

Building effective cluster policies

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Abstract:

The aim of this paper is to present benefits by creating one cluster platform, in special view in cluster policy, which will be proposed to implement in Republic of Kosovo. Considering the scarce availability of empiric data in this context, the main data collection method used is international documents review.

As a community concept, a cluster encourages relevant firms within a value chain to move in, provide constructive competition, and stimulate collaboration among firms to form cluster synergy, an important driver in a national innovation system.

Regions develop through an 'entrepreneurial process of discovery'. Importantly, these entrepreneurial discovery processes work differently in different places. So regions need to identify their own areas of competitive advantage. Science parks are widely seen as an effective tool to promote industry cluster, to realize larger and more visible returns on the R&D investment of a nation, and to bring about national/regional economic development.

Cluster policies are proposed as a central component of practical strategy development. Some of the strategies that we propose in this paper are broker policy, demand site policy, training policy, promotion of international linkages policy, broader framework policy, BCG matrix, by special overview to encourage venture capitals and angel's investment.

However an issue that is becoming increasingly clear is that the **cluster policy** is becoming more important and relevant. The strong correlation between cluster initiative, cluster policy, innovation, promotion and sustainable economic development and competitiveness demonstrate the importance of this topic.

Keywords: cluster, policies, economic development, competition, innovation, promotion.

JEL Classification: C38

1. Introduction

The effect of policy cluster in economy development has been studied extensively in recent years. There have been many papers describing the important of making adequate cluster policy, depend on the country/region needs. The general futures of cluster are well known globally, but in our country we need to create a meaningful strategy for clusters.

Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, and associated institutions in a particular field that are present in a nation or region. Clusters arise because they increase the productivity with which companies can compete. The development and upgrading of clusters is an important agenda for governments, companies, and other institutions. Cluster development initiatives are an important new direction in economic policy, building on earlier efforts in macroeconomic stabilization, privatization, the opening of markets, and reducing the costs of doing business. (Harvard Strategic Centre, 2004).

Economic theoreticians suggest considering also other indicators when defining a cluster: cooperation links, geographic aspects, product assortments, sizes of companies, etc.

According to (Knorringa, P. & Meyer-Stamer, J, 1998), a cluster is one of the types of cooperation. Horizontal and vertical cooperation are specific to a cluster (Pachura, 2010); (Cook, 2010). A cluster is a group of geographically close companies (Saxenian, 1994) that often produce the same product (Sorenson, O.; Audia, P. G, 2010) and the companies share the same development vision and supportive infrastructure (Cooke, P.; Huggins, R., 2003). However this view isn't present in the right form in our county. The Kosovo government didn't create the policy infrastructure and support the cluster initiatives, so maybe this is the reasons why we don't find any cluster model in our country. Despite the importance of this topic for national and regional development few researches have studied and proposed relative policies and strategies for our county. Its desirable to carry our survey of creating and implementing cluster strategies between many sectors, and the main point will be starting communication between companies and government to have stable connection for this sensitive topic

The aim of this paper is to present relevant information that should consider in order creating useful national cluster strategies, comparing with European strategies and cluster policies. In this paper we attempt to develop most important elements that cluster policies should have.

Based on relative European strategies that we consider during our work, we argue that it is very important now to create and implement cluster models in our country, in order to increase the innovation, country development, to stabilized export and import, and to offer new products that will development based on market needs.

We have organized the rest of the paper in following way: describing the basic theoretical framework of clusters, the impact of cluster in national and regional development, important of creation of science parks, European cluster policies and other relative policies that directly affect in cluster performance, and conclusions and recommendations.

2. Theoretical framework

A cluster is 'a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities' (Porter, 1998).

Several directions are outlined in the studies – clusters are examined as the drivers of competition, innovation, and regional development (Garanti, Z.& Zvirbule-Berzina, A., 2013). Clusters enable companies to easily access important resources, reduce transportation costs, and access consumers and labour (Marshall, 2009), (Porter E. M., 2000) (Krugman, 1991), which, according to several authors (Dumais, G.; Ellison, G.; Glaeser, E. L., 2002), is the dominant factor nowadays, as well as to reduce transaction costs and access specialized services (Scott, 1988) (Scott, A. J., 1994) (Scott, A. J.; Angel, D. P., 1987), infrastructures, and a competitive business environment (Lin, C. H.; Tung, C. M.; Huang, C. T., 2006), which leads to increases in efficiency and productivity. A company's wish to operate in a cluster may be associated with easier access to information and lower business start-up barriers (Lin, C. H.; Tung, C. M.; Huang, C. T., 2006) and with the existing cooperation links with suppliers and buyers, which facilitates the commercialization of products (Ketels, 2003) (Garanti, Z., Zvirbule-Berzina, A & Yesilada, T., 2014).

(Timpano, 2005)

Table 1. Cluster policy objectives and indicators of impact

Objectives	Indicators of impact (examples)
Economic development and structural	Economic performance
Enhancing innovation	Rate of growth of innovation at the cluster level
Supporting research and training	Rate of growth of scientific production, patents and specialized skills
Infrastructure investment	Economic performance
Supporting entrepreneurship	Improvement of economic environment
Promoting networking	Rate of growth of connections and links between firms
Supporting cluster organization	Increase in the quality of cluster management

Source: Timpano2005:11

Europe 2020 Strategy, which aims to create the framework for a smart, sustainable and inclusive growth includes among others the initiative entitled "An industrial policy for the globalization era". In the next programming period 2014 - 2020 the European policymakers will direct the EU budget firstly for supporting the competitiveness of industry and in particular SMEs, in order to correct market failures such as access to finance, and to strengthen and diversify the domain - so that the European industry could compete on a global scale.

Also, the participation of small and medium enterprises to financing programs will be a priority objective of the European Strategy for industrial competitiveness and SMEs, which aims at:

- a simplification of the rules
- to reduce the cost of participation
- to accelerate the evaluation, selection and contracting
- to provide single points of contact, e.g.

Specifically, the European Commission proposes the establishment of a special program called "Competitiveness and SMEs", as the successor of the current Competitiveness and Innovation Framework Programme (CIP). Also, all support measures for SMEs, including the innovative component of the CIP, would be included in the Common Strategic Framework for Research and Innovation. The "Competitiveness and SMEs" program will focus mainly on measures to promote dynamic, competitive SMEs internationally. In other words, the financial perspective 2014-2020 attaches a great importance to supporting SMEs as a factor in industrial competitiveness and economic growth. Regarding this new strategy, the European Commission (COM, 2014) mentions that " the EU industry is in shape and has the potential to restore the European economy back on the path of growth." Developing an EU industrial base requires industry to be "modern, innovative, competitive, based on low-carbon emissions, resource and energy efficient."

Communication identified the following main areas where the competitiveness of the EU economy could be further strengthened in order to achieve significant progress in meeting the objectives of Europe 2020 Strategy:

- Orientation of structural changes in the economy towards more innovative and knowledge-based sectors
- Supporting innovation in industry, in particular by further concentration of
- Research projects in areas such as nanotechnology, advanced materials, industrial biotechnology;
- Promoting innovation and use of clean technologies
- Improving the business environment
- Supporting innovative, full implementation of the Single Market regulations, in particular Directive Services
- Facilitate professional and market interconnection, internationalization and market access of SMEs. (Pauna, 2014)

3. Region development

Cluster-based entrepreneurship plays an important role in the economy of the 21st century. A regional cluster can be defined as a combination of 5 dimensions – single sector enterprises that cooperate and compete; supportive enterprises from a wide range of

sectors; public and government institutions interested in economic development of the sector and region; other institutions, like research, education, finance and others and the fifth is regional dimension, which combines all four previously mentioned dimensions into one region. (Garanti, Z., Zvirbule-Berzina, A & Yesilada, T., 2014)

Based on literature, there are many elements that need to be revised, in order to establish new regional development, based on cluster model. There are many factors that influence cluster results. Basically the human resource and their potential are the most important factor that companies need to analyze in the very beginning period. In these contexts, in this paper we present many tools that affect directly in human resource performance such as broker policy, training policy, vesting, e.g. but other very important parts of cluster are finance department, R&D department and sales department. All these departments have the unique ability to promote and to succeed in regional market.

a. Science parks

Science parks are widely seen as an effective tool to promote industry cluster, to realize larger and more visible returns on the R&D investment of a nation, and to bring about national/regional economic development. As a community concept, a science park encourages relevant firms within a value chain to move in, provide constructive competition, and stimulate collaboration among firms to form cluster synergy, an important driver in a national innovation system. Therefore, the success of a science park depends on its ability to stimulate industry cluster synergy, which is a dynamic network created by a geographically proximate group of interconnected companies, associated institutions, and the environment. By pooling infrastructure, human resources, capital, technology, and product markets, companies can facilitate interaction, dialog, collaboration, and competition along the value chain to stimulate competitiveness. (Chen, Ch.P., Chien, Ch.F., Lai, Ch.T., 2013).

A science park often comprises the partnership between public and private institutions to create knowledge innovation and interaction through infrastructure and environment shaping. Although the public sector plays a more important role than the other actors in the early stages of the cluster life cycle in cluster initiation, infrastructure buildup, and public fund provision. (Andersson, T., Serger, S. S., Sörvik, J., Hansson, E.W., 2004), the private sector lead may be crucial for the effective performance of the economy (Porter M. , 2001).

Furthermore, innovation within a science park is different from enterprise innovation. It must create cluster synergy to raise competitiveness in the value-added process for an individual enterprise and for the entire cluster; otherwise it will only be a grouping of enterprises. (Chen, Ch.P., Chien, Ch.F., Lai, Ch.T., 2013)

4. Cluster policies

Several factors and policy tools can stimulate cluster synergy. For example, (Porter M. E., 1998) proposes factor input conditions; local demand conditions; related and supported industries; and firm structure, strategy, and rivalry in the diamond model. (Sun, C.C., Lin, T.R., Tzeng, G.H., 2009) add government support and culture as two other important factors. (Chen, Ch.P., Chien, Ch.F., Lai, Ch.T., 2013) include knowledge producing institutions, innovative enterprise, supporting endowments, bridging intermediaries, customer of innovation, cluster network dynamics, and international linkages in a cluster network interactive model.

Cluster policy directly involved some other policies which are broker policy, demand site policy, training policy, promotion of international linkages policy, broader framework policy, BCG matrix, venture capitals, angel's investment, vesting which have strong impact to create national cluster policy.

The data of the European Innovation Scoreboard (ProInno Europe, 2009) confirm that there is a strong link between national innovation systems and innovation indicators. This provides evidence that state support is important for cluster development and promotion of innovation using the cluster approach. Cluster support instruments differ in various European countries and regions, due to factors such as differences in economic development levels and co-operative traditions between

the state and private sectors. Cluster support policy could be one of the indicators of state or regional competitiveness, reflecting the ability of the state to mobilize and invite main economic players to cooperate in promoting growth and developing innovation. (Boronenko, V., Zeibote, Z., 2011)

Table 2. Policy trends supporting clusters and regional innovation systems

Policy stream	Old approach	New approach	Cluster programme focus
Regional policy	Redistribution from leading to lagging regions.	Building competitive regions by bringing local actors and assets together.	Target or often include lagging regions. Focus on smaller firms as opposed to larger firms, if not explicitly then de facto. Broad approach to sector and innovation targets. Emphasis on engagement of actors.
Science and technology policy	Financing of individual, single-sector projects in basic research.	Financing of collaborative research involving networks with industry and links with commercialization.	Both take advantage of and reinforce the spatial impacts of R&D investment. Promote collaborative R&D instruments to support commercialization. Include both large and small firms (often spin-off and start-up firms). Usually high-technology focus.
Industrial and enterprise policy	Subsidies to firms; national champions.	Supporting common needs of firm groups and technology absorption (especially SMEs).	Programmes often adopt one of the following approaches: <ul style="list-style-type: none"> • Target the drivers of national growth. • Support industries undergoing transition and thus shedding jobs. • Help small firms overcome obstacles to technology absorption and growth. • Create competitive advantages to attract inward investment and brand for exports.

Source: OECD, 2007, Competitive Regional Clusters: National Policy Approaches, Policy Brief, May 2007, OECD: Paris, p. 3.

a. Broker policy

A broker has the role of pushing for system interaction and integration within a network. It stimulates linkages to external resources, and acts as an adhesive among state-of-the-art technology, manufacturing, and market. A broker policy aims to strengthen the mechanism for value-adding dialog and cooperation among various stakeholders. These policies include the creation of platforms for dialog, university–industry interaction system, public–private partnership to support knowledge enhancing linkage, or venture capital. Science parks and business incubators are additional tools often used and supported by government policies. (Chen, Ch.P., Chien, Ch.F., Lai, Ch.T., 2013).

b. Demand site policy

Aside from releasing data and market information, public procurement has a strong potential for developing and strengthening clusters. Along with subsidies and R&D financing, it can stimulate demand, long-term development, and buffer market variance. Even though the market often dictates demand, public support is important in strengthening industry cluster development, especially in its early stages. (Chen, Ch.P., Chien, Ch.F., Lai, Ch.T., 2013).

c. Training policy

Formal educational systems usually cannot provide the exact skill competence for most firms. Employees need on-the-job and vocational training programs. Consequently, most economies have created extensive public and private training programs for their labor pool. Training policies upgrade skills and competencies of human resources that are essential for effective clustering. Public training policy is especially crucial for SMEs, as they generally have fewer resources to recruit and train competent workers. (Chen, Ch.P., Chien, Ch.F., Lai, Ch.T., 2013).

d. Promotion of international linkages policy

This policy facilitates the interplay among foreign and domestic markets, manufacturing, and technology actors. In addition, this policy includes elimination of trade barriers, strengthening of

transport and communication systems, and harmonization of market regulations, among others. These measures can greatly improve cluster conditions of information and resource flows, and enhance specialization in value chains across national borders. (Chen, Ch.P., Chien, Ch.F., Lai, Ch.T., 2013).

e. **Broader framework policy**

This policy covers an overriding playing field marked by effective and consistent rules for interaction transactions. This policy includes macroeconomic stability, product, labor and financial markets, education, government, physical and judicial systems, communications, and transport infrastructure. It may also include social capital and measures that support trust in transactions. (Chen, Ch.P., Chien, Ch.F., Lai, Ch.T., 2013).

f. **BCG matrix**

Products, industries, and clusters all have lifecycles. The BCG framework is a tool that examines the development of product or industry lifecycle. Despite its limitations, the BCG matrix is widely cited in academic and popular discussions on strategies. The BCG matrix consists of two dimensions, namely, market growth and market share position, with high and low levels. Market growth is an indicator of potential economic impact in a particular industry. Market share reflects competitive position in relation to its competitors. Together, products/industries are divided into four categories, namely, Star, Cash Cow, Problem Child, and Dog.

1) Star. These products or industries have relatively high shares in markets with a promising future. They have the potential to continue growing and generating profits. Thus, more resources and support should be provided to sustain Star development.

2) Cash Cow. These products or industries have relatively high market shares in mature markets. They should be maintained, kept alive, and milked. The focus is in maximizing the generation of cash and directing that cash to support newer and higher growth industries, such as supporting Stars or helping a Problem Child.

3) Problem Child. These products or industries have relatively low market shares in attractive yet uncertain markets. It has the potential to increase its market share or turn into a Dog. The strategy in dealing with a Problem Child is to help it develop into a Star or phase it out.

4) Dog. These products or industries have relatively low market shares in unattractive markets. If they could not find ways to teach the old Dog new tricks, they should probably get out, unless its existence is needed to support or complement other industries. (Chen, Ch.P., Chien, Ch.F., Lai, Ch.T., 2013).

g. **Venture capitals**

Venture capital investing can be defined broadly as "investment by professional investors of long-term, risky equity finance where the primary reward is an eventual **capital** gain, rather than interest income or dividend yield" (Wright and Robbie 1997, xiii). This **capital** gain is realized when the **venture** capitalist or investing partners sell or otherwise liquidate their equity stake in the **venture**.

A diverse group of investors join **venture capital** partnerships. These investors include pension funds, endowments, foundations, bank holding companies, insurance companies, wealthy individuals, investment banks, and nonfinancial corporations.

Venture capitalists may be categorized by either the sources of investment **capital**--whether captive or independent--or the stage of business development on which they focus their investments. Captive **venture** capitalists are generally subsidiaries of banks or insurance companies and are funded through the mother institution; independent firms must seek funding through third parties.

Independent firms are primarily organized as limited partnerships. The **venture** capitalists are general partners, and the third-party investors are limited partners. As general partners, **venture** capitalists have considerable control over the firm and its management.

Venture capitalists set certain developmental targets for enterprises and may release additional funds only as each goal is met. This sequential financing arrangement results in the release of enough **capital** to get the firm to the next level of maturity and no more.

Limited partners, on the other hand, use the **venture** capitalists as investment intermediaries and play a much more restricted role in management of the firm(s). Even though limited partners have little involvement in day-to-day management, the contractually specified relationship between general and limited partners helps ensure that the interests of the latter are not overlooked, as is discussed further below. (Parker, E., Parker, Ph., 1998).

Venture capital investments are made in companies not quoted on stock markets, where the investor trades-off the short term illiquidity in the shares held for the prospects of a greater future return. (Wright, M., Robbie, K., 1998).

h. Angels investment

Business angles (Bas) are usually cashed-out entrepreneurs or retired senior executives who own investable assets of more than US-\$1m, so-called 'high-net worth individuals'. Along with time and expertise, they invest their money in high-risk, high return ventures, almost exclusively in seed and early stage financing rounds (Freear, J., Sohl, J.E., Wetzel, W.E., 1994). Since they invest their private money, they are called 'informal' investors. The investment amounts typically range from US-\$50,000 to \$100,000, but sums of US-\$10,000 and more than US-\$100,000 are also common. The exit type is normally unplanned and highly depends on a venture's development. Mostly, BAs invest in start-ups in geographical proximity to their hometown. Due to their knowledge and experience in a special field, they invest in ventures in the same industry they worked in or founded companies before. The provision of mere capital and equity growth is often not the only reason why BAs support new ventures. Many of them are also interested in tapping into an exciting venture, to leverage their business contacts and also to protect their investment by active involvement (Lumme, A., Mason, C.M., & Suomi, M., 1998). As BAs provide equity for the new venture, they can demand a position as mentor or advisor and the entrepreneur is forced to coordinate decisions with them if he intends to retain the BA money (De Clercq, D., Fried, V.H., Lehtonen, O. & Sapienza, H., 2006).

i. Vesting

There are two common forms of vesting schedules: time-based and performance-based. With time-based vesting, shares subject to the option become available for the employee to purchase at a stated frequency after the grant date. For example, 25 percent of shares granted will vest on the anniversary of the grant date over four years, or 100 percent at the end of year four. Shares subject to options with performance-based vesting become purchasable when the performance metrics are met, such as when the company reaches specific revenue or earnings-per-share targets. In some cases, a stock option will have both time- and performance-based criteria, with the vesting occurring at the earlier of the time-based schedule or the performance goals being met. (Longnecker, B. & Van Gordon, P., 2008)

5. Conclusions

Given the established pre-conditions of technology diffusion and innovation, it is obvious that the 'first step' for any government is to ensure a good investment climate. In other words, ensure: openness to trade, an effective property right regime, a functioning judicial system, adequate infrastructure, and a fair tax and regulatory system. Infrastructure is particularly important as firms cannot even consider innovating while trying to operate with high costs and unreliable rail, harbour, power and IT provision.

Evaluation of clusters can be, if the companies start cooperation with each other, and the economic development report shows the positive trends.

Our country try to create a strategy for clusters many years ago, but nowadays this strategy isn't finished yet.

Unfortunately, Kosovo didn't register any cluster model, but there are some initiatives that are developing the cluster strategy.

6. Recommendations

Kosovo have the potential to become important regional players in innovative sectors. Kosovo currently is not living up to their potential, however, some constraints to growth are structural and/or external, but many of them can be alleviated by a more favourable policy environment.

Our recommendation for government is to create very concentrated strategy to motivate and to create very supportive business climate. A good investment climate not only helps local firms, but also encourages multinationals to "upgrade" their presence in the country. A conducive climate means that firms are more likely to perform R&D activity in the country as opposed to just transferring technology from headquarters to local branches. This task will be implemented after the government creates law infrastructure and many other stimulation strategies that will courage business to invest and use benefits of cluster model.

With the correlation between trade and innovation, another way to boost innovation is through removing constraints to importing and exporting, especially for small firms. This could include some form of matching grant program to help reduce the cost of consultancy and certification required for exporting. With respect to imports, the learning process inherent in capital imports is enhanced when accompanied by training and on-site technical assistance.

The policy of promoting clusters in Kosovo should be read in conjunction with the stimulation of R&D at both the private and public level, high-tech industries enjoying a sustained promotion. Firms perform on average better within their sector at the national level

"National" clusters benefit from export spillovers or have a specific ability, beyond individual productivity or size that makes them future potential champions

By bringing academia and business closer, venture capital and business incubators go some lengths to curtail another hindrance to innovation in Kosovo. Firm in clusters have better export performance.

The companies should be more focus in human resource, because they can increase highly the company performance and can develop new strategies and techniques to improve the whole model performance. This is one of the reasons why we present some strategies that are strongly focused with the motivation of staff and company performance.

Expert who will create the strategy and law infrastructure should take care for these details, because the corporation of the cluster companies need to be very clearly described.

7. Bibliography

- Andersson, T., Serger, S. S., Sörvik, J., Hansson, E.W. (2004). *The cluster policies whitebook*. Malmö, Sweden: IKED.
- Boronenko, V., Zeibote, Z. (2011). The Potential of Cluster Development and The Role of Cluster Support Policies in Latvia. *Economic Annals* , 35-67.
- Chen, Ch.P., Chien, Ch.F., Lai, Ch.T. (2013). Innovation: Management, Policy & Practice. *eContent Management Pty Ltd* , 416-436.
- COM. (2014). Comunicare a Comisiei catre Parlamentul European, Consiliu, Comitetul Economic si Social si Comitetul Regiunilor. *Politica Industrială: Creșterea Competitivității* .
- Cook, P. (2010). Jacobian cluster emergence: wider insigne from "green innovation" convenience on a schumpeterian failure, in Emerging clusters: theoretical, empirical and political perspectives on the initial stage of cluster evolution. *Northampton: Edward Elgar Publishing Ltd* , 387.
- Cooke, P.; Huggins, R. (2003). High-technology clustering in Cambridge (UK). *The institutions of local development. London. IGU* , 51-74.
- De Clercq, D., Fried, V.H., Lehtonen, O. & Sapienza, H. . (2006). An entrepreneur's guide to the venture capital galaxy. *Academy of Management Perspectives* , 90-112.
- Dumais, G.; Ellison, G.; Glaeser, E. L. (2002). Geographic concentration as a dynamic process. *The Review of Economics and Statistics* , 193-204.
- Frear, J., Sohl, J.E., Wetzell, W.E. (1994). The private investor market for venture capital. *The Financier* , 7-19.
- Garanti, Z.& Zvirbule-Berzina, A. (2013). Towards multi-dimensional regional cluster identification. *Economic Science for Rural* (pp. 225-233). Jelgava, Latvia: Germany inspires innovation.

- Garanti, Z., Zvirbule-Berzina, A & Yesilada, T. (2014). Cluster concept in Policy planning documents: The cases of Latvia and Northern Cyprus. *Verslas: Theory and Practice* , 129-139.
- Ketels, C. H. (2003). Cluster-based economic development. www.caps.am/data.php/859.pdf.
- Knorringa, P. & Meyer-Stamer, J. (1998). New dimensions in local enterprise co-operation and development: from clusters to industrial districts. *ATAS Bulletin XI* , 26.
- Krugman, P. (1991). Increasing returns and economic geography. *The Journal of Political Economy* , 483-499.
- Lin, C. H.; Tung, C. M.; Huang, C. T. (2006). Elucidating the industrial cluster effect from a system dynamics perspective. *Technovation* , 473-482.
- Longnecker, B. & Van Gordon, P. (2008). *Administering Stock Option Plans : How-To Series for the HR Professional*. Scottsdale, Arizona: WorldatWork Press.
- Lumme, A., Mason, C.M., & Suomi, M. (1998). *Informal venture capital: Investors, investments and policy issues in Finland*. Dordrecht, Netherlands: Kluwer Academic Publishers.
- Marshall, A. (2009). *Principles of economics*. New York: Cosimo Inc.
- Pachura, P. (2010). Regional cohesion: effectiveness of network structures. *Berlin: Springer-Verlag Berlin Heidelberg* , 120.
- Parker, E., Parker, Ph. (1998). Venture capital investment: Emerging force in the Southeast. *Economic Review* , 36.
- Pauna, C. (2014). Cluster policy relevance on regional development. *Internal Auditing & Risk Management* , 179-187.
- Porter, E. M. (2000). Location, competition, and economic development: local clusters in global economy. *Sage: Economic Development Quarterly* , 15-34.
- Porter, M. (2001). *Clusters of innovation: Regional foundations of U.S. competitiveness*. Washington, DC: Council on Competitiveness.
- Porter, M. E. (1998). *Competitive advantage: Creating and sustaining superior performance*. New York: NY: Free Press.
- Prolinno Europe. (2009). European Cluster Memorandum. www.proinno-europe .
- Saxenian, A. (1994). Regional advantage: culture and competition in silicon valley and route 128. *Cambridge: Harvard University Press* , 226.
- Scott, A. J. (1988). Flexible production systems and regional development: the rise of new industrial spaces in North America and Western Europe. *International Journal of Urban and Regional Research* , 171-186.
- Scott, A. J. (1994). High-technology industry and regional development in Southern California. *University of California Press* , 322.
- Scott, A. J.; Angel, D. P. (1987). The US Semiconductor industry: a locational analysis. *Environment and Planning* , 875-912.
- Sorenson, O.; Audia, P. G. (2010). The social structure of entrepreneurial activity: geographic production of footwear in the United States 1940–1989. *American Journal of Sociology* , 424-462.
- Sun, C.C., Lin, T.R., Tzeng, G.H. (2009). The evaluation of cluster policy by fuzzy MCDM: Empirical evidence from HsinChu Science Park. *Expert Systems with Applications*, 36 , 11895–11906.
- Timpano, F. (2005). *Cluster identification: policy implications of the evolution of the cluster concept in the context of globalisation and European enlargement*.
- Wright, M., Robbie, K. (1998). Venture Capital and Private Equity: A review and Synthesis . *Journal of Business Finance & Accounting* , 521-570.