

THE INFLUENCE OF KNOWLEDGE MANAGEMENT IN THE DEVELOPMENT OF CLUSTERS

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ABSTRACT

With the emergence of the global economic crisis, the economies of many countries were unbalanced, and investors were affected, sometimes dramatically lowering performance in some sectors. The battle to attract and retain investors emerged increasingly more. Managerial strategies were changed as well, being adapted to the given situation. Through this work I wanted to show the influence of knowledge management on the development of clusters in the current situation of post-crisis. The main goal of supporting the development of clusters is to create jobs, especially now when unemployment is at record levels, and of developing the regions and the economy.

The intervention of knowledge management in cluster development can have a number of advantages: increased profitability of the sector in question, addressing differentiation strategy through quality, decrease of the differentiation cost by maintaining under control the cost of the driving forces.

This paper mentions the results, identifying and determining influence / role of knowledge management on the development of clusters, by following the links between knowledge management and development of clusters. At the basis of the study lies the analysis of theoretical and practical concepts on knowledge management in global and European clusters; the conclusions of the evaluation, in the current situation, in terms of knowledge management, in developing clusters, reflects the need for the strong relationship between the two concepts and the benefits that occur from their interconnection.

KEYWORDS: *cluster, innovation, knowledge management, regional development.*

JEL CLASSIFICATION: *D83, R58, R11, J24, P25.*

1. INTRODUCTION

Knowledge management performs actions concerning knowledge - such as organizing, sorting, storage, usage of knowledge objects (e.g., information, analysis, ideas, etc.) - And then promoting and sustaining them in the organization in the form of concepts, management strategies, etc. Along with the geo-political changes, Europe has seen clear progress in the management of strategies. Knowledge management has emerged from the need to find effective solutions to social and economic development. In this age of technology-the era of knowledge - knowledge management does nothing but to facilitate effective communication, technological and organizational knowledge. Knowledge management has emerged as a necessity of the evolution of the technologically advanced and computerized era. Knowledge has become an important factor within the competitive economic environment. Welfare is also the target of all mankind and it trains the progress and who in turn can be achieved only through innovation and the application of cutting-edge knowledge. Along with the crisis, organizations have tried to find competitive alternatives, of survival and success. Knowledge management did nothing but to facilitate common ground through his insights.

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Collaborative strategies have cut costs, expenses and increased informational and material profits. An example is the cluster.

2. THEORETICAL FRAMEWORK

Alfred Marshall (1842-1924) - known as one of the founders of neoclassical economics and Michael Porter, Harvard Business School expert, represent two of the specialists in the field who have made known and popularized the concept of the cluster.

Innovation underlies the development of clusters, and it is linked to a knowledge management well realized and supported by the cluster members. It is encouraged by government policies, by research institution and by innovative management. The result is beneficial for all, because there is an economic development by increasing the competitiveness of the companies involved, set up of other clusters, creating jobs, capitalizing research in universities and research institutes, motivation of education and increased quality of life. Knowledge management can transfer and apply information and innovations within the company and within the organizations in the clusters.

OECD (Organization for Economic Cooperation and Development) defines knowledge-based economy as being the economy based directly on the production, distribution and use of knowledge and information" and the capabilities of receptor through, know who, know why, know how, know what.

A cluster can work in terms of the managerial strategy that brings a flow of information, of knowledge which must be in agreement with the objectives of its organizations, considering the fact that they have to get performance and high profits while lowering the costs.

3. KNOWLEDGE MANAGEMENT AND ITS ROLE IN THE DEVELOPMENT OF CLUSTERS

In this period, the society is based on knowledge and their technological transfer is facilitated by clusters along with networks of companies (strategic alliances, regional poles, etc.). That you can reduce costs and capitalize on knowledge; innovation has a significant contribution to this, which, within the cluster can be supported by high level research.

The influence of knowledge management in the development of clusters is represented by the primary objective, namely competitiveness. Innovation helps targeting success. Besides the many factors that can influence the clusters is also mentioned the cooperation with specialized centers and institutes that can generate innovative ideas. A knowledge management may even pave the way of the cluster to high performance through organization within because it offers access to a knowledge base, capitalizing them into a specialized technologized environment. Highly qualified and innovative staff, possessing specialized knowledge is a competitive and productively advantage for the cluster. Innovation applied by these personnel involves high-level knowledge, anticipating market and flexibility in thinking and action. All these give performance of the clusters.

Inside the cluster grows boosts and capitalizes the expertise of researchers, teachers, students, research centers and universities, as well as the other undertakings involved. Knowledge management manages to convey and transfer information and knowledge to teams of specialists. At the cluster level takes place a capitalization of knowledge through economic activities and production. The overall result - of combining knowledge management with developing clusters - can only be beneficial, as it is harnessing the highly qualified human and material potential of that region.

Clusters represent a new way of thinking about national, state, and local economies, and they necessitate new roles for companies, for various levels of government, and for other institutions in enhancing competitiveness. For companies, thinking about competition and strategy has been dominated by what goes on inside the organization. Clusters suggest that a good deal of competitive advantage lies outside companies and even outside their industries, residing instead in the locations

at which their business units are based. This creates important new agendas for management that rarely are recognized (Porter, M.E., 2000).

Under the conditions of a knowledge-based economy, finding solutions to increase efficiency and competitiveness of the economic sector, severely tested by the crisis, is attempted. Knowledge management proposes improving the efficiency of the activities of companies, organizations or clusters. The latter are forms of organization able to adapt more quickly to these economic and social changes and convulsions, creating knowledge-based competitive strategies: minimizing costs and risks, transferring knowledge between companies with similar goals - by conducting R & D and Innovation.

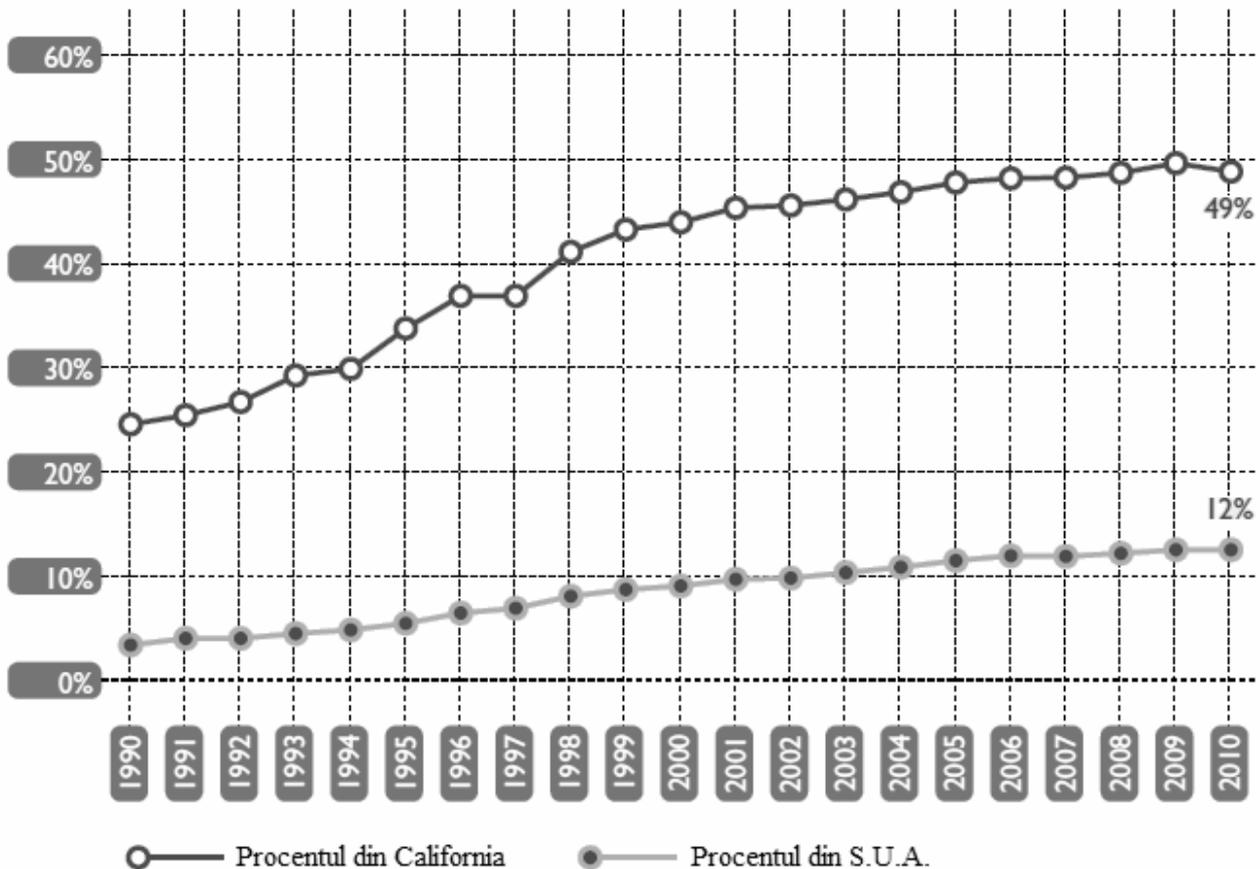


Figure 1. Percentage of patents records by cluster Silicon Valley in California and the U.S.

Source: adapted from Joint Venture: Silicon Valley Network, 2012

For example, the most important resource of the cluster in Silicon Valley is the human resource, as a direct consequence of the fact that in this region there is a knowledge-based economy, which in turn is based on the talent and skill of human capital. A very important aspect is that a very high percentage of residents have higher education (especially in science and engineering), the qualified specialists being the competitive advantage of the export-oriented ICT industry (through ideas, innovative products and services) (Vlasceanu, C., 2013).

Knowledge management has a great application by adopting investment strategies - the transfer of information, knowledge and organizational learning. In the clusters there is no relationship of subordination between its organizations, they complement each other, advantageously, in order to increase the competitiveness of their creative products.

Table 1. Top 10 member states of the European Union, according to the Human Development Index 2013 (HDI)

No.	Global Ranking	Country	HDI - 2012
1	1	Norway	0.955
2	4	Holland	0.921
3	5	Germany	0.920
4	7	Ireland	0.916
5	7	Sweden	0.916
6	9	Switzerland	0.913
7	15	Denmark	0.901
8	17	Belgium	0.897
9	18	Austria	0.895
10	20	France	0.893

Source: adapted from UN Development Programme, Human Development Report, 2013

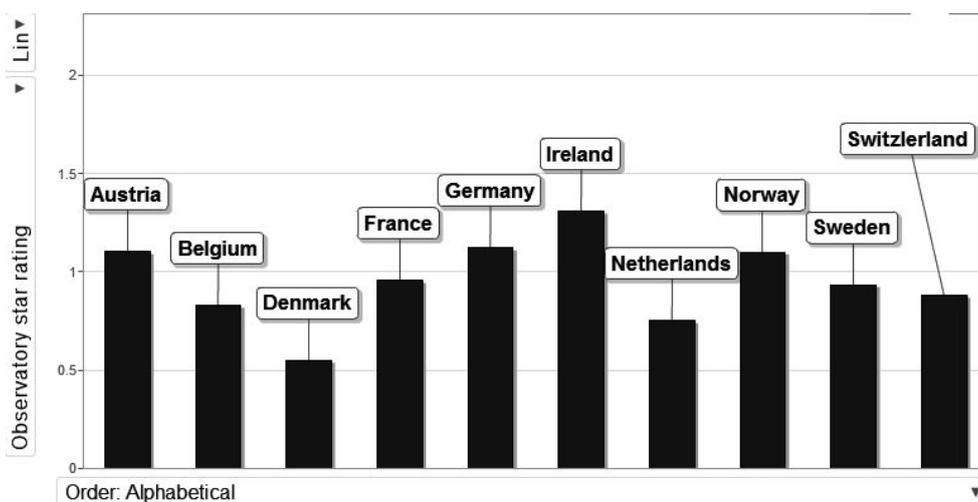


Figure 2. Observatory's star rating of clusters in the Top 10 EU member states, according to the HDI 2013

Source: adapted from The European Cluster Observatory

In the above table are listed the top 10 European countries according to the Human Development Index (HDI), and the mean values in the figure are the stars of the clusters in these countries. The average values refer to the clusters in all fields, and as we can see, they have a good rating. From this we can deduce a correlation between the level of development of the country and the level of development of these clusters (Vlasceanu, C., 2013).

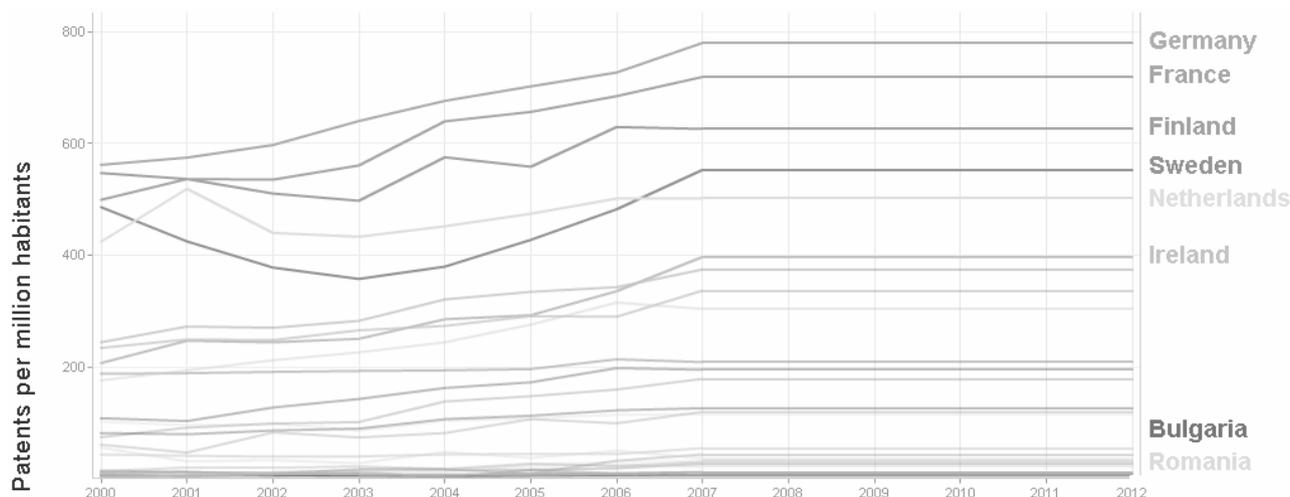


Figure 3. Number of patents per million inhabitants
Source: adapted from The European Cluster Observatory

As we can see in the above figure and table, there is a direct correlation between HDI and number of patents in each mentioned member state of the EU. The number of patents per million inhabitants is a very good indicator of the level of innovation in a respective country, but also an indicator of the level of economic development of each country and of the clusters that are a part of.

Effectiveness of the implementation / application of knowledge management depend on many factors: "the specific of the organizational culture corresponding to companies, the attitude of the management towards change at organization level, as well as shareholder mindset on organizational development" (Ciubotaru, V. et. al., 2008). Once met its objective of sustainable competitiveness is facilitated the recovery for all investment costs, obtaining useful benefits for the cluster. An enhanced market image - with loyal customers - is the expression of the degree of flexibility and adaptability, anticipation to the current requirements. At the level of clusters, the adoption of knowledge management is a viable strategy in economic and social terms, as it has the advantages of cost and risk minimization if a particular component has not given the expected results and can take some corrective action - adopting measures consistent with the environment of action.

4. CONCLUSIONS

The application of knowledge management in the organization is beneficial for the development of the socio-economic context, as it makes the flow of specialized knowledge in various fields to circulate and be boosted, and this is good for business communities and beyond. Knowledge transfer by knowledge management is facilitated by networks of organizations that collaborate and clusters by producing synergies.

According to Henry and Pinch (Pitelis, C., Sugden, R., Wilson, J. R. (Eds.), 2006), the potential of clusters is as centers of accumulated knowledge, and the realization the knowledge potential of clusters enhances the attractiveness of their localities for transnational firms.

Clusters, as we have shown above, facilitate the transfer of know-how and the transfer of knowledge, facilitates the spread of knowledge management and strengthens the rule of successful information transfer. A powerful knowledge management within a cluster leads to exploitation and processing at a higher level of information and knowledge - because of the high potential of research and innovation of the cluster - consequently, the effect can only be increased business efficiency and competitiveness of member firms of the cluster, which leads in its turn to the economic development of the region in which the cluster belongs.

As a motivating role in the emergence of clusters it is even this crisis that has reinforced the need to develop some business areas that have common general objectives. An intake was brought by knowledge, relationships, and connections between certain regions but also support - especially during this crisis - by governments. At their core sit harnessing resources, reducing costs and the unity of joint regional skills. Fierce competition at global level is transferred in part at the cluster level, but this does nothing but to stimulate innovation and progress - and to highlight the essentiality of the strong connection between knowledge management and clusters, in the current global context.

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