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## CLUSTERING AS A FACTOR OF INNOVATIVE DEVELOPMENT

*The article provides the examples of clustering of developed sectors of economy and individual initiatives of private business in Latvia. A number of issues are identified that hinder further clustering of Latvian economy. The evaluation of the National Development Plan for 2014–2020 is given. The need to use the cluster approach in the program of national development of Latvia is reasoned.*

*Keywords:* clustering; innovative development; competitiveness; national development plan; Latvia.  
*JEL classification:* R11; R58.

## Світлана А. Страдіня КЛАСТЕРИЗАЦІЯ ЯК ЧИННИК ІННОВАЦІЙНОГО РОЗВИТКУ

*У статті наведено приклади кластеризації розвинених галузей економіки та окремі ініціативи приватного бізнесу в Латвії. Окреслено низку проблем, які заважають подальшій кластеризації економіки Латвії. Оцінено Національний план розвитку на 2014–2020 роки. Показано необхідність використання кластерного підходу в програмі національного розвитку Латвії.*

*Ключові слова:* кластеризація; інноваційний розвиток; конкурентоспроможність; національний план розвитку; Латвія.

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## Светлана А. Страдия КЛАСТЕРИЗАЦИЯ КАК ФАКТОР ИННОВАЦИОННОГО РАЗВИТИЯ

*В статье приведены примеры кластеризации развитых отраслей экономики и отдельные инициативы частного бизнеса в Латвии. Определен ряд проблем, которые мешают дальнейшей кластеризации экономики Латвии. Дана оценка Национальному плану развития на 2014–2020 годы. Показана необходимость использования кластерного подхода в программе национального развития Латвии.*

*Ключевые слова:* кластеризация; инновационное развитие; конкурентоспособность; национальный план развития; Латвия.

**Introduction.** In the last decade the interest to clustering processes in economy has grown significantly. The majority of developed countries use the cluster model of development as it leads to an increase in investments, development of innovations, extension of sales markets etc. The economy clustering steadily holds the first positions in today's discussions concerning the establishment of competitive advantages of countries, regions and industries.

Latvia during the ten-year stay in the EU has received investments from various funds, but they poorly promoted clustering, in both core and related economic sectors.

Cluster as a special configuration of enterprise activity can grow only not externally, but also internally. It can be established by a top team. However, the state should create conditions for growing of clusters in industries, contributing to the increase of competitiveness of national economy as a whole. This aspect is very topical for Latvia, since the creation of favorable conditions can give a powerful impact to this process.

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The issues considered in this article do not include the entire problem set related to clustering in Latvia. But they generally cover the development of innovative economy in the country.

**Brief literature review.** We got familiarized with the concept of economic cluster in the works of M. Porter. He introduced it for firms and companies on the same territory, united by common goals when entering markets. Cluster, according to M. Porter is a specific subject of competition and a "group of geographically adjacent, interconnected companies and supporting organizations, operating in a certain area, characterized by a common activity and complementing each other" (Porter, 1998).

In today's conditions the concept of clusters is becoming increasingly associated with the so-called economy of knowledge, innovations, information economy. Thus, both scientific and practical interest represent the works of foreign experts in the field of theory and practice of national innovation systems formation and learning economy (Asheim and Isaksen, 1997; Lundvall and Johnson, 1994).

The cluster theory of Swedish theorists is basically formed on the study of correlations of Swedish corporations. Here clusters are based on the thesis of E. Dahmen "about the blocks of development". The basis for competitive success, as he considers, is the existence of connection between the ability of one sector to develop and the ability to provide a progress in another (Dahmen, 1989).

In general, the above mentioned authors agree on one thing: that the existence of clusters allows national industries develop and support their competitive advantages.

**The purpose** of the paper is to show the clustering process at the domestic market, reveal the existing problems and the need for its further use in the program of national development in Latvia.

**Results.** The Republic of Latvia is on the north-east of Europe. The capital of Latvia is Riga, the largest city in the Baltic States. In May 2004, Latvia became the member of the European Union and in 2014 adopted the euro. Latvia is not a major exporting country and exports accounts for a relatively small part of its economy. Latvia largely depends on foreign direct investments and credit resources.

Within the framework of European funding programs actually began coming in the funds from the European Regional Development Fund, the European Social Fund and Cohesion Fund and what is more, within the frameworks of two Community Initiatives, EQUAL and INTERREG, and from the European Development Fund of Agriculture and Development Fund of Fisheries. Altogether for the period from 2007 till 2013 Latvia under all these projects allocated approximately 5.63 bln EUR (Knyazeva, 2013).

The main sources of foreign direct investments in Latvia were and still are the neighboring countries of the Baltic region. Currently, the investments from Sweden, Germany, Denmark, Estonia and the Netherlands account for 43.7% of the total investments volume (Foreign Direct Investment, 2014).

All that has allowed Latvia make a certain step in the annual rating of competitiveness of the World Economic Forum, having risen from the 52nd to 42nd place. In "The Global Competitiveness Report" 144 countries are evaluated at 12 integrated indices calculated on the basis of statistical data for 2013 and questionnaire of entrepreneurs at the beginning of 2014 (The Global Competitiveness Index, 2014).

*The clustering process in Latvia.* Let's consider how clustering occurs and what place it ranks in the program of Latvia's national development. Latvia has some cluster initiatives as in the last 2 years with the support of structural EU funds several clusters have been created, let's dwell on some of them.

Latvia has historically formed a powerful scientific base in the field of chemistry. The priority sectors for economy's development organic chemistry production, medical devices, medicines and the like. It may be said that pharmaceuticals today is one of the most successful industries. On the basis of associations of Latvian chemical and pharmaceutical entrepreneurs and supported by Ministry of Economics of the Republic of Latvia within "Cluster Development Program" is created "Life Science Cluster of Latvia" (Life Science Cluster, 2012).

The common goal of this cluster is to strengthen pharmaceutical industry within 3 years. This is the key industry in Latvia producing and exporting value added products and providing working places for highly skilled employees with professional knowledge and technological skills.

The industry of clean technologies in Latvia (Clean Tech Latvia) was developed at a high level even before the creation of the cluster of clean technologies and many enterprises to join this cluster had successfully worked both at the domestic market and abroad. In 2012 the Latvian association of biotechnologies signed an agreement on project implementation of cluster of clean technologies of Latvia with the Latvian Investment and Development Agency (LIAA) and European Regional Development Fund "The program of clusters". "Clean Technology Cluster" is a non-governmental cluster organization. It unites 21 enterprises, scientific and educational institutions, dealing with environment pollution and wastes utilization, as well as energy resources renewability. The long-term goals of this cluster are to create within the next 8 years the basis for products promotion at the world market, the creation of new and innovative products, improved competitiveness (Clean Tech Latvia, 2012).

In contrast to all sorts of associations, communities, cluster is an improved form of production organization for sectorial or regional firms, companies, involving research institutions, operating in a particular production area. Within a cluster synergy is achieved through competition and cooperation between participants. And as mentioned earlier, it has an inward nature, but not imposed from outside. Therefore, this definition corresponds to these two abovementioned clusters.

So fashionable word "cluster" allowed any association be named so. Thus, in Latvia, within the last 2–3 years like mushrooms after the rain various kinds of clusters began to emerge, including, for example: Latvian tree-construction cluster (Latvijas Koka būvniecības klasteris) which united more than 20 manufacturers of wooden houses, educational and research institutions and other related enterprises. The goal of cluster creation is to assist cooperation of branch enterprises, development of organizations, acquisition of new and expansion of existing markets (Latvijas Koka būvniecības klasteris, 2012).

The cluster of long-term tourism of Latvia (LITA), has been created by the Association of Latvian Travel Agents and operators (ALTA), "Latvian Investment and Development Agency" with the financial support from the European Regional Development Fund (ERDF). Its goal is to promote: mutual cooperation of travel

agents and operators, tourism providers, long-term development of tourism in Latvia, increasing its competitiveness (Sustainable tourism cluster, 2013).

"Russian cluster" is a group of lawyers, providing consultations and legal support in Russian for support and servicing of Russian investors in the process of making investment transactions in Latvia. With the assistance of law bureaus in Lithuania, Estonia and Finland, involving in the group BORENIUS, this cluster helps its customers in the issues related to Lithuanian, Estonian and Finnish legislation (BORENIUS GROUP, 2014).

The "Cluster of food quality" is created in collaboration with the Latvian Federation of food companies and Latvian Investment and Development Agency (LIAA), in it many meat processing factories of Latvia participate (Latvijas Partikas Uzņēmumu federacija, 2012).

In our opinion, the mentioned clusters are not clusters at all, sort of associations, communities, complexes, agglomerations, assisting organizations they are some in combining efforts to find additional sales markets, improve products quality at the domestic competitive market. They don't lead to the creation of special form of an aggregate innovative product that concentrates a variety of scientific and technological inventions, converting them into innovations, commercialization of which provides the achievement of new competitive advantages. Despite this, a number of clusters are financed by LIAA and ERAF (European Regional Development Fund).

A cluster can be defined as a system of interconnected firms and organizations, the value of which as a whole is greater than the sum of its components. It should be noted that an important distinctive feature of cluster is its innovative orientation. A cluster unites a wide range of participants, including support institutions, production and business structures among which there are manufacturers, suppliers, higher educational institutions and scientific organizations. When firms are potentially more competitive together, rather than separately, it is the prerequisite to create a cluster as an innovative form of diversification and development.

To continue the topic of clustering in Latvia, we would like to mention some of private business initiatives. These initiatives, unfortunately, are not always supported by the state or regional structures, they are ignored by the LIAA and ERAF. Moreover, the government sometimes promotes the acquisition of successful business by more developed countries, such as Sweden, Norway, Finland and others.

Thus, in the field of veterinary medicine 4 competitive companies began negotiations on clustering. It was a necessary measure as are Swedish company began buying in certain Latvian firms to concert into branches. Each of the companies has its own advantage in one or another field: one has satellite clinics with differentiate range of services, other – most advanced developments in the field of osteosynthesis, carrying out the most complex operations, the third – diagnostics and laboratory research, well-functioning system of specialists selection: the selection of students, training, promotion and rising the qualification.

According to our opinion, joint efforts will allow these companies create an industrial innovation cluster, joining their most advanced developments in the field of veterinary with the training system for staff, the availability of clinics throughout Latvia and a research center. Innovative partnership is a particularly important tool in

achieving creative and commercial purposes. Thus, competition within a cluster turns into the mechanism of active promotion of competitive advantages.

Having examined separate clustering initiatives as supported by European funds and the state, as well as private business, it can be seen what place this process takes in the national economic development of Latvia.

***The place of clustering in national development of Latvia, 2014–2020.*** Last year Latvian government approved the "National Development Plan for 2014–2020" which got the name "the breakthrough in the economy". In it are formulated 3 priorities: man's ability to preserve security, the growth of national economy, promoting the growth of territories (Latvijas Nacionālais attīstības plans, 2014). It is based on the assumption that every resident of Latvia wants to live better, make his/her own breakthrough and the goal of the state is to create conditions for that, that is a favorable environment for growth. This environment must satisfy the basic needs, inspire self-development, encourage people to revive and ensure wise employment of scarce resources throughout the entire territory of the country.

In this regard, the attention is focused on traditional economic development strategies which unfortunately are completely worked out. In it is poorly represented innovative development, including clustering. And this is despite the fact that Latvia was in the penultimate place in the EU according to the data of Innovation Union Scoreboard 2014. It is in the group "Modest innovators" with the innovation performance well below the EU average (Union Scoreboard, 2014).

What prevents further innovative development of Latvia?

1. Latvia is characterized by the lack of traditions of statehood, poor quality of political elite and as a consequence, heightened responses to real and putative threats of security (language policy, the increase in military expenditures), the lack of strategic vision and responsibility.

2. High growth rate in 2005–2008, undoubtedly, contributed to the emergency of an ambitious concept of the "Baltic tiger". But this growth was formulated artificially on a speculative basis and the EU funds that indicates to the exhaustion of the previous model of economic development.

3. According to the data of Eurostat 2012 in Latvia on average 23.4% of enterprises were innovative, while in the EU countries this indicator was on average 52%. The share of GDP spent on R&D is 0.46% of GDP (Europe in Figures, 2012).

4. Currently, the system of human resources formation was neither meaningful, nor ready to develop people for life in new reality. It significantly lags behind many EU countries on such issues (dimension) as: research systems, entrepreneurship, intellectual assets, innovators and firm investment (Union Scoreboard, 2014).

Latvian government should develop an innovative program of national development in the next few years, to declare publicly and provide guarantees of its performance. As marked by M. Porter and B. Stern, its formation and existence requires long-term political and economic guarantees on the part of the state (Porter and Stern, 2001). And European experience has shown that many countries have created various kinds of programs, have developed innovative strategies and have created national supporting funds of clusters.

For example, French program "Competitiveness clusters" was implemented in two phases. The first phase was 2005–2008. The second, so-called "The competitive-

ness clusters policy 2.0", covered the period of 2009–2011. After the implementation of the first phase all 71 supported clusters were evaluated and the government decided to continue the implementation of the program (Fontagne et al., 2013).

Currently, in Austria there is a program to support the development of scientific researches and its commercialization "COMET – Competence Centers for Excellent Technologies". This program provides for creation and partial funding of a number of innovative clusters. The program is a joint initiative of the Ministry of Transport, Innovations and Technologies and the Ministry of Economy (Programme Document "COMET", 2008).

Danish Ministry of Science, Innovations and Higher Education has developed a perfect "Cluster Policy and Cluster Programme" (smart recommendations for policy makers) (Christensen et al., 2012). This experience is worthy of imitation.

The creation of program for national development of Latvia will provide favorable conditions for the development of innovative processes at all levels of the economy: for enterprises, both private and state-owned legal entities for individual industries and regions.

This should contribute to innovative training, aimed at improving the entrepreneurial spirit, development of venture enterprises, information technologies etc. Development of the abilities to innovate in technologies is the basis for creative economy. As stated by B. Lundvall the basis for successful transition to innovative training is the existence of certain scientific and educational potential and the possibility to turn their knowledge into innovations and innovations into production (Lundvall, 1997).

In this regard, to the government of Latvia needs to formulate the concept of learning economy which implies a continuous process of improving skills and knowledge required for innovative production. Knowledge economy implies that in this process should be involved to a greater extent all sectors of society.

Due to the unevenness of Latvia's development with separate growth centers and peripheries priority development fields should be allocated for each region, taking into the consideration their peculiarities and the availability of resources. It is not obligatory to have high-tech zones only. But they have to be focused on the development of infrastructure, creation of work places, and improvement of qualifications.

The main feature of a regional innovation system, as Norwegian economists B. Asheim and A. Isaksen consider, is the combination of external and internal knowledge. In industrial regions there is a possibility to generate not only additional, but also radical innovations which are necessary to maintain a high competitiveness. This is the key feature of learning regions and their regional innovation systems (Asheim and Isaksen, 2002). In Latvia historically there are 4 regions (Vidzeme Zemgale, Kurzeme and Latgale), then the solution would be to create on their base regional clusters having their funds for the development of infrastructure.

M. Porter believes that competitiveness of a country should be considered through the prism of international competitiveness, but not for individual firms and clusters – combinations of firms of different industries, besides the fundamental importance have the ability of these clusters to use internal resources effectively (Porter, 1998). Latvia has started working on the formation of clusters; however, these clusters are created without the state support and are based on private initiatives only.



Adopted in 2010, the strategy "Europe 2020" contains recommendations to the states authorities to accelerate the rates of economic growth. The central place in the "Strategy 2020" takes the initiative the EC on creating the "Innovation Union" (Flagship Initiative Innovation, 2010). This initiative of the EU is aimed at clustering stimulation, creation of conditions for innovative economy development, as well as shaping a single European market of innovations. Latvia can't lag behind in this process.

**Summary and conclusions.** The carried out research has demonstrated that the clustering process as a way of innovative development of Latvia is too slow. The support for cluster initiatives of private business is insufficient on the part of the state.

The experience of some other European countries shows the importance of the availability and implementation of national programs on innovative development. We believe that improving the competitiveness of Latvia is possible only through the formation of a new economic model – economy's clustering. Therefore, further research is suggested to steer into the creation of regional innovation clusters and tracking the processes that prevent the cluster development of Latvia.

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