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SMEs AND GREEN ECONOMY - ENERGY FOR THE SMEs IN THE 3RD MILLENNIUM**ABSTRACT**

In most economies, small and medium-sized enterprises (SMEs) are seen as the drivers of growth and economic success and their role is of fundamental importance for the overall economic prosperity of any country. Bulgaria does not make an exception. Nearly 99 % of the economic actors in Bulgaria are SMEs (more than 310 000) and they contribute to the extent of 60% of its Gross Domestic Product (GDP).

Any economic activity requires energy – energy measured by the efforts involved and the degree of ambition and motivation of the actors. However, most of all and literally speaking, energy is required for production purposes and in the daily processes – the one seen and paid every month on the bills and the one that companies have to consider while calculating their costs in order to remain competitive. Energy has to be affordable and reliable. Reducing the costs is depending on many factors such as innovation, the available energy mix and the geopolitical side of energy dependency affecting prices. One of the main issues lies in the redistribution and in equal use of resources, minimising costs and in utilizing natural resources in an innovative and cleaner not polluting way, respectful of the environment and efficient.

In this context, Europe has begun to draft its Climate and Energy Policy ever since the early 2000s, fixing some targets in the short, mid and long term. In the year of the signature of the Paris Agreement reached during the COP21 Conference on Climate Change, the European Union and its Member States have been important stakeholders in its adoption and will be major actors in its progressive implementation. European policies themselves align with it and have been conceived in order to reach particular targets respectively by 2020, 2030 and 2050. These targets join the efforts for a constant and sustainable economic development by utilizing natural and other resources thoughtfully, in a way to achieve and support a decarbonised economy.

Europe's Climate and Energy Policy by 2020 has three main goals implied in the figures "20/20/20" - meaning 20% CO2 emissions reduction by 2020 compared to 1990 levels; 20% of renewables used in Europe's energy mix; and 20% achieved saved energy (energy efficiency). All EU countries should also achieve a 10% share of renewable energy in their transport sector.

The 2030 targets include a 40% cut in greenhouse gas emissions compared to 1990 levels; at least 27% share of renewable energy consumption; at least 27% energy savings compared with the business-as-usual scenario (source: EU Commission website).

Keywords: Green economy, SMEs, clima and energy policy

JEL Classification: L26, Q41, Q48

1. BULGARIA ABIDES TO EUROPE'S CLIMATE AND ENERGY POLICY

1.1. The National Support Strategy for SMEs 2014-2020

The "National Strategy on SME Promotion 2014-2020", also called "Small Business Act" (SBA or Strategy from now on) is a political document with mid-term nature by which the Government of the Republic of Bulgaria has demonstrated its vision of government policy to support small and medium-sized enterprises (SMEs) in the country and to harmonize their policies in this area with the policy of the European Union.

It is known that SBA is a key policy document of the European Union in support of SMEs. As recommended by the European Commission, its principles should be applied in each Member State. With this strategy Bulgaria makes a major step towards convergence of national and European policy to support SMEs in the period up to 2020. There will be no difference in the priorities set in the European document and the Strategy.

The SME Strategy is justified by the Law for SMEs (Article 5, paragraph 1); the application of the Strategy is based on an Annual program approved by the Minister of Economy and Energy (Article 5, paragraph 2, item 4). The Annual program contains proposals for measures based on the results of Bulgaria, published in the SBA Fact Sheets for the preceding year. The main financial instrument of the formulated measures remains relevant operational program of the Ministry of Economy and Energy.

1.2. Strategic environmental goals by 2020

Bulgaria is a country, in which SMEs invest in energy efficiency, developed and marketed, and used in the production of "green" products. The state provides financial incentives for this purpose and informs entrepreneurs about all the possibilities on the way to "green" technologies.

The criteria in the priority area "Environment", together with the operational goals, are as follows.

1. Innovations with environmental benefits.
2. Share of SMEs with measures of resource efficiency.
3. Share of SMEs that have received public support for the introduction of measures to resource efficiency.
4. Share of SMEs satisfied with public support in the field of environment.
5. Share of SMEs, offering "green" products or services.
6. Share of SMEs with a turnover of over 50% generated from "green" products or services.
7. Share of SMEs that have received public support for the production of "green" products or services.
8. Share of SMEs satisfied with public support for the production of "green" products or services.

Table 1: Operational Goals

Criteria	Goal	Change
1.	> 0.04%	At least 60 SMEs more (no micros)
2.	> 93.00%	28,000 SMEs more
3.	> 9.00%	25,000 SMEs more
4.	> 56.00%	88,000 SMEs more
5.	> 26.00%	18,000 SMEs more
6.	> 22.00%	18,000 SMEs more
7.	> 8.00%	3,500 SMEs more
8.	> 62.00%	151,000 SMEs more

1.3. State-aid support for SMEs and technological state of play

Key findings about SMEs in Bulgaria

Bulgaria is a country where SMEs have a free and competitive access to public procurement system which is fully electronic. State aid for SMEs is available. All the rules of the legislation in the field of competition are explicitly designed to promote more innovative and entrepreneurial business environment.

- Technology transfer and improvement of cooperation networks between SMEs, universities, educational institutions of all kinds, regional authorities, research centers and development, science and technology parks, etc.
- Support for R&D carried out in particular SMEs, including access to R&D - services research centers.
- Support to SMEs for the promotion of non-destructive environmentally friendly products and production processes.
- Measures to stimulate entrepreneurship and starting a business
- Measures to promote e-commerce, education and training, networking and cooperation etc.
- Measures to improve SME access to more efficient use of ICT

The presence of Bulgarian SMEs in the Single Market can be promoted further in different directions - as support for the introduction of new standards, and through more awareness about the opportunities on intellectual property - businesses to be protected by using the services of both national patent authorities and the community - especially in the field of protection of patents or registration of Community trademarks and community designs.

The presence of Bulgarian firms in the market may continue to be encouraged through participation in international exhibitions and fairs.

Information security is of key importance. It can be ensured both by the administration and by network organizations such as Europe Enterprise Network.

A strengthened competitiveness is needed

For analytical purposes, a comparison was made between the shares of SMEs (taken from all sectors) in different sectors in Bulgaria and six EU countries, closest in population to Bulgaria. The goal was to compare the sectoral structure in countries with a similar number of workers because before talking about labour productivity and employment, we should pay attention to the unit that generates employment and productivity respectively, namely – the enterprise.

Share of the number of SMEs from the sectors of all SMEs in %

	Bulgaria	EU-6 ^x
High-tech manufacturing ^{xx}	1	2
Low-tech manufacturing	10	8
Knowledge intensive services	14	23
Less knowledge intensive	68	51

service		
Other sectors	7	16
Total	100 %	100 %

Remarks

- x Sweden, Finland, Denmark, Austria, Hungary and Slovakia
- xx The classification of technological intensity of Eurostat is used. In this part of the analysis high-tech manufacturing means high and medium high tech manufacturing, and low-tech: medium low and low tech manufacturing.

Although the share of knowledge intensive services in Bulgaria is growing in recent years, growth is slow, and new enterprises during the crisis appeared again mostly in the less knowledge intensive services. A realistic explanation would be - lack of qualified staff able to perform tasks with high demands. Among the industries, in which there is growth of labour productivity is the production of computers, electronics, optics, the automotive industry, other vehicles, etc. However, this is mainly due to the redundant staff and to a lesser extent due to optimization and innovation in the production.

The growth of wages per employee is in excess by BGN 1,400 per employee per year in SMEs for all sectors for the period 2008-2011. There is a high wage growth especially in the film industry (50%), information technology (20%) and air transport (25%).

If we compare Bulgaria with other nine Member States of the EU from Eastern Europe, Bulgaria currently has the lowest proportion of firms in high-tech manufacturing – less than 1%. Bulgaria had the second lowest share in knowledge intensive services - 14% of the SMEs in these sectors compared to around 32% for Estonia. Bulgaria has the highest proportion of less knowledge intensive services – around 70% compared to around 55% in Hungary. The latter definitely showcases the need for strengthening competitiveness by promoting innovation and more profitable approaches.

2. APPROACHES & OPPORTUNITIES TOWARDS A GREENER ECONOMY

2.1. Innovation-driven investments in more efficient solutions and approaches

The main source of funding to support SMEs in the previous seven-year period was the Operational Programme "Competitiveness" at the Ministry of Economy and Energy. Obviously, simplifying application procedures will be one of the most important tasks for the new and ongoing programming period. Aside from the contracted funds program JEREMIE, the largest financing schemes for technological innovation – a total of 515 contracts worth over BGN 370 million and another 659 contracts for the introduction of internationally recognized standards worth BGN 65 million (by the editorial completion of this part of the Strategy) - insufficient for significant impact on any of the priorities of the Strategy. Therefore the main task of programming the period 2014-2020 should be measures with greater multiplier effect – following the example of the JEREMIE program or creating business incubators and other innovation infrastructure in the country, which will continue to make impact post-public funding.

Innovation measures

Strong incentive for innovation culture of SMEs can be an example of fast growing SMEs, as most of their progress is thanks to a new product, service, energy efficiency, better marketing approach, better management structure or other innovation.

Back on SBA data, the introduction of new products and services created in the enterprises themselves need at least:

46,000 more SMEs;

76,000 more SMEs must implement organizational or marketing innovation;

102,000 more SMEs should start training their staff;

This can be driven both by strengthening the role of the National Innovation Fund and by the mass-scale of the innovation voucher scheme and the demarcation of the Operational Programme "Human Resources " and " Innovation and Entrepreneurship", the creation of enterprises and entrepreneurship education should be left to "Innovation and entrepreneurship " and retraining required 90,000 employees in item a fully "Human Resources".

Crucial here is the introduction of enterprise education in schools and the expansion of the training firms in all schools, including the School of the Arts (where lay the groundwork in preparation employed in the creative industries that are part of most intense of knowledge services).

Green technologies measures

The results of Bulgaria show that:

18,000 more SMEs need to generate at least 50% of their turnover from green products and technologies;

28,000 more SMEs to achieve efficiency in resource use

In the case of energy efficiency measures and technological innovation, and related "green technology" innovation can be fully committed to improving the ecological orientation of companies.

In order to be effective, we created this Strategy adapting it to the Small Business Act, looking for a balance between reasonable administrative reforms when necessary and direct funding where it is needed.

Each year, according to the Law for SMEs, the Ministry of Economy and Energy will create an Annual program, which will describe the most urgent measures needed to be taken according to the results of the Small Business Act. By measurability and comparability of these results, we can always be sure whether the measures are working or not. Improved performance is related to the full implementation and development of e-government: an electronic service for entrepreneurs and exchange of data between institutions. The rules for the introduction of new fees or amending existing must be clear and well known. Reducing the number of charges and their sizes can be linked to the creation of a single point of contact where one can obtain information and to signal the disproportionate fees or procedures hindering SMEs.

The administrative burden for growth

Nevertheless, Bulgaria is not far from the EU average in this priority area. Therefore the next target is that the country should stand in the top ten in EU by easing the administrative burden for small businesses.

The main task is to introduce the "SME test" - it serves as a comprehensive assessment of the impact of future legislative and administrative initiatives on SMEs and taking account of the results in the preparation of proposals for legislative changes. The test must accompany each draft legislative change, as well as financial statement and clearly and specifically summarizes how the rules will affect small businesses. If the test finds that the measure prevents SMEs, brings additional administrative burden, but it turns out that the measure cannot be implemented, it must be the exclusion of SMEs (especially microenterprises) from the scope of this measure.

Making better use of the public consultation is essential before the introduction of any legislative changes.

A research was conducted on what are the 10 most severe administrative burdens encountered by businesses - whether legislative norms, rules or procedures – followed by an assessment of their current impact and a transition to alleviate or eliminate them. The following results were shown.

2.2. Opportunities for SMEs under the HORIZON 2020 framework

Where are we?

The following indicative targets for alignment with the EU average in the relevant indicators of the areas of the Small Business Act (the document that is based and future national strategy for the promotion of SMEs in Bulgaria from 2014 to 2020) in which Bulgaria is lagging behind most:

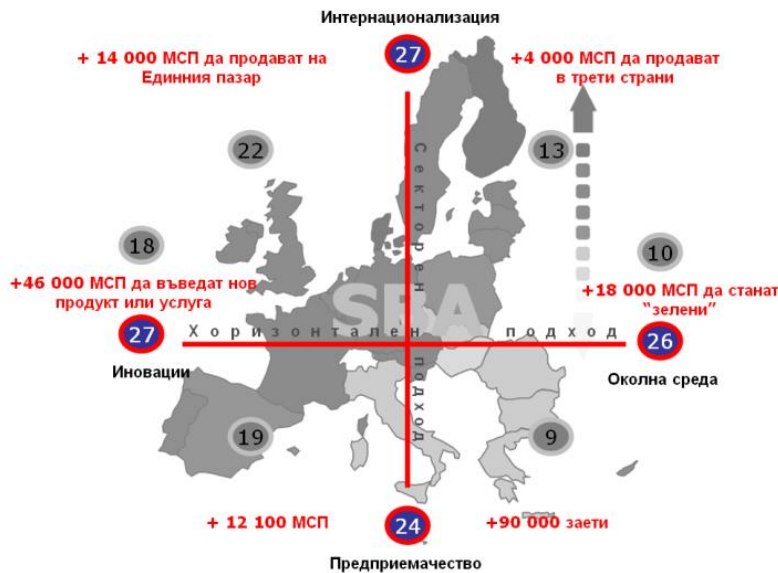


Figure 1.

Bulgaria = Entrepreneurship (24th in the EU), environment (26th in the EU) internationalization (27th in the EU), innovation (27th in the EU)

Measures for the creation of new businesses and promote entrepreneurship

Goals: 12,100 more new SMEs and 90,000 new employees

Start-ups should be mainly from the following sectors:

- Computers, optics and electronics
- Cars and other vehicles
- Metal products
- Machines
- Printing and recorded media industry
- Textiles
- Information Technology
- Films and TV productions, sound recording
- Information services
- Publishing
- R&D

Creation of new businesses and fostering entrepreneurship is the key to restructuring the sector. According to regional specialization enterprise creation can be oriented according to the concentration of the workforce and SMEs in the respective districts of the country. The participation of the SMEs in HORIZON 20/20 will also facilitate the clustering of these sectors. The fact is that in Bulgaria there is no critical mass of businesses, leading to a quantum leap in the production of relevant sectors. Enterprise creation can be stimulated in a combination of grant and revolving tools using the network of entrepreneurial and business centers in the country. Key is entrepreneurship education to people with business idea to create a sustainable business that will remain on the market and after the first 5 years.

2.3. SMEs in Bulgaria

Group of medium high and medium low technology industries covers economic activities of C19 through C30 under CEA-2008 (NACE) without high-tech economic activities and C33 "Repair and installation of machinery and equipment".

Green energy implementation is among leading approaches of the SMEs.

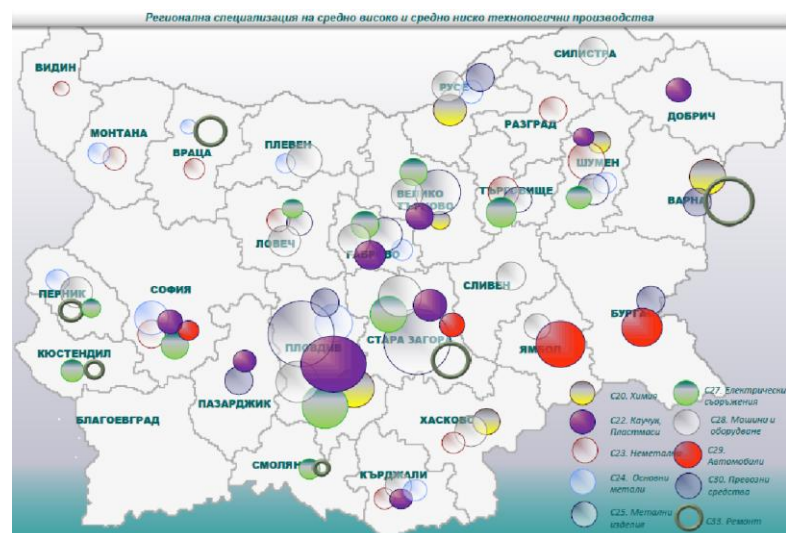
The group employs over 184,000 people, of which over 110,000 (60%) of SMEs. Typical is a high degree of specialization and concentration at the district level, as 69% of workers in this group are characterized by regional specialization coefficient above 1.2 ($LQ > 1.2$ - Figure 5).

The highest concentration of the group of medium-high and medium low tech manufacturing is in the central regions of the country and in particular in the districts of Plovdiv, Stara Zagora, Gabrovo and Veliko Tarnovo.

The combination of regional specialization and enterprise density yields the following conditions for clustering by sector:

- C20: Chemical industry - Varna, Ruse and Plovdiv
- C22: Rubber and plastic - Plovdiv and Gabrovo
- C23: Non-Metal products - Gabrovo, Vratsa and Shumen
- C25: Metal products - Gabrovo, Stara Zagora and Plovdiv
- C27: Electrical equipment - Gabrovo and Sofia
- C28: Machines - Gabrovo and Stara Zagora
- C29: Automobiles - Lovech, Yambol
- C30: Other vehicles - Ruse and Varna

Figure 2.



Low tech manufacturing

Group of low-tech industries covers economic activities of C10 to C18 by CEA-2008 (NACE) and C31 economic activities "Manufacture of furniture" and C32 "Other manufacturing".

The group employs over 307,000 people, of which over 232,000 (75.5%) in SMEs. This is a group of production sectors, which employ the largest number of employees. Total group is characterized by an average level of specialization, as 56.7% of the employed are in areas with pronounced regional specialization due to the relatively even distribution of manufacturing enterprises of the food industry.

The highest concentration of the group of low-tech industries is observed in the Southwest and South central, and Northern and Central region.

The combination of regional specialization and enterprise density yields the following conditions for clustering by sector:

- C10: Food - Plovdiv, Yambol and Sliven
- C13: Textiles - Gabrovo and Sliven
- C14: Clothing - Blagoevgrad, Rouse, Haskovo
- C15: Leather and Shoes - Kyustendil, Blagoevgrad, Pazardzhik
- C16: Wood - Smolyan and Lovech
- C17: Paper - Sofia, Plovdiv, Pazardzhik and Veliko Tarnovo
- C31: Furniture - Lovech, Pazardzhik, Ruse, Gabrovo

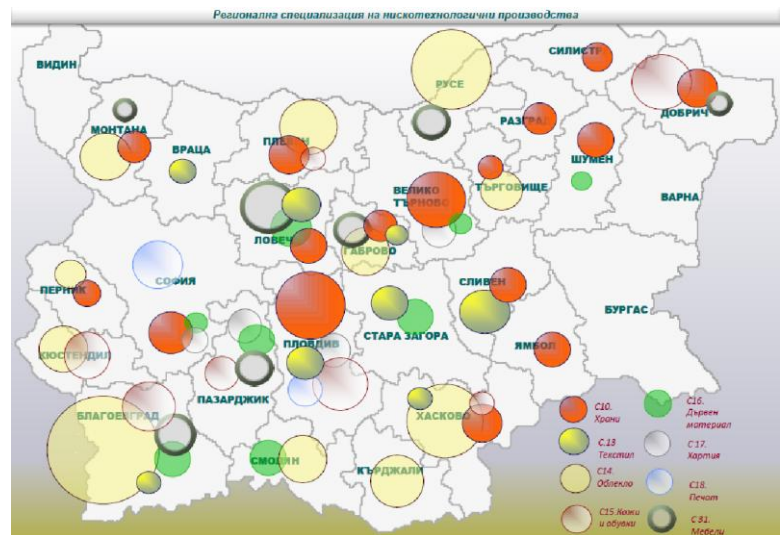


Figure 3.

3. REGIONAL SPECIALIZATION MAPS

Figure 4.

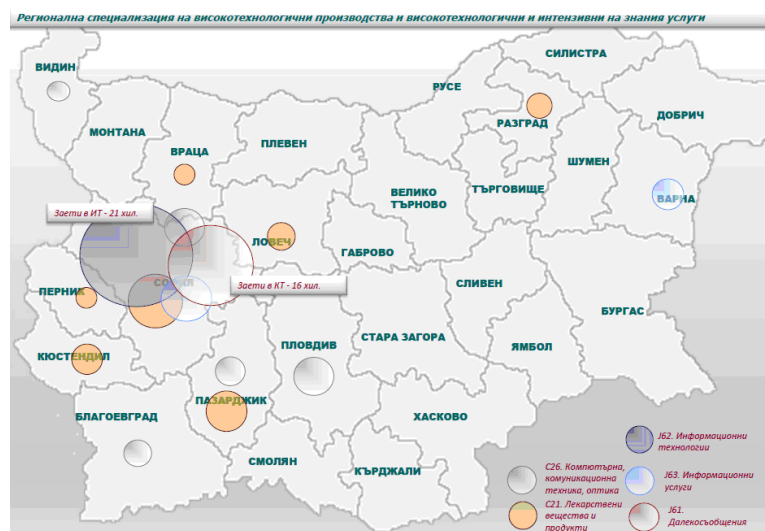
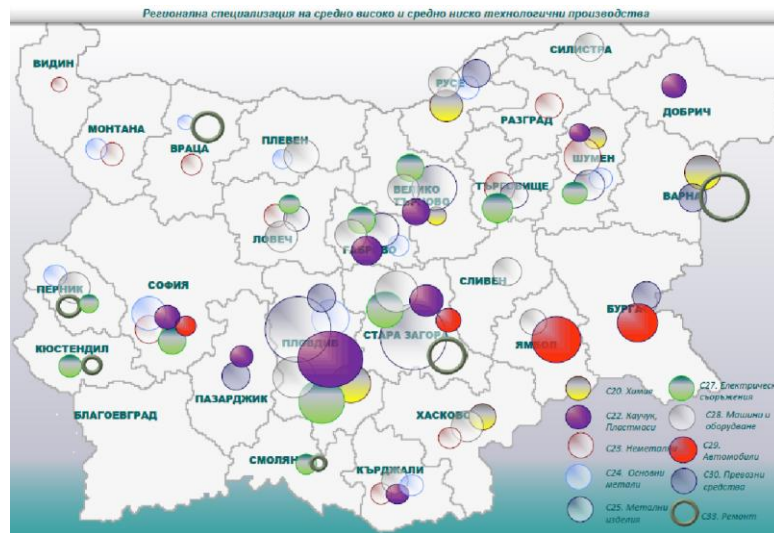


Figure 5.



CONCLUSION

The combination of regional specialization and enterprise density can be a good basis for the formulation of more precise measures to support the creation of energy efficient enterprises, the clustering of existing businesses and the creation of technology parks and business incubators for the relevant sectors.

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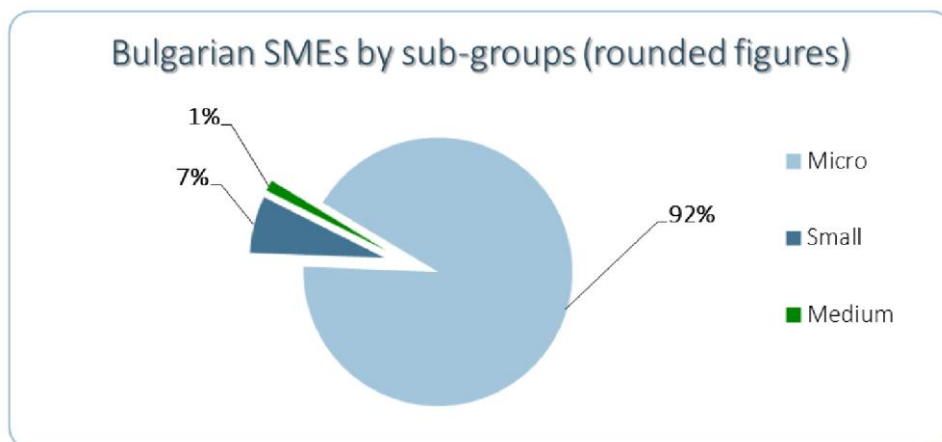


Figure 6. Subgroups of the Bulgarian SME Sector