

BENCHMARKING AS A TOOL FOR IDENTIFYING THE DIRECTIONS OF SMART SPECIALIZATION IN THE REGION

Elnara Samedova

*Azerbaijan State University of Economics (UNEC), Azerbaijan
Elnara_Samadova@unec.edu.az*

Elena Stryabkova

*Belgorod National Research University, Russia
stryabkova@bsu.edu.ru*

Mikhail Kochergin

*Belgorod National Research University, Russia
kochergin1994@yandex.ru*

Anna Kulik

*Belgorod National Research University, Russia
kulik@bsu.edu.ru*

ABSTRACT

One of the current approaches to spatial development is the concept of "smart" specialization developed in the early 2000s in the European Union. It implies the development of those industries that will provide the regions with the greatest competitiveness (at various levels). The selection of such industries should take into account endogenous advantages of the region. At the same time, when it comes to the spatial development strategies of the supra-regional level, it is important to select different industries for different regions in order to avoid 'duplication' of advantages. However, in practice, the implementation of the "smart" specialization concept encounters significant difficulties, the main of which is to define the industry in which a region could specialize. The selection process should take into account both the above-mentioned endogenous advantages of the region and the demand for products of the prospective industry on the national and global markets. The purpose of this article is to provide a rationale for using the benchmarking as a potential tool for identifying the directions of "smart" specialization in the region. In the first part of the article we look upon the theoretical basis of benchmarking. In the second part we select (with the help of the data from Eurostat and Rosstat) European regions with the gross regional product structure corresponding most that of the Belgorod region, i.e. we select the benchmarks. In the third part we offer perspective directions of "smart" specialization in the Belgorod region. As a result, we provide recommendations for the design of a regional spatial development strategy based on benchmarking – the search for structurally similar regions of the world for the transfer of knowledge and successful practices in the choice of a market niche for the region, taking into account its uniqueness in the context of the world's technological trends.

Keywords: *Benchmarking, endogenous development, Eurostat, Interregional cooperation, "Smart" specialization, Spatial development*

1. INTRODUCTION

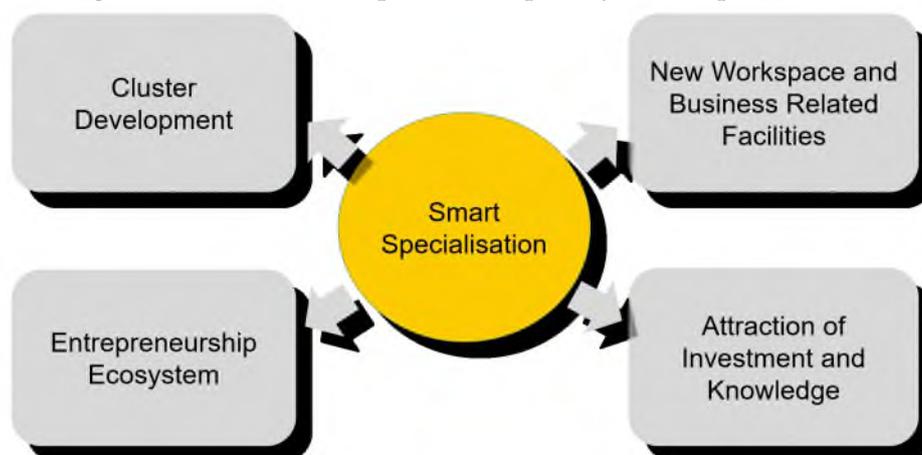
Spatial development of territories is quite a vast area of knowledge. Spatial development highlights a number of approaches and practices that are often contradictory. The choice of a particular direction depends on the objectives pursued by the authorities responsible for shaping spatial development strategies. One of the current approaches to spatial development is the concept of "smart" specialization developed in the early 2000s in the European Union.

It implies the development of those industries that will provide the regions with the greatest competitiveness (at various levels). The selection of such industries should take into account endogenous advantages of the region. At the same time, when it comes to the spatial development strategies of the supra-regional level, it is important to select different industries for different regions in order to avoid 'duplication' of advantages. However, in practice, the implementation of the "smart" specialization concept encounters significant difficulties, the main of which is to define the industry in which a region could specialize. The selection process should take into account both the above-mentioned endogenous advantages of the region and the demand for products of the prospective industry on the national and global markets. Benchmarking is a tool of analysis, which is a comparison of the object under study with a certain standard. Benchmarking identifies best practices and formulates ideas for improvement (Invernizzi et al., 2017; Improving Training...). Typically, benchmarking is used at the enterprise level to analyze business processes, marketing solutions, etc. (Mann et al., 2010, p. 24). Benchmarking, however, can be applied in other areas: in particular, in the creation of regional spatial development strategies and of regional clusters. In Russia, there is an understanding of the need to use European experience in the development of the cluster standard and requirements for assessing the effectiveness of the cluster. The European Cluster Excellence Initiative (European Clusters Excellence) is used as a reference point since 2009 to compare clusters (benchmarking procedures) and provide cluster management companies with methodological recommendations for improving the quality of cluster management. At the Krasnoyarsk Economic Forum in 2015, the Russian cluster management quality assessment system was developed based on the European Cluster Excellence Initiative indicators. This system for assessing the quality of cluster management is regarded as part of the Cluster Standard project (Cluster Management System Standard, 2015).

2. SELECTING BENCHMARKS FOR BELGOROD REGION

For Belgorod region it is possible to offer a set of activities of the regional cluster policy, the specific feature of which should be the transition to cluster portfolio management. The regional authorities should develop a cluster development strategy for the region, focused on "smart specialization" (Figure 1).

Figure 1: Cluster development as a part of Smart specialisation



Source: The urban dimension..., 2019

Smart specialization is the allocation of innovation priority zones in the spatial planning scheme (Uyarra et al., 2018; Radosevic et al., 2018). The concept was developed in the EU in the 2000s.

It is a mechanism that provides a coordinated implementation of industrial, scientific and technological regional policies (Methodology for Identifying...). We can highlight the following new initiatives within smart specialization framework:

- Macro-regional initiatives - the creation of macro-regions in the EU;
- Vanguard initiative - interregional cooperation of industrially developed regions, relatively evenly distributed across the EU territory (Methodology for Identifying...).

There are the following basic principles of smart specialization:

- A limited set of priority areas;
- Consideration of supranational / state priorities of socio-economic and current level of scientific and technological development;
- Consideration of Key Enabling Technologies, and the necessity to develop new industries and markets;
- Business plays a key role in finding priority areas;
- Creating platforms for coordination of government and business;
- Cross-sectoral nature of priorities;
- Interregional / international benchmarking (Methodology for Identifying...).

It is possible to propose the following steps within a smart specialization strategy:

1. Identification of specialization: we identify on the basis of statistics potential areas of specialization with obligatory consideration of regional potential (educational, scientific, industrial);
2. Regional expertise: experts, large and small business, academic community, informally employed people, and other categories of actors in each region conduct expertise of ideas formulated at the first stage;
3. Coordination and development of the plan: coordination of the decisions made between the regions, in order to identify opportunities and prospects for cooperation; adjustment of the national and regional strategies for spatial development; designing tools for the development of specialization (attraction of investors; support for scientific projects; retraining of personnel; withdrawal of business from the shadow sector, etc.) (Zemtsov et al., 2016; Zemtsov, 2019).

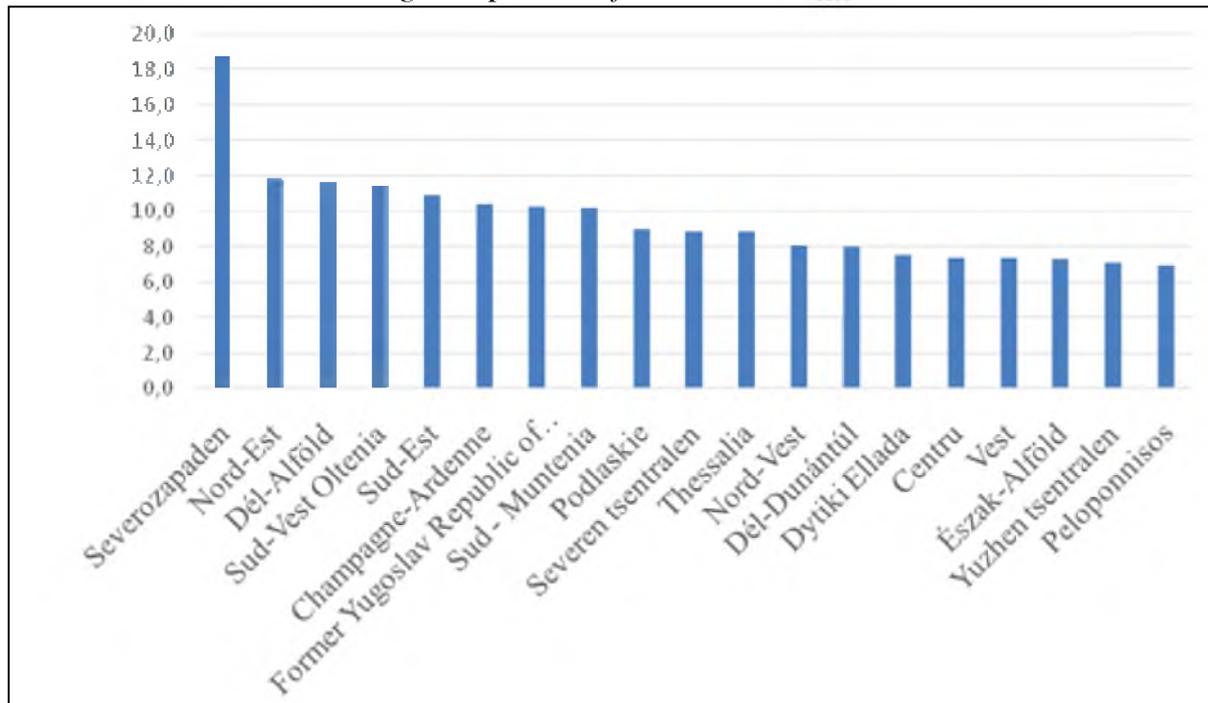
European Committee of Regions comes to the conclusion that it is necessary to form a network research infrastructure linking the neighbouring regions. This increases the exchange of knowledge, allowing each of the actors of inter-regional cooperation to contribute to the development of interdisciplinary research. The Committee thus points to the need to develop and implement a strategy of "smart specialisation", so that the European regions will ensure economic growth and job creation, taking into account endogenous regional characteristics (European Committee of the Regions, 2019). The strategy of cluster development of a region can be based on benchmarking, searching for structurally similar regions of the world for the transfer of knowledge and successful practices, and selecting a market niche, taking into account the uniqueness of the region in global technological trends. The following principles of implementation of the cluster policy should be considered as the main ones:

- Differentiated approach to the structure of activities, taking into account the stages of cluster evolution;
- Priority of development institutions (center of cluster development, specialized organizations), focused not on the support of subjects, but on the creation of conditions for activities, in the structure of the objects of the cluster infrastructure (Menshchikova et al., 2017);
- Relying on instruments to create and stimulate demand for innovation;

- Activization of new players - participants of cluster initiatives (civil society, local government, experts).

We carried out benchmarking of Belgorod region on the basis of recommendations for drafting the strategy of cluster development of Belgorod region on the basis of "smart specialization", comparing it with EU regions, which have an equal economic structure. The share of agriculture in the gross regional product of Belgorod region is 18.2% (Rosstat). We have singled out the regions of the European Union with the same high share of agriculture (Figure 2) (Eurostat).

Figure 2: European regions with share of agriculture in the sectoral structure of gross regional product of more than 5%^[1]_{SEPA}

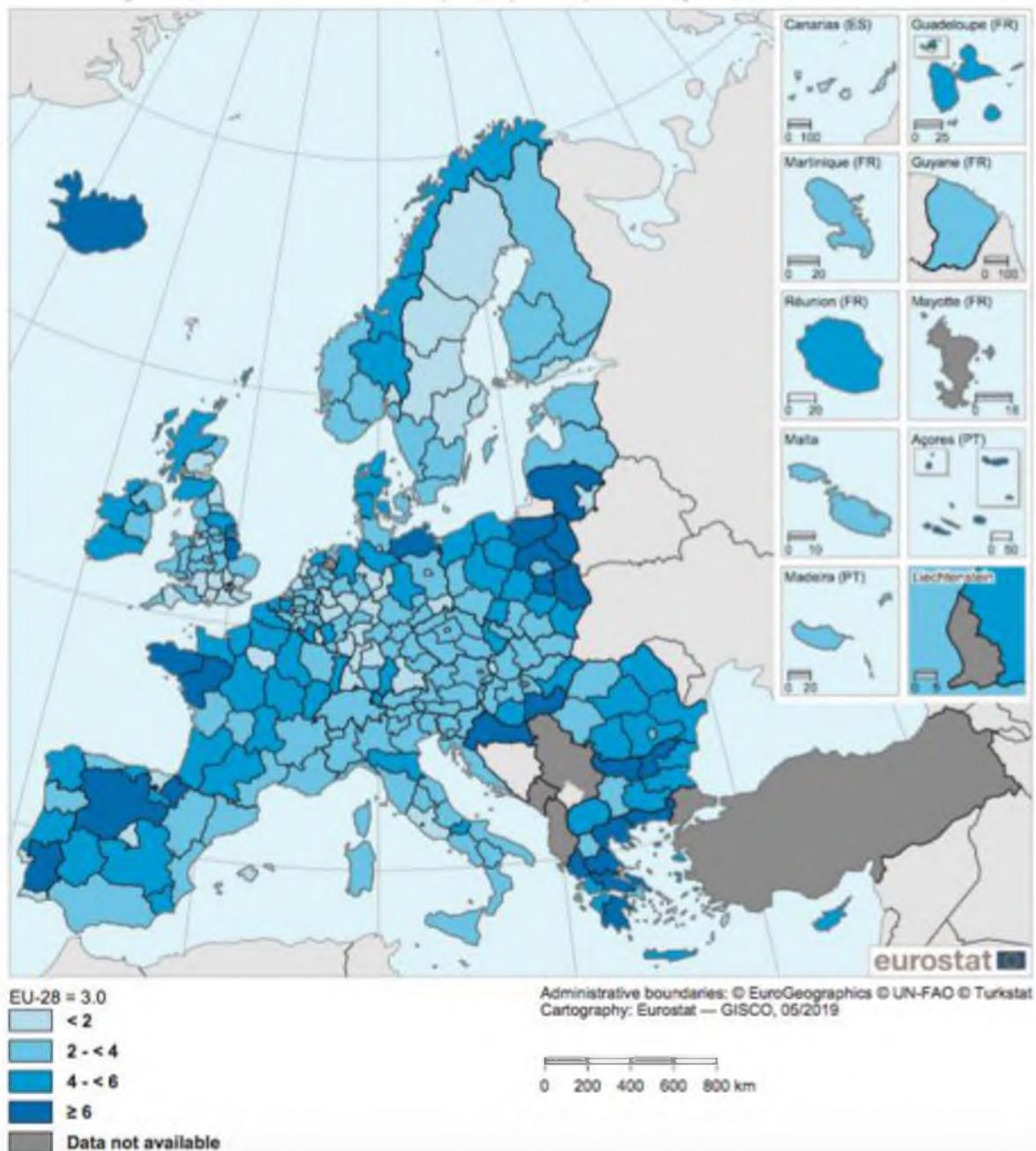


Source: Eurostat

Figure 2 shows that the majority of such regions are the least developed regions in Europe - Romania, Bulgaria, Macedonia, Estonia, Greece and Hungary. There is only one region among developed European countries with a high share of agriculture in the region's sectoral structure (10.4%) - Champagne-Ardenne in France. This region is the largest wine producer in France and has a large area for the cultivation of crops, characterized by a high standard of living. Since 1 January 2016, it has been part of the larger Grand Est Region (Grand Est). It should also be noted that among developed European countries France has one of the highest shares of those engaged in food production (Figure 3), which additionally indicates the suitability of the regions of France for benchmarking of Belgorod region, where the share is about 12% (Rosstat).

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Figure 3: Employment in the manufacture of food products, 2016



Source: Eurostat regional yearbook, 2019

Like all regions of Europe, Champagne-Ardenne is developing a "smart specialization" within the framework of the European Union Strategy "Europe 2020" and its extensions. Within the framework of "smart specialization" four areas are being developed: bioefficiency, production of new materials, health and quality of life, energy production (Grand Est). Within the Champagne-Ardenne region development policy, special attention is paid to the preservation of cultural and natural heritage. This is facilitated by the creation of regional parks for the sustainable development of the region, mainly in agricultural areas (Grand Est). The regional parks help to preserve the biological diversity and natural resources of the region and ensure a high quality of life in the region. Regional Parks use animation and experimentation programs, create so-called ecological corridors, recreate the features of 35 French municipalities. A so-called "health barometer" is being developed in order to maintain the health of the region's

population (Grand Est). Grand Est, of which Champagne-Ardenne is a part, positions itself as a region open to the whole world. The region forges long-term partnerships with regions in Europe and countries around the world. In this way, the region enhances its competitiveness, exchanges experiences and expertise (Grand Est). In general, the policy of territorial cooperation in the Grand Est region has three main directions:

- Line 1: international cooperation;
- Line 2: international solidarity and cooperation among local actors;
- Line 3: networking at national, European and international levels (Grand Est).

The aim of Grand Est is to become a European leader in bioeconomics. Bioeconomics is the production and processing of agricultural, forestry and other renewable resources, the production of bioenergy. Thus, the transition to the so-called "green" economy is ensured (Grand Est). The region is creating a road map to consolidate all bioeconomic initiatives. The scientific community, and regional business are involved in its creation within Industries & Agro-Resources (IAR) Competitiveness Cluster in Bezanne on the Marne (Grand Est).

3. PERSPECTIVE DIRECTIONS OF "SMART" SPECIALIZATION IN BELGOROD REGION

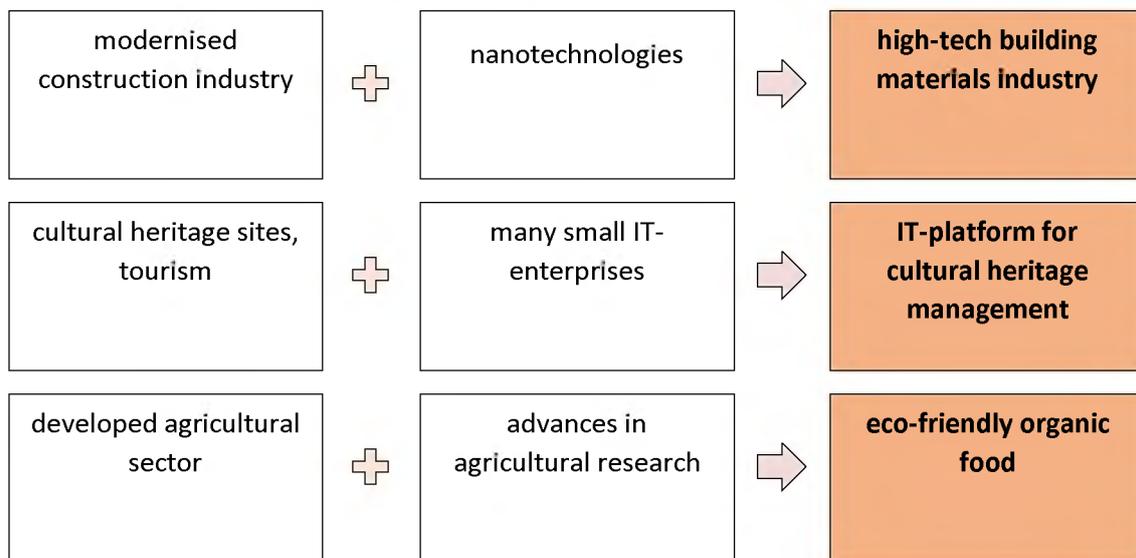
For the Belgorod region it is possible to choose the same priority development directions. A new direction for national and regional authorities is the application of smart specialization principles in the design of regional competitiveness policy (Stryabkova et al., 2019). The main objective of the smart specialization strategy is to transform the sectoral structure of the region, which can be achieved either through evolution, modernization and diversification of old industries, or through the creation of entirely new industries. The search for the region's unique specialization is done from the bottom up based on:

- Determination of unique competences in the region (intersection of branches of specialization with new scientific fields);
- Positioning of the region in relation to key enabling technologies (KETs);
- Cultural and creative innovations;
- Targeting the region's social objectives such as improving the environmental situation, providing jobs for special categories of the population, and overcoming social inequality and vulnerability.

The federal authorities must create the All-Russian Platform of Smart Specialization, which will provide a database for comparing regions with each other and choosing a unique specialization. For example, for Belgorod region:

- On the basis of modernization of the construction industry and introduction of nanotechnologies, we suggest creating a high-tech industry of building materials;
- On the basis of cultural heritage and tourism objects, and the existence of a large number of small IT companies, we offer the creation of an IT platform for cultural heritage management in Belgorod region;
- On the basis of the existing developed branch of the agro-industrial complex and taking into account achievements of agricultural science we offer specialization of the region on eco-friendly organic food (Figure 4).

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Figure 4: Choosing a unique specialization for Belgorod region of Russia

Source: Authors

4. CONCLUSION

We have formulated recommendations for the design of a cluster development strategy for the region on the basis of benchmarking, allowing regional governments to determine the conditions for transition to "smart specialization" and promote the creation of a unique market niche for the subjects of cluster initiatives. On the basis of recommendations for the design of a cluster development strategy for the Belgorod region on the basis of "smart specialization" we conducted benchmarking of the Belgorod region on the basis of its comparison with the EU regions, which have an equal economic structure. Within the framework of "smart specialization" it was suggested to develop four directions: bioefficiency, production of new building materials, health and quality of life, energy production. Belgorod region can develop specialization on the basis of creation of high-tech industry of construction materials, creation of IT platform for cultural heritage management in Belgorod region. On the basis of the existing developed branch of agroindustrial complex and taking into account achievements of agricultural science we offer specialization of the region on eco-friendly organic food. The positive effect that will arise in the functioning of the considered clusters of the Belgorod region, in our opinion, will be associated with their spatial localization, the effect of scale and a combination of competition and cooperation between members of the cluster, that is, will be the result of the properties of clusters. Analysis of the effects of clustering is supplemented by a new effect, which we have identified earlier - a decrease in the level of social vulnerability of the region's population.

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