

The Role of Entrepreneurship for Cluster Formation in the Economy

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Abstract

The paper summarizes the contribution of the entrepreneurship to the cluster formation in the economy. Emphasis is placed on the so-called “pure” entrepreneurial clusters. The features of the latter are commented on the background of an example from the Bulgarian reality.

During the last decades entrepreneurship has become a significant factor for economic development. This is associated first with the recognition of innovation as an important prerequisite for business progress, and second – with the discovery of adequate driving forces, providing access to innovative solutions and their effective dissemination (diffusion mechanisms, clusters, networks, etc.).

Keywords: *entrepreneurship, cluster formation, entrepreneurial clusters.*

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1. Introduction

Despite the proven (since Schumpeter) close relationship between entrepreneurship and innovations (including diffusion), the role of the first to form suprabusiness organizational structures such as clusters remains relatively under-represented. This paper tries to contribute to the clarification of this question, using in combination the historical analogy and the case study as methods for scientific disclosure. In many cases, only the highlighting of examples of good practices on a certain subject is enough to trigger the interest of economic policy and to provoke it to take action.

2. Entrepreneurship and cluster formation in the economy

Although the development of clusters in the economy has been influenced by different chance events (Porter's famous Diamond model catches on them), the cluster formation can hardly be conceived as accidental. A number of conditions are to be mentioned and in recent years entrepreneurship emerges as one of the most important.

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Historically seen, the constitution of the first economic clusters² assigned to the entrepreneurship a complementary (secondary) role. According to classical ideas clusters occur in regions that are rich in factors of production (natural resources, labor and capital). Entrepreneurship is called upon to organize the exploitation of a factor of interest, securing necessary support resources.

With the establishment of innovations as a precondition for accelerated economic development, the nature of the cluster changes. Clusters begin to acquire the appearance of an innovative-technological entity. Important role in the formation of such structures play institutions such as universities, research laboratories, specialized secondary schools, regional governmental bodies, etc. Also, the availability of adequate infrastructure with opportunities for inspiring a new type of social relations is considered a factor for strengthening and expanding the base of a cluster, and at a later stage – for its sustainable development. In such a situation, entrepreneurship with its habitual dynamism and propensity to take calculated risk starts playing a leading (primary) role.

It should however be remembered that modern business is not only innovative. Normally, different "worlds" exist in parallel. Some of them are related to novelties; others – to traditions. What is the actual relationship between those "worlds" depends on the ability of the applied sciences to create new opportunities and on the economy to use them. In a cluster formation process covering traditional industries and activities as well, entrepreneurship – with its knowledge and skills for effective use of innovations – is called upon to play a leading (primary) role.

It should also be stipulated that not every entrepreneurial initiative connected with the creation of an innovative or traditional business necessarily leads to the formation of a cluster. A good example is the Bulgarian company "Kaolin" AD engaged with the complex exploitation of a specific natural field to produce kaolin, silica sand, limestone, dolomite, chamotte and feldspar and providing alone for all necessary material, labor and financial inputs [20].

In some cases, cluster initiatives emerge as a direct consequence of (significant) developments occurring in the socio-economic superstructure (more frequent) or in the basis (more rarely) of the society – a rapid transition from a centrally planned to a market economy accompanied by changes in ownership; shock redirection of government policies combined with restriction of costs, restructuring of the administration and the like. In the most recent economic history of Bulgaria an example of such an external "interference" is the process of demonopolization and privatization of the former state associations and large enterprises and the resulting restructuring of their functions, which "forced" a number of managers and professionals to become entrepreneurs. New businesses also emerged after evaluating the development potential of traditional ones in light of structural changes in the real sector of the economy.

In this case entrepreneurship also comes to the fore as a cluster formation factor and plays a crucial role in initiating the process. A meaningful role plays not

² To mention here are the so called industrial areas (districts), which were described in details by Alfred Marshall decades ago. For details, see. [2].

only the desire to exploit existing resources with the help of the accumulated knowledge and skills, but also the personal initiative of people and organizations from the region. The specialized literature starts even to speak about "clean" entrepreneurial clusters [9; 11].

The following example provides a more complete picture of the baseline assumptions and ways of forming an entrepreneurial cluster in specific areas of the Bulgarian reality – the production of paints, coatings, plasters, anhydrides and other chemicals on the territory of Rousse region.

3. Investigation of the case of the Rousse region to create an entrepreneurial cluster in the field of chemical production

As already stressed, the beginning and acceleration of an economic activity within a given region can be initiated as a result of different accumulations. They can be connected, on the one hand, with specific knowledge and acquired skills, qualifications, experience and contacts in a specific area. Such conditions are usually ensured by the existence of a large company with a long history, which for various reasons, is parting from professionals involved in the development of markets, products and technology, i.e. the strategic parameters of the business. On the other hand, for the creation of multiple parallel businesses a "bait" for entrepreneurship is needed. For the Bulgarian conditions, according to studies of local and foreign researchers, the role of such a "bait" play factors such as desire for independence, for a higher job satisfaction and a desire to provide higher income (profit) [7, 13].

The benefit from a structure like that is associated mainly with the development of a specialized local labor market, thereby reducing the cost of search and training workers in the light of the businesses created [10, 3].

The formation of an entrepreneurial cluster structure in the field of production of chemical products in the Rousse region is associated with the development of a prototype enterprise – the former factory "G. Genov ", now called "Orgachim"AD. The enterprise has a long history and experience in the industry due to the accumulated specific knowledge and experience in chemical technologies, product design and marketing of paints and coatings.

"Orgachim" is a company with over 110 years of history. Its development goes through various ups and downs, but overall the company has managed to maintain and develop its production potential. Today, it is considered a modern industrial company with a rich product portfolio, intellectual potential and innovative capacity.

Founded in 1901 as a plant for inks, paints and shoes polishes, the factory expanded over the years in different directions, including iron-oxide paints and unsaturated polyester resins production. The new products development and the supporting technological decisions were conceptualized in a R&D facility of their own. During the 1970s a reconstruction and modernization was undertaken to transform the workshops "Varnishes", "Resins" and "Packing", which marked the

beginning of the full automation of production. Eighteen years later, a technology of the company BASF for the production of phthalic and maleic anhydride was utilized and a workshop for the production of plasticizers began operation. By 1990 the company became a leading manufacturer of paints, resins and phthalic anhydride in Bulgaria. In recent years the development of the company is not only strongly connected with changes in the technological process and development and introduction of new products, but in environmental issues and commitments to society.

In 1998, significant changes in company's strategy with increased focus on development and maintenance of own brands and more attention to market requirements were introduced. In keeping with the strategic changes, a significant structural changes in the company occurred. As a result of these structural changes, some of the staff was released, including specialists in the field of chemical technology, marketing of chemical products and a significant proportion of production workers. Certain amount of this skilled workforce with specific contacts and knowledge of the chemical business was ready to create or join a start-up with the same or similar activity.

So, in a several years period (from 1998 to 2002) enterprises with main activity production of varnishes, interior paints, decorative plasters, pigments, solvents, paste and other chemical products were created and developed in Rousse region. Appropriate examples are companies like "Megachim" AD, "Ekon 91" OOD, "Ninachim" OOD and "Hemolak" OOD. Thus, a natural process of diffusion of enterprises from a certain branch and on a particular territory has been ignited.

Observations show that businesses have peculiar cluster similarities in a number of parameters. The main similarities are summarized in Table 1³.

Table 1: Comparison by parameters relating to clustering enterprises from the chemical industry of Rousse region, Bulgaria

Enterprise	Orgachim AD – Rousse	Megachim AD – Rousse	EKON 91 Ltd. – Rousse	Ninachim Ltd. – Rousse	Hemolak Ltd. – Rousse
<i>Main activity</i>	Production of products – paints, varnishes, enamels, primers, adhesives, electrical insulating varnishes,	Production of products – paints, water-dispersion alkyd enamels, polyurethane and azure lacquers; pigments;	Production of products – water-based paints, silicone and polymer coatings, enamels, primers, varnishes,	Production of products – water-dispersion paints, primers, decorative plasters, paints for metal, wood	Production of products – alkyd and water-dispersion paints, paste, inks, etc.

³ The data has been synthesized from the information published on the websites of the companies comprising the cluster [16, 17, 18, 19] in the period between April– May 2011.

	resins, decorative plasters, anhydrides, plasticizers and alkyd resins, etc.	thinners; primers, etc.	linseed oil for wooden surface, adhesives, alkyd resins, PVA dispersions and solvents, foam-latex pillows and mattresses, etc.	and plastic, water-based primers, alkyd; water-based anti-corrosion primers, alkyd, acrylate, two-component polyurethane paints, colorless varnishes, primers, linseed oil, solvents.	
Registered trademarks	„Facagen”, „Alutin”, „Balkyd”, „Ruviplast”, „Vinakol”, „Hamelekon”, „Protecta”, „Mefisto”, „Leko”, „Interin”, „Emanuel”, „Blago”, „Deko Professional”, „Spirit”, „Casa Bella”	„Dekorator”, „Aquis”, „Praktika”, „Xpert”, License for exclusive rights for production of paints and varnishes with Teflon® in Bulgaria	Paint and painting products „PASTELO” and foam-latex mattresses and pillows „LATEX”	„Marsel”, „Si Belle”, „Marsel H2O”, „MARSEL Pro”	„Hemolak”
Markets	Bulgarian and international industrial and mass consumption markets	Bulgarian and international industrial and mass consumption markets	Bulgarian and international industrial and mass consumption markets	Bulgarian and international industrial and mass consumption markets	Bulgarian and international industrial and mass consumption markets
Tinting of products	It is used tinting system „Hamelekon” for a machine coloring of water-	It is used tinting system „Dekorator” for a machine coloring of paints in RAL	It is used tinting system „PASTELO Tint master” for a machine coloring of paints and plasters in	Tinting on individual customer requirements in RAL catalogue.	Tinting on individual customer requirements in RAL catalogue.

	dispersion, alkyd paints and azure lacquers for interior and exterior painting in over 10000 colors from different types of cartels – Hamelekon interior and exterior collections, Nova, RAL, Trox.	catalogue.	over 20000 colors.		
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Reporting enterprises also show similarities in other parameters and characteristics:

- Most of the suppliers of the enterprises manufacturing paints, water-dispersion paints, varnishes, enamels, primers, adhesives, electrical insulating varnishes, resins and decorative plasters are the same – BASF, CLARIANT, BAYER, KEMIRA, PERSTORP, DOW, BYK and LUKOIL - NEFTOCHIM - Burgas;
- Data exchange, access and use of specific information for the development of the production of paints, varnishes, plasters and other chemical products (technology transfer) are provided;
- A local innovation environment for chemical production as a result of the concentration of specialists in the region, labor mobility, dissemination of knowledge through informal contacts between firms is created. Examples like innovative solutions for the usage of tinting system and the development of water-based paints ("washable" paints) support this observation.
- The proximity of the companies for production of dyes and chemicals is considered necessary, albeit insufficient condition for successful knowledge transfer. It contributes to the spread of a large number of new technologies developed on grounds of the same knowledge and generated by research in chemical production in the Rousse region.
- A part of the managerial know-how transfer is due to management movements from one company to another.
- Manufactured products from the above companies like the water-soluble paints, silicone and polymer coatings, the enamels, the primers, and the tinting products (paints and plasters) are distributed in successfully using tinting systems for specialized catalogs RAL and Trox.

- The role of the state for provision of public procurement for the enterprises from the cluster is negligible.
- The level of contacts with the local university (University of Rousse "A. Kanchev") is up to now not crucial to the development of innovative businesses in the cluster.

4. Conclusion

The cluster structure created as a result of entrepreneurial activity in the region of Rousse, Bulgaria, operating in the field of chemistry and related production of paints, varnishes, coatings, plasters and anhydrides and other chemical products, provides an opportunity to derive more of the following essential features of the entrepreneurial cluster: first, similar cluster structures can be formed not only in high-tech (as in the Western countries) but also in the traditional areas. Secondly, entrepreneurial clusters are constructed as a "flat" structure; they do not necessarily require the presence of a network of associated suppliers to the region in which they arise and develop. Thirdly, entrepreneurial clusters generally show relatively fewer contacts with the state, relying to a lesser degree on direct state funding, public-private partnerships and others. Fourthly, this type of clustering does not necessarily require the presence of high-tech bodies such as university, school or college.

Of course, presenting of findings like the presented above as coherent theory should be undertaken after gathering, processing and analyzing of additional information, including other examples of local and foreign practice.

References

1. Велев, М., 2007. *Клъстерен подход за повишаване на конкурентоспособността*. Изд. Софттрейд, София.
2. Велев, М., 2005. *Относно същността на клъстерите*. Сп. „Индустиален мениджмънт”, № 2/2005, с.с. 49-52.
3. Михайлова, Л. *Основни въпроси на управлението на клъстерни образувания*. В: Стратегически аспекти на управлението на мезоикономически структури. 2007. Изд. Примакс, Русе, с.с. 23-37.
4. МИЕТ/ИА „ФАР”, 2011. *Въвеждане на клъстерен подход и установяване на пилотен клъстерен модел*. [On-line] Available at: www.iaphare.org/bg/project/project_category.php?id=514&t=categories&cid=1827 . [Accessed 20 May 2011].
5. Папазов, Е., 2008. *Клъстернобазираны стратегии за регионално и трансгранично развитие*. Доклад, изнесен на МНК „СВСЕД”, Варна.
6. Портър, М., 2004. *Конкурентно предимство на нациите*. София, изд. „Класика и стил” ООД, 2004, с. 169.
7. Тодоров, К., 2011. *Бизнес предприемачество*. Том I. Изд. на БАРМП, София.

8. Тодоров, К., 2005. *Основни на дребния бизнес*. Изд. „Некст”, София, 2005.
9. Ueda, M., 2003. *Entrepreneurial Clusters in Knowledge-Driven Economies: An Essay on Their Evolutionary Dynamics*. MIT.
10. Gordon, I., McCann, P., 2000. *Industrial clusters: Complexes, Agglomeration and/or Social Networks?*. *Urban Studies*, 37 (3).
11. Guiso, L., Schivardi, F., 2011. *What determines entrepreneurial Clusters?*. *Journal of the European Economic Association*, № 2.
12. Porter, M., 1998. *Clusters and the New Economics of Competition*. *Harvard Business Review*, November-December.
13. Stefanović, I. et al., 1998. *Entrepreneurs' Motivational Factors: Empirical Evidence from Serbia*. *Serbian Journal of Management*, 6 (1) (2011). Op. cit.: Blanchflower, D. G. & A. J. Oswald. What Makes an Entrepreneur? *Journal of Labor Economics*, 16 (1): 26-60.
14. The Economist, Magic Formula: The secrets of entrepreneurial success, <http://www.economist.com/node/13216077>, [Accessed 12.05.2011]
15. The World Bank, *Clusters for Competitiveness, A Practical Guide & Policy Implications for Developing Cluster Initiatives*, 2009.
16. <http://www.orgachim.bg> [Accessed 12.05.2011]
17. <http://www.megachim.com/> [Accessed 10.05.2011]
18. <http://www.ekon-bg.com/> [Accessed 28.04.2011]
19. <http://www.ninachim.com/> [Accessed 05.05.2011]
20. <http://www.kaolin.bg> [Accessed 07.05.2011 г.]