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Clustering - Good or Bad idea!?

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Abstract. Clusters tend to be a key factor for a successful macroeconomic development and microeconomic business environment. Execution of cluster projects is one of the strategic objectives of many counties, as it contributes to the economic development of regions and increases the level of innovative development of enterprises which form a cluster. Cluster mapping efforts create a set of data and insights on economic activity across industries and locations.
With this paper we will try to present the advantages and disadvantages of being in cluster. All huge projects have obstacles and benefits, but in this paper we will try to summaries the facts of clusters, analyzing data from states in Balkan region and presenting some useful information for enterprises which are thinking for sector development opportunities.

Keywords: clusters, potential, benefits, investment, growth.

Introduction

The prospect of potential benefits from cluster initiatives for companies encourages government and other public actors to launch cluster promotion policies. In general, a well-developed concentration of related b (Zejnullahi, E.D., Balaj, N. & Hodaj, N., 2017) business promotes three important activities:

- Increase productivity (through specialized inputs, access to information, synergies, and access to public goods);
- Faster innovation (through cooperative research and more intense competition);
- New business formation (filling in niches and expanding the boundaries of the cluster map).

Cluster initiatives help regions govern their economic development and recruiting efforts. It also encourages communities to refocus their efforts on existing industries. Strong domestic cluster initiatives also assist the regions in attracting foreign investments. As leading platforms for their industries, clusters are able to attract national and international key players. In fact, foreign-owned companies can enhance the leadership of the cluster and contribute to its upgrading.

Throughout Europe, clustering of companies and R&D organizations is acknowledged as an effective tool for national and regional development. There are hundreds of cluster initiatives existing in Europe alone, aiming to foster innovation and internationalization of companies using collective actions. (Innovation & Environment Regions of Europe Sharing Solutions, 2012)

Some geographic areas have obvious natural advantages that result in cluster formation.

First, the cost of transporting goods is reduced when firms are located close to their customers or suppliers. Input suppliers can exploit economies of scale in large clusters of downstream firms who, in turn, benefit from timely delivery and lower inventory costs.

Second, when firms locate in a cluster, a pool of workers emerges, making it easier to hire new workers when labor demand increases and facilitating better matching of workers to jobs.

Third, knowledge spillovers, in particular informal exchanges of ideas, are more likely when firms are in close geographic proximity. In a more dense concentration of economic activity, workers and entrepreneurs are more likely to learn from each other. Close proximity to competitors can facilitate information sharing or allow firms to engage in collective action to overcome common constraints such as contract enforcement. (Africa Growth Initiative, 2015).

Cluster advantages and disadvantages

As (Mazur V. V., Barmuta, K. A., Demin, S. S, Tikhomirov, E. A. & Bykovskiy, M. A., 2016) mention that studying the experience of developed countries shows that innovation clusters have a greater ability to innovate due to the following key advantages:

- Unlike traditional industrial innovation clusters represent a system of close relationships not only between companies, their suppliers and customers, but also to institutions of knowledge, including research centers, universities, and scientific research institutes. As a generator of new knowledge and innovation, they provide a high level of competitiveness. The innovation process includes suppliers and consumers, as well as companies from other industries, and as a result of inter-firm cooperation on R&D costs are reduced;
- Subjects of companies – participants of the innovation cluster, especially SMEs, are able to more accurately and more quickly respond to customer needs. Participants cluster facilitated access to the new technologies used in various areas of economic activity;
- Cluster structures create positive effects not only for the cluster association and its members, but also for the home regions: An increase in employment, the growth of wages and profits, intensification of entrepreneurial activity, etc (Press, 2006). Cluster structures provide economic growth for the region as a whole, not only for cluster members, improving the welfare of the entire population,
- acceleration of regional scientific and technological progress, improving the regional innovation system;
- The subjects of the firm in the cluster are under intense competitive pressure, which is exacerbated by the constant comparison of their own business activities with those of similar companies;
- Ability to coordinate efforts and financial resources to create new products and technologies, and output them to the market (Nafziger, 2012). Within the cluster, it is possible alignment of supply chain, from product creation to its production and to market;
- The establishment within innovation clusters mainly export-oriented products and technologies, i.e. intra-cluster competitive advantages are significant on an international scale;
- State participation in the formation of cluster strategies. If the initial clusters are formed only due to the "invisible hand of the market", especially when upgrading TNCs in recent years, many governments began to "grow" their own initiative in the framework of public-private partnership, giving this process a tangible material and moral assistance;
- Creating a sustainable distribution system of new technologies, knowledge, products, so-called technological network, which is based on a joint scientific base;
- Ability to carry out internal specialization and standardization, minimizing the cost of innovation;

- The presence of the system of innovation clusters of flexible business structures – small businesses, competing in the production of creative ideas that allow grope innovative points of growth of the regional economy;
- Regional and local clusters of small firms provide a high degree of specialization in servicing a particular business niche, because it provides access to capital for industrial enterprises, other resources, and actively going exchange of ideas and knowledge transfer from scientists to businessmen. (Mazur V. V., Barmuta, K. A., Demin, S. S, Tikhomirov, E. A. & Bykovskiy, M. A., 2016).
- However, clusters are not an ideal element for the economy because the list of advantages may be continued by the list of innovation cluster disadvantages, as follows (Petrov, 2010).
- The excessive concentration of enterprises in domestic relationships and environmental conflict beyond the cluster may lead to technology obsolescence and decrease of their competitiveness in the domestic and foreign markets;
- The cluster's reserved character may cause the elasticity reduction of participating enterprises;
- The absence of competitors in an isolated cluster "destroys" the need for constant updating of the production and sales process;
- The uniqueness of each cluster leads to considerable complication of efficiency assessment of its functioning, because there is no opportunity for comparison with other clusters;
- The correlation between the entire cluster consequences and the performance of its each member (Mazur V. V., Barmuta, K. A., Demin, S. S, Tikhomirov, E. A. & Bykovskiy, M. A., 2016).

Research methodology

For the realization (accomplishment, implementation) of this paper we have used combined data, which were provided from European Cluster Collaboration and Cluster Observatory platform online, which monitor and report about the cluster effects. These data have been analyzed through statistical methods appropriate for discussion.

This research was completed from statistical data about Balkan countries, included in this research, being: Kosovo, Albania, Serbia, Northern Macedonia, Montenegro, Bosnia and Hercegovina, and Bulgaria. For this work the selection was done based on the logic of influence possibility, and further on the data were statistically tested. In this paper we have analyzed the number of clusters, in each country, the sectors in which the clusters were formed and the report to the GDP of 2018.

We assess that as a limitation to this paper is the lack (absence) of primary data, which we could not provide due to funds and the geographic inclusion the research has. If primary data were at our disposal, then we could do a confrontation of results between our primary data and the secondary data. The other limitation in this research is the lack (absence) of data on cluster employment for 2018. Therefore, for our analysis we have used the combined data which produced the results presented in this paper.

Data analysis

Based on the data provided from European Cluster Collaboration Platform (Online platform developed and funded by European Union), which we have selected only for
7 countries included in this research, being: Kosovo, Albania, Serbia, Northern Macedonia, Montenegro, Bosnia and Hercegovina, and Bulgaria, we have gained the data which have been presented in a tabellary form, in the following:

Table 1 – Evidence from selected states for cluster registered and GDP

	Republic of Kosovo	Albania	Serbia	North Macedonia	Montenegro	Bosnia and Herzegovina	Bulgaria
Number of clusters[1]	1	2	24	3	4	4	22
GDP per capita $[2]	4193.6	5075.4	6880.5	5394.3	8226.6	6056.2	8651.1

Authors' calculations

If we analyze these data, we can suppose that countries which have successfully created clusters in different regions within their borders, have a higher GDP. This comes as a result of their concentration (focusing) in the fields identified as priority to

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[1] https://www.clustercollaboration.eu/cluster-list [2] https://tradingeconomics.com/

them. This identification has enabled them, apart from specialization, to increase also exports through adequate cluster policies. Based on the above table, it can be clearly seen that the Republic of Kosovo has the lowest GDP in the region, and that it has only one cluster registered. These data prove once more the relevance and the impact the clusters have in the economic development of the country, as priority points of each government, building up of knowledge and experiences in the field belonging to education institutions, as well as the increase of profit and specialization of enterprises in respective sectors.

	Republic of s	Albania	Serbia	North	Montenegr	Bosnia and Herzegovin	Bulgaria
Automotive	-	-	2	-	-	-	1
Distribution and Electronic Commerce	-	-	1	-	-	-	1
Communications Equipment and Services	-	-	-	-	-	-	2
Furniture, Wood Products	-	-	-	-	-	-	1
Aerospace Vehicles and Defense	-	-	-	-	-	-	1
Environmental Services	-	-	1	-	-	-	2
Transportation and Logistics	-	-	2	-	1	-	1
Production Technology and Heavy Machinery	-	-	-	-	-	-	2
Mechatronics and Automation	-	-	-	-	-	-	1
Microelectronics and Embedded Systems	-	-	1	-	-	-	1
Business Services, Information Technology and	1	1	1	2	1	1	1
Education and Knowledge Creation, Hospitality and	-	-	3	-	1	1	3
Electronic Commerce	-	-	2	-	-	-	1
Electric vehicles industrial cluster	-	-	-	-	-	-	1
Metalworking Technology	-	-	1	-	-	2	2
Financial Services	-	-	-	-	-	-	1
Construction Products and Services	-	-	2	-	-	-	1
Agricultural Inputs and Services	-	1	3	-	1	-	-
Textile Manufacturing	-	-	1	1	-	-	-
Marketing, Design, and Publishing	-	-	2	-	-	-	-
Crop & animal production	-	-	2	-	-	-	-

Table 2 - Regional active clusters presented in sectors

Analytical Instruments Tourism

Authors' calculations

Analysing carefully the above presented graphic, we can see also priority fields, which the countries of our analysis have applied. Out of these data we can allude that the most successful cluster initiatives have been proved in the sector of Business service, Information technoclogy and Analytical instryument, as well as Education and knowledge creation, Hospitality and Tourism. Since each country has its own unique characteristics and potentials as well, then the prioritarisation of sectors depends on governmental strategies and distributions of funds per cluster.
If we deepen this analysis more, in each country separately, we can see that Serbia has the largest number of clusters being active, and distributed in several sectors. Out of the data

provided from the platform Cluster Collaboration we can see that the most appropriate sectors for the development of cluster have shown to be Education and Knowledge Creation, Hospitality and Tourism, followed by Agriculture inputs and services. Almost the same situation appears also with Bulgaria, which, in addition to these sectors, appears also with a slight expansion also in the field of Finances, Communications equipment and services, Production and Metalworking technology etc. We allude that the expansion of the cluster network in some sectors has been achieved thanks to the stimulating policies for investment and innovative approach, which the Serbian government has towards the businesses with development potential.

Quite another approach appears in neighbouring countries of Serbia, such as Kosovo, Montenegro, Northern Macedonia, and Bosnia, which have not shown very attentive in creation and implementation of cluster initiatives. It is numbered a concentration of clusters in these 4 countries in the field of Business Service, Information Technology and Analytical instruments, this due to the distinguishing competences the Balkan peoples have in these fields. However, it should be stressed that in relation to the European countries, these 4 countries have remained behind (marked time) in the cluster development and stimulation, and in cluster annual reports, they have appeared ranked at the bottom of the list.

A good news is that regardless of challenges, the initiatives for cluster creation are being developed on daily basis, and the main actors are benefiting a lot from this network, which represents a stimulation for further regional development.

Conclusion and recommendation

Kosovo, regardless of potentials it has, especially in the field of IT, mechatronics, tourism and agriculture, which are qualified as fields of strategic interest for the country, it faces social, economic, legal and political challenges. All these challenges have an important impact in creation of the climate for cluster development. Based on the features of its country, each country makes efforts to create stimulating policies for businesses. However, in countries in transition, this issue is more delicate, because the challenges are various, and very often it happens that the initiatives of innovative businesses, which are profitable for the country, extuinguish just (exactly) because of the inadequate operation environment. An ideal formula is both the governments and the investors, as well as education institutions cooperate closely in order to create a unique platform, fulfilling the needs of the country and adapting the most innovative techniques in respective fields. However, practically, this situation is very disappointing, not because of the lack (absence) of initiatives, but because of challenges being present in many sectors.

For the accomplishment of a cluster, it is necessary also an experience in the adequate sector. Also this issue can be problematic, if as an initiative is not supported by the specialized education insititutions. If we analyze Kosovo, in this case, from the presented table, we can see only one registered cluster intiative in the field of IT. Analyzing the requests of the sector, in the recent years the interest to study in this field has increased, and unique platforms have been created, which are promising for the country. It should be stressed the fact that Innovation Centre of Kosovo has given a special contribution in the support of startup in the field of IT and broadlier, as well as University for Business and Technology – UBT, which has stimulated the students to create innovative products and to present them abroad, at specialized conferences, fairs and workshops, and their results have been impressive both in presentation and in evaluation, gaining first places in many cases.

Since the geographic position is the main element based on which the first cluster relations are created, we allude that Kosovo fulfills (meets) this criterion completely. Being positioned in a strategic spot (place), in the centre of Balkan peninsula, bordering on countries like Albania,

Northern Macedonia, Serbia and Montenegro, and with a very close access to the Adriatic Sea, with an appropriate infrastructure, Kosovo is ready to develop its capacities, to increase the level of export through the accomplishment (implementation) of at last 4 clusters in the fields of strategic interest. This strategic position, as well as other ideal elements for the development of clusters would help the country in producing products of high quality, with advanced production equipment and minimum costs.

And as a conclusion, if we have a clear goal, an adequate division of works, a prepared team and an appropriate monitoring, then the cluster implementation in a respective sector is the key to the development not only of an enterprise, or a group of enterprises in a cluster, but also of the economy of the country, of increase of experiences and world representation in a dignified manner with qualitative products/services.

As main recommendations of the authors deriving from the results of this paper are the following:

- Increase of possibilities in specialized trainings in On Job training, increasing the cooperation between the education institutions and businesses, and urging innovation in the development of specialized programmes;
- Another important advantage which is promoted through clusters is the potential influence of the increase of spaces for the use of circulation economy;
- Urge creation and increase of potential of business societies within certain industries through clusters, whereby their lobbing force against the respective governments is increased
- Another priority is the potential increase and the facilitating of creation of relations between the similar clusters, in the region, considering the fact that on the Balkans we have great cluster similarities operating in different countries, which are geographicly very close.
- Eventually, we should always take into consideratrion the level of implemented technology by the companies wishing to be an active part of clusters, because of the impact the technology nowadays has in doping business, and of the possibility of an easy access to the information of strategic relevance (importance).

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