As a specific aspect of organizational form, clusters can contribute to the

creation of added value, improved flexibility, the development of better coordination, and confidence.

Satisfaction of economic interests of cluster organizations requires active institutional support and assistance to its members. Involving businesses, public institutions, and research institutions in clusters stresses the importance of the permanent coordination among business entities. The achieved level of communication and coordination among the above-mentioned entities determines the potential for growth and development of cluster organizations in the future.

Connecting businesses from various industries through clustering and other forms of association is characteristic of highly developed countries. Lack of association of business entities in rural areas, especially in agriculture, is one of the causes of their insufficient competitiveness (Janković - Milić et al., 2011). The paper emphasizes the positive implications of the clustering of agricultural entities in certain regions, in terms of successful regional development and sustainable rural and agricultural development.

Theoretical basis of clustering

A cluster is a geographical proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and externalities (Porter, 1998). The economic cluster consists of vertically (shared suppliers) or horizontally (shared customers) related companies within one national economy. Geographic concentration of customers, suppliers, and competitors in a particular region promotes innovation and competitiveness (Porter, 1990). Clusters are groups of specialised enterprises – often SMEs – and other related supporting actors that cooperate closely together in a particular location. In working together SMEs can be more innovative, create more jobs and register more international trademarks and patents than they would alone (European Commission, 2014). The common field of activity, complementarities, and coherence of interests affect the expansion of clusters beyond the borders of a national economy.

At the same time, the existence of competition and cooperation is one of the specifics of the existence of the clusters (Porter, 2010). These processes are simultaneously held at different levels and among different participants. Dynamic competition and intensive cooperation are desirable for the future development of clusters. Strong interdependence of all members and faster diffusion of knowledge contribute to the realization of a synergistic effect at the level of each individual member, and the cluster as a whole.

The task of economic policy makers is to create a positive climate for the realization of the objectives of the cluster. The objectives of the cluster organization are: (1) Establishment and development of common network of members; (2) Establishment of common strategy; (3) Facilitation of the development of innovations and introduction of new technologies; (4) Expansion of cluster and connecting with related cluster organizations (Volarev, 2010). The success of cluster organizations in meeting the goals and implementing the strategy is determined by many factors. This requires cluster management to continuously adjust thinking and align business strategy with the internal and external environment. Changes (innovations) that occur within the cluster organization, or outside of it, can trigger the development and improvement in all stages of the cluster's life cycle (Krstić et al, 2014).

The emphasis on economic transformation and on building interregional value chains calls for a new generation of cluster policy approaches. Clusters can be key delivery instruments for national and regional smart specialization strategies, internal market, re-industrialization, and SME policy. Clusters are a unique opportunity for regional policy makers and cluster actors to share experiences on how smart specialization strategies and clusters can help transform your region and drive growth (European Commission, 2014).

Cluster development is conditioned by its ability to adapt to change. Without monitoring, comparison, and control, it is not possible to avoid the vulnerability of cluster organizations in the competitive struggle. By controlling the process, activities, and outcomes, cluster organizations are increasing opportunities for improved business efficiency.

Clusters, as a specific way of connecting businesses, have a positive impact on the level of economic performance of member companies. The interest of business entities for clustering has occurred because of problems of falling behind in productivity, the need to adapt to changing conditions in the business environment, and large regional disparities.

Advantages, disadvantages and challenges of clustering

The prosperity of the European Union relies on its ability to provide SMEs and industry with a favorable business environment and customized support to unlock growth opportunities. Stimulating cross-sectoral cooperation and innovation, as well as helping SMEs to access finance, new industrial value chains, and to go international are seen as key drivers. Clusters and cluster organizations can play a key role in securing these objectives (European Commission, 2015). Clusters operate together in regional markets. 38% of European jobs are based in such regional strongholds and SME participation in clusters leads to more innovation and growth. There are about 2000 statistical clusters in Europe, of which 150 are considered to be world-class in terms of employment, size, focus, and specialization. According to the European Cluster Excellence Scoreboard, for a number of selected emerging industries and regions in the period 2010 - 2013, 33.3% of firms in clusters showed employment growth superior to 10%, as opposed to only 18.2% of firms outside clusters (European Commission, 2015).

Cost-benefit analysis is a useful analytical tool for assessing costs and benefits of cluster membership. The main advantages of cluster organizations are: cost savings of companies operating in the cluster, strengthening human capacity, higher level of specialization, better starting basis for further growth and development, dissemination of knowledge, strategic and operational flexibility, stimulating environment for innovation, collaboration, and development of competition, easier solving specific business problems, lower risk of error in business decision-making, knowledge and support framework conditions, supporting internal networking and internationalization. Cluster organizations positively affect the market position of companies, given that they increase productivity and efficiency of member companies. The literature states that cluster organization helps each of its members make progress. The main costs are reflected in vaguely defined development objectives, lack of an adequate institutional framework for the development of cluster organizations, non-harmonization of regulatory framework with best practices, the lack of accompanying strategic documents, complex monitoring, and control of cluster performance.

The European Cluster Excellence Scoreboard Pilot Version applies the scoreboard methodology for measuring regional strength in emerging industries developed under the European Cluster Observatory to three emerging industries in the fields of creative industries, eco industries and mobile services. The pilot scoreboard is composed of three key elements: the strength of the regional business environment (framework conditions), firm strength, and effective business support services (part of cluster management excellence). According to the survey results, major challenges identified by the surveyed the cluster management organisations (CMOs): Lack of regional / national / supra-national support for financing and development of the organisation, Difficulties in assessing cluster performance (due to e.g. a lack of commonly agreed methods), Lack of involvement of cluster stake holders in strategy development and implementation, Difficulties in collaborating with other clusters, (nationally and /or internationally), Lack of private funding for the development of the

organisation and strategy implementation. Governance characteristics of the surveyed CMOs: Involvement of stakeholders in the identification of cluster strategies, Performance monitoring is based on objectives and key performance indicators, Feedback from the board and advisory committees is integrated into the cluster strategy, Representatives of regional authorities and policy makers on the board, Presence of an Advisory Committee composed of industry representatives, Representatives of investors on the board, Presence of a Scientific Advisory Committee composed representatives from academia, Representatives from other regional / national clusters on the board for boosting collaboration (Probst et. al, 2013).

Clusters in agricultural production as a chance for more intensive regional and rural development

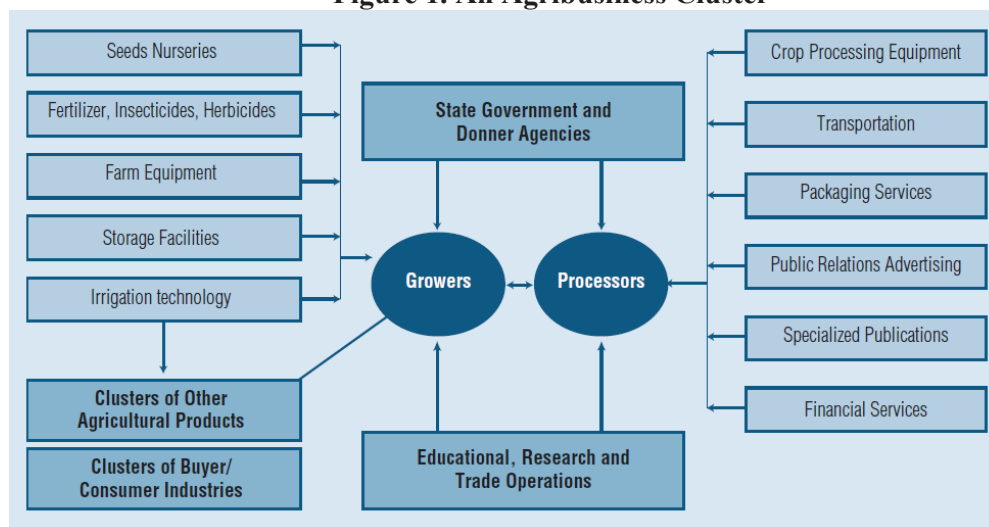
Balanced regional development is highly positioned as a goal of developed countries, and one of the common courses of action of the EU member states. In a large number of developing countries, the greatest potential for sustainable growth, which is intensely pursued, lies in the agricultural sector. In this regard, the state has to create a framework in which agriculture can contribute to balanced regional development and the development of rural areas. In this way, clusters have proved to be a good solution and one of the possible forms of regional and rural development.

Although there is plenty of research and initiatives which are related to clusters in general, very little attention has been given to clusters in the agricultural sector. The reason for this may be the very idea of clusters and tight connection with competitiveness and innovation. These two features are primarily linked to sectors of the economy that are focused on innovation as a fundamental value, such as information technology, electronics, automotive industry, and biotechnology.

Dealing with the constant growth of productivity and market pressure, agricultural sector can only through clusters cope with the prevailing trend, in order to improve its capacity in terms of innovation and competitiveness. In order to foster the competitiveness of agriculture and ensure food security, the European Commission is committed to promoting and encouraging the creation of voluntary agricultural producer organizations. It is certain that a new form of association is slowly paving its way to the agricultural sector, where cluster type of association is recognized as a way to overcome the shortcomings of previous forms of association.

Clusters in agriculture make up a complex system, and refer to association of businesses and other institutions involved in related and different activities, connected by common interests in the area of procurement of inputs, product placement, development and introduction of new technology and innovation. With this in mind, agriculture clusters can be defined as a geographic concentration of interconnected small and medium-sized enterprises (SMEs) and entrepreneurs, specialized suppliers and service providers, companies in related industries, scientific and educational institutions, and government bodies and agencies in the sector of agriculture and rural development (Paraušić, Cvijanović, 2014) (Figure 1). Various authors in the economic literature have come up with a large number of definitions of the term agricultural cluster, but the common element to all of them is the geographic concentration of companies from one or related industries, as well as insisting on their mutual networking into one unit, which is characterized by relationships of trust and cooperation.

Figure 1. An Agribusiness Cluster



Source: Clusters for Competitiveness (2009), A Practical Guide & Policy Implications for Developing Cluster Initiatives, page 2

As regards the agricultural clusters, most agree that they are always a group of entities related to the specific geographical area, region, or to a specific administrative entity. Networking of entities in a specific region serves to build competitiveness at the regional level through the exploitation of its resources and predispositions. It refers to converting comparative advantages into competitive (Pejanović, 2009). In this regard, clusters recognize and favor local advantages, simplicity, and differences.

Agricultural production management and product processing is a complex process that requires daily making of important decisions. Cluster, as a long-term strategically-oriented project, greatly facilitates making the right decisions and overcoming barriers to successful development of the agricultural sector. For this reason, the clusters can become a generator of new ways of strategic thinking in the national economy, which will provide the agricultural sector with the quality, quantity, and continuity of production, and meet market and customers' demands. Therefore, agricultural clusters enable all agricultural stakeholders to achieve better business results through cooperation with individual institutions and other entities in the agribusiness sector.

The main motive of small agricultural producers to create clusters lies in their inability to compete with the increasing number of large and affiliated companies on the market, whose power allows them to dictate market conditions. Due to the present financial constraints, low production capacity and offer potential, and given the expensive and non-standardized production, insufficient orientation to innovative marketing, market research, and modern technology, the only way to improve competitiveness lies in clustering. On this basis, farmers and companies have the opportunity to, through the joint use of key resources or sources of competitiveness, make up for every thing they individually lack and prevents them from successful market appearance (Paraušić et al., 2010).

Agricultural clusters strengthen cooperation, build confidence and business links among agricultural producers, suppliers, processors, exporters, educational, scientific, and public institutions, and strengthen the competitive power of all members at the regional level and in the individual terms. Of course, all of the above leads to the growth of productivity and competitiveness of the agricultural sector, as well as rural development and increased exports of agricultural products.

As regards the agricultural clustering, it is important that agricultural producers join clusters only if they recognize their business interest, which is defined by a clear objective of the cluster itself. Cluster development has to be encouraged by the state, in terms of creating the necessary conditions, although the clustering initiative itself comes from agricultural entities. The positive side of the cluster organization is reflected in the possibility of associated farmers to influence the adoption of legislative provisions and other acts in the interests of all participants in the cluster, and the business results of the participants organized in a cluster can improve by as much as 50% (Agricultural Advisory and Support Service of Serbia, 2010).

Operation of agricultural companies within the cluster can lead to increased productivity and growth of production. Furthermore, agricultural cluster development stimulates balanced regional and rural development of a country. Increased productivity in agriculture can bring about income growth of employees in this sector and increase in the share of the primary sector in gross domestic product (Paraušić, Cvijanović, 2014). Furthermore, it leads to sustainable agricultural and rural development, which is imperative for the future of all countries. In addition, it is important to emphasize the high contribution of agricultural clustering to the development and strengthening of the innovative performance of the associated companies and regions.

In Serbia, as in other developing countries, the greatest potential for sustainable growth is in the agricultural sector. Several decades ago, Serbian agriculture recorded some attempts related to clustering, where by a number of them developed, but those were young clusters with insufficient competitive power to influence market trends. The basis for the development of clusters in Serbia lies in the ability to solve a large number of current problems in agricultural production, which continue over the years.

Important obstacles to the normal functioning of clusters in this sector, as well as in other sectors of the economy, are the following: financial sustainability, lack of full-time employees as a consequence of insufficient funding, and poor development of production capacity (Mijačić, 2011). Rural environment can certainly be a problem for the development of agricultural clusters due to the absence of favorable economic, institutional, and infrastructural prerequisites for the successful development of small and medium-sized enterprises and clusters (Paraušić, Cvijanović, 2014). Another problem, maybe the most important in the development of clusters and the whole country, is the existence of a very low level of communication and coordination among the national, regional, and local authorities (Glavaš - Trbić, 2012).

These problems could be overcome by the development of clusters, as the private sector within the cluster seeks to encourage the development of information, technology, and transport infrastructure, to cooperate with the government bodies, and to create stable professional associations, which will attract a greater number of participants and thus strengthen its position on the market, while the state should create and maintain stable micro and macroeconomic conditions within the economy. Furthermore, by attracting foreign direct investment in the vicinity of cluster centers, removing barriers to local competition, establishing standards that are conducive to innovation and acting as a buyer of cluster products and services, the state can stimulate the interest of farmers to create clusters and realize higher profits (Guide to Cluster Development, 2013).

In the agricultural sector, clusters represent an efficient instrument to enhance competitiveness and, as such, develop more and more and more, especially when it comes to a new type of agriculture – organic production. For this type of clusters, it is particularly important to focus on environmental protection, because agricultural production causes pollution, originating from artificial fertilizers and chemical plant protection products. A prerequisite for creating successful clusters dealing with the production and marketing of

organic products is the removal or mitigation of fundamental barriers to their development – change of mindset of producers, processors, exporters, and adequate government assistance (Petković et al., 2011).

By clustering in the field of organic farming, members get easier access to knowledge, experience, and skills necessary for dealing with and the maintenance of this form of agricultural production, because cluster connects directly all members of the value chain of organic agriculture at one point. At the same time, the advantage of associated organic producers lies in the ability to produce larger quantities of organic products, easier finding of buyers on the market, as well as better conditions for the marketing of products and the procurement of the necessary goods and services for production. In relation to this, there is the overcoming of problems of access to the domestic and foreign markets, and better promotion of organic, environmentally friendly, and healthier products that are of high quality.

Organic production in Serbia is still in its infancy, and there are many issues that producers face. Therefore, what is necessary is the existence of an umbrella organization, which provides the necessary information, logistics, and the possibility of better organization and association for the purpose of better marketing of products. One such organization is the Cluster of Organic Producers – South, which was established in 2013, under the short name, Organik South. The cluster includes four processors of organic food, nine primary producers, three agricultural high schools, and Center for the Development of Jablanica and Pčinja Districts.

The primary objective of this cluster is to provide all its members with the strong support for the performance on the domestic and international markets. Cluster members are participants in the project "Support to the Production of Organic Food in Southern Serbia", which focuses on the development of organic production, as a special opportunity for small farmers and small farms in the south of Serbia. Special focus is on the export of products to customers in Austria, who are interested in cooperation with the the project beneficiaries and the purchase of certified organic products from Serbian organic producers (Center for the Development of Jablanica and Pčinja Districts, 2013).

It is important to emphasize that the promotion of the cluster concept, i.e. association in order to create mutual benefit, increases the level of stability in operations and improves market performance. The result of the project, which aims at providing assistance to regional producers and processors in the creation of associations and connections with local associations, is an overall strengthening of the organic food sector in South Serbia. In addition, clustering increases production capacity of organic food and creates conditions for the future sustainable development of the sector and the economy in Southern Serbia in general.

Conclusions

Joint action of business entities in modern business conditions and the prevailing trends becomes imperative. Through specific connections, business entities, focusing on a common task, combine knowledge, information, and resources to become as successful in business as possible. Clustering is primarily a feature of developed countries around the world, but they are developing in transition economies as well. However, the manner in which the cluster is formed is different, although the common denominator in all the economies is the same. It is a necessity and inevitability of the process of clustering, as one of the ways to increase the competitiveness of enterprises and regions.

Clustering is a model of regional development, based on the unified functioning of the entities in the same sector and their resources, with the support of state institutions. The benefits the business entities gain from this association are reflected in the easier overcoming

of problems encountered during operations, better exchange of information, and generation of knowledge. These benefits result in increased business efficiency of small and medium-sized enterprises, support to the development of other sectors, balanced regional development, and overall progress of the region.

In Serbia, clustering has, as a successful model of development, become part of the strategic documents relating to rural, regional, business, and local economic development. Although this model of association is still relatively new in our country, it increasingly involves agriculture. Given the economic environment and very short period since the establishment of agricultural clusters in Serbia, accurate assessment of the effects of clusters is debatable, because this is a model that is designed to give long-term effects.

Based on the presented conclusions, it can be stated that the formation of clusters can improve the performance and efficiency of development of business entities. In conditions of strong competition, it can be a decisive factor in increasing market power and improving market position.

References

1. Clusters for Competitiveness (2009), A Practical Guide and Policy Implications for Developing Cluster Initiatives, International Trade Department, The World Bank
2. Glavaš Trbić, D. (2012) Clusters for Rural Development, Foundation Andrejević, Belgrade
3. Janković - Milić, V., Jovanović, S., Anđelković – Pešić, M. (2011) Encouraging the Development of Small and Medium - Sized Enterprises in Rural Areas with a Focus on Nišava District, Agrarian and Rural Policy in Serbia –The Necessity of Speeding Up the Reforms, Association of Agricultural Economists of Serbia, Faculty of Economics, Novi Sad, pp. 81- 97
4. Krstić, B, Stanisavljević, N., & Stanišić, T. [2014]. Generic Benchmarking in Order to Improve Performance of Clusters. *Industry*, 42 (3), pp. 79-100.
5. Mijačić, D. (2011), Analysis of the State of Business Infrastructure in the Republic of Serbia, National Agency for Regional Development, Belgrade
6. Paraušić, V. Cvijanović, J. (2014) The Competitiveness of Serbian Agribusiness – Clusters in the Function of Sustainable Regional Competitiveness, Institute of Agricultural Economics in Belgrade, Belgrade
7. Paraušić, V. Cvijanović, D. Hamović, V. (2010) Cluster Approach to Improving the Competitiveness of Livestock Production in the Republic of Serbia. *The Matica Srpska Journal of Social Sciences*, No.130. pp. 61 - 72
8. Pejanović, R., (2009) Development Problems of Agriculture of the Republic of Serbia, *Agricultural Economics*, pp. 5-23
9. Petković, M. Aleksić Mirić, A., Petrović, M. (2011) Building Interorganizational Processes in Order to Raise Competitiveness: The Case of Clusters in Serbia, *New Methods of Management and Marketing in Raising Competitiveness of the Serbian Economy*, Faculty of Economics in Belgrade, Faculty of Economics in Subotica, Scientific Society of Economists of Serbia, Belgrade
10. Probst, L., Monfardini, E. Frideres, L., Unlu Bohn, N. (2013) European Cluster Excellence Scoreboard, Pilot Version. European Cluster Observatory, the European Commission.
11. Porter, M. (1998). Clusters and the New Economics of Competition. *Harvard Business Review*, Vol. Nov-Dec. pp.77-90.
12. Porter, M. (1990). *Competitive Advantages of Nations*, Harvard Business School, New York: Macmillan

13. Porter, M. (2010). Location, Competition, and Economic Development: Local Clusters in a Global Economy. *Quarterly Economic Development*, 14 (1) pp. 15-34.
14. Volarev, T. (2010). Manual for Clustering in the Republic of Serbia. Retrieved from <http://data.sfb.rs/sftp/organizacija.sum> 2014 August 10th
15. Center for the Development of Jablanica and Pčinja Districts, 2013, www.centarzarazvoj.org
16. European Commission (2015) http://ec.europa.eu/growth/smes/cluster/index_en.htm
17. European Commission (2015) http://ec.europa.eu/enterprise/initiatives/cluster/observatory/news/index_en.htm
18. Agricultural Advisory Service of the Republic of Serbia, (2010) Agricultural Economics – Clusters in Agriculture, http://psss.rs/e107_plugins/forum/forum_viewtopic.php?3500
19. Guide to Cluster Development, (2013) <http://www.scribd.com/doc/130342301/Vodi%C4%8D-za-razvoj-klastera#scribd>

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