

ECOLOGICAL CLUSTERS IN TERMS OF THE ENVIRONMENT PROTECTION

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Abstract

Liberalization of domestic economy implies not only the international competition, but also more severe business conditions. New terms of business competition imply being familiar with conditions and implementation of the regulations in the field of environment, health care, safety, protection of producers and the adequacy of products. The managers in Serbia do not have sufficient business experience in market conditions, so they need a support in knowledge, skills and acknowledgement with the standards of ecological production. Since that an ecological factor gets its significance, there rises a need for joining into the ecological clusters, in order to improve a competitive advantage of a cluster's members and, at the same time, protect the environment. Accordingly, a manager's task is to change the production, marketing, as well as using the products and services, i.e. performing activities in accordance with scientific and technical knowledge, in a way to prevent serious and irretrievable degradation of the environment. Instantaneously, there is necessary to measure an effect on the environment protection, to conduct a regular control of the environment protection and evaluation of adjustment with the internal requirements of a company, legal requirements and other regulations. This will give a contribution to preservation of favourable conditions for development of ecological production in Serbia.

Key words: *clusters, management, standards, environment, competitiveness.*

Introduction

Association, or in a modern terminology word – networking, represents globally widespread trend. The association goal is a synergy which contributes to networked actors more than an individual appearance on the market. The business networking has become a modern strategic need, a new model of an entrepreneurial behaviour and the global megatrend, which just bases on searching for a key competence of enterprises and an efficiency of organizational-process network, and it consists of creating adjustable, synergetic and competitive organizational structure (Draskovic, 2004).

A key goal of network connection in the ecological clusters bases on realizing their useful economic, organizational and ecological effects. In the literature, it explains through their fundamental principles of forming and a functional specificity of existence, which reflects in a dynamic tendency of organizational development, a permanent spreading and improvement aiming to realize as better as possible positioning and a greater success on the market.

The network economy is a new entrepreneurial organizational-process model, which develops thanks to basic building blocks (information, innovations, communications, new technologies etc.). It significantly changes the international trade performances and the competition generally. The network connection does not appear as a substitute of traditional hierarchical-bureaucratic organizational-managerial structures, but as a new management strategy, even a paradigm, used by many world (especially global) enterprises, which base their success and development on modern structuring of business processes. The network connection improves the abilities of adjustment to changes, innovativeness, modernizing and training in regard to a hierarchical-bureaucratic organizational structure. Besides, the strategic

management of network organizations provides decreasing costs, increasing a profit and better reactions to change of the market conjuncture.

The practice has shown that, by networking the organizational structures, business processes, scientific-research work and similar, has come to key acknowledgements, skills and other advantages which valorise on the market as the competitive. The networked partners in business processes more and more use mutually their key competences aiming to make faster, cheaper, more flexible, quality and better result, by which makes a competitive advantage on the global market (Draskovic, 2006).

Materials and methods

In implementation of a research task was used a desk research of data which refer to the ecological clusters and the environment protection in Serbia. Such research implies using the data from the official resources: programs for clusters development in the Republic of Serbia (RS), the data from domestic and foreign literature, using the internal documentation base of the Institute of Agricultural Economics, Belgrade. Using the stated sources for the research can get more reliable response to the key questions which impose within the analysis of the ecological clusters and their role in the environment protection in Serbia.

Results and discussion

One of the ways to encourage development and quality of the local environment, i.e. a rhombus of national competitiveness in Serbia – are exactly the ecological clusters, although the local business environment is not favourable to this form of association. The clusters can be defined as critical masses of enterprises and institutions in one place, of unusual competitive success in certain fields (Porter, 1998).

According to Porter (1998), strong competitive advantages in global economy mostly lie in local issues – knowledge, relations, motivation – differences which the competitors cannot copy easily, and which the best can develop through the clusters. The cluster association is characterized by cooperation and correlation (unification and complementarity) of members, their geographic, i.e. a local boundedness, active channels for business transactions and communications, making a common product and/or a service or mutual resolution of some need or a goal.

The main factors in the clusters development must be the enterprises-participants. Only through their active participation, a cluster will strengthen and develop. Educational institutions also have their role and, in some cases, have shown as a significant catalyst in a cluster's development. The faculties can have an educational role, but can also be the key factors in research and development, as well as the innovativeness in the clusters. Also, an integral part of clusters are the organizations for providing business services with an expertise, which suits to the clusters needs, like marketing, consulting and similar organizations. All these bodies can contribute to strengthening of clusters development and can have a legitimate role in its development. That is to say, in a knowledge-oriented business, raises a significance of concentration of researchers, consultants and laboratories at one location, and by that increase the possibilities to create such innovation, i.e. a value and a quality of supply, which remote competitor cannot copy and overcome easily (Paraušić, Cvijanović, Subić, 2007).

Finally, the local authorities, the regional developmental agencies and other economic bodies have a significant share in hastening the clusters development by the interventions, strategic directions, donations, making favourable development conditions, organizing educational seminars by regions, decreasing a risk for starting a business or in taking credits, etc. There are several mutual elements in the clusters functioning:

1. Basic businesses – businesses as a leading cluster's participants and mostly bring the highest incomes from the users outside the cluster.

2. Supportive businesses – businesses which directly and indirectly support the basic cluster's businesses. Here belong the suppliers of specialized machines, components, raw materials, as well as all other service firms, including also financial/brokerage firm and their capital, lawyers, designers, marketing and public relations services. These firms mainly are highly specialized and physically located in the vicinity of the firms for the basic businesses.
3. Intellectual supportive infrastructure – in clusters which function top-class, the basic and supportive businesses do not work separately, isolated. In successful clusters take part many members of a local community: local schools, universities, poly-technical institutes, local commercial and professional associations, centres for economic development and many others which support the activities of clusters and are, in fact, the key factors in clusters. The quality of this intellectual supportive infrastructure, as well as a level of a team work within, makes a very important factor in development of any cluster.
4. Physical supportive infrastructure – primarily, a physical infrastructure: roads, ports, arranged waste areas for a classic or a specific waste, communications, etc. Such infrastructure quality must be at least at the same level as the competitive one, and preferably even much better.

In most of cases, making the clusters by a “bottom up” line, leads to, so called, quasi-cluster, accurately – associations, which have a perspective to become clusters. There should emphasize the following “clusters”, associations, founded at the initiative of members, not to get the state's incentives, but to position better the enterprises within the cluster on the market (Mihailovic, Parausic, Simonovic, 2007).

The initiatives for forming the cluster in Serbia are in the field of ecology. The enterprises, the members of the Ecological Cluster of Serbia have been authorized for taking over and recycling the specific types of dangerous and secure wastes. It is important to emphasize that all enterprises – the cluster members, have all technical conditions, as the necessary documentation for recycling and taking over the waste. The enterprises – members of the cluster are authorized services providers in the activities in the table 1:

Table 1. Fields of consulting services within the ecological cluster

▪ Consulting in the field of implementation the standards ISO 9001, ISO 14001, EMAS, BSI OHSAS 18001, HACCP/Codex Alimentarius, EUREPGAP, ISO 17025 , ISO 22000
▪ Making reports on a strategic impact evaluation of plans and programs to the environment
▪ Making integral local plans of waste management in municipalities
▪ Preparing the projects for contesting with domestic and foreign donors, for credit
▪ Making and implementing the LEAP and the Agenda 21
▪ Consulting services in the field of law and policy in the environment protection
▪ Lectures and trainings according to your wishes in the field of management system and the environment protection
▪ Preparation of study of the environment impact evaluation and preparation of all accompanying requirements through all phases of assessment procedure of the environment impact.
▪ Preparation of risk assessments of chemical accidents
▪ Expertise in the field of eco-toxicology
▪ Production and sale of an equipment for disposal and recycling of secondary raw materials

The ecological clusters provide more efficient apply of an economic-ecological policy. Namely, the instruments and measures of the economic-ecological policy must have a strategic position. Although their evolution and application is still at the very beginning, there are necessary the following measures (Pejanovic, 2000): 1) Internationalization of externalities is a procedure by which the external costs (taxes and other instruments) make

“internal”, in a way they must become a part of a market (retail) price. This particularly refers to ecologically less acceptable products or production procedures, in order to discourage their mass production and use, 2) Prohibition (the biggest polluters' work prohibition) or determination of a tolerable level of pollution. There is necessary to define by norms and regulations an interest for the environment quality, and then by the efficient mechanisms to provide these norms and regulations apply, through introduction of rigorous measures for their contempt. It is necessary, in the same way, to regulate a genetic engineering and to introduce the norms, which would make a boundary between the research results apply, by which improve incomes of the others, which represent a long-term risk for the environment, 3) Recycling is a procedure of a production reuse of already used products and side products of some production, where achieves a double goal: decreasing use and consumption of natural resources and a reduction of a final emission of harmful substances. This is relatively cheap measure which means less pollution and greater chances for the natural balance preservation, 4) Favouring of ecologically acceptable projects, especially of, so called, no-waste technologies, with ecological standardization and other accompanying measures. This measure cannot conduct partially, but in accordance with well-known ecological principle: „Think globally, act locally“, 5) Prevention realizes by timely informing, consulting, raising the ecological awareness and education. This measure realizes according to an old popular principle: „Better safe than sorry“, 6) Preventive thinking means also introduction and respecting the ecological standards. ISO 14000 is a series of the international standards meant for managing the enterprises activities (ecological management) due to decrease of harmful effect to the environment, 7) eco-label means labelling of products, by which points out to the potential users that the product has been adjusted to the ecological standards.

The experience has showed that the greatest chances for success have those ecological clusters (initiatives) which have a consensus on mutual goals and activities, which have a clear framework for cooperation and have been founded based on own initiative. In the economy of Serbia, during the pilot program of clustering, these are, at the same time, the greatest problems. That is to say, a successful work of clusters limits a high level of members distrust, misunderstanding of a cluster concept, a need for a horizontal association, without readiness to cooperate deeper, insisting on individual problems, fear of losing the business decision-making autonomy. Instantaneously, a shortage and under development of institutional and infrastructural support largely hinders these processes in the Serbian economy. The cooperation between universities, scientific-research organizations and an economy sector is not sufficiently developed (Program for development of business incubators and clusters in the Republic of Serbia 2007-2010).

Conclusion

The Serbian economy clustering is only at the very beginning, and the clusters contribute to development of competitiveness, through the productivity growth and creation of innovation strategies, which cannot be lost out of a sight in the future period, when should expect more intensive processes of clusters creation and functioning. Such way of strategic correlating the enterprises, due to further growth, should get its fly-wheel and to play a key role in strengthening the competitiveness and performance of the Serbian enterprises on the foreign market.

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