

## CLUSTERING SMALL AND MEDIUM ENTERPRISES IN ORDER TO STRENGTHEN THEIR COMPETITIVENESS

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### ABSTRACT

Using clusters as a model for developing business has proved to be practical, especially in countries and regions that have a tradition of supporting the development of small and medium enterprises. The immediate precursors to the development of clusters are incubators. In general, where there is experience with incubators, clusters are developing rapidly.

The need for vertical and integrative connectivity allows the introduction of new firms and their adaptation to innovation –based networks. Localization allows the concentration of innovative activities, operational skills and entrepreneurial predispositions, which is of great importance for all interactive processes in the context of creating a new business.

The establishment and development of clusters result in significant effects that have a positive impact on the companies in the cluster and the whole region where the cluster is located. This implies the creation of more jobs, greater variety of manufacturing processes, lower procurement costs, expansion of the market and creation of opportunities for new business connections.

**Keywords:** clusters, small and medium enterprises, site.

### КЛАСТЕРСКО ПОВРЗУВАЊЕ НА МАЛИ И СРЕДНИ ПРЕТПРИЈАТИЈА ЗА ЗГОЛЕМУВАЊЕ НА НИВНАТА КОНКУРЕНТНОСТ

Развојот на бизнисот по моделот на кластери се покажа практичен, особено во земјите и регионите кои имаат традиција во давањето поддршка за развој на малите и средните претпријатија. Непосреден претходник на развојот на кластери се инкубаторите и, во принцип, таму каде што постојат искуства со инкубаторите, кластерите брзо се развиваат.

Потребата за вертикално и интегративно поврзување овозможува воведување на нови компании и нивно прилагодување на мрежата врз база на иновации. Локализацијата овозможува концентрација на иновативните активности, оперативните способности и претприемачките предиспозиции, што е од големо значење за сите интерактивни процеси во контекст на создавање на нов бизнис.

Резултат на воспоставувањето и развојот на кластери се значајните ефекти кои позитивно влијаат на компаниите во кластерот и на целиот регион во кој се наоѓа кластерот. Тоа подразбира создавање на нови работни места, поголема разновидност на производните процеси, намалување на трошоците за набавка, проширување на пазарот и создавање на можности за нови деловни врски.

**Клучни зборови:** кластер, мали и средни претпријатија, локалитет.

## INTRODUCTION

Clusters are geographic concentrations of interconnected companies and various related activities, specialized suppliers, service providers and related organizations for support (educational and research institutions, agencies, etc..) which compete or cooperate at a specific area of activity. The diversity of clusters forms and constant development of new types of associations make impossible to provide a common basis for all clusters, so they have no even a single definition.

The term cluster is derived from the English word cluster which means collection, group

of the same or similar elements. In fact, clusters are networking model where firms are grouped in a flexible way, driving the development of small and middle enterprises and on this basis promote economic development at the local and regional level. However, it also indicates that the conceptual approach to the development of clusters is relatively complex and therefore can only be achieved by the simultaneous collaboration of representatives from governments, companies as candidates for the cluster, financial institutions, educational and other organizations.

## THE OBJECTIVES OF THE ESTABLISHMENT OF CLUSTERS

The system clusters (economic clusters) is a new global model for small and medium-sized enterprises development. Clusters are developing where the small business development already reached a considerable level and where the system state measures are favorable. Clusters of companies classified in the same activity or activities create more comparative organization, development, market - marketing ventures at one region, or more closely related regions. In this way they contribute the company to be rapidly developed, to apply modern methods and, under modern management, derive the maximum out of the market environment, thereby creating opportunities for the economy of the region gain a competitive advantage over other regions.

The cluster as a specific network related profit and non-profit entities rapidly change market processes within the regional framework. This is because collective action participants in the cluster system clusters accelerate marketing effects in relation to suppliers, customers and the general distribution channels. At the same time, and because of the physiognomy of the cluster as upgrading of small and medium-sized enterprises, they accelerate

the specialization of small firms and their classification into economic groups and the business sector.

The literature has still not sufficiently understood the phenomenon of clusters, but it recognized that they rapidly develop in specific locations, close to the most important resources for business, close to major industries and markets of goods for final consumption. One of the important features in the development of clusters is a high degree of novice companies (start - ups ) and a high degree of innovation processes in them.

The most common joint objectives for which the clusters were established can be divided into six segments:

- Research and development of the network - creating a network within a cluster and between clusters (making a database of companies, regular visits, directory of suppliers and service providers, website, monthly information about updates in the industry and environment, periodicals, etc.);
- Training and education - analysis of the need for specific training, organization of training, regular meetings of companies in order to exchange experiences and contacts,

and so on.;

- Business cooperation - initiating and supporting projects of cooperation between companies, educational and research and development institutions, to connect with the funds to finance innovative projects;
- The impact on politics - lobbying and creating dialogue between industry, academic society and government;
- Innovation and technology – facilitating of innovation processes, trend monitoring, dissemination of new knowledge and the introduction of quality standards, improvement of technological processes;
- The growth of the clusters - the strengthening of regional identity, building national and international reputation, promote domestic and foreign investment.

The success of the cluster is based on mutual trust and respect of certain principles and rules. Clusters should be organized where the first results can be achieved. Certainly, it should be borne in mind that the cluster is a long - term project and, as such, it is very complex. The cluster is oriented strategy which involves the development of specific sectors, industries in a particular area for a particular company, members of the cluster. Cluster development is the most effective way to raise the economy of a region at a much higher level. Modern business is based on speed, quality, flexibility, innovation, connection and building a critical mass of capital and production (service) potential. This new style of business requires a team approach at the local level - the cluster approach. In many countries, especially in countries in transition, cluster development has been accepted as a fundamental strategy for economic development. Therefore, Michael Porter points out: “Clusters are the basis of new, productive economy.”

Clusters are based on systemic connections between companies. Links can be built on common or similar products (eg, fruit producers, restaurants, tourist facilities, tourist agencies), production process ( production of wheat, the production

of agricultural machinery, reception and guest accommodation, organizing sightseeing tour ), common technologies, the need for natural resources (agricultural land, waterways, forests and protected landscapes), requirements for certain professional qualifications (a common need for labor - translators, technicians, cooks). There are two basic types of building clusters from the top down (top down) and from bottom to top (bottom up), and often the combination of the two. Model “ from top to bottom” (top down) was developed in the countries in transition. As a rule, this model develops when the possibility exists for the formation of the cluster but is not recognized by the business sector and the need for the state to encourage the initiative of creating a cluster in the direction from top to bottom. The initiative of creating a cluster must include proper and related institutions as well as institutions for training, research, development and others. After the starting of the cluster state can remain as moderator of processes with certain incentives for cluster development.

Model “bottom-up” (bottom up) cluster development is related to the initiation of the development of the business sector. In this case, the government accepts the initiative and creates conditions for the development of clusters. This model is represented in Western Europe, where MSE are collaborating and competing each other and create a healthy economic structure whose final result is the creation of clusters. Benefits of association under the principle clusters showed the full value of the developed countries, but also in underdeveloped countries and countries in transition. Clustering means cooperation and innovation of active partner for companies of all sizes from a variety of areas, citing the education, development and introduction of new technologies into business processes and, above all, involvement in international development trends, creating opportunity not only to monitor the existing ones.

Cluster concept is not new, it was contemplated in the United States at the beginning of the twentieth century, by the constutuion of corporations and increase of productivity. Since then, the clustering approach has been considered in the context of the ability to take innovation not only at the corporate level, but also at the region and now the national and multinational level.

In short, within the cluster it is easier, faster and cheaper to achieve all these than in individually required companies:

- Obtaining of certificates of quality that ensures finding the right buyer for the right product;
- Product Branding or branches;
- Training of workers;
- Introduction of new technologies;
- Research;
- Improving of design .

According to research by the European Cluster Observatory from 2008, which comprised 31 European countries (of which 26 are the members of EU) it was found that all countries have adopted policies of clusters at the state or regional level. Half of them adopted the policy clusters in 1999. National clusters programs have over 80 % of the countries that are mainly related to industrial policy and company policy or the policy of science and technology .

Relevant institutions and funding sources, who are responsible for policy of clusters are mainly ministries of industry and trade

or ministry of economy as well as the ministry of finance. Sources of funding are from the national budget 63 %, EU structural funds, 19 %, 7 % of the business sector, the regional budget of 3 % and 8 % other sources. Financing is done so that a group or cluster of potential clusters apply for grant support. Most applications (70 %) are made on the principle of bottom - up and the remaining 30 % by the principle of top - down.

The experience of the Republic of Serbia and Western Balkan countries in the field of the clusters are more than modest. Specific examples of clusters that exist or are under development are mainly experimental trials that were mostly developed without clearly defined rules, organization, mission and vision. One of the main problems is the lack of knowledge and lack of understanding of the term “cluster” and the importance of their institution for the development of the region. In the RS and the Western Balkans in general business conditions are extremely unstable. The system for facilitate and development of SME and their joining in clusters at the state level is not yet finished. In the Republic of Srpska and in Bosnia and Herzegovina the results are much more modest in this area, compared to the previously mentioned countries. The following table provides an overview to the now established clusters in the Republic of Serbia.

**Table 1. Clusters in the Republic of Srpska**

| No | Name                      | City       | Yar of estab. | No of members | Field of industry           |
|----|---------------------------|------------|---------------|---------------|-----------------------------|
| 1  | Cluster „Drvo-PD“         | Prijedor   | 2005          | 40            | Vood industry               |
| 2  | Cluster “Drvo-G”          | Gradiška   | 2007          | 11            | Vood industry               |
| 3  | Cluser “Drina drvo”       | Srebrenica | 2007          | n/a           | Vood industry               |
| 4  | Cluster “Drvo”            | Banja Luka | 2007          | n/a           | Vood industry               |
| 5  | Cluster “Solargroup”      | Banja Luka | 2007          | 5             | Solar systems               |
| 6  | Cluster “Koža”            | Banja Luka | 2009          | 6             | Leather proccesing industry |
| 7  | Cluster “Bilje-graf”      | Trebinje   | 2007          | n/a           | Plant production            |
| 8  | Association “Drvotehnika” | Doboj      | 2007          | n/a           | Vood industry               |

In accordance with the Strategy of SME development, Republic Agency for SME development in 2007 from its own funds supported the establishment of six clusters: Drvo PD-Prijedor, Drvo Banja Luka, Drvo G-Gradiška, Solar Klaster Banja Luka, Klaster Bilje graf Trebinje i Udruženje Drvotehnika Doboj. From all the above clusters, “Drvo -PD” Prijedor is the most successful cluster that has over 40 members. The cluster of wood and furniture industry “DRVO” was established in 2005 in Prijedor, on the initiative of local businesses and supported by the Agency for Economic Development of the Municipality of Prijedor - PREDA. Cluster “DRVO” Prijedor is an organization whose goals are business networking, education, information exchange and promotion of business enterprises and active entrepreneurs within the wood and furniture industry, and improving the conditions of the activity of wood processing, production of wood products and furniture, monitoring technical technological advances in this field and adjustment of interests.

The status of cluster organization was received in 2007, by signing the contract for the project clusters with the Republic Agency for SME development. If we take into account that members have a headquarters in five neighboring municipalities and cities (Banja Luka, Kostajnica, Banja luka, Novi Grad and Prijedor), it is reasonable to say that the cluster DRVO” has a regional character.

The aim of the cluster “DRVO”- Prijedor is to improve the competitiveness of its activities, wood and furniture industry, and offer support to companies in raising product finalization. In this sense, the organization of joint visits to trade fairs and equipment manufacturers, study visits,

seminars and training to meet the needs of members, all significantly contribute to the achievement of the above objectives .

Association “DRVO - G” from Gradiška has 11 members from the Municipality of Gradiska. Association of wood Processing “WOOD - G” Gradiska gathers all the economic operators who want to preserve and improve the secret crafts of woodworking and preserve the forest as a source of much needed raw materials.

Association “Drvotehnika” - Doboj gathers enterprises and entrepreneurial activities in the field of wood processing, in order to improve operations, better promotion and joint market Cluster “Drina drvo”- Srebrenica brings together companies from the municipalities of Srebrenica, Bratunac and Milici. Cluster activities are to strengthen the representation of common interests of companies in the wood processing and forestry, easier access to government and other institutions and organs which largely depends on the performance of the company, reducing participation in joint participation in fairs and the effects of increased performance, cost reduction through joint marketing and research target markets, the organization of joint supply chain for certain raw materials, establishment of new business contacts through meetings organized by cluster and professional and legal advice that members can receive from the cluster.

Cluster “Solar Group” - Banja Luka is form from Mechanical Engineering Banja Luka and companies “Topling” Prnjavor, “Koming” from Gradiška and “Bemind” -Banja Luka. These entities have established cooperation in the design, manufacture and installation of solar systems and shared for the first time in Bosnia and Herzegovina manufactured solar heating system.

## POTENTIAL CLUSTERS IN THE REPUBLIC OF SRPSKA

In addition to the established clusters in the Republic of Srpska, there are a number of

associations that can quickly be developed into clusters of remarkable size and volume

of business. Table 2 provides an overview of the association and cooperative which in their scope and results can compete with the

existing clusters in the Republic of Serbia and beyond.

**Table 2. Potential clusters in the republic of Srpska**

| No | Name                           | City          | Year of estab. | No of members | Field of industry           |
|----|--------------------------------|---------------|----------------|---------------|-----------------------------|
| 1  | Association of wood processing | Mrkonjić Grad | 2007           | 18            | Wood industry               |
| 2  | Association "Vinos"            | Trebinje      | 2007           | 15            | Wine industry               |
| 3  | Cooperative "Žalfija"          | Trebinje      | 2005           | 60            | Beekeeping                  |
| 4  | Association of poultry         | Srbac         | 2007           | 24            | Poultry and food processing |

Association of Wood Processing Mrkonjic city was founded in 2007. There are 18 members whose primary activity is the final and wood processing. Company's own products are shipped mainly to foreign markets of Serbia, Croatia, Macedonia and Italy.

Association "Vinos" Trebinje aims to create a world - known brand, but also to control the origin of the grapes and on that basis to protect the wine made in this region. It is planned that this association grows into a cluster of growers and wine producers. The association has 15 members including the basement "Vukoje".

Beekeeping cooperative "Žalfija"-Trebinje aims to develop beekeeping sector by encouraging the production, marketing and sale of bee products originating and

produced by its members, then supply cooperatives and other beekeepers raw materials necessary for modern beekeeping and beekeepers education on the principles of "good beekeeping practices". The cooperative has 60 cooperatives and 1,000 contractors.

Association of poultry of Republic of Srpska from Srbac is a business association for poultry and food production which brings together 24 members from 12 municipalities. Members of the association are mainly manufacturing companies in this field and Veterinary Station of Srbac and Veterinary Institute Vaso Butozan from Banja Luka. The Association offers its members training, literature, help with legal documents, interests advocating and promotion.

## CONCLUSION

Clusters as the forms of association of companies have shown good results in many economies and those reasons are imposed as a solution to overcome the obstacles to doing business faced by SMEs. Clusters are geographically limited and based on a systematic links between companies. Links can be built on common or complementary products, production processes, core technologies, the need for natural resources, requirements for particular qualifications, distribution channels, etc.

In simple terms, a cluster is a group of

related companies in one industry. This group includes producers of raw materials, governmental and non - governmental organizations and even the educational and scientific institutions that have joined together to solve common problems. Clusters are considered to increase the productivity and competitiveness of companies, which then become more powerful in the national and global terms.

Successful operation of the cluster leads to positive effects in companies that are members of clusters as well as in the region

where the clusters are placed: more jobs, greater diversity of processes, lower costs of acquisition, diffusion of technology, expanding markets, creating opportunities for new business relationships, ability performance of major investment projects in the region, etc.

Depending on the characteristics of the region and the company members, clusters set their priorities using resources of their region and establish formal links

that enable to achieve common goals. In addition, the formation of clusters as a form of association is also significant because of the competitive advantage at the global marketplace.

As the networking of SMEs in clusters is becoming increasingly important to the economies of many countries and regions, and that is applicable in many areas of business, there is a need to further studies.

### REFERENCES

1. Bresnahan T., Gambardella A. and Saxenian., 2001. "Old Economy Inputs for New Economy Outcomes: Cluster Formation in the New Silicon Valleys . "Oxford.
2. Ceranić S., 2004. Management of small and medium - sized enterprises, Faculty of Management, SME, Belgrade.
3. Cluster Management, 2008. GTZ - Ministry of Economy and Regional Development of the Republic of Serbia, Belgrade.
4. Deželjin, J. et al., 2002. Entrepreneurial Management, MEP Consult, Zagreb.
5. Dostić M., 2003. Management of small and medium - sized enterprises, Faculty of Economics, Sarajevo.
6. Fennel S., 2010. Development of a general model for the establishment and development of industrial clusters - Doctoral dissertation, Novi Sad.
7. Goretzky W., 2006. The start of a cluster of industrial policy - the European experience, GTZ Centre in Banja Luka.
8. Horvat Đ., Kovacevic, V., 2004. Cluster, path to competitiveness, London: Cera Prom.
9. Information regarding the development of clusters in the Republic of Srpska, 2010. Ministry of Industry, Energy and Mining, Banja Luka.
10. Porter M., 2003. The economic performance of regions, Regional Studies, New York: The Free Press.
11. Sumbo J., 1998. The Theory of Innovation, Edward Elgar, UK.
12. Vujatović - Zakić Z., Rikalović G., Stojanović Ž., 1995. Agricultural Economics, Faculty of Economics, Belgrade.
13. Vukmirovic N., 2006. Modern Entrepreneurship, Faculty of Economics, Novi Sad, Banja Luka.