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MARKET ANALYSIS OF CLUSTERS IN SERBIAN AGRIBUSINESS[1]

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Summary

In the national economy clusters have been recognized as an instrument for strengthening productivity and innovation in Small and Medium Enterprises, as well as an instrument for regional development starting from 2005, when the Ministry of Economy and Regional Development began with the implementation of development projects of the first clusters. The ministry along with other government and foreign institutions, which worked to build clusters based on the projects, has provided support for cluster development in the national economy. The subjects of this paper are clusters in Serbian agribusiness registered until June 05, 2013. The aim of this work is to identify main characteristics of clusters, problems in their functioning, and to propose measures for cluster promotion in the future. This is achieved by market analysis of clusters or survey in the form of interviews. The research results indicate that clusters in Serbia were unable to develop until middle of 2013. They still possess low operative, innovative and export capacities, and there is a lack of key contributions of clusters to creating a unique regional specialization of labor and knowledge, as well as increasing regional competitiveness. In the future cluster development in agribusiness will be directly related to the creation of a favourable business environment for SMEs, stimulative and predictable agricultural policy, as well as developed entrepreneurial initiatives aimed at joint activities and cooperation.

Key words: *clusters, agribusiness, competitiveness, productivity, innovation.*

JEL: *R11, O12*

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Introduction

Clusters are an integral part of the business environment in developed economies and show a significant contribution to the competitiveness of involved cluster members, regional and national competitiveness. In the field of agribusiness they are one of the methods of developing and improving the sector and producer competitiveness, too. Networking of agricultural producers, government institutions and agencies, scientific and educational institutions, as well as organization for support small and medium enterprises (abbreviation SMEs), provides preconditions for creating a sustainable competitive advantage for agricultural producers and higher export and recognition of products in international market.

Although cluster development in Serbian economy started in 2005, for the time being (middle of 2013) clusters in Serbia have not been developed. According to the survey of business infrastructure in Serbia (Mijačić, 2011): (1) clusters in Serbia lack the lowest common denominator in terms of defining the interests around which the cluster members are gathered, (2) cluster capacities are not developed enough, with low intensity of activities, given that companies are usually not active in cluster functioning and are rarely willing to invest their time in cluster activities, (3) the vast majority of clusters have failed to build trust and close relationships with their members, and participation of connected institutions is mainly symbolic, with no significant results in improving the competitiveness and developing new products for cluster members.

The subject of this paper is market analysis of the existing clusters in Serbian agribusiness, with the aim to identify all cluster characteristics, their specificities and problems in functioning. Based on the results of market analysis of the clusters and on the study of world literature on clusters and best practices for cluster development in developing and transition countries, the aim of this paper is to propose measures necessary for the promotion of clusters as an important instrument for creating the competitiveness of agriculture and food sector as well as an instrument for rural and balanced regional development.

Although the subject of this paper has been defined as cluster research in Serbian agribusiness, it is important to point out that in the economies of transition and developing countries (such as Serbia), which have recently started to use the concepts of clusters, in most cases there are no "real" clusters or clusters as empirical/market phenomenon of grouping the companies and institutions in a particular region and economic segment, based on the tradition of production, entrepreneurial spirit, cooperation among companies and market strengths. When we speak of clusters in these countries we speak of ***cluster initiatives and cluster organizations***, which are often identified as clusters. According to (Sölvell, Ketels and Lindqvist, 2003, EC, 2008):

- Cluster initiatives are public and private initiatives defined as organized efforts to increase development and competitiveness of clusters within a region, through joint activities of companies, government (state institutions) and/or scientific research institutions.

- Cluster organization is often part of a cluster initiative defined as a legal entity or public and private organization of cluster management, which usually participates and takes part in the premises, facilities and activities of the cluster.

Although the authors in this paper discuss about clusters in Serbian agribusiness (and use the term "clusters") in fact it is all about cluster initiatives. Furthermore Serbian agribusiness is seen as process of producing food, feed, fiber and other goods by the systematic raising of plants and animals, and as sector of food manufacturing industry.

Research methodology

Market analysis of clusters in Serbian agribusiness was conducted through a questionnaire or through interviews with cluster managers or representatives of institutions involved in development and implementation of cluster initiatives. The market survey was carried out from June 15 to July 15, 2013, and the interview was conducted by phone lasting approximately 30 minutes. The survey was based on prepared questionnaire, which contained all the issues relevant for cluster evaluation, or issues related to: (1) the organization, operation and financing of clusters; (2) the number of members and their way of networking; (3) problems and limitations in functioning; (4) proposed measures to improve clustering.

In order to achieve data on the number of clusters in Serbian agribusiness, the authors have used the database of registered legal entities and entrepreneurs at the Serbian Business Registers Agency (Serbian Business Registers Agency, 2013). Search for agri-food clusters at Serbian Business Registers Agency (abbreviation SBRA) database was made on June 5, 2013 in two rounds. In the first round, searching for legal entities and entrepreneurs using the keyword "cluster", it has been found that in their name the word "cluster" have: (1) 10 companies; (2) 2 entrepreneurs; (3) 101 associations and (4) 4 foundations. In the second round, searching for legal entities and entrepreneurs that have the word "cluster" in their name was carried out using keywords, such as "agriculture", "agro", "agroindustry", "rural", "food", "plants", "beef", "wine", "grains", "vegetables", "fruit", "bio" and others words related to agriculture. In this way a list of 39 registered clusters at SBRA database has been obtained. These clusters operate in Serbian agribusiness, of which only 4 exist in the legal form of a nonprofit joint stock company, and the remaining clusters are registered as associations. Interesting fact is that the cluster "Somborski salaši" has been registered at SBRA both as an association and as a nonprofit shareholding company.

Large number of clusters identified in such way is already contained in cluster database available to the Serbian Chamber of Commerce, Cluster Council (List of mapped clusters in Serbia, September 07, 2012), as well as the umbrella organization of clusters "Cluster house", Niš (Cluster house, 2013). Since in cluster database of these institutions and organizations additional agricultural and food clusters have not been identified, it can be concluded that until middle of 2013 (actually up to June 15, 2013) in Serbia, at SBRA database, ***39 clusters in the field of agribusiness have been registered***. All these clusters have been involved in market analysis and questionnarie, through the interview method.

Of the total number of clusters, the authors were unable to make contact with only 6 cluster managers, so that 84.6% of the total number of identified clusters in Serbian agribusiness was the subject of market analysis.

In order to complete market analysis of clusters in Serbian agribusiness, using the interview method, a number of institutions in Serbia involved in cluster development have been questioned, such as: the National Agency for Regional Development (abbreviation NARD), Regional Development Agencies (abbreviation RDAs) to support SMEs sector, the program LEDIB "Cluster house", Niš (Paraušić, 2013).

The concept of clusters and cluster contribution to creating a sustainable competitive advantage of enterprises in agribusiness

In numerous studies and scientific works which have clusters as topic, researchers start from Porter's definition of ***clusters***. According to this author (Porter, 1998) "clusters are geographic concentrations of interconnected companies and institutions in a particular field" or "critical masses in one place, of unusual competitive success in particular fields". In addition, Porter (2008) also defines clusters as "geographic concentration of interconnected companies, specialized suppliers, service providers, companies in related industries and associated institutions (universities, agencies, chambers of commerce) in a particular field of activity that compete but also cooperate". Basic terms associated with cluster are (Porter, 2008; Enright, 2003; EC, 2008):

- Successful clusters are concentrated in one or more economic sectors within the region/city (***cluster density*** refers to the number of companies included in cluster or geographical vicinity of companies and institutions in specific geographic area and economic sector), they have ***width*** (established horizontal connections with cluster participants or developed relationships with companies that produce/provide complementary products/services and that have similar market position) and ***depth*** (vertical connections of members in the cluster or links of the companies in value chain from input purchase, to sale).
- ***Established public-private partnerships*** (especially in the field of university-industry collaboration in R&D; cooperation private companies with government bodies);
- Cooperation between the cluster members realizes through intensive ***cooperation,*** but also through ***competitive relation***;
- Successful clusters are characterized by the existence of, so called "***social glue"*** (developed confidence, cooperation and partnership among the companies, government bodies and scientific-educational institutions);
- Externalities (effects of transferring benefits, knowledge and innovation between the companies in cluster, but also outside cluster).

Porter emphasizes that clusters affect competition in three broad ways (Porter, 1998): (1) by increasing the productivity of companies based in the area; (2) by driving the direction and pace of innovation, which underpins future productivity growth; (3) by stimulating the formation of new businesses, which expands and strengthens the cluster itself. At the same time, numerous studies state a positive link between the degree of grouping of firms in rural areas and income growth in rural regions: rural clusters have higher earnings, compared to earnings of workers who work outside cluster, as a result of higher productivity and strong cluster effects of rapid flow of information, high accumulation of knowledge, skills, etc. (Porter, Ketels, Miller and Bryden, 2004).

A very important factor for improving agricultural production in all countries, especially in the transition ones, is ***productivity growth*** and this is more important factor than production growth (Liefert, Swinnen, 2002). Production growth can only lead to income growth in the agricultural sector, while productivity involves not only change in the production technology, but what is more important, change in the nature and behavior of companies, creation of commercial and public infrastructure and institutions to support production (credit system, provision of market information, legislative basis, etc.) Having in mind all that, it is important to point out that in the processes of increasing the productivity of domestic agriculture, significant, but unused instruments are clusters. By joining into a cluster, participants have the opportunity to increase productivity and "to compensate" everything that each individual is lacking of or to have the option of a common, efficient and cheaper approach to: capital/finances, specialized suppliers and labor, the market for their products, knowledge, information and research knowledge, etc. In addition, cluster members have the option of using government programs to develop physical infrastructure, public institutions, laboratories, technology transfer, training programs and the like.

The most important contribution of clusters to domestic agriculture is the ability, by using clusters, to move the focus of competitiveness of farmers from low prices and the exploitation of labor and natural resources to competition which is based on a high productivity, knowledge, economy of scale, innovations, high quality, modern technologies, networking. Even though the EU market offers great opportunities for Serbian agriculture exports, the results will depend on the success in improving two key determinants of competitiveness: productivity and quality (Antevski, Petrović, Vesić, 2012). In both cases, the clusters are recognized as a form of association that can contribute to the productivity growth of agricultural production, high quality and innovation, all of which leads to the acquisition of sustainable sources of competitiveness of producers in domestic and international markets. Also, it is important to point out that clusters can be seen as a way for improving of efficiency and effectivity of company organization (Nikolić, Cvijanović, Grujičić, 2008).

The analysis of characteristics of clusters registered in the field of Serbian agribusiness until middle of 2013

Based on the identification of clusters registered in the field of agribusiness at SBRA database and their market analysis (Paraušić, 2013), it can be noted that, by regions,

the list of agricultural and food clusters (according to the place of their registration) is the following:

- there are 10 clusters in the region of Belgrade;
- 15 clusters are in Vojvodina;
- 8 clusters belong to the region of Šumadija and Western Serbia, and
- 6 clusters have been registered in the region of South and East Serbia.

The largest number of clusters is registered in Vojvodina, and in most cases the clusters are registered in the major urban centers (Belgrade, Novi Sad, Nis, Kragujevac), where is also the largest concentration of institutions and regional agencies that support cluster development. The basic characteristics of surveyed clusters in Serbian agribusiness are given below (Paraušić, 2013):

- **Legal form.** The largest number of clusters is registered in the legal form of an association. Only 4 cluster initiatives (Rakovica agro cluster, Belgrade; Plants United, Belgrade; Somborski salaši, Sombor and Agro cluster Obrenovac) are registered as a nonprofit joint-stock company;
- **Year of cluster establishing.** The largest number of clusters was registered after the Law on Associations (Official Gazette of the Republic of Serbia, No 51/2009) has been adopted, that is since 2009;
- **Method of cluster establishing.** In most cases clusters were established or initiated by RDAs, that secured the funds for cluster development through the EU projects (IPA fond 2007-2013[5]; South East Europe - SEE 2007-2013), local projects to encourage employment and innovation clusters and SMEs (funded by the state, provincial or city/municipal budget) or by applying for programs of foreign governments and agencies (LEDIB/ Danish programme for local economic development in the Balkans; cluster support of the Kingdom of Norway; Agribusiness project of the U.S. Agency for International Development/USAID; Swiss Agency for Development and Cooperation, the European Partnership with Municipalities Programme- EU Progres funded by the EU and the Government of Switzerland).
- **Number of cluster members and critical mass of participants.** Cluster members are usually: registered family farms, SMEs and entrepreneurs in the area of production and trade in agricultural and food products, agricultural cooperatives, farmers' associations, as well as supporting institutions, such as: schools and universities, scientific research institutes, certification bodies, agricultural extension services, RDAs, experts of various profiles and the like. The number and structure of cluster members usually meet or exceed the minimum number of members that NARD requires for cluster support (NARD, 2013). However, despite the vast membership, clusters do not have critical mass of participants, since there is no membership of big and strong market

5 SECEP Programme for Competitiveness and Export Promotion; Programme RDEPR 2; Exchange 3 programme, Cross Border Cooperation Projects and the like.

companies/producers, and very often the membership of some companies and institutions is only formal.

- **Organizational cluster network.** In the field of agribusiness there are no real clusters, because most of them are similar to associations, cooperatives or NGOs. Networks of cluster participants with suppliers, companies in related industries, and supporting institutions are insufficiently developed. The following cluster characteristics make them significantly similar to associations: (1) there are some clusters which as members have only companies that deal with the same kind of activities or the same processes in the value chain; (2) small number of clusters has developed the necessary depth (vertical connection of the companies in the product value chain)[6];(3) participation of some companies, especially scientific and education and research institutions is often formal (required by tender conditions); (4) cooperation among cluster members is very small (especially in terms of meetings, exchange of knowledge, ideas, information, as well as in terms of addressing common infrastructure problems or joint placement of the products);
- **Sources of funding.** Almost all clusters are characterized by the lack of sustainable and stable sources of funding for professional management and cluster activities, and great reliance on project-based funding (along with budget or donor support). In particular, NARD, provincial funds, EU funds, city/municipality funds and various donor funds are expected to support the work of cluster offices (funding for professional management), as well as almost all cluster activities: exploring foreign markets, promotion and participation in international fairs, export contracts, activities on transfering new technologies, education and introducting quality standards, commercialization of innovations and the like.
- **Entrepeneurial capacity (operation).** The surveyed clusters are usually not operative or have very low operative and entrepreneurial capacity. In most cases they are just cluster initiatives "on paper". Entreprises as cluster members are inactive and unwilling to invest their time and activities in joint projects and small number of cluster has employed a manager. Cluster activities are mostly related to organization of seminars, training, conferences, visiting fairs, creating websites, publications, etc.
- **Production and export capacities and market share.** Production and export capacities of cluster members are low, and the same situation is with market share of clusters in the sector of activity they belong to;
- **Innovation.** Clusters have low innovative potential because they lack economic or entrepreneurial strength for commercialization of innovations. In addition, there is lack of cooperation with scientific research institutions in R&D sector.
- **Market recognition.** Since they do not have critical mass of participants and capacity, clusters have no economic significance nor recognition at the local level, much less at the level of regional or national and global economy. Recognition in intrenational

6 In some cases, large dependence on imported components in almost all clusters prevents vertical expansion of the cluster, especially antagonistic relationship of producers with importers, who charge considerably high costs of imported components.

market shows only raspberry cluster in Arilje, which is not registered as a cluster, bit is in practice the concept of association that is most similar to the empirical concept of clusters.

- **Achievement of goals.** Although the goals of almost all cluster aim at increasing production, export and innovation, technology improvement, competitiveness of industry and members involved, opening of new plants and new jobs, in practice, cluster activities are mainly carried out in the areas of: (1) promotion and internationalization (participation in national and international fairs, study tours, creation of the cluster visual identity/cluster logo and website, creation of joint publications), (2) education (organization of seminars, training, conferences); (3) joint procurement of inputs and cost reduction based on that; (4) establishing formal cooperation/network between cluster members, by forming database about cluster members, through the organization of meetings and the like. Although these benefits do not contribute to the competitiveness of clusters and their members, in the first stage of cluster development it is realistic to expect those kinds of benefits (savings through consolidation of business functions, joint participation in international fairs or joint promotion activitites), and only with time and cluster strengthening joint product development and competitiveness improvement of the involved members can be expected (Horvat, Kovačević, 2004).
- **Problems in cluster functioning.** The functioning of clusters is facing numerous internal limitations of development, of which the most important are the following: (1) purpose or need to unite is not recognized; (2) there is lack of mutual trust; (3) conflicts between different groups are expressed; (4) there is lack of developed inner communication and mutual cooperation between cluster members; (5) lack of critical mass of clusters; (6) low financial capacity/resources of clusters; (7) low production, export and innovation capacity of clusters. In addition, cluster development is also limited by numerous external obstacles: (1) disincentive measures in agricultural policy; (2) underdeveloped business environment for companies and family farms in the agribusiness sector; (3) failed privatization of companies in the agribusiness sector and unresolved property and legal issues related to agricultural land; (4) ineffective legislative and judicial framework, etc.

Using the survey of key institutions involved in the production of agricultural products in which Serbia achieves great export results, the authors were able to identify geographic concentration of producers, which has certain characteristics of cluster networking, or the potential to develop in the future in a successful cluster (Paraušić, 2011). These are **the raspberry producers in the area of Zlatibor**, who are not legally registered as a cluster, but in practice have lots of elements that make them similar to cluster concept (Paraušić, 2011):

- High concentration of raspberry producers and cold storages in the Zlatibor region (the municipalities of Arilje, Bajina Bašta, Kosjerić, Požega);
- Producers are known in domestic and international markets;
- Producers achieve high production and export of raspberries;

- All participants in raspberry production cooperate closely: raspberry producers cooperate with numerous cold storages, that provide contracts for the production and necessary raw materials, and the producers are also supported by the Arilje Agricultural Innovation Center, Local Economic Development Office in Arilje, Association of Raspberry producers "Vilamet", Cold Storage Association "Ariljska malina" and the like.
- Long tradition in the production of raspberries;
- Raspberry has a distinctive and high quality.

However, the following factors make raspberry producers in the Zlatibor area distant from the essential function of clusters: (1) permanent conflict of interest between the producers, cold storages and exporters, (2) the absence of government programs to support producers (educational programs, infrastructure), (3) the absence of government actions in order to protect competition and lack of inspections in the field of combating the informal economy, (4) the producers and exporters are poorly supported from the agricultural budget, (5) small role of science and educational institutions in the field of production innovation and commercialization of innovations.

From the presented characteristics of clusters in Serbian agribusiness it can be concluded that the clusters are still new (in the initial period of functioning), they are not operative enough, and without sustainable or stable sources of funding. The largest number of clusters functions only at the local level, created with the support from RDAs (there is a lack of bottom-up approach in cluster development). Clusters do not have critical mass of participants, economic or market strength and they have very small production, export and innovation capacity.

Due to these characteristics, the clusters do not show their positive effects or contribution to the growth of productivity, innovation and competitiveness of the participating cluster members and the regions in which they operate. Furthermore, their positive influence on the entrepreneurship development, employment and the creation of new SMEs within cluster activities is often neglected. From the point of national economy/regional economy, clusters in Serbian agribusiness do not show contribution to the Gross Domestic Product of the country or region, regarding the following parametres: (1) the number of employess in the cluster in relation to the total number of employess in the sector/country/region; (2) the number of companies included in the cluster and an annual turnover of cluster members in relation to the number of enterprises and turnover of the agricultural sector/total or regional economy, (3) the share of cluster export in the export of a sector/country/region.

Regardless of all flaws, disadvantages and limitations of cluster functioning, it is still too early to evaluate the market sustainability of registered clusters in the future, especially having in mind the fact that many clusters are in their initial phase of functioning, and that the clusters will need ten years or even more to develop their depth and show their positive effects on the competitiveness of the participating cluster members and region in which they operate (Porter, 2008). However, what is certain is that the clusters are not successfully developed if these obstacles (problems in functioning), especially in the field of external limitations of development, are not eliminated or at least reduced.

Although the market analysis has showed that in Serbian agribusiness there is almost no real or substantial use of the cluster concept in practise, "Flower Producers Cluster", Kragujevac is one of a few successful clusters. Through some form of cooperative organization, this cluster has managed to survive on the market, provide some financial sustainability (through the collection of membership fees, mediation in the procurement of inputs and product sale) and achieve some results in terms of increased production, sales, technology improvement in flower production etc. (Paraušić, 2013). In a recent study of business infrastructure in Serbia (Mijačić, 2011), the author distinguishes "Flower Producers Cluster", Kragujevac as a positive example of clusters in the Serbian economy, with the following explanation: this cluster is financially self-sustaining based on income from membership fees, it was able to develop an effective financing mechanism of raw material supply for its members, improve the quality of flower production and in the best possible way gather small flower producers and producers of planting material from places near Kragujevac.

Proposed measures to build capacity and strengthen the competitive advantages of clusters in Serbian agribusiness

In the forthcoming period there is no doubt that an adequate support has to be provided for cluster development so that clusters can contribute to creating and strengthening the competitive power of domestic producers in domestic and international market. In order to support clusters, financial support from the government institutions will not be crucial, but rather actions that the state has been taken to remove limitations of SMEs development, which are located in macroeconomic policy and microeconomic business environment (eliminating external limitations of cluster development which has been discussed in the previous section). In this respect, it is necessary to create a ***favorable micoeconomic environment*** for SMEs, which is understood in accordance with Porter's National Diamond framework (Porter, 1990).

In Serbia, favourable micoeconomic environment implies: implementation of law, sanctioning of illegal business, create favorable conditions for investments and new employments, etc. Thus "natural" conditions for establishing and functioning of clusters will be created, as well as the conditions in which entrepreneurs/farmers will realize the purpose and need to unite. In creating a ***stimulative business environment*** role of the state will be crucial in the following:

- Provide stimulative and predictable agricultural policy, with bigger support for farmers from the agricultural budget;
- Develop an institutional framework for SMEs sector (effective legislative and judicial framework, effective law implementation, protection of ownership rights and intellectual property);
- Develop incentives for investment and innovative tax policies for companies working in the field of agribusiness, artisan food production according to traditional recipes, organic production, etc.;
- Develop financial market, with favorable funding sources and secure loans for investments in the innovation of technology, primary agriculture, export

business and so on;

- An effective policy to protect competition on the market (monopoly regulation, a company with a dominant position on the market, sanctioning the informal economy, etc.);
- Develop all the elements of the business infrastructure (business incubators, science and technology parks, etc.). Analysis of domestic authors (Vojnović, Cvijanović, Lazic, 2011), just indicate the need of potential entrepreneurs for the existence of entrepreneurial incubator to facilitate the first steps in bussines operations;
- Develop of organizations for providing consulting services in Serbia. According to the research of domestic authors (Mihailović, Tepavac, Kovačević, 2012), market of consulting services in Serbia has not developed significantly in last period and owners and managers of enterprises still do not feel a need for this services. Consulting services market in Serbia is very atypical, with massive number of small consultative organizations and extremely small number of big companies (Mihailović, Cvijanović, 2011).

In addition, the success of clusters in Serbian agribusiness will depend on eliminating ***internal limitations*** of cluster development, as well as on entrepreneurial initiatives of business entities in order to increase association, networking, implementation of joint projects and activities. Below are given the most important requirements in the field of internal cluster capacities:

- Provide stable sources of funding for cluster activities and projects;
- Increase the critical mass of clusters and their development in the regions and sectors where there is a regional recognition, specificity and tradition of agricultural production and processing, high concentration of producers/processors and a high level of knowledge and experience of all market participants;
- Active cooperation of cluster members (with the companies in the product value chain and with related companies) based on trust, long-term relationships, business ethics, and reached consensus on common objectives and cluster development strategy;
- Developed entrepreneurial and competitive spirit of cluster members;
- Increase the production, export and innovation cluster capacities.

However, the ***two most important elements in development of clusters with sustainable competitive advantages*** are:

- Support the cluster initiatives receive from the support institutions (Business Support Organisations or Business Service Providers), which help SMEs and companies in the cluster to increase their competitiveness in the national and international market (through technical, consulting, financial and other support). In Serbia these institutions are recognized as RDAs or the centres for SMEs development, as well as the local economic development offices established by the cities or municipalities. These institutions/departments have market recognition, the capacity to attract funding from the Serbian budget and the EU, as well as the capacity to assemble

participants from the public and private sector;

- Solving the issue of cluster financing. Through membership fees or by charging services that clusters provide, it is impossible to finance the cluster. Thus survival and functioning of the existing clusters in Serbian agribusiness will depend on the possibility of project financing of clusters. In this context, the clusters will directly depend on larger cluster support from the national, provincial or city/ municipal budget, as well as on the capacity of clusters to apply for EU funds or other donor funds.

All requirements necessary for cluster development in Serbian agribusiness are also requirements to create a sustainable competitive advantage of SMEs sector, requirements to increase export, employment and development of scientific research infrastructure and in general to achieve sustainable economic growth in Serbia. It is important to emphasize that none of these requirements alone can influence cluster development and sustainability, but all together, creating synergy, they make a favorable and stimulating environment for development of clusters and cluster initiatives.

Requirements for cluster development are based on the analysis of the world literature about the things that prevent cluster development in the less developed regions (Rosenfeld, 2002), factors that contribute to the cluster success (ERDA, 2003), based on the survey of clusters in Serbian agribusiness (Paraušić, 2013), and based on the analysis of adopted national documents that address the problem of cluster development and SMEs sector in Serbia (Paraušić, 2012).

Conclusion and recommendations

This paper analyzes the clusters in Serbian agribusiness (clusters registered until June 05, 2013 at SBRA database), using a survey, in the form of interviews with cluster managers or representatives of institutions involved in cluster development. The basic cluster characteristics and functioning problems have been emphasized, and a series of measures and actions are given for clusters to create their competitive advantage, survive on the market and become an instrument for rural and regional development in Serbia.

Although clusters in Serbia had, since 2005, budget support from the Ministry of Economy and Regional Development (now NARD support) and RDAs, that have worked to create clusters in the national economy based on the projects (through applying for funds from the national budget, EU funds, donor funds of foreign programs and governments), clusters in Serbian agribusiness have not been developed. They are still without visible results and effects on the growth of production, employment, export, productivity, innovation and competitiveness, or at the level of enterprises of cluster members, or at community level (at regional level). The market analysis showed that clusters in agribusiness are still new, unrecognized, underdeveloped, not operative, and they are very much similar to associations or cooperatives. There is lack of "bottom up" approach in cluster development, given that entrepreneurs lack knowledge about the cluster concept as well as the fact that the use of cluster networking in the current economic environment in Serbia is very faint.

The main reasons for underdeveloped clusters are external ones (unfavorable mascroeconomic and microeconomic business environment), but the reasons also lie in the very same clusters, or in their small financial strength, low production capacity, unbuilt trust and cooperation among cluster members.

Regardless of all flaws, disadvantages and limitations of cluster functioning, it is still too early to evaluate their sustainability or the potential of their development in the future, especially having in mind the fact that many cluster are new, and that the clusters will need ten years to show their positive effects on members and the region in which they operate. However, what is certain is that the clusters will be successfully developed if obstacles to their development, expecially in the field of external limitations of cluster development, are eliminated or at least reduced.

In this paper measures needed to create and improve the capacities and competitive strength of clusters are also presented. Financial support of government institutions will not be crucial in cluster supporting, but rather activities of the state in order to eliminate limitations of SMEs development and growth, which are located in the macroeconomic policy and microeconomic/business environment (eliminating external limitations of cluster development). It is necessary to create a favorable institutional and stimulating business environment for companies and family farms, including agricultural policy incentives, stimulative fiscal measures, measures to support employment and investment, efficient legislative and judicial framework etc. In addition, the success of clusters will also depend on the elimination of internal limitations of cluster development (building trust, reconciliation of interests of different participants and forces, cooperation development between cluster members, increase the critical mass of clusters, increase production, innovation and export capacities), as well as on the entrepreneurial initiatives of business entities (farmers) in order to increase association and implementation of joint projects and activities. However, the most important requirement for cluster development and sustainability in the future, which is in the field of internal cluster capacities, will be solving the issue of cluster financing.

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TRŽIŠNA ANALIZA KLASTERA U AGROPRIVREDI REPUBLIKE SRBIJE

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Abstrakt

U nacionalnoj ekonomiji klasteri su prepoznati kao instrument jačanja produktivnosti i inovativnosti u sektoru malih i srednjih preduzeća, kao i instrument regionalnog razvoja tek 2005. godine, kada je Ministarstvo ekonomije i regionalnog razvoja počelo sa implementacijom projekata razvoja prvih klastera. Podršku razvoju klastera u domaćoj privredi tokom proteklih godina pružalo je kako resorno ministarstvo, tako i druge vladine i strane institucije, koje su na projektnom principu radile na izgradnji klastera. Predmet rada jesu registrovani klasteri u agroprivredi R. Srbije do 05.06.2013. godine, a cilj rada jeste da se kroz trižišnu analizu klastera, odnosno anketno istraživanje u formi intervjua, identifikuju osnovne karakteristike klastera, njihovi problemi u radu i predlože mere za afirmaciju klastera u budućnosti. Rezultati istraživanja ukazuju da klasteri u R. Srbiji do polovine 2013. godine nisu uspeli da se razviju. Oni su još uvek niskih operativnih, inovativnih i izvoznih kapaciteta, a izostaju ključni doprinosi klastera na stvaranje jedinstvenih regionalnih specijalizacija rada i znanja, odnosno na rast regionalne konkurentnosti. Razvoj klastera u agroprivredi u budućnosti biće u direktnoj vezi za stvaranjem povoljnog poslovnog ambijenta za rad malih i srednjih preduzeća, zatim sa stimulativnom i predvidivom agrarnom politikom, kao i sa razvijenim preduzetničkim inicijativama usmerenim ka zajedničkim aktivnostima i saradnji.

Ključne reči: *klasteri, agroprivreda, konkurentnost, produktivnost, inovativnost.*

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