



INNOVATION ACTIVITY OF SMALL AND MEDIUM SIZE ENTERPRISES IN THE EUROPEAN UNION. SUMMARY OF SUPPORTED CONCERNS AND POOR RESULTS

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Abstract

In this article, the author proposes a critical analysis of the present state of development of research, development and innovation of small and medium enterprises (SMEs) in the European Union. The SMEs sector is of particular importance in the EU economy, as demonstrated by the overwhelming key indicators on its share in terms of total number of enterprises, the added value of non-financial sector and employment. Conclusions of the article reveals the constant concern of policy makers in the Union relative to the subject matter and visible failures SMEs innovation, and some suggestions on improving common (and where possible, national) policies in the field.

Keywords

European Union Member States, Small and Medium Size Enterprises, research-development and innovation, economic policies

1. The importance of SMEs for the EU economy

In EU Member States there is approx. 20 million of Small and Medium Enterprises (SMEs) which represent 99% of all enterprises (99.8% of all enterprises in the non-financial business) and provides approx. 67% of all jobs. They contributed in 2013, with over half (approx. 58%) to the value added of non-financial sector from the EU, being the backbone of the EU economy and the main creator of wealth and economic growth.

What is even more surprising is that nine out of ten non-financial enterprises in the EU (92.4% in 2013) are in fact microenterprises with 1-9 employees (see Table 1), their share in the total employment and the value added (VA) being, however, much less than approx. 30% and, respectively, 22%. Thus, microenterprises have the second largest share in terms of contribution to employment and the value added of the four classes of enterprises, after the large ones, the following places coming to medium and small enterprises.

Table 1. Classification of EU SMEs according their main indicators

Business category	Number of Employees	Turnover	Or balance sheet total
Medium enterprises	< 250	≤ € 50 m	≤ € 43 m
Small enterprises	< 50	≤ € 10 m	≤ € 10 m
Micro-enterprises	<10	≤ € 2 m	≤ € 2 m

Source: European Commission, Enterprise and Industry, Facts and Figures 2. 02. 2015

According to all economic analysts and those responsible in the EU institutions, SMEs must also have an important role in research, development and innovation (RDI) for obtaining enhanced competitiveness in the international market.

Registering a business in SMEs group brings two categories of benefits:

1. Eligibility for support in many EU programs specifically designed for business support, especially for enterprises of this class e.g. funding scientific research and innovation, competitiveness and other support programs which would otherwise be classified as disallowed State aid;
2. Fewer demands and lower fees for administrative formalities.

2. Brief picture of EU policies for stimulating innovation in SMEs

In the European Union, in the last 10 years, the Commission has paid particular attention to policies aimed at SMEs, particularly those on innovation support. There were elaborated several documents containing programs and measures to support innovation in this sector. However, many measures proposed remained only in the official documents due to a lack of funding, specialized staff, of obstacles in the protection of property rights, lack of opportunities for the assimilation of innovation obtained in other countries, etc.

It can be said that the cornerstone of a coherent policy for SMEs has been made with the adoption of the *Small Business Act (SBA)* (EC 2008) in June 2008,

document which aims to improve the issue of SMEs, promoting the principle dictum "think small first", which could be translated as 'priority to SMEs'.

SBA approved an assembly of ten principles to guide the design and implementation of policies at EU level as well as at Member States level. These principles are essential for creating VA at EU level to put SMEs on an equal footing and improve the legal and administrative environment throughout the EU. Among the principles adopted, at our particular interest is the promotion of competences in all forms, within SMEs, and innovation.

"*Innovation Union*" (EC 2010-1). The concept of "Innovation Union" launched by the European Commission in its Communication of 6 October 2010 (IP / 10/1288, MEMO / 10/473) and presented at the EU Competitiveness Council in Luxembourg on 11-12 October, constitutes a strategic approach to innovation, driven by the highest political level.

Innovation Union would be a central element of "smart growth", one of the three pillars that make up the strategy "Europe 2020", channelling EU efforts in research-development-innovation and cooperation with third countries on challenges like change climate, energy, food security, population health and aging.

In a 2010 study (Zagame, P. 2010) it was indicated that achieving goals of "Europe 2020" to increase investment in RDI to 3% of Gross Domestic Product (GDP), could create 3.7 million jobs and enhance annual GDP of the EU to 795 bln. Euro in the year 2025. It would also require an additional one million at the still existing number of researchers in that year.

Innovation Union is characterized by ten key elements, mostly applicable to SMEs. We cite among them: European innovative partnership, additional measures to improve access to finance for businesses, development of existing research initiatives, modernization of the European intellectual property legislation, reviewing funding from the Structural Funds and the framework for State aid for innovation.

Re-industrialization of Europe. In January 2014, the European Commission adopted the Communication "For an European Industrial Renaissance" (EC 2014-1). In this Communication, the Commission argues that industrial policy and other EU policies are becoming increasingly integrated (as shown also in the communication with similar subject from 2010), but it proposes its consolidation. It emphasizes the importance of a good business environment to stimulate investment, encourage and promote technological change and promote modernization of EU industry, as a whole. It detailed the resources already available for industrial policy (ESIF, Horizon 2020, COSME, Eurostars), which ensure its effective functionality, and asked the main actors in the sector to

coordinate their efforts to take advantage of opportunities for collaboration. Industrial strategy must be applied, according to the Commission, taking into account the many interactions with other EU policy areas, such as enterprise policy (*Mission for Growth*) (EC 2015-1), internal market policy, regional policy and structural funds, *Enterprise Europe Network* (EC 2015-3), the regulatory environment (*Regulatory Fitness and Performance Programme – REFIT*) (EC 2015-5), social policy (education, training), global value chains, etc.

Another form of stimulating the SMEs innovation activity is *clusters* of EU Member States (EC 2015-4). Clusters facilitate innovation process components at least through improvement of firms' ability to perceive opportunities for innovation, making it possible to be in permanent contact with numerous companies, supplying and related institutions, creating a competitive environment, facilitating experimentation at lower costs, compared to the situation of a company that would try experiments in isolation. Interest in technological innovation and created externalities can help to improve long-term competitiveness and ensure the sustainability of local businesses. Externalities may involve direct or indirect forms of cooperation.

The most important programs to support SMEs innovation are "Horizon 2020", COSME, ESIF (European Structural Funds and Investment) and Eurostars.

"*Horizon 2020*" is the financial instrument implementing the Innovation Union, an initiative of the Europe 2020 Strategy for 2014-2020. SMEs in EU Member States related to research and development program "Horizon 2020" can obtain financing and support for innovative projects that could help them to expand business in other EU countries or beyond. "Horizon 2020" finances innovation potential through a dedicated *SME Instrument* (EC 2015-6) that provides support for these enterprises under the headings "societal changes" and "Leadership in Key Enabling Technologies" (LEITS). Featuring funds about 3 billion euro for 2014-2020, SME Instrument helps SMEs with high potential to develop pioneering ideas for products, services or processes able to face competition in the global market, through grants and a range of support services and facilitates access to risk finance, innovation in three phases of setting goals - developing innovation, demonstration and commercial exploitation of innovation results.

Eurostars is a program that supports performing SMEs in RDI, companies that innovate products, processes or services to gain a competitive advantage (Eurostars 2015). Eurostars does this by providing funding for transnational innovation projects, whose results are then quickly sold. To obtain the funding needed, Eurostars associates beneficiaries from at

least two Eurostars Member States. Due to international collaboration, European SMEs can get easier access to new markets. The program is funded publicly with a total budget of 1.14 billion euro and is currently supported by the 40 member countries of EUREKA¹ and the European Union.

On average, a project has 3-4 participants from 2 or 3 countries, has duration of 29 months and a budget of 1.4 mil. Euro. In a Eurostars project, a SME has a central position in transnational consortium. The participation in a Eurostars project can become a passport for growth, further innovation and even greater success in business by opening new markets on international level.

COSME (EC 2015-7) is the EU Competitiveness of Enterprises and SMEs program. In the period 2014-2020, COSME will have a budget of 2.3 billion euro and will support SMEs in the areas for a better access to finance, to markets, for supporting entrepreneurship and more favorable conditions for business creation and growth.

ESIF (EC 2015-8) includes European Social Fund (ESF), European Regional Development Fund (ERDF) and the European Agricultural Fund for Rural Development (EAFRD), all having vocation in financing SMEs from European countries, especially in RDI activity.

3. Weak results of the SMEs stimulating innovation policy

Although many, programs, initiatives, instruments, documents, etc., calling to support innovation activity in the EU and its Member States, have failed so far satisfactory results. A very small number of SMEs with CDI activity has a satisfactory degree of absorption the innovation results obtained by other firms from EU or outside, and activates in high-tech (HT) industries and knowledge-intensive services, with an important contribution to innovation capacity of a country, to its competitiveness and growth potential.

According to Annual Report on European SMEs 2014, in EU-28, HT intensity in manufacturing is relatively low for both SMEs and large firms. In 2013, EU-28, only 2% of SMEs in manufacturing industries worked in HT, while for large firms the figure was 7%. 30% of SMEs operated in the knowledge-intensive services sector and their activities generated over 1/3 of the total value added produced by SMEs in this area. Key factors for the development of high-tech production and knowledge-intensive services identified in the Report are: capital investment in renewal operations, particularly gross capital investment and investment in

capital intensive technology (information and communication technology), labor market adequate policies, public investment in education and training.

The contribution of HT SMEs to generate value added was about 2-fold higher than enterprises from medium and low technology level industries. HT SMEs generated almost 6% of VA HT, while large firms had a 13% stake in VA in manufacturing industry. SMEs in HT industrial sectors had a 4% share in total employment of SMEs. In most EU-28, HT industry SMEs had a share of VA in manufacturing between 1% and 10%. However, in countries such as Ireland and Malta, SMEs have an important role: in Ireland over 30% of VA in manufacturing is generated by HT SMEs, while in Malta, comparable figure is 18%.

As it appears from the data of Table 2, in the period 2009-2012, HT industry SMEs registered a growth rate of VA quite high (12.04%), while total employment decreased by 6.04%. In terms of SMEs in knowledge intensive service sector, the two trends are reversed: lower growth (2.03%), in generating VA, and positive, fairly high (7.17%), in the number of employees.

In an overview, the situation of the HT industry sector and knowledge-intensive services SMEs (only indicators available to get an idea about the involvement of SMEs in innovation) in 2009-2013, is relatively modest and the crisis of that time had, of course, its influence, but without determining in a decisive measure the unsatisfactory results achieved by European SMEs.

Table 2. EU-28 SMEs performances from the high-tech industry and knowledge intensive services, during the period 2009-2012

	EU-28 cumulative growth rate (2009 - 2012)
SMEs in non-financial business sector	
Value added	7,78%
Employment	-0,75%
High-tech manufacturing SMEs	
Value added	12,04%
Employment	-6,04%
Knowledge intensive services SMEs	
Value added	2,03%
Employment	7,17%

Source: European Commission, A Partial and fragile recovery, Annual Report on European SMEs 2013/2014

An explanation of the weak results recorded from the SMEs sector in the last period was provided by the *European Forum for Innovation* participants who made a comparison with the corresponding US sector. In a 2012 document of the Forum (Vanhaverbeke, Wim

¹EUREKA is a Europe-wide Network for Market Oriented Business, with 40 member States, which support transnational cooperation in Research, Development and Technologies

2012) it was shown that the EU has fewer new companies among innovative firms in high-tech compared to the USA. This relates to the deficit of the EU private sector RDI compared to the USA, the latter being more intensive in research and development. But this matters only about a third of the EU-USA gap in RDI. Most of the gap is due to the fact that young companies that are leaders in the innovation process are less intensive in RDI than similar firms in the USA.

Analyzing the cause for new and innovative firms in the EU are, on average, less intensive in RDI than those of USA, the participants to the mentioned Forum showed that it was entirely the result of a different sectoral composition of new firms in the EU and US. Those of USA are working in greater proportion in sectors with high intensity in RDI, biotechnology and Internet services being the most visible cases.

The analysis confirms that the gap between the EU and US RDI is largely a structural problem. To overcome this handicap the EU needs to support many new companies to develop and to have access to peak innovative status, which can be done, especially in new and intensive in RDI sectors. These sectors are often closely linked to breakthrough scientific research.

There are a number of plausible reasons to explain why the EU has fewer young investors in new sectors, able to claim world leader status. Union fragmented markets restrict companies in terms of their access to large markets and achieve economies of scale. Industries that have less results show a weaker involvement and input from successful innovative projects. And access to finance for major projects, but high risk, are a particular problem in the EU, where the venture capital market is fragmented. Young firms, with very interesting projects, but lacking of guarantees and reputation, are particularly disadvantaged by a double handicap: restrictive lending and high risk of bankruptcy. Also, the EU approach is motivated by short-term care regarding employments, endangering the long-term growth resulting from the breakthrough innovations.

According to a fundamental principle guiding the drawing political lines in the field, there is a need for a systemic approach. It is important to put in place the right framework conditions, creating an environment which promotes competition and companies' access to markets, finance and skills, even if not specifically the new firms.

Analysts presented to the Forum believe that a more intensive effort should be directed towards solving the structural growth of the EU economy. If programs for young, innovative companies should be focused on small target groups, they would not require massive injections of public money, but would have the potential for huge revenues, by creating conditions for post-crisis

growth. Due to limited resources available for new innovative firms, under a restrictive budgetary situation in many countries and the risk of government weakness, it is even more important to get the right policy to find out details of funds allocation.

In addition, governments should remove specific barriers faced by new firms, highly innovative, mainly the lack of access to finance. The systemic approach should take into account the effective protection of intellectual property rights, the support policies for the development of private risk capital markets, and address the major challenges faced by the EU (such as climate change and energy, population health and aging, digitization and security).

4. Conclusions

This analysis leads to the separation of several main conclusions on innovation activity of Small and Medium Enterprises in recent years.

- A first conclusion is the almost insignificant impact of the many programs and projects aimed at stimulating innovation activity of SMEs in the EU, over the last four to five years: the number of SMEs which conduct research, development and innovation or have the necessary means for the assimilation of RDI results, available on national and international community, is still very low. This leads to lower competitiveness of European SMEs compared with those they are competing, primarily in the USA;

- A second conclusion is the existence of challenges to the possible involvement of EU SMEs in the innovation activity. These challenges relate to diversity and inadequacy of national legislative and administrative frameworks governing the establishment of new innovative enterprises and SMEs, the lack of qualified personnel or the specific organizational framework that is the clustering and of multiple international relations of which the large enterprises dispose;

- Third, funding is a major problem that requires finding private sources (especially venture capital) and the appropriate means of attracting them to work for RDI SMEs. As shown by some commentators, public R&D funding, due to the high risks involved and uncertainties, should be out of phase, intervening only in the pre-commercialization of a project;

- Fourth, support programs and financing of innovation activity of SMEs should be simplified in terms of formalities, knowing that the bureaucracy discourages the vast majority of potential applicants to such programs. In this context, the requirement of national and international partnerships, under European programs (Eurostars), is unable to stimulate the participation of SMEs and, therefore, they should give it up. Equally, it would be simplified the control based

on a great variety of documents and in many stages of spending funds allocated;

- Fifth, although it is a very circulated concept, entrepreneurship and entrepreneurial culture in the EU and the Member States do not amount to a satisfactory level, as in other countries (the USA or Japan, for example). Starting a business does not concern the educational institutions and the creation of new and innovative enterprises is difficult. In addition, there are large discrepancies between EU Member States in this regard, most new members having not such pursuit.

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