Đorđe Kaličanin
University of Belgrade
Faculty of Economics
Department of Business Economics and
Management

Olga Gavrić
University of Belgrade
Agricultural Faculty
Department of Economics

THE IMPORTANCE OF CLUSTERS AS DRIVERS OF COMPETITIVE ADVANTAGE OF COMPANIES

Značaj klastera u unapređenju konkurentske prednosti preduzeća

Abstract

Competitive advantage is the main indicator of quality and successful positioning of a company. It stems from the existence of distinctive competence and is seen as a result of a good strategy. As such, it determines which company will be successful in the global competition as well as which company will convert threats, brought by the turbulent environment, into opportunities. One way to create and improve competitiveness is to connect companies in clusters. Clusters, as a form of local association of companies, encourage innovation, productivity, more efficient use of limited resources, creation and expansion of new competencies, and create value for all their participants. Based on different connections, they enhance not only the competitive advantage of companies but also the competitiveness of the national economy.

Key words: *clusters, competitive advantage, value, synergy, companies*

Sažetak

Konkurentska prednost je glavni indikator kvaliteta poslovanja i uspešnog pozicioniranja preduzeća. Ona proističe iz postojanja distinktivne kompetentnosti i javlja se kao rezultat dobre strategije. Kao takva, opredeljuje koja preduzeća će biti uspešnija u globalnoj tržišnoj utakmici i koja će pretnje koje sa sobom nosi turbulentno okruženje pretvarati u šanse. Jedan od načina za stvaranje i unapređenje konkurentske prednosti je i povezivanje preduzeća u klastere. Klasteri kao vid lokacijskog udruživanja preduzeća, podstiču inovativnost, produktivnost, efikasniju upotrebu ograničenih resursa, kreiranje i širenje novih kompetencija, kao i stvaranje vrednosti za sve učesnike u istom. Po osnovu različitih veza u klasteru, unapređuje se konkurentska prednost preduzeća, ali i nacionalne ekonomije.

Ključne reči: *klasteri, konkurentska prednost, vrednost, sinergija, preduzeća*

Introduction

The imperative of change, macro-arrogance and trends in the global economy, as main features of the contemporary business environment, impose the need for the formulation of new and improvement of the existing business strategies. Strategy, as the main guiding idea in continuously changing conditions, should contribute to the creation of a permanent competitive advantage [3, p. 180]. However, despite good formulation, it is also important that strategy is well implemented. One of the well-implemented strategies relates to connecting companies in clusters. This strategy provides an opportunity for SMEs to be more micro competitive, to be well-positioned in the market, and to achieve sustainable growth, i.e. the growth that creates value for owners and other stakeholders in the enterprise. In addition to micro competitiveness, clusters also enhance the competitiveness of the national economy, which is in accordance with the "diamond" theory[1]. In support of this assertion, numerous examples of successful clusters around the world (Italy, USA, Spain, etc.) are cited in this paper, which will be discussed in more detail further on in the text.

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1 According to the "diamond" theory of national competitiveness, each determinant (general conditions, demand conditions, strategy context and related industries), independently and in interaction with each other, influence main elements of success in the global market, as well as the character of the business environment, in which local companies create value.

The concept of clusters was first introduced in the economic literature by *Michael Porter*, who defined clusters as geographic concentrations of interconnected companies and relevant institutions dealing with appropriate activities, linked by common characteristics and complementarities. In his analysis, *Porter* has found that clusters represent a critical mass of competitive success of companies, regions or countries in a dynamic environment and the economy based on knowledge [6, pp. 202-204]. He also pointed out that the main source of competitive advantage is productivity growth based on information exchange and resource sharing as well as the growth of innovation, based on the rapid exchange of ideas and technological knowledge. This fact reflects the importance of clusters. An important feature of clustering is that it emphasizes the role of location in the competitiveness of an economy, which has been excluded from the economic analysis at one point.

Government and its institutions, such as universities, development agencies, advisory bodies, etc., give great support to clusters. Clusters, as a form of association of companies in the market, are present not only in the world but also in the domestic economy. All of these features will be discussed in this paper.

Innovation, productivity and competitiveness

Clusters, as a form of location association of companies, appear in a variety of industries and sectors (information technology, film industry, construction, tourism, fashion industry, etc.). Clusters are typical of both developed and less developed economies, but they are better organized in the developed economies. The boundaries, size and type of connections within the cluster are dynamic categories. The entries of new companies (suppliers, customers or related companies) are expanding cluster vertically or horizontally, respectively. Types of connections in a cluster are also subject to change and depend on the allocation of resources and capacities of companies in developing optimal relationship.

Clusters have a number of advantages and disadvantages that we shall mention and analyze. Based on the multiple links within the cluster and the synergies in that respect,

economies of scale and better mobility of resources emerge, which creates superior value for customers and adequately meets their needs. Furthermore, clusters take advantage of a location and form the basis for creation of distinctive competence as a very important goal of the company.

Clusters also encourage productivity and innovation of a company because these groups have the information database and are able to take full advantage of it. In fact, thanks to the aforementioned database, all participants have the right information at the right time, thereby creating a basis for initiation and innovation as well as for efficient and effective operations. As we have mentioned, by improving the competitiveness of the participants in clusters, the national competitiveness is also being improved (the development of regional and rural areas is being encouraged). Clusters are, thus, providing a basis for the cooperation of companies, which softens inter-professional competition fears. This creates conditions for the rapid exchange and implementation of new knowledge and skills.

Anyway, despite numerous advantages, clusters also have certain disadvantages. In fact, a cocooning effect may occur, in the sense that a cluster may eventually evolve into a self-sufficient system, which, of course, carries the risk for its functioning and survival. When companies decide to join a cluster, there may be a wrong choice of the branch. Also, a political system, lack of an adequate infrastructure and some other elements can be a barrier to the development of clusters. Apart from that, the absence of state regulation or assistance can be an obstacle for the development of clusters. A significant deficiency is a risk of loss of technological discontinuities [5].

The success of a cluster depends greatly on the specialization, cooperation, flexibility and diversification of enterprises [1]. The relations of cooperation enable companies to compensate for their weaknesses, increase flexibility and react faster to signals from the environment or initiate some change. Specialization is also crucial for the success of clusters, because it contributes to their diversification. Last but not least, an important factor is the transfer of technology, knowledge and information as well as workforce training and social infrastructure.

The influence of clusters on productivity, innovation and competitiveness is especially emphasized in the economic literature. Namely, clusters encourage productivity of companies in several ways. Firstly, clusters allow easier access to the necessary material factors of production and specialized professional staff. Secondly, they make access and flow of information easier. Thirdly, clusters increase productivity by allowing complementary activities of participants and constant cost savings. Thanks to the procurement from local suppliers, companies reduce transaction costs (in acquisition they cannot use a remote source) or import charges (if inputs are purchased from abroad). The need for inventory is also minimized, thus, the inventory costs are reduced. Significant savings are achieved in the field of marketing and branding. Furthermore, cooperation between enterprises within clusters enhances transparency and communication, and prevents opportunistic behavior of suppliers (in terms of delay and the quality of goods).

Strong competitive pressures from local competition within a cluster encourages companies to operate more efficiently and effectively as well as to improve their own competence, which ultimately leads to competitive advantage and better positioning in the global market. What is important to point out is that clusters also enhance the competitiveness of regions and national economy. The positive effects spread to other sectors as well, which contributes to the improvement of the competitive position of the economy in the world economic context.

Highly significant effect of a cluster is the impact on innovation in enterprises. The effects on innovation and productivity of enterprises in a cluster are highly interconnected and testify to the fact that the company will have multiple benefits if it operates within the cluster, compared to its independent functioning on the market.

Companies acquire necessary knowledge and information as well as technology and software faster, which leads to the creation of a realistic base for the growth of innovation. Also, due to the cooperation and better communication within the cluster, companies are able to understand the new innovative trends better, which contributes to the diffusion of knowledge, and ultimately, to the acquisition of competitive advantage. Strong local competition creates pressure on companies to constantly innovate; in other words, instead of being followers they become pioneers in the field of innovation, which *de facto* leads to better understanding and meeting of consumers' needs. Sometimes, however, it happens that innovation is not approved by all the participants within the cluster, which inhibits new ideas and provokes inertia, limiting the flexibility of the company.

Government support: Yes or no?

The future of many clusters would be very uncertain without the proper support of the state and state institutions. Because of its importance for the regional economy and economic growth, the development of clusters must be one of the priorities of the economic policy. In this development, the main role is played by various state institutions from development agencies, local authorities to the universities. These entities may influence the development of clusters directly or indirectly. Direct government support may be in the form of laws, tax exemptions and other incentives that encourage companies to join the cluster. Indirect support is reflected in the formation of an expert team, which assists and monitors the cluster or in the establishment of special agencies as forms which mediate between the state and the cluster.

State support is best explained in terms of the "diamond" theory of national competitiveness [6, p. 153]. Using a variety of initiatives, programs or government incentives, state affects each of the determinants (factor conditions, related industries, demand conditions and context strategies) of the "diamond". For example, by collecting specific information on cluster, or by strengthening specialized transportation and communication infrastructure, government affects the development of clusters and factor conditions of an economy. In addition, through sponsoring a forum of participants in the cluster, or through establishing and attracting supplier parks oriented to the cluster, the state stimulates cluster development as well as the development of related industries. Finally, by adopting regulatory standards that are favorable to innovation, the state encourages clustering and conditions of demand. In this way, the state removes the defects in the "diamond" of

national competitiveness and encourages the formation of clusters precisely in those sectors where the "diamond" is the most effective.

In the EU countries, (Serbia has recently become the candidate for the EU), development agencies have the main role in cluster development, acting as a mediator between the small and medium-sized enterprises involved in the cluster on the one hand, and the institutions of the European Union on the other. Mentioned institutions provide the necessary funds for the development of clusters. For example, in France cluster development policy is defined at the national level, in Spain and Belgium at the regional level, while in Italy the local and regional authorities are cooperating with the universities, research centers and service sector. Universities often see clusters as an instrument for spreading knowledge and ideas for the improvement of the quality of final products and services.

According to the World Bank research, the regions that want to encourage economic growth, living standards and competitiveness, mostly support cluster development in the areas such as biotechnology, pharmaceutical industry, information, nanotechnologies, etc. In order to create an efficient environment which supports cluster development in Europe, the EU authorities developed various support instruments such as [4]:

1. Instruments which support the creation of cluster policies at national and regional level, such as PRO INNO Europe Initiative, the European Cluster Observatory and ERAWATCH,

2. Instruments which support networking of clusters and other relevant cluster organizations in Europe, such as Europe INNOVA, FP7 program.

In 2005, the Government of the Republic of Serbia has started an initiative to encourage the process of association of small and medium-sized enterprises in clusters. Following the example of developed economies in the world (USA, Germany, Italy, etc.), the Government of the Republic of Serbia adopted a program to support cluster development and appointed the Ministry of Economy and Regional Development as the main entity that implements cluster policy. The implementation of this program began in 2007 with the financial support of the Government of the Kingdom of Norway. In the

meantime, the Cluster Council and the House of Clusters have been established as the main subjects for mapping information about clusters, representing their interests and promoting them [5].

The Cluster Council is a consultative structural body of the Serbian Chamber of Commerce and unique advisory body for the development of clusters. The Council was established in 2011 and has two main objectives:

1. Affirmation of clusters to improve entrepreneurship and general business environment,

2. Initiation of the establishment of new clusters and contribution to the development of individual clusters.

Members of the Council are representatives of cluster organizations in Serbia. Besides the Cluster Council, the House of Clusters was established in 2011 with technical and financial support from the Danish program for local development, LEDIB. In 2012 the House of Clusters has founded an innovative training center for the cluster development based in Nis, in order to encourage and support the development of clusters. Also a unique magazine about clusters in Serbia "Infocluster" has been designed and the annual October Balkan Conference "Days of Clusters" has been set up in Nis in the same year. All these data go in favor of the fact that the clusters in Serbia are seen as one of the pillars of future development of the national economy. All of these activities in the cluster field are in accordance with the Strategy for the development of innovative and competitive small and medium-sized enterprises from 2008 to 2013. There are around 40 clusters in Serbia, of which those in the construction sector and tourism dominate the market. This will be discussed below with an emphasis on fashion sector, clothing and footwear.

Examples of successful clusters: Europe and Serbia

Case of Italy and Spain

In the previous analysis, we have seen some of the benefits for a company that occur as a result of the presence of clusters in the economy such as increasing competitiveness, greater participation on international markets, and better positioning. As a confirmation of given facts, we will

overview the experiences of two EU economies (Italy and Spain) and the domestic economy (Serbia), with special emphasis on the fashion industry.

The first cluster, as a form of location association of small and medium-sized enterprises, has emerged in Italy in the region of Emilia Romagna. The famous cluster of ceramic tiles is a synonym for the first cluster, and is also the most analyzed example in the economic theory. This cluster has proved that, due to the presence of multiple connections and synergy, the region of Emilia Romagna recovered and developed after the Second World War, which ultimately affected the whole of the Italian economy. However, the clothing and footwear cluster, i.e. the so-called fashion cluster, for which this Mediterranean country is famous in the world, is much more interesting for our study.

The headquarters of the fashion cluster is in Milan, Lombardy region. The beginning of the emergence of this cluster dates back to the seventies, when two groups of companies, the design and sewing company, began to cooperate with each other. During the same period the famous "Stilismo" appeared. In other words, on the fashion scene several fashion companies emerged, respectively: Armani (1975), Versace (1978), Moschino (1983) and D&G (1986). With the adequate financial support, as well as with the support from the Government, universities and the media, this cluster became the world's leading cluster in the industry and one of the major brands of Italy, some twenty years later. The secret of its success is one of the most frequently asked questions. First, it should be noted that the cooperation itself, or rather multiple connections between companies from sectors such as textiles, leather, fashion accessories and jewelry have resulted in a unique design for which they are famous in the world. Vertical (simply put, supplier – manufacturer – customer) and horizontal (connection of companies involved in similar activities) connections resulted in a pioneering and innovative position of these companies as well as in their competitive advantages. Thanks to synergies and productivity growth, these companies are coming to right information that enables them to adequately respond to the needs of consumers around the world, which is also reflected through the growth of exports in the Italian

fashion industry. However, apart from the companies in this field, the fashion cluster includes universities that provide professional training of qualified personnel, enjoys the financial support from the banks that finance various development programs, which are initiated by the regional authorities (the Chamber of Commerce, the Fashion Chamber of Commerce) as well as the state itself. This proves once again that the state support is crucial for the survival of the cluster. Media, such as television and internet, play an important role in the fashion cluster by further promoting and providing necessary information on the companies. Companies organize the famous Fashion Week and other events (Fiera Milano), which contribute to the further development of tourism in the city of Milan as well as in the region in general.

Most of these factors, which have contributed to the development of the fashion cluster, are also the determinants of the "diamond", which is in accordance with the fact that, if a cluster is in the segment where the "diamond" is the most effective, the determinants affect independently and in a synergy the improvement and the competitiveness of both clusters as well as the national economy. For example, the media and universities are determinants of relating and supporting industries, foreign and domestic sources of growth are conditions of demand, while the general idea of the existence of "Made in Italy concept design" is a factorial condition. In Figure 1, you can see the whole map of the Milan fashion cluster.

In another Mediterranean country, Spain, cluster policy can be assessed as a determined initiative of the regional government [2]. Also, the public sector has the role in cluster development, whose level of engagement depends on the particular region. Zara and Massimo Dutti, the famous brands from Spanish fashion cluster, are located in Galicia (most of the companies within the Galician fashion cluster have been founded by the entrepreneurs from small towns in the region). Fashion cluster in Spain was created and developed spontaneously due to the companies that have been able to recognize the need for cooperation and joint participation in the global market. In contrast to the above-mentioned Italian fashion cluster, Spanish cluster development began in the mid-nineties and, some ten years later, it started its domination.

Figure 1: Milan fashion design cluster map
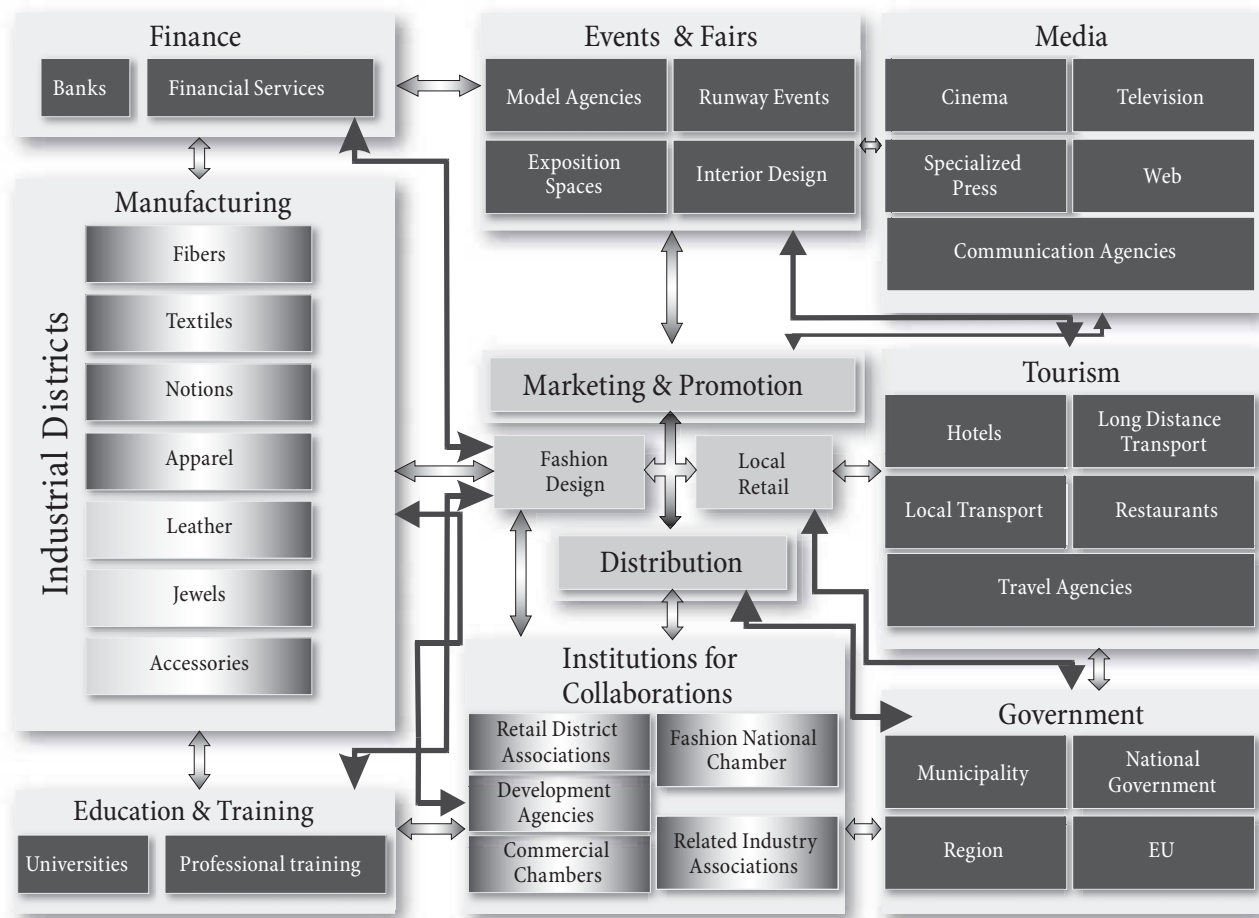
Source: Authors

In the period from 1997 to 2007, the export of Spanish fashion cluster grew at a rate of 24%. The data also show that in 1997 Galicia took second place (20%) after Catalonia (47%) in the total export from Spain. Catalonia is otherwise known for brands such as Mango. Just a decade later, there has been an increase in export from 20% to 48%, so that Galicia received the title of the largest exporter in Spain. As in the case of Italy, a lot of support for the development of the cluster has been given by the universities, suppliers, regional authorities and the media. The main competitive advantages of the companies of this cluster are good quality and very affordable price of their clothing pieces, a fact that enable them to reach the large market of consumers around Europe and worldwide.

Case of Serbia

Clusters are a relatively new phenomenon in the domestic economy. Most of them were established in 2005, and are currently at the early stages of development. The main incentives for the development and expansion of clusters are provided primarily by the Government of the Republic of Serbia and the Ministry of Economy and Regional Development in order to improve the business and national competitiveness as well as to strengthen the entrepreneurial spirit. In addition to this, we hereby list other objectives, to which clusters should contribute [8]. These are:

- Definition and strengthening of cluster infrastructure by creating a database of its members,
- The establishment of cooperation in various fields of cluster activity as well as training of human resources,
- Facilitation of the process of introducing innovations and new technologies,
- Expansion and development of clusters,
- Connection with related clusters in the region,
- Provision of larger and more stable export supply.

Frequently asked question is why there hasn't been earlier cluster development in the local economy, as in comparison with the United States, Italy, Germany, and other economies Serbia falls behind. First of all, there was no favorable environment for the development of clusters. The main limiting factor was the lack of cooperation, coordination and confidence that are the basis for the development of clusters. Besides, there were no supporting activities (logistics activities, research activities related to products and brand, etc.) and complementary forms of production to encourage the further development of clusters. Finally, low liquidity of the economy, with gloomy economic picture burdened with geopolitical problems, led to a backlog.

Forty clusters operate currently in Serbia, of which several are national, while others are regional [4]. If we look at the representation of industries, tourism is leading with six and the construction sector with five clusters, followed by textile, agriculture and food industries. In addition, there are also clusters in ICT sector, service cluster, scientific cluster and two clusters in the environmental sector, which promote recycling and energy efficiency. Certainly all of these clusters contribute to the improvement of competitiveness in Serbia.

All clusters can be divided into clusters of zero, first and second phase [4], in accordance with the level of their development. Generally, the zero phase clusters are the least developed and the second phase clusters are the most developed.

For example, the zero-phase clusters are:
- Cluster Sombor salasi – tourism,
- Cluster Reciklaza jug – ecology,
- Cluster Dis Nis – design.

Clusters of the first phase of development are:
- Cluster Istar 21 – tourism,
- Vojvodina ICT Cluster – information technology,
- Cluster FACTS – fashion, clothing industry,
- Cluster Pollux – food production,
- Cluster Ecopanonia – environmental sector,
- Cluster Start Up – service sector,
- Cluster Subotica-Palic – tourism,

The most advanced group of clusters (Phase II) includes:

- Automotive Cluster AC Serbia,
- Dundjer – construction,
- Cluster Flower of Sumadija – floriculture sector,
- Medical Tourism Cluster,
- Netwood – production of furniture and interior design.

To make our analysis complete, this time we shall analyze the cluster model in Serbia in order to comprehend which international experience can be used in the further development of local clusters. In the domestic economy, there are several clusters in the sector of textiles and fashion, which are usually in the first stage of development and are present in both northern and southern parts of Serbia. The existence of these clusters is of great importance for the development of the textile industry sectors as well as for the promotion of domestic clothing brands in the European market [9]. Cluster development will certainly improve the competitiveness of local enterprises and facilitate the competitive struggle with the well-positioned companies on the European market that will inevitably lead to Serbia's entry into the EU. There are several clusters in the field of fashion and clothing, such as: Clothing Industry Cluster Southern Banat, ASSTEX, Textile Start Up, FACTS, the Impulse – textile exporters, textile cluster NIS.

The cluster ASSTEX was founded in 2009 in Novi Pazar and includes 14 companies. This Textile Association employs 779 people and generates annual turnover of EUR 9,585,884. As most of the world's clusters, ASSTEX cooperates with secondary textile school, professional high schools and universities that provide support in the form of training of future employees in the textile industry.

Much more successful and better known is the cluster FACTS, an association that consists of 16 private companies and three academic institutions. Members of this cluster are well-known domestic fashion brands Tiffany Production, Knitwear Ivkovic, PS Fashion, Extreme Intimo, Luna, Garman, Soda sport, Leonardo Jeans, Jasmil, AMC, etc. In other words, the cluster brings together producers of dresses, sweaters, jeans, underwear, and sports equipment. Cluster FACTS, as previously mentioned, cooperates with the Faculty of Applied Arts, the professional high school of Design and the Technical Institute Mihajlo Pupin. The cluster was established in 2010

and, in the following year, had the total turnover of EUR 54 million, whereas the total amount of export was EUR 14 million. The main export markets are the markets of former Yugoslavia, Europe and Russia. The total number of direct employees is 2611 and, indirectly, 3500. The cluster is supported by the Secep EU project (2010-2012), by the German government as part of GIZ ORF project (2011-2013) as well as by the Swiss government through a SIPP (2012-2015). Since 2012 the cluster has been a member of the AHK German – Serbian association, with the aim of deepening international cooperation [7]. The main goal of this cluster is the acquisition of new knowledge, innovation and technology, as well as improving the quality of business in order to better promote domestic brands in the European market.

If we make a parallel between Italian, Spanish and Serbian fashion clusters, we come to certain facts which point to potential development directions for Serbian clusters. It becomes clear that greater networking of enterprises is necessary, that is, a greater collaboration between the producers and suppliers, logistics channels and exporters is needed in order to achieve the aforementioned cost savings, and hence, productivity growth, synergies and competitiveness. In other words, it is necessary to encourage vertical integration. Universities, local authorities and the media which provide appropriate support (through facilitation and promotion) should be more involved, and banks as basic financiers should support companies through soft loans, which should encourage them to join the cluster. Finally, domestic clusters should cooperate with regional clusters within the same sector, which can contribute to better sales on foreign markets as well as to the rapid adoption of new knowledge and ideas.

Conclusion

The analysis in this study showed the importance of business competitiveness and highlighted the creation of the value as one of the enduring goals of the company's management. This ultimate goal can be achieved in various ways; one of them is organizing companies into clusters. This type of local association of companies leads to the more efficient use of both internal and external

resources of a company. The association of companies with complementary partners or connection with suppliers and customers creates a real basis for the improvement of productivity and innovation, and, ultimately, for the competitiveness of enterprises. Economically speaking, the power of one cluster lies in the cooperation as well as in multiple connections that result in synergy.

The positive effects of clusters are not only reflected in the economic sector in which cluster operates, but they spill over to other economic sectors and the national economy as a whole. It confirms the repeatedly mentioned *Porter's* theory of the "diamond" of national competitiveness. One of the effects of clustering is the strengthening of regional economy and increase in life standard. In macroeconomic terms, these regions and areas are attractive places for investment and attract foreign investors. Clusters promote both new technology and the creation and development of new companies.

On the other hand, the support of the state and state institutions is necessary in order for clusters to become active and popular as a business concept. In other words, public support is crucial. In addition to these facts, the European Union has been using a variety of instruments, incentives, laws, programs and projects to encourage SMEs to associate. Footwear and clothing clusters in Italy and Spain showed how cluster really operates and its importance for an economy. These examples reflect the fact that clusters not only improve the competitiveness of companies, because they are *de facto* world leaders, but also that they promote an economy in the world and are one of the main pillars of export. Also, it has been shown that all institutions (media, universities, financial institutions, etc.) are also involved in the cluster, apart from the producers themselves.

In Serbia, clusters are in the early stage of development. Due to fact that in a few years Serbia will become a full member of the European Union and that the great European market will be opened, bringing with it new competitors, it is considered that further development of clusters enhances competitiveness and enables better positioning of domestic companies. However, as has been pointed out, help from the state is necessary. There has been certain progress in this field. In fact, in 2006 the

Government of the Republic of Serbia adopted a program to support cluster development, and in 2011 the Cluster Council and the House of Clusters have been established. In addition to the support of the Serbian government, domestic clusters have the support of international partners, such as Germany, Switzerland and Norway. Clusters are increasingly promoted as a business concept, which can also be seen at an annual event "Days of Clusters", which takes place in Nis.

In order to develop clusters in Serbia, it is necessary to improve cooperation, coordination of activities and confidence which are the real basis of cluster existence. It is also necessary to include more supportive activities (universities, media, financial institutions, agencies) as well as to strengthen cooperation with suppliers/importers and buyers/consumers, which encourages further development of clusters and eliminates production bottlenecks that create additional costs. Apart from that, we need to analyze foreign experience as possible direction of the future development and deepen cooperation with other clusters in the region. In order to achieve these goals, it is necessary to change the concept of business philosophy in the direction of presenting clusters as one of the main pillars of creating sustainable competitive advantage.

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Đorđe Kaličanin

is an Associate Professor on course in Strategic Management at the Faculty of Economics – University of Belgrade, where he acquired all his degrees (B.Sc., M.Sc. and Ph.D.). On master studies he teaches courses in Strategic Finance and Business Strategy. He is the author of articles in the scientific fields of strategic management, business planning and value-based management. He led and participated in projects of strategic planning, investment decision making, business planning, organizational design, valuation and compensation system design. He is the Manager of the Publishing Center at the Faculty of Economics.

Olga Gavrić

was born in 1985 in Belgrade. She received bachelor degree (International finance, 2009), and master's degree (Business management, 2012) at the Faculty of Economics, University of Belgrade. Currently, she is a PhD student in Business Management at the same University. She is a Teaching Assistant at the Faculty of Agriculture (Department of Economics), University of Belgrade.