REGIONAL SPECIALIZATION AS A DEVELOPMENT DETERMINANT OF A SMALL AND MEDIUM-SIZED BUSINESS IN BULGARIA

Desislava Botseva[*]

Introduction

Small and medium-sized enterprises (SMEs) in national economies' structures have always been discussed, arousing severe research interest. We observe the topic from two opposite directions. Firstly, their usefulness and importance for the socio-economic development of the regions, and secondly, how this development promotes SMEs' progress so that they, in their activities, respond optimally to the rise of modern societies. There is hardly a researcher or author working on the topic of SMEs who does not support the thesis that these structures have, to no small extent, an unrealized potential that follows and needs to be developed, especially in the context of modernity shaped by economics 4.0 and Society 5.0 (Nikolov, G. 2019). However, such a statement should be subjected to a severe analysis based on the methodology of a new, modern system of indicators to illustrate SMEs' real readiness and ability to provide an adequate response to current challenges and development trends. In turn, such development should be considered and characterized by different positions, economic, social, technical and technological, informational, infrastructural, cultural, and many others, presenting the modern picture of the integrity of regional development, designed to engage all these aspects.

[*] Assist. prof. Desislava Botseva, Ph. D,
Department of Regional Development,
University of National and World Economy, Sofia, Bulgaria

On the one hand, the regional sectoral analysis of small and medium enterprises is the basis for characterizing Bulgaria's situation. On the other hand, through it, the preconditions for these enterprises' development could be identified, and their specific regional potentials could be determined. Such a foundation for decision-making and implementing measures to support specific sectors of the economy should ensure their effectiveness and efficiency. In this sense, it is essential to assess these interventions' effect on the country's economy and their impact on the region's regional development in which the stimulated SMEs operate. There is an objective need for timely consideration of these mechanisms' impact on the development of the SME sector in Bulgaria, both on the specific industry to which they belong and on regional development. The aim is to achieve a multiplier effect by generating added value, stimulating export activity, and increasing employment.

1. A brief historical overview of theories of regional specialization and some empirical research

At the dawn of the emergence of regional economic literature, most economists believe that differences in their size determine individual territories' wealth. This economic thought line has been called "mercantilism" developed by European scholars T. Moon, W. Petty, J.W. Colbert in the late 16th and 17th centuries. Mercantilists maintain the view that the amount of gold and silver determines the wealth of the territory. They suggest that the interventions related to the territories' economic development should aim at increasing them. To achieve this, they propose to stimulate the exports and restrict imports, except exports of precious metals.

Thus, recognizing the vital role of trade for economic growth is accompanied by an increase in restrictions and strict foreign exchange regulation by the state. One of the first British representatives of classical economic theory, Adam Smith (1723-1790), criticized these limitations. He showed that the territory well-being depends not on the amount of gold and silver as on the production level through the division of labor and cooperation. He supports the view that the region's specialization must be based on the principle of absolute advantage. The region exports its products at the lowest price and

imports those made in other lower-cost areas. Producers must operate in conditions of free competition and a certain amount of economic freedom. Thus, was born the theory of absolute advantage.

The absolute advantage theory has clearly shown how foreign trade should occur if there is an absolute advantage in the region. However, it does not answer how a region can participate in foreign trade areas if it does not have such an "absolute advantage." The theory of "comparative advantage" derived the answer to that question. Another representative of the classical school, David Ricardo (1772-1823), developed the theory of absolute advantages and showed that trade could be mutually beneficial, even if one of the regions did not have an absolute advantage in producing certain products or services. Ricardo essentially developed A. Smith's theory proved that absolute advantages are only a particular case of the principle of rational division of labor, based not on absolute but relative (comparative) advantages. Even countries (regions) with higher production costs for their products can benefit from specialization in foreign markets due to the difference in prices between different participants. The comparative advantage principle is that the regions must specialize in the production of those goods that they can sell at the lowest comparative cost compared to other regions. Comparative costs show how much of the production of some goods we have to give up to increase the production of others by one.

In the theories of Adam Smith and David Ricardo, the main factor in determining the rational structure of production and exchange is labor costs. In the 30s of the XX century. Swedish economists E. Heckscher and B. Olin develop a theory of international (interregional) division of labor, taking into account the ratio of the main interchangeable factors of production (labor, land, capital, etc.) (Blaug, 1992). From Heckscher and Olin's conclusions, it is clear that backward or developing countries (regions), which as a rule have an intense shortage of capital and surplus labor, must specialize in the production and export of labor-intensive products. Developed countries and regions with accumulated significant capital (including scientific and technical) must strive to export capital-intensive products. The natural-geographical profile of the territory strongly influences the specialization. Thus, e.g., countries and regions with sizeable agricultural land areas and relatively low population density should expand agricultural exports. Land and other natural resources are immovable factors, and only the products of their exploitation can move.

The key assumptions and interpretations of the Heckscher-Olin theory are tested and corrected in the coming decades. In particular, this was done to search for relevant export and import patterns of goods, taking into account the direct costs of the production factors and the indirect ones, concentrated in raw materials and consumables. This analytical task was realized much later. In the late 1940s, Vasily Leontiev subjected the theory to empirical verification. The results of this inspection went down in history as Leontief's paradox. Leontiev decided to check whether since capital is abundant in the United States, based on a comparison with other partner countries, the country's exports are mainly capital-intensive goods and imports of labor-intensive ones. Among the calculations and comparison of the results obtained, it turned out that US imports are more capital-intensive than exports.

There is a lot of research in the regional economic literature that has approached regional specialization and concentration problems. The definitions of regional specialization are based on the same production structures, reflecting the same reality. Regional specialization expresses the territorial perspective and depicts the distribution of sectoral shares in one region, usually compared to the rest of the country. Here, localization theories play a significant role in shaping the theoretical foundation.

The creation of the theory of the location of objects is associated with the publication in 1826 of the books by the German economist J. Thünen "The isolated state in terms of agriculture and the national economy" (Der isolierte Staatin Beriehung auf Landwirshaft und National Okonomie). The theory is based on the assumption that there is an economically isolated country in the world. There is a single central city, the only market for agricultural products, and a source of industrial goods (The theory of location of agricultural products). The method compares the costs of delivery and transport of goods from the production point to the market (city) should be used. As a result of the analysis, it

determines the most favorable areas for the positioning of individual types of agricultural products (their specialization). Despite von Thünen's work (since in practice, no state meets the prerequisites set in his theory), it becomes a critical example of the use of mathematical models in the view of spatial economics. The modern economy appreciates and recognizes its essential methodological significance and value.

The next step in developing localization theories was made with the advent of ideas about industrial objects of economic activity. W. Laundhart and A. Weber are recognized as founders of this trend. W. Laundhart developed a theory for the rational localization of industrial enterprises. Its most important achievement is the method of finding the optimal location for the location of a unit of an industrial enterprise in terms of sources of raw materials and markets for the sale of products. The determining factor in both Johann von Thünen's Theory and Wilhelm Launhard's Theory is transport costs. Laoundhart's views are further developed in the works of A. Weber. The most significant pieces of the German economist and sociologist Alfred Weber are "Theory of the location of industry (1904)" and "Theory of the location of industry. Pure Standard Theory (1909). They become the most circumstantial theories in this area.

The next step in the development of localization theories is the emergence of the so-called settlement positioning theory. W. Kristaler introduced the first functional Theory related to the localization of settlements in the market system. His central places theory was revealed in the work Central Places in Southern Germany, published in 1913.

The general spatial theory was developed in the twentieth century. Its author is A. Lösch, a Polish economist whose views are set out in his work "Spatial Organization of the Economic," published in 1940. The general spatial theory is linked to the private ideas of Thünen, Weber, Kristaler. We can conclude that he is the founder of the thinking for the specialization of regional industries because he set himself the task to justify the possibility of the rational geographical distribution of production. HIs book indicates the most advantageous options for the location of newly built industrial enterprises in the centers with active economic life and in the market areas. Lösch bases his scientific work on the subject of localization theory, moving from the development of enterprises and the community to the problems of forming economic regions. The most important contribution of A. Lösch is developing the basic principles of spatial theory and financial equilibrium.

From all the above, we can conclude that regional specialization expresses the local perspective and depicts the distribution of sectoral shares in the regional economy, usually compared to the rest of the country. A region is considered highly specialized if a small number of industries have a large share in that region's economy.

2. Sectoral characteristics and regional specialization of SMEs in Bulgaria

In general, small and medium-sized enterprises constitute the largest segment of enterprises in the Union's national economies. The case with Bulgaria is similar, as they form 99.8% representation in our country's economic structure. In addition to the statement, we will point out that they generate over 65% of value-added and over 75% of employment, both of which significantly exceed the Union average (by around ten percentage points). On the other hand, Bulgarian SMEs' average productivity is still considerably lower than the EU average. That is why increasing the competitiveness of SMEs is key to economic development (Current data on SMEs (2014-2018), Ministry of Economy of the Republic of Bulgaria).

Class size	Number of enterprises			Number of persons employed			Value added		
	Bulgaria		*EU*	Bulgaria		*EU*	Bulgaria		*EU*
	Number	Share	*Share*	Number	Share	*Share*	Billion €	Share	*Share*
Micro	315 410	91,8 %	93,0 %	616 012	30,6 %	*29,7 %*	6,5	21,6 %	*20,8 %*
Small	23 471	6,8 %	5,9 %	477 693	23,7 %	*20,1 %*	7,0	23,2 %	*17,6 %*
Medium-sized	4 248	1,2 %	0,9 %	432 689	21,5 %	*16,8 %*	6,1	20,5 %	*18,0 %*
SMEs	**343 129**	**99,8 %**	**99,8 %**	**1 526 394**	**75,7 %**	***66,6 %***	**19,6**	**65,3 %**	***56,4 %***

Regarding the number of SMEs in Bulgaria, the largest is their relative share in Services. This is typical of the whole territory of the Union and quite logical. The close share of SMEs in the field of Construction is the smallest. According to this indicator, our country significantly lags behind the Union average (6.1% to 14.6%).

Comparing the data on the number of employees in different industries in SMEs' structure for Bulgaria and the EU-28, we can make some essential summaries. Although it engages the largest relative share in our country's economic system (42%), the Services sector offered employment to 33% of the employed. In comparison, this value for the Union is close to 44%. In terms of the number of employees, in the national economy, the service sector successfully competes with trade. The industries share an almost equal relative share of employees. The construction industry employs the smallest number of employees, both at the national and European level (9.2% to 12.2%)

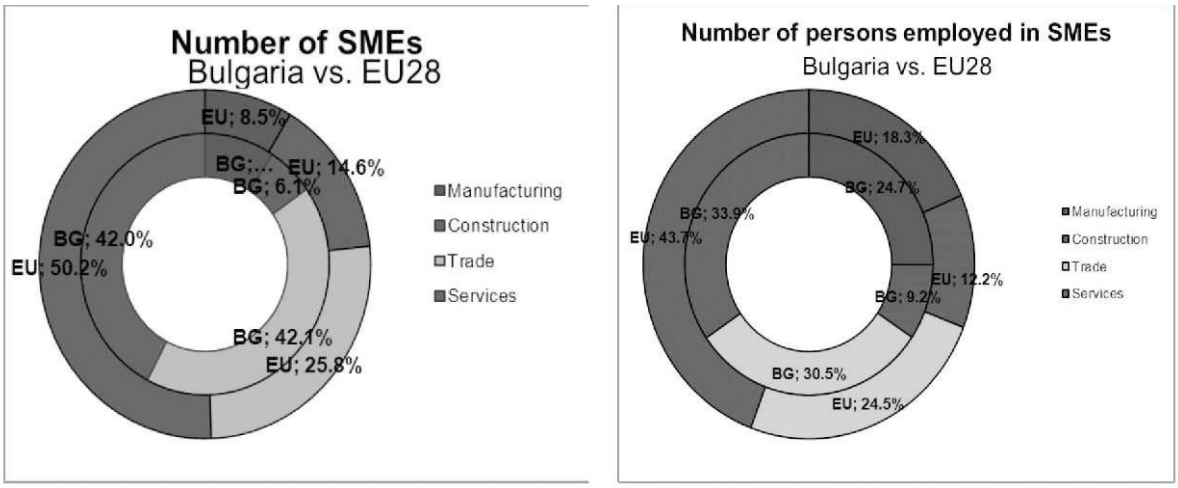


Fig. 1: Share of SMEs Bulgaria vs. EU-28 (number and persons employed); Source: SME Performance Review 2019, DIWEcon, 10th May 2019

Of particular importance for the development of economic sectors and the provision of an adequate response to the new challenges generated by dynamically evolving societies is developing a high-tech knowledge economy (Tsolov, G. 2019). The analysis requires us to compare the Bulgarian economy's performance in the context of the EU-28 averages. The graphs below visualize SMEs' dynamics and offer an overview of the development of different technology classes and knowledge-intensive SMEs.

Here it is essential to define the technological productions that are: High-technology: Manufacture of basic pharmaceutical products and pharmaceutical preparations, Manufacture of computer, electronic and optical products; Medium-high-technology: Manufacture of chemicals and chemical products, electrical equipment, machinery and equipment, motor vehicles, trailers and semi-trailers; Medium-low-technology: Manufacture of coke and refined petroleum products, rubber and plastic products, other non-metallic mineral products, basic metals, fabricated metal products, except machinery and equipment, Repair and installation of machinery and equipment, Manufacture of other transport equipment. Low-technology: C10: Manufacture of food products, beverages, tobacco products, textiles, leather and related products, wood and products of wood and cork, paper and paper products etc.

The same way we need to define the Knowledge-based services as:

- Knowledge-intensive services, of which: Market services (Water transport, Air transport, Legal and accounting activities, Activities of head offices; management consultancy activities, Architectural and engineering activities; technical testing and analysis, Advertising and market research, Other professional, scientific and technical activities etc.; High-tech (Motion picture, video and television programme production, sound recording and music publishing activities, Programming and broadcasting activities, Telecommunications, Computer programming,

consultancy and related activities, Information service activities, Scientific research and development) and Other (Publishing activities and Veterinary activities)

• Less knowledge-intensive services, of which: Market services (Wholesale and retail trade and repair of motor vehicles and motorcycles, Wholesale trade, except of motor vehicles and motorcycles, Retail trade, except of motor vehicles and motorcycles, Land transport and transport via pipelines, Warehousing and support activities for transportation, Accommodation etc.) and Others (Postal and courier activities).

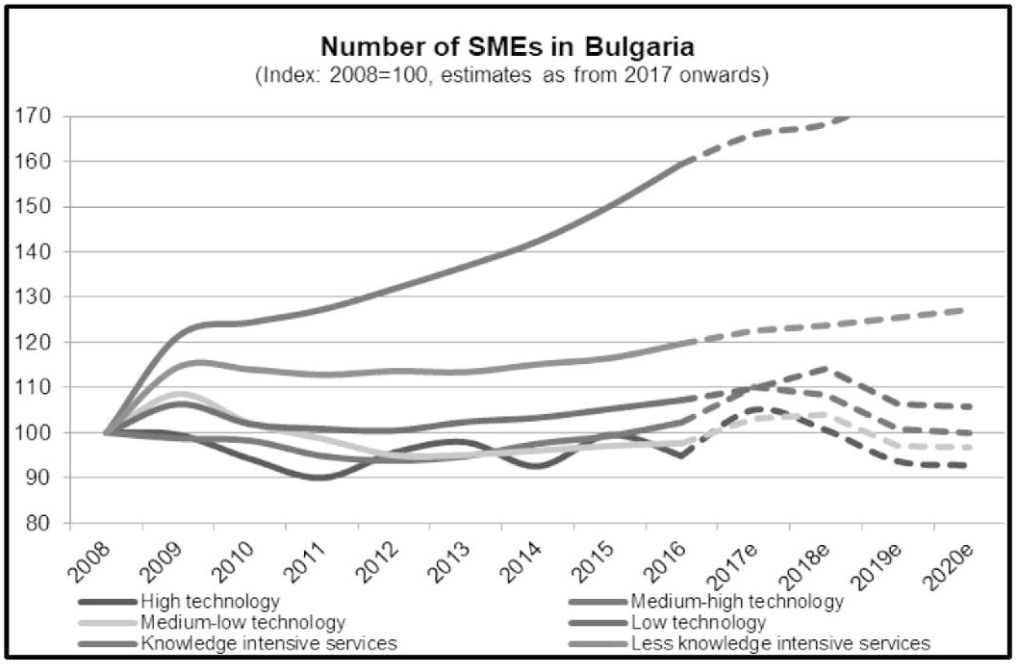


Fig. 2: Number of SMEs in Bulgaria (2008 - 2020), Source: SME Performance Review 2019, DIWEcon, 10th May 2C

For the period 2008-2016 and the forecast 2017-2020, Bulgaria reports excellent results regarding the dynamic increase in the number of Knowledge-intensive services, as their number almost doubles. However, there is no progress or expansion in their number concerning high-tech industries, but even a decrease, compared to the indicators achieved in 2008. Bulgaria should realize a large part of its untapped potential in terms of high technologies. In catching up with development, technologies should be dynamically recognized and integrated into the Bulgarian regions' economic activities to optimize production. However, there are many reasons why this does not happen, and Bulgarian SMEs face several challenges in integrating high-tech industries. On the one hand, this is the still tricky access to funding (including poor understanding of procedures, lack of transparency, and publicity); on the other hand, the increasingly topical issues related to human resources and capital (Tanakov, N. 2019).

For comparison, we also apply the graph of identical industries and the values for the EU-28. We see that the development is analogous. Here we can think in two directions. On the one hand, opportunities should be sought for better integration of global technological innovations in the field of economic sectors, and on the other hand, to design and program new concepts for the development of territories expressed through the prism of Intelligent Regional Specialization.

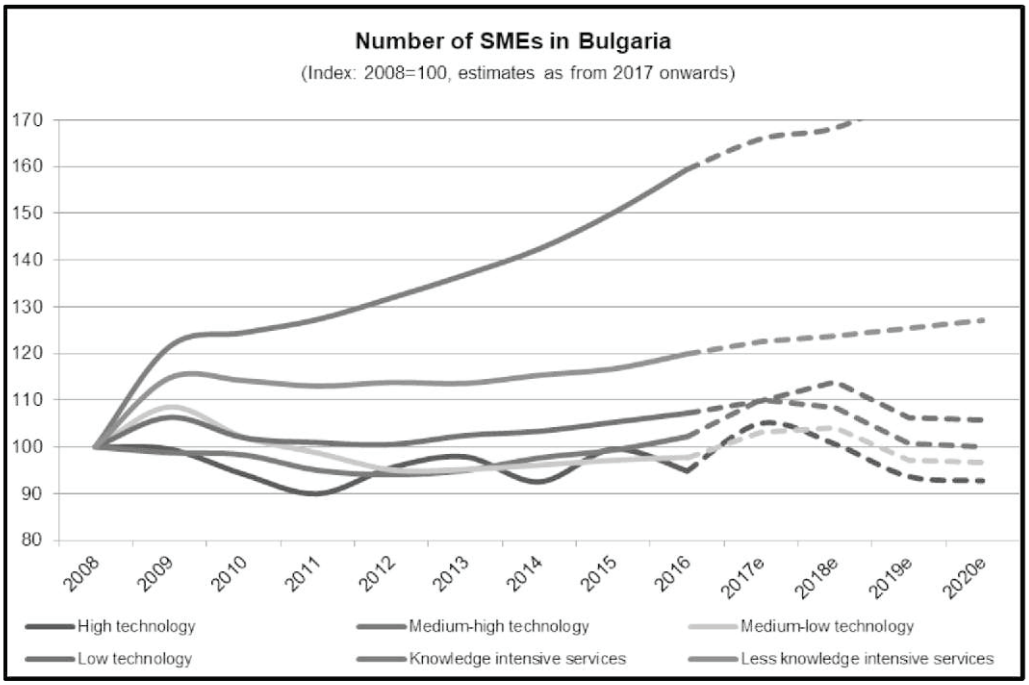
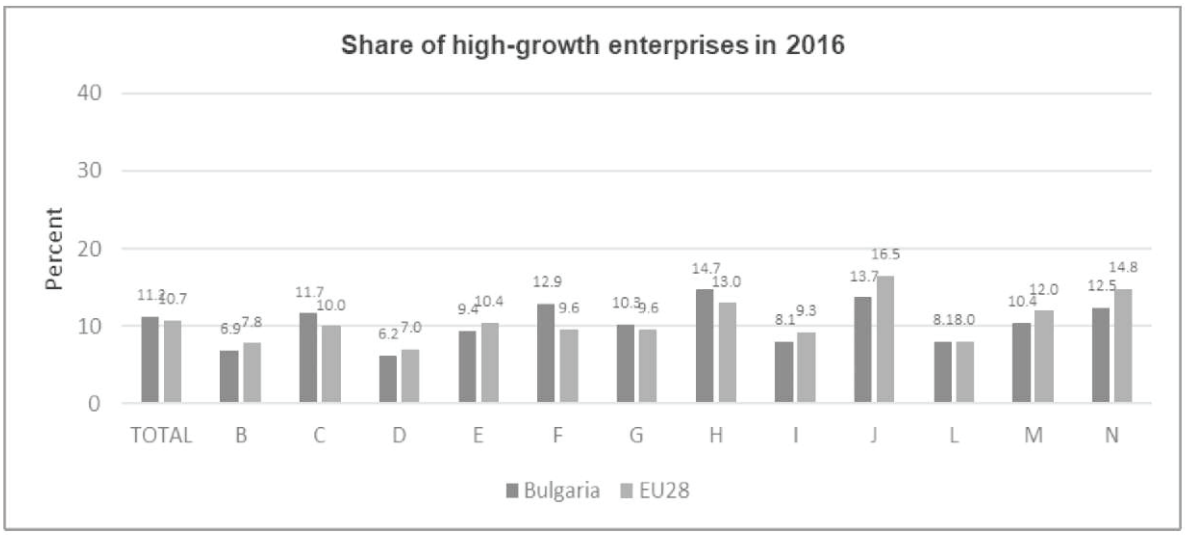


Fig. 3: Number of SMEs in Bulgaria (technology and knowledge) 2008 - 2020e; Source: SME Performance Review 20: DIWEcon, 10th May 2019

Regarding the share of fast-growing SMEs, in 2016, a balanced structure of development, against European enterprises' background, is impressive. In the general case, the ratio Bulgaria: EU-28 is 11.2%: 10.7%. According to the specific indicator, Bulgarian SMEs are ahead of the average for the Union in terms of growth. Outpacing values are also observed in the areas of Transportation and storage, Manufacturing, Real estate activities, Construction, Wholesale and retail trade, repair of motor vehicles and motorcycles.

It is important to note that the rapid growth of information and communication enterprises' share continues (and continues its dynamic change in the years to 2020). Thus, the percentage of IT companies is growing most dynamically. This, of course, is a very logical response to the current trends in modern societies' development. In this sense, in 2016, their share in Bulgaria increased by 13.7%, and for the Union by 16.5%. The increase in employees in the industry is happening at a slightly more moderate pace. According to data for 2018, they increase by 9% annually to 30.1 thousand, and in 2019 increase by 10% to 34.1 thousand people. Historically, within seven years, employees in software companies have doubled in number. This should keep relevant to the eternal issue of staff shortages in the IT field.



LEGEND

B	Mining and quarrying	**H**	Transportation and storage
C	Manufacturing	**I**	Accommodation and food services
D	Electricity, gas, steam and air conditioning supply	**J**	Information and communication
E	Water supply; sewerage, waste management and remediation activities	**L**	Real estate activities
F	Construction	**M**	Professional, scientific and technical activities
G	Wholesale and retail trade; repair of motorvehicles and motorcycles	**N**	Administrative and support services

Fig. 4 : Share of high -growth enterpr. in 2016; Source: SME Performance Review 2019, DIWEcon, 10th May 2019

Although at the EU-28 level, 49.5% of SMEs have undertaken some form of innovation, the share of innovative SMEs varies considerably from one Member State to another. In 13 Member States, over 50% of SMEs in 2014-2016 were innovators. On the other hand, 7 Member States, incl. And Bulgaria has taken the form of innovation in less than 1/3 of SMEs. Within the EU-28, the gap between innovative large enterprises and innovative SMEs is particularly large in several Central European countries, including Bulgaria.

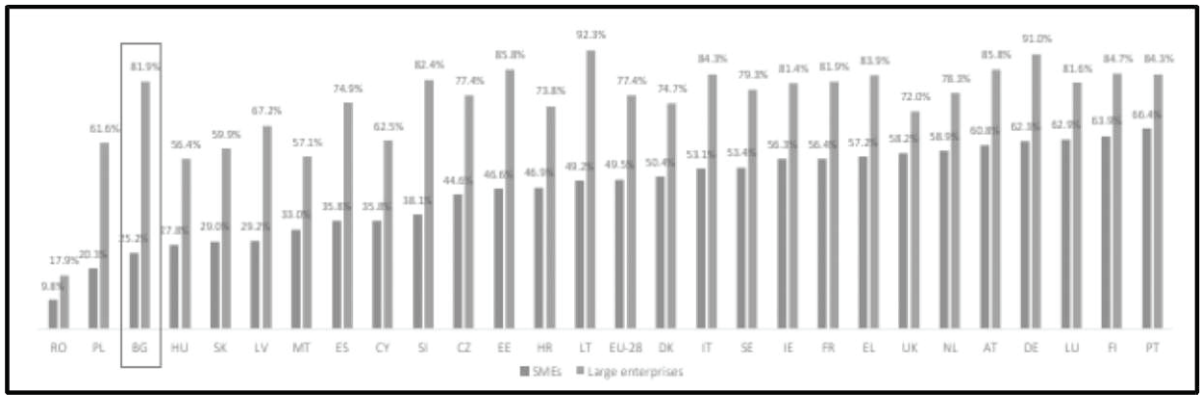


Fig. 5: Share of enterprises undertaking innovation activities in 2014-2016 in EU Member States, Source: Eurostat, Community Innovation Survey (CIS-2016)

According to the European Commission's report, the main barriers reasons for the development of innovation for SMEs in Bulgaria are:

✓ "Lack of cooperation partners."

✓ "Lack of external financing (credit or private capital)"

✓ "Difficulties in obtaining public subsidies or subsidies''

✓ High competition'

✓ 'Uncertain market demand'

✓ 'Lack of qualified employees in the enterprise.'

✓ 'Lack of internal finance' and 'High costs'

Most innovative SMEs believe that each barrier is more important than large enterprises for all the factors considered. Innovative SMEs typically face a much more comprehensive range of challenges than innovative large enterprises. It is more difficult for SMEs to obtain funding for their innovations, whether from external, internal, or government sources. SMEs are less likely to have qualified employees to innovate and find it more challenging to find cooperation partners. Some factors are particularly important for SMEs. For example, 6% of large enterprises say that the "lack of external financing" is essential to hamper innovation efforts, compared to 12.9% of SMEs. Besides, 14.4% of SMEs cite "high competition" as a significant barrier compared to 7.6% of large companies. These differences reflect the SMEs' specific market context, which seems less favorable for innovation at the aggregate level. In general, SMEs seem to find it relatively more difficult to increase and maintain their innovation activity.

In January 2017, the Commission carried out a comprehensive assessment of Bulgaria's progress over the last ten years since the establishment of the Cooperation and Verification Mechanism (SME) in 2007.

Based on the long-term perspective and significant progress, the Commission has outlined 17 key recommendations, the implementation of which would lead to the termination of the SME process, in line with President Juncker's goal of completing the SME process by the end of this Commission's term. Therefore, the recommendations made in January 2017 are considered sufficient for SMEs' closure unless changes occur that lead to a clear reversal of progress. It was also stressed that the process's pace would depend on how quickly Bulgaria will implement the recommendations irreversibly (Vasileva, E. 2018). In particular, the recommendations focused on the Bulgarian authorities' accountability and accountability requirements and on the introduction of internal guarantees to ensure the irreversibility of the results, i.e. to prove that the implementation of ongoing projects will continue, even without SMEs. As the Council emphasized, SMEs' performance will end when each of the six indicators applicable to Bulgaria is satisfactorily met (Bulgaria's Progress Report 2018.[COM(2018)850]).

3. Intelligent regional specialization - the modern dimension of sectoral concentration

What is smart specialization [3]? A smart specialization is a strategic approach to economic development through targeted support for research and innovation (R&D). This will be the basis for Structural Funds investments in R&D, as part of the contribution of Cohesion Policy to achieving the long-term goals for growth and jobs of the Europe 2020 Strategy (Nikolov, G., Vasileva, E. 2018). More generally, smart specialization involves a process of developing a vision, identifying competitive advantages, setting strategic priorities, and using smart policies to maximize development potential based on the knowledge of each region, whether weak, strong, high- or low-tech (Nikolov, G. 2019). The Innovative Intelligence Specialization Strategy (ISIS) is generally a strategic document for changing Bulgaria's policy and overcoming the socio-economic challenges. It is a means to improve the competitiveness of the economy, both in Bulgaria and in the EU. Smart specialization is such for two reasons: it sets the main priorities for both politics and industry; it considers global trends, stimulating businesses to reach their true potential. It provides an opportunity to build on the strategic advantages of the given territories, which implies a clear communication policy, active participation of stakeholders, a high degree of integration, and connection with international guidelines and programs.

Smart specialization strategies contribute to the Europe 2020 goals of smart, sustainable, and

inclusive growth by strengthening the EU's regional and national research and innovation potential.

Smart specialization is a concept of innovation policy that aims to stimulate regional innovation, contributing to growth and prosperity, helping and enabling regions to focus on their strengths. Smart specialization is based on partnerships between business, public entities, and knowledge institutions (e.g., the Academy).

Defining the smart specialization strategy established by Regulation (EU) № 1303/2013 of the European Parliament and the Council defines it as: "Smart specialization strategy" means national or regional innovation strategies that set priorities to build competitiveness advantage. The SS develop and compare research and innovation's strengths with business needs to achieve a coherent solution to emerging opportunities and market developments. It avoids duplication and fragmentation of efforts; The smart specialization strategy can take the form of (or be included in) a national or regional strategic framework for research and innovation. The Smart Specialization Platform (S3 Platform) provides information, methodologies, expertise, and advice to national and local policies and promotes mutual learning and transnational cooperation, and contributes to the academic debate on the concept of smart specialization.

The smart specialization strategy must prioritize areas, sectors, and economic activities where regions or countries have a competitive advantage or have the potential to generate knowledge growth and lead to the economic transformation needed to address the main and most pressing challenges facing society, and the natural and built environment. The number and nature of these priorities will vary from region to region.

Such an approach requires keeping in mind that when designing the Smart Specialization Strategy, priorities need to be identified that can be changed or modified when the availability of updated information/analyzes recommends it. Priorities could be formulated in terms of areas of knowledge or activities (not only science-based but also social, cultural, and creative), subsystems within a sector or sector cutting and corresponding to specific market niches, clusters, technologies, or the scope of application of technologies for specific societal and environmental challenges or the health and security of citizens (e.g., ICT for active aging, mobility solutions to reduce traffic congestion, innovative material solutions for eco-building, etc.).

While some regions or countries may prioritize one or more key technological innovations, others will focus on such technologies' applications to specific goals or specific areas. Social, organizational, market, and service innovation or practice-based innovation play as important a role in the Smart Specialization Strategy as research-based technological innovation. This is especially important for regions with a relatively weaker technical and scientific basis.

The smart specialization strategy includes radical innovation and the use of niches through design in traditional areas, the development and implementation of new business or organizational models, and the adaptation/use of invention stemming from knowledge and experience in these areas. Horizontal measures will complement the priority choice of districts, sectors, or specific economic activities. They aim to realize adequate framework conditions for entrepreneurship, supporting the work of all types of companies both on the domestic and international markets and the development of inter-company, inter-cluster, and cross-border cooperation.

4. Opportunity for development of specialization strategies: the role of regional profiling in Bulgaria.

Modern concepts related to the design of strategies for the specialization of regions is related to the intelligent use of data sets. They should diagnose strengths, weaknesses, inconsistencies and deficits, scientific and technological progress, innovation, and economic opportunities. The challenge is that the dynamically changing circumstances associated with societies' modern development require constantly evolving measurement indicators. However, most of the existing data focus on measuring the past and the present but fail to "understand" the future and reflect development opportunities. The intelligent approach aims to design and build such a modern regional specialization necessary to reveal future possibilities.

What is the current reality regarding the regional specialization of the Bulgarian sectors and industries? The map with circles shows the regions and the locations of specialized sectors (ie, where a small number of enterprises have a large share in this region). Industries are from all technological levels and all economic sectors. Some typical trends make an impression. The large regional centers (Sofia, Plovdiv, Stara Zagora, Varna, Burgas) have a complex specialization. Most activities are concentrated in the capital city. The gravitational territory's potential is firmly "sucked" by it to meet Sofia's economy's needs. In the discussion territories of Northwestern Bulgaria, it isn't easy to talk about the specialization of regional productions (especially Vidin). The case with Razgrad is similar.

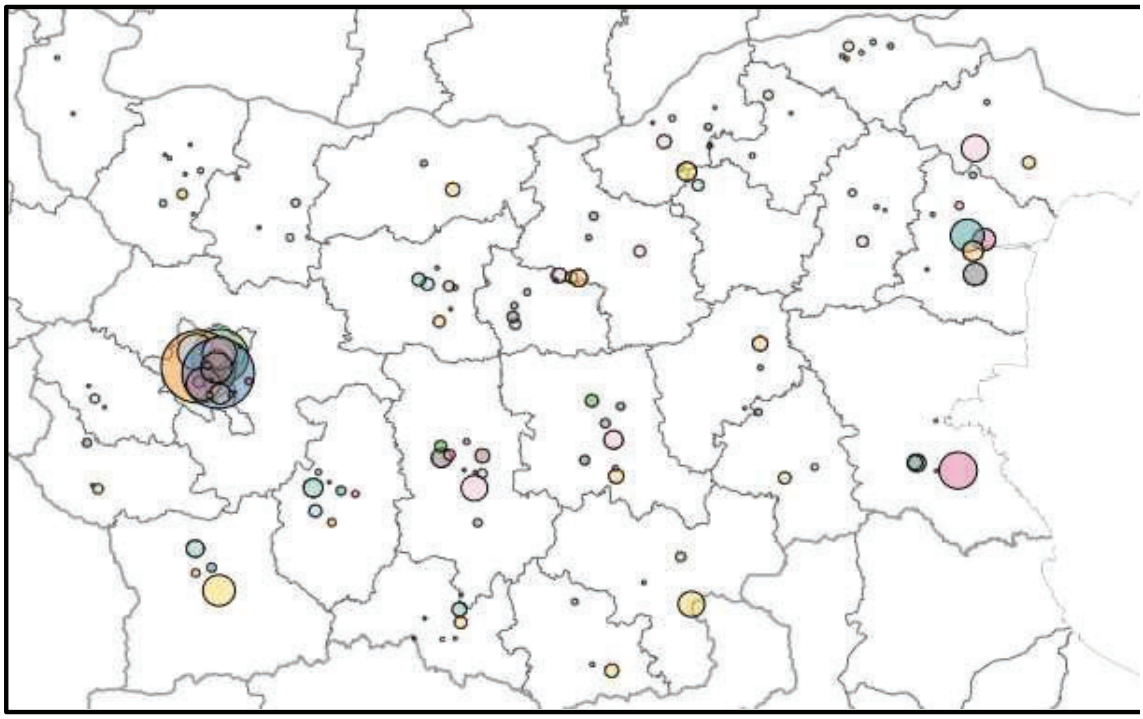


Fig. 6: Regional Specialization, 2014 (NSI), number of enterprises, Source: Viz Author: SME Policy and Georgi Klisurski, Ministry of Economy

The basis for the regions' successful specialization recognizes the typical local potential as a significant generator of development. The regional specialization focuses on fostering prospects that would be a source of added value and stimulate regional economic development than on bridging deficits. The main conceptual idea is for the center of growth and development to be the resource or characteristic that defines the territory. Such bottom-up thinking would open up opportunities for new investment possibilities through the prism of promoting specific regional potential.

To be as successful and applicable for the Bulgarian reality, and for the European regions as a whole, the process of developing a strategy for specialization should be initiated by leading actors or institutions that are strongly committed and in a good position to mobilize other stakeholders and resources and set the strategic framework for further action. They are usually representatives of the local community. These leading actors may arise, for example, from companies, research institutions, national or regional authorities. The role and diversity of these top actors and institutions in setting priorities and developing the strategy allow for a more diverse, interactive process than the purely vertical decision of government agents, often at the expense of market-based resource allocation. The smart specialization approach, which should also be recognized by the Bulgarian regions, calls for an "entrepreneurship-driven" allocation of resources.

Once the “entrepreneurial discovery” process is initiated, the immediate challenge is to provide mechanisms or structures for the emergence of these new “bottom-up entrepreneurial initiatives” and to demonstrate that they can mobilize relevant stakeholders who have the potential to provide

value-added. In this way, entrepreneurs identify emerging activities of future specialization. Other stakeholders contribute to identifying existing capabilities (e.g., research capabilities) and barriers (e.g., regulatory constraints or institutional problems) so that these activities can thrive.

Innovation systems are becoming more and more limitless, and regional economies are becoming more and more interconnected. The government could consider the interregional and international dimension of emerging activities in its strategies (e.g., increase regional competitiveness, open business opportunities and take advantage of synergies and complementarities with other regions). Here, international organizations can serve as platforms to facilitate interregional and international synergies between sectors (e.g., the International Association of Science Parks and Innovation Zones). In the same way, the government could consider and assess how regional policy can impact companies and the location of activities and adjust them. Nevertheless, the governance survey results show that regions and countries define their strategies, mostly from their internal perspective. The cross-border dimension of strategy is still in its infancy.

The mobilization and empowerment of key stakeholders and institutions to realize their potential as leading actors are essential elements for transforming traditional regional innovation strategies into regional smart specialization strategies. Successful mobilization of university resources can also have a strong positive effect on the achievement of comprehensive regional strategies (EC-IPTS (2011)). Factors needed to ensure sufficient input from all relevant socio-economic actors involved in the development of the smart specialization strategy include the participation of leading knowledge institutions: universities and institutes for research, innovation, and creativity; the involvement of highly skilled workers in the process, given the growing cross-sectoral, trans-technological and cross-border dimension of activities, to quickly process the knowledge needed to identify complementarities and synergies (e.g., related diversification); the need to build trust and reciprocity between all participating socio-economic actors; the need to use a common language between all participants to achieve common goals, objectives and commitment; the need to increase transparency about the way they are elected includes, in particular, what role (empowerment) is given to them during the process.

Along with strong leadership and stakeholder involvement, another essential element is using quantitative and qualitative data to position the region, country or emerging 'activities' in the broader picture of the European or global market. The key question is what data and tools are needed - and available - to support the policy-making process and assess emerging activities' potential. The most important thing here is the opportunity to open bottlenecks for future specialization and development of the Bulgarian regions. The overview of European areas shows that most countries and regions use different methodologies such as analyzes of scientific and technological indicators, regional distribution of employment by sector, export indicators, roadmaps, SWOT analyzes, and forecasting approaches.

Thus, data and indicators are needed to track progress, assess structural transformations, and compare strategies. Indicators for measuring science, technology, and employment specialization can help politicians diagnose strengths and weaknesses and develop scientific, technological, innovative, and economic opportunities. To help policymakers have a broader view of national or regional specializations, additional - and improved - indicators can be developed to map science-technology interactions, identify emerging science and technology areas, and map interregional cooperation.

Additional limitations for data analysis arise when regionally comparable data internationally - primarily for economic specialization - are underdeveloped. Several indicators for innovation, research, and development, additional investment in related industries, early market transactions, and interregional and international cooperation deserve more attention in the future. For example, the OECD's ongoing work on global value chains builds national indicators based on the new data available to measure value-added trade: the OECD ICIO model and data at the ORBIS level. It would be interesting to examine whether regional indicators could be developed to help regions position themselves in "global value chains."

In addition to quantitative data, diagnostic tools can be particularly useful for identifying these promising 'activities' - which are not covered by existing empirical material - but have already reached a certain level of local involvement in the development cycle. Here, forecasting exercises were highlighted as a powerful tool for developing a shared vision for the future among all stakeholders. Such a practice can be a strong complement to quantitative and qualitative analyzes looking at a region's past and present by combining: (i) information: to understand better the complex interactions in which emerging activities evolve; ii) Intelligence: by scanning to explore new ideas, unexpected problems, and shocks, as well as persistent problems or trends; iii) Imagination by integrating foresight, creativity, and design for a scientifically possible, technologically feasible and socially desirable future; iv) Interaction with the systematic involvement of stakeholders in an inclusive process with a long-term perspective for the analysis of different perspectives and their social relations in the system; and finally, and v) effective implementation for a successful transformation program (Saritas, O. 2011).

Conclusion

Intelligent regional specialization is called to work and stimulate the best of the territory, thus improving living standards, socio-economic and regional development, and increasing regional competitiveness. It is built based on platform thinking, which aims to improve the investment climate in the regions, promote entrepreneurship, and the development of high-tech industries and the knowledge economy.

The main engine of such platform thinking is innovation and the ability to generate, adapt, and integrate innovations. Based on the analysis, it is clear that Bulgarian SMEs still face several difficulties in innovation. It is not well implemented and recognized as a priority area for development by small and medium businesses. Despite the many programs aimed at supporting innovative SMEs, the share of SMEs undertaking inovative activities has not changed significantly since the beginning of 2000. Bulgaria traditionally maintains its place among the old non-innovators. However, this is valid with some reservations. The amplitude between SMEs' innovation activity and the corporations, which have the role of the core of the innovative development of our country, is significant.

The analysis of the degree of innovation and non-innovation among SMEs (and large enterprises) showed that our country's general innovation climate is an important driver for the spread of innovation activity among SMEs and large enterprises. Many of the existing programs address a wide range of issues and challenges that have been identified by innovative and non-innovative SMEs. Stakeholders have suggested several additional actions that could increase SMEs' innovation rate in the EU. However, there are large differences across the EU concerning the frequency of innovative SMEs among the SME population. The scope and type of problems they face and the level of state support for R&D in SMEs vary.

The regional specialization and especially its modern intelligent concepts contain several opportunities for the Bulgarian regions. Proper recognition of priorities would generate added value, economic growth, and development. The accurate and timely orientation of regional development policies towards a small number, concretely and clearly defined regional priorities with significant and possible for realization potential, based on the specific territorial reality, is the key to bringing the Bulgarian regions to the European and why not the world economic scene.

Notes:

[1] The data presented in the table are forecasts for 2018, prepared by DIW Econ, based on data from 2008-16 from the Structural Database for Business Statistics (Eurostat). The data cover the "non-financial business economy", including industry, construction, trade, and services. The following definitions of the size class apply micro-firms (0-9 employees), small companies (10-49 employees), medium-sized companies (50-249 employees). The advantage of using Eurostat data is that the statistics are harmonized and comparable between countries. The disadvantage is that for some countries, the data may differ from those published by national authorities;

[2] Alfred Kristaler (1893-1969) was a German geographer, the founder of the rational theory of the hierarchy of settlements. According to his main work, The Central Cities of Southern Germany, people organize their settlement network

to make the most efficient use of the region's natural resources and localization advantages.

[3] Platform for intelligent specialization of the EC. http://s3platform.jrc.ec.europa.eu.

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