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Professional paper

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CLUSTERS AS A FACTOR FOR ATTRACTION OF FOREIGN DIRECT INVESTMENTS

Abstract

In the new era of globalization, followed by liberalization and deregulation, contemporary concept of competitiveness is determined by productivity, which is a function of the ways companies compete, their capability to apply sophisticated methods and advanced technology and to offer unique products with high added value and diversified services.

Empirical evidence confirms that industrial clusters through their multidimensional model of networking and information exchange can enhance competitiveness through driving innovation, productivity growth and stimulating formation of new businesses. Foreign direct investments are seen as an important factor for enhancing competitiveness by transferring know-how and new technologies.

This paper analyses the impact of the clusters in attracting foreign direct investments, drawing conclusions and recommendations for Republic of Macedonia. Main conclusions of the paper are that automotive cluster has put Republic of Macedonia on a map of attractive FDI location for automotive industry. Number of foreign companies decided to locate their economic activities in the country, thus, contributing to the overall competitiveness of the country. Further steps are needed to place the country in the worldwide supply chains and to further strenghtent the links between local suppliers and foreign companies with final goal- attraction of more FDI and further rise of the automotive cluster.

Key words: clusters, foreign direct investments, competitiveness
JEL Classification: F21, F23

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Introduction

In times of accelerated technical and technological changes, globalization and liberalizatio, the concept of competitiveness is emerging as a new paradigm of development. Defining competitiveness as an ability of the national economy to produce goods and services that will pass the test on the international market while simultaneously increasing the real incomes of its citizens, it follows, that, competitiveness at national level basically relies on competive companies from the national economy who are able to generate an increase in productivity necessary to achieve higher incomes and increase of employment.

The same will be explained by Michael Porter of the Harvard Business School, whose known aphorism is that national prosperity is created and not inherited and that the final economic and development phase is an economy driven by innovation, which is characterized not only by high efficiency, but, also, by the creation of products and services with unique value.[1] The central hypothesis in the Porter's model is that national competitiveness is a result of the competitiveness of enterprises, while the competitiveness of enterprises, in turn, requires an innovative milieu to succeed.

On the other hand, the trend of globalization and the liberalization of world trade flows also imposes capital mobility. The countries of the world liberalize their policies on foreign direct investments, with the aim of attracting them, driven by the positive effects that they bring to the growth of competitiveness.

Industrial clusters, as a broad phenomenon, are been connected with many fields of economics, inclusing FDI-Foreign direct investments. Research on this conection between these two has shown that FDI and cluster are inter-related, both having effect on each other. [2]

On one hand, FDI helps the expansion and development of clusters in a host country. On the other hand, clusters have had significant role in attracting foreign direct investments and, were, therefore, one of the factors for improving the competitiveness of certain industry. [3]

[1] Porter, M.E. "The competitive advantage of nations", Free: New York, 1990, Klaus Shwab, Global Competitveness Index Report 2016-2017, World Economic Forum

[2] Gugler Phillippe and Brunner Serge, FDI Effects on National Competitiveness: A Cluster Approach, International Advances in Economic Research, vol 13, issue 3, 2007, pg. 268-284

[3] De Propris Lisa, Driffield Nigel, The importance of clusters for spillovers from foreign direct investments and technology sourcing, Cambrige Journal of Economics, Volume 30, Issue 2, 2006, pg 277-29

This paper aims to analyze the role of clusters in attracting foreign direct investment. In the first chapter we will define clusters, as well as the Porteer's concept of competitiveness as well as key factors that motivate investors to locate their economic activities in a particular location. The second chapter will be devoted to the role of clusters in attracting foreign direct investments and the third chapter analyses Automotive Cluster in Republic of Macedonia, drawing conclusions for further development of the cluster in direction of further attraction of FDI and improvement of the competitiveness of the automotive industry. Starting with theoretical approach of the concept of clusters, and the theory behind the tendency of certain location to attract FDI, through case study analysis of automotive industry in Republic of Macedonia, we use use the comparative analysis and than the induction metod to draw conclusions on the role of the automotive cluster as a factor for attraction of FDI.

1. CLUSTERS AND PORTER'S THEORY OF COMPETITIVENESS

The phenomenon of the industrial clusters, especially in recent decades, widely penetrated into the sphere of economic study related to development, especially in terms of the role of small and medium enterprises and exports, thanks to some significant, empirically validated experiences and achievements in the practice of growing number of countries in the world. Thus, the European regions have accepted the cluster concept with enthusiasm, and the same practice has been adopted by many US federal states. Developing countries have also adopted Porter's cluster model in their regional and national development policies.

In the broader sense of the word, and yet precisely, the cluster can be defined as "sectoral and geographical concentration of firms"[4]. With this concentration of firms, in fact, the benefits arise from the external economy, pointed out by Alfred Marshall, which arise thanks to: [5]

• Supply provided by numerous producers of raw materials, components for installation (semi-products), spare parts or equipment;

• The available workforce with specific, professional qualifications and knowledge;

[4] John Humphrey, Hubert Schmitz, "*Principles of Promoting Clusters and Networks of SME's*", SME Programme, UNIDO, October 1995, pg.8

[5] Prof PhD Vladimir Petkovski, "Industrial areas and industrial clusters: from Alfred Marshal to Third Italy", Faculty of Economics, Skopje, 2004

• Concentration of marketing and sales experts outside local or national markets and

• Concentration of experts for specialized services in the field of technology, finance and accounting.

In his paper "Clusters and the Economy of Competitiveness" of 1998, Porter will define clusters as one conglomerate of: [6]

• interconnected industries including suppliers of specialized inputs, equipment service providers, and specialized infrastructure;

• distribution channels and consumers, manufacturers of complementary products and companies connected on skills, technologies and joint inputs bases and

• related institutions such as: research organizations, universities, standardization organizations, education and training, and so on.

At the beginning of the 90s, Harvard Business School professor Michael Porter developed the theory of competitive advantages, published in his particularly influential work The Competitive Advantages of the Nations.

Namely, Porter explains that in traditional theories, the competitive advantage is predetermined by the abundance of factors of production such as land, natural resources and the labor force. The countries achieve comparative advantages in those parts of the industry which uses intensively abundant natural resources. Porter believes that classical comparative advantage theories are unable to provide a satisfactory explanation for modern industries and sectors in the economy in contemporary conditions of globalized competitiveness and emphasized power of technological innovation. One of Porter's aphorisms is that national prosperity is created, not inherited, which directly contradicts with the theory of comparative advantages, according to which the abundance of resources predetermines regional and national competitiveness.

According to Porter, the cluster networking of firms affects competitiveness in three ways: [7]

• By increasing the productivity of cluster firms. This is achieved through increased access to specialized inputs and specialized work-force; increased access to information, institutions and public goods, as well as through stimulation of complementarity;

[6] Porter Michael, *Clusters and Economics of Competition,* Harward Business Review, 1998, pg 2

[7] Bolland Alex, " *Industrial clusters: Identification and Public Policy*", Working Paper 09-02, University of Sussex, 2002 pg.2

• By increasing the innovative capacity of cluster firms. This is a result of the increased diffusion of technological knowledge and innovations. The competitive pressure from rival cluster firms drives the innovativeness in firms, which stimulates the growth of productivity.

• By stimulating a high rate of formation of new businesses in the cluster as a result of the stimulated entrepreneurial spirit in the cluster, which stimulates the growth and strengthening of the cluster.

Starting from the definition of competitiveness of certain businesses as the ability of its industry for innovation and improvement, and developing his theory of "national diamond", Porter pointed out, that, clusters should be a central element in all competitive development programs in developed, as well as in developing countries. Porter proposed his "diamond" as an analytical tool for assessing the quality of the business environment in a particular location or cluster. In the same clusters progress through four dimensions:[8]

• Favorable factor requirements (resources) including human, physical, capital resources, knowledge and infrastructure. In order to improve productivity, it is necessary to improve the efficiency, quality and specialization of the imputes in function of the respective clusters.

• Strong and sophisticated domestic demand. The presence of sophisticated and influential domestic demand encourages companies to innovate continuously in order to maintain leading market positions. Consumer cooperation is crucial in creating products that will meet their needs

• A local base of related and supporting industries. The presence of capable, specialized local suppliers is extremely important in providing cost-effective efficient inputs.

• A competitive environment that stimulates the productivity of firms. The presence of competing firms motivates firms to innovate in order to diversify from rivals.

One of the important determinants of national economic development is the capacity of the national economy to attract foreign direct investments. And while this is determined by many factors which are preconditioned (geographical location, availability of natural resources, national legislation, etc.), Porter's theory is that raising the productivity of the factors of production through more investment is a factor for improving the attractiveness of certain location. Geografic and sectorial concentration of inter-related firms can dramatically influence the transformation of certain economy into an attractive location for business activities.

[8] Porter, M.E. "The competitive advantage of nations", Free: New York, 1990, pg. 71-130

2. CLUSTERS AS A FACTOR FOR FDI ATTRACTIVNESS

If we generally agree that foreign direct investment is vital to the economic development of a particular local community or region, then we need to look at the phenomenon of attractiveness of the cluster for the same. In that context, high-level clusters, such as London as a financial center or the Silicon Valley, represent true magnets for high-quality investments. Given the fact that they are the leading centers in the given industries, they tend to attract all the key players from home and abroad. A majority of investment banks have their global or European headquarters located in London, although very few of them are already British, while most of the companies in the information sector and the electronic communications sector have located their business activities in the Silicon Valley. And after their establishment, these foreign companies can strengthen the leadership of the cluster and contribute to its growth and development.

The question is- why the firms would decide to locate their business activities in a particular cluster. Or even more, why would certain companies want to locate close to their competitors. In part, as recalled and exacerbated, the answer lies in the effects of the economy of agglomerations - a specialized workforce, specialized suppliers and knowledge transfer. But, to a large extent, the influence of the decision has the so-called "isomorphic" behavior - expressed in the language of institutional theory. For example, it is very important for the banking industry to be present in London, because it signals "membership" or belonging in the industry for clients or other clients. More important, the two theories - the economic and institutional, support each other, which means, that, in the moment when the cluster establishes leadership in a certain area, it will attract investments, domestic and foreign too. [9]

The Irish pharmaceutical industry is a good example of the importance of clusters in attracting domestic and foreign direct investment. Foreign direct investment in the pharmaceutical industry in Ireland is 40 years old, since 1964, when Squibb, now Bristol-Myers Squibb, locates its production activities in Ireland. Today, 13 out of 15 top pharmaceutical companies in the world have significant activities in Ireland.[10]

[9] Birkinshaw Julian, Upgrading the Industry Clusters and Foreign Investments, Int. Studies of Mgt, & Org., vol 30, no 2, Summer 2000, pg. 93-113

[10] Yehoue, B. Etienne, Clusters as a driving engine for FDI, IMF Working Paper, October 2005, pg 5

In England, Alfred Marshall, having analized the willingness of companies in the production sectors to locate business near their competitors, major suppliers and customers, developed a concept of external economies of scale. In this way, he specified all factors conducive to the improvement of operational efficiency existing in the immediate envinronment. Marshall indentified three main reasons why companies choose to locate their businesses in the vicinity of other companies operation in the same sector of the economy:[11]

- Emergence of a market of specialized vendors and customers;
- Local labor markets that offer experienced and highly qualified work force;
- Diffusion of knowledge (knowledge spill-over) between companies. Concentration of production in industrial clusters allows companies (especially small and medium sized) to specialize, exploit joint infrastructure and mimic the best technological and organizational solutions used by competitors.

One of the most important attributes of clusters is innovation. Quality infrastructure of the R & D institutions plays an important role in the innovation process, which, ultimately, leads to improved competitiveness. Innovativeness, on the other hand, can, however, be a significant factor in attracting foreign direct investment. The effect of synergy is even greater - foreign direct investments themselves carry new technologies that stimulate innovation and make the region more attractive for investments for foreign investors. Innovation of several cluster companies by competition leads to increased productivity of the entire sector. [12] As a consequence, the production costs of the companies are reduced, a certain amount of funds is released and can be invested in other segments, thereby moving in this way the growth of the cluster. This, in turn, stimulates innovation with end-users, competitors and suppliers and encourages greater allocation of resources in research and development in order to gain and retain competitive advantages of innovation. Competitive pressure from foreign affiliates may be an additional incentive for domestic companies, encouraging greater efforts in the field of research and development, as well as the application of advanced, sophisticated

[11] Bojar Ewa, Boyar Matylda, Clusters-the concept and the Polish experience, Lublin University of Technology, Revista Informatica Economica, nr. 4 (44) 2007, pg. 15

[12] E. Bojar, M.Bojar, T.Zminda, The Clusters as a Factor for Attracting Foreign Direct Investments in Less Developed Regions, Lublin University of Technology, Romanian Journal of Regional Science, Vol.2, No 1, Summer 2008, pg. 62-65

technologies. Consequently, foreign direct investments are accelerating economic development, although one can not expect that they are the only factor for changing the technological base and the innovative capacity of the industry.

The available infrastructure (physical, soft, financial, institutional), the established connections within the cluster - the horizontal and the vertical, and especially the links in the supplier's chain, the social capital as the basis for building a trust, is a strong stimulus in the process of deciding on the location of investments, whether it be internal investments or, foreign direct investments. On the top of that, if national authorities are proactive and have a clear understanding of the uses of cluster networking through support policies and the promotion of the local business climate, the positive effects of cluster mergers in attracting domestic and foreign direct Investments are the expected result.

And here the question is raised which investments are more important for the growth of the local economy, whether domestic or foreign, and consequently, which ones should be directed towards policies and measures for their attraction. It is very important that all investments are important for economic development; however, for the development of dynamic competitiveness determinants, foreign direct investments are much more significant. Namely, it is known that, with foreign direct investments often comes an inflow of new know-how and technologies, which is one of the key determinants of growth of competitiveness. Hence, the multiplier effects of knowledge transfer through the opening of new local businesses, or the formation of chains of suppliers for the needs of foreign direct investments.

The presence of foreign capital, and especially the international aspect of the cluster structure, is usually a stimulus for attracting domestic investments. That's why the cluster is capable of growing and expanding on new markets. Cluster companies may use distribution channels developed by foreign multinationals, cluster members, to sell their products. Cluster fusion stimulates innovation, so that cluster members can take advantage of many opportunities and transform from standard component suppliers for multinational companies to producers of new, unique products with high added value.

Multinational corporations can be a reasonable stimulus for concentration of business activities in a particular location. Thus, many clusters, such as the ones in Singapore or Ireland, own their emergence to

the foreign direct investment. Others, for example, the automotive industry in Detroit or Hollywood, have been in home ownership for many decades, although they have recently undergone the trend of entry to foreign direct investment.

3. AUTOMOTIVE CLUSTER AS A FACTOR FOR FDI ATTRACTION IN REPUBLIC OF MACEDONIA

The production of parts and components for the automotive industry in the Republic of Macedonia has a traditionally significance for the economy, which is additionally and rapidly increased with the entry of foreign investments and the construction of several large factories in the last 6 years. The initiators of the sector in Macedonia in the 1960s with the growth of the "Crvena Zastava" in Serbia and the founding of several companies supplying parts for the vehicles from Kragujevac. Indeed, Macedonia has a tradition and experience in the production of parts for the automotive industry, which are at the disposal of potential investors and existing companies to accelerate their growth.

Bearing in mind that the role of the suppliers in the total vehicle is increasing continuously and at the moment it is estimated that the suppliers are responsible for 80% of the added value of the vehicles and provide about 50% of the investments for research and development of the automobile industry[13], the involvement of the Republic of Macedonia in the European, and the world's synergies for the supply of automotive parts is a real challenge. Large companies are looking for sites with lower production costs, which is a real opportunity for local companies to join the syndicate of suppliers.

The automobile cluster of Macedonia is a group of companies, manufacturers of automotive components, universities, research and development centers that work alongside the development of the automotive industry in Macedonia. The cluster was founded in 2009 under the auspices of the German Society for International Cooperation - GIZ.

The goal of the cluster is to contribute to the growth and development of the automotive industry in Macedonia through increasing competitiveness and production, as well as strengthening the synergies of suppliers by intensifying the cooperation between universities and companies in the Macedonian automotive industry.

[13] www.clepa.eu, European Association of Automotive Suppliers

Majority of the companies comprising the automotive cluster are domestic. The cluster includes also academic institutions-Faculties of Mechanical and Technical Engineering, which is positive attribute; given the fact its main goal is raising competitiveness of automotive industry.

In the last decade, Republic of Macedonia has been strongly focused on the development of the policy of foreign direct investment, that is, promoting the country as a favorable destination for foreign investors, guided by the assumption that the new ones will bring new technologies and new knowledge, will improve the export structure and will contribute to the structural diversification of the Macedonian industry.

Mainly, the foreign direct investors were attracted by several factors: favorable position close to the EU markets, competitive work force, low taxes and social security contributions and the incentives offered in the Technological Industrial Development Zones.

One of the characteristics of the foreign direct investments in Republic of Macedonia is that the majority of companies which made a decision to invest in the country were from the automotive industry. Since the first investment of Johnson Controls in the TIRZ Bunardzik in 2006 to produce printed circuit board components, around 20 companies from the automotive industry located their manufacturing in Macedonia: Van Hool (bus assembly), Johnson Matthey (production of catalysts), Kemet (capacitors), Johnson Controls (cut and trim for car seat covers), Amphenol (signal harnesses for cars), Kromberg & Shubert (wire harnesses), TeknoHose (tubes), Dräxlmaier (wiring systems just-in-time and just-in-sequence) etc.

About 80% of the companies located in TIRZ are in the automotive industry, hiring around 13000 people and exporting 380 milions of dollars in 2015. Around 500 domestic companies cooperate with these automotive companies delivering services, raw materials and similar. [14] Number of companies rose from 30 to 50 in just few years. [15]

In 2016 Association of automotive industry in within the Council of foreign investors was formed, as a modern automotive industry development platform, which will be able to offer an important concept for human resource development and management, transfer of technological and innovation processes, and to generate new local supply chains, given the fact that this sector is dominant with foreign investors, and new opportunities for cooperation with domestic suppliers are opening up.

[14] Statement of Stefan Peter, President of Council of foreign investors, 01.11.2016, www.novamakedonija.com.mk

[15] Invest in Macedonia, Automotive Components Sector in Republic of Macedonia, 2015

Conclusion

In the new era of fast technical and tehnological changes, globalization and liberalization of trade flows, competitiveness is highly determined by the ability of the companies from one national economy to innovate and create products with high added value. Foreign direct investments are more often seen as a factor for transfer of knowledge and know how, therefore as a factor for raising competitiveness of certain industry.

Empirical evidences show that geografic and sectorial concentration of inter-related firms can dramatically influence the transformation of certain economy into an attractive location for business activities. Despite the argument why would companies want to locate their activities near their competitors, clusters are becoming important factor for attraction of foreign direct investments. Availability of specialized resources, knowledge and tehnologies, local base of suppliers, as well as the motivation force, driven by the presence of the rivals is making the cluster an attractive location for business activities.

Automotive industry in Republic of Macedonia showed significant rise in the last decade, as a result to the foreign direct investments in this sector, accompanied by positive business climate. Republic of Macedonia is slowely turning into hub for automotive industry, steping its way into the regional supplier chains. The next challenges for rise of the sector would be further establishment of connection with domestic companies for supply of imputs, development of R & D facilities and further improvement of the links with the academic institutions in the area of applied knowledge, as well as continuously improving the system of education to respond to the needs of the sector. Creating links with the clusters from the region will only improve the positions of the sector in the competitive European market. Another very important thing for the domestic companies is to keep flexibility and the ability to adapt to the new trends in automotive industry (production of hybrid, electric vehicles, “green” and lighter parts) in order to keep their position in the supply chains, even when, by some chance, foreign investors decide to leave the country.

One thing is evident –automotive cluster is becoming one of the lead sectors for foreign direct investments in Republic of Macedonia. Despite the arguments that main reason for the attraction of the investments in this sector

was the incentives from the government given in the TIRZ, fact is that major automotive companies decided to locate their activities in Macedonia instead of some other country in the region, contributing to the further rise of the competitiveness of Macedonian industry.

References:

1. Birkinshaw Julian, Upgrading the Industry Clusters and Foreign Investments, Int. Studies of Mgt, & Org., vol 30, no 2, Summer 2000
2. Bojar, E., Bojar, M., Zminda, T., The Clusters as a Factor for Attracting Foreign Direct Investments in Less Developed Regions, Lublin University of Technology, Romanian Journal of Regional Science, Vol.2, No 1, Summer 2008
3. Bojar Ewa, Boyar Matylda, Clusters-the concept and the Polish experience, Lublin University of Technology, Revista Informatica Economica, nr. 4 (44) 2007
4. Bolland Alex, " Industrial clusters: Identification and Public Policy", Working Paper 09-02, University of Sussex, 2002
5. www.clepa.eu, European Association of Automotive Suppliers
6. Gugler Phillippe and Brunner Serge, FDI Effects on National Competitiveness: A Cluster Approach, International Advances in Economic Research, vol 13, issue 3, 2007,
7. De Propris Lisa, Driffield Nigel, The importance of clusters for spillovers from foreign direct investments and technology sourcing, Cambrige Journal of Economics, Volume 30, Issue 2, 2006
8. Humphrey John, Hubert Schmitz, "*Principles of Promoting Clusters and Networks of SME's*", SME Programme, UNIDO, October 1995
9. Yehoue, B. Etienne, Clusters as a driving engine for FDI, IMF Working Paper, October 2005
10. Invest in Macedonia, Automotive Components Sector in Republic of Macedonia, 2015
11. www.novamakedonija.com.mk
12. Petkovski Vladimir Prof d-r, "Industrial areas and industrial clusters: from Alfred Marshal to Third Italy", Faculty of Economics, Skopje, 2004
13. Porter, M.E. "The competitive advantage of nations", Free: New York, 1990
14. Porter Michael, *Clusters and Economics of Competition,* Harward Business Review, 1998