ENTREPRENEURIAL INNOVATION—KEY TO A SUSTAINABLE AND COMPETITIVE EUROPEAN UNION

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The European Union has experienced weak economic growth during the last decades. This fact undermined its global economic positions, causing the eastward shift of the world's economic gravity centre. Moreover, in the last years, global economic sustainability issues gained prioritised attention since the climate change, and environmental degradation brought humanity near the edge of irreversible collapse. To address these challenges, the European Union's decision-making factors developed progressive strategies and policies to reignite economic growth in a sustainable and durable manner. These directives were aimed to bring to the EU member states additional growth and enhanced entrepreneurial activity. In this context, the present research evaluates the role of entrepreneurship in augmenting economic and sustainability of the European Union countries during the last years through applying both qualitative and quantitative methods of analysis. The results reached underline that entrepreneurship was a driving force of sustainable economic development; nevertheless, its growth was insufficient to bring an economic breakthrough for the member states. Consequently, it was concluded that the European Union should provide more initiatives for the business by promoting liberal policies and strategies. From this perspective, the present research advocates to strengthen business freedom.

Key words: European Union, entrepreneurship, innovation, sustainability, economic development, liberal economic policies

INTRODUCTION

The European Union is presently facing multiple socio-economic challenges which are menacing future development perspectives. One of the challenges remains poor economic growth

and feeble entrepreneurship, particularly in the area of SMEs. Technologies and innovation represent the main competitive advantage the European Union can rely on to face permanently increasing global competition. However, in the long run, this prerogative can evaporate as the lack of robust economic development make the EU lose economic ground to competitors in the world. If so happens, the European countries can become 'open-air museums' of human civilisation, known more for beautiful architecture, traditions and tourism opportunities than for real economic power. To avoid this perspective, the European Union defined ambitious strategies and policies aimed to reignite entrepreneurship, boost innovation and enhance economic competitiveness without increasing the pressure upon the environment and its capacities to support further generations.

The present research reflects the socio-economic and sustainability performance of the European Union in the last decades. It assesses the strength of the EU countries' entrepreneurship and evaluates the interdependence between the community's socio-economic prosperity and business activity. Moreover, it generally described the main directions of development pursued by the decision-making factors and their relevance for the current state of affairs in the European Union. The main goal of this article is to determine the extent to which the growth in entrepreneurship can reinforce European Union's innovation and economic progress and foster sustainability of human activities, thus strengthening the EU's international economic positions.

To reach this goal, several objectives were established, including an overview of the main European initiatives to enhance entrepreneurship, innovation and sustainable development; determination of the evolution of business competitiveness of the European Union countries and the effect of the EU integration upon European trade performance; characterisation of the evolution of the socio-economic performance of the European Union states and analysis of the resource and energy efficiency of the European Union countries. The European Union is heterogeneous from the political, economic and social point of view comprising 28 states with different level of development.

Therefore, to reach relevant conclusions, it has been decided to approach the research matter both generally and individually.

The results obtained show that the European Union increased its positions in terms of entrepreneurship and economic growth. Moreover, it has reported relatively favourable evolution of its economic sustainability. Nevertheless, the positive evolution of economic sustainability and entrepreneurship was insufficient to break through the weak economic growth. Thus, the European Union decision-making factors should redefine their social market economic model, which was promoted in the last decades since it does not provide enough economic flexibility. Therefore, more liberal policies should be promoted.

LITERATURE REVIEW

A subset of relevant literature has been selected to have a broader understanding of the issues related to sustainable economic development of the European Union. The literature is aimed to highlight the main sustainability paradigms, the role of entrepreneurship in the European economy and the main areas of interference between them. Thus, according to Balkyte and Tvaronavičiene (2010), sustainability is a core characteristic of the modern economy which should be taken into consideration when developing policies and strategies to increase economic competitiveness. Thus, in this regard, competitiveness and sustainability are interrelated since an efficient economy does not only satisfy the present needs of people but also assure favourable conditions for the next generations to meet their own needs. Globalisation, economic dynamism and social progress are key features of modern economy, and therefore, policymakers should be aware of the necessity to keep all these dimensions in balance.

Moreover, Thomson and Snell (2013) underline that when speaking about sustainable economic development, first of all, it should consider energy sustainability. Overall, the whole European Union is lacking viable alternatives to present energy resources which are accessible, not polluting and cheap. Nevertheless, the most vulnerable countries from the European Union which are most exposed to energy threats include the

Eastern and Southern European states. Although it is argued that the primary objective of sustainability is to combat climate change, the real threat comes from the fuel poverty. Within the last years, many efforts have been undertaken in this regard; however, the energy sector of the European Union still lacks efficiency.

Steurer and Hametner (2013) say that the European Union is the leading global power in terms of promoting sustainable development strategies both horizontally across various economic sectors as well as vertically across different levels of government. However, sustainability, besides its environmental aspects, is composed of social development ones. In such a way, EU is rather succeeding in protecting the environment than in assuring favourable social perspectives to the population. In this regard, it can be mentioned that a range of Mediterranean EU countries ignore the social sustainability dimension.

The present governmental model of the European Union proves to be poorly efficient in combating social sustainability challenges. Bell and Morse (2010) add that sustainability is measured not only in terms of social, environmental and economic welfare. The concept should be broadened comprising the whole structure of sustainability, including, for instance, sustainability education in schools and the ways by which related information is disseminated. Furthermore, disambiguation should be realised by increasing data availability and reducing its opaqueness.

Sustainable development of the European Union cannot be achieved without supranational coordination by the European Council. Efficient economic development requires political support which is assured by this organism. Nevertheless, the attributions of supranational bodies are limited, hampering the economic development of the community as a whole since many legislative and coordination differences occurring at the level of national states create economic irregularities. Policy coherence is crucial in assuring the stability and future development of the economic potential of the European Union (Puetter, 2012).

Furthermore, Campos et al. (2014) specify that European integration has brought important economic advantages for the participating countries except Greece. At the same time, it should be highlighted that economic growth across the

European Union countries has been uneven because of the peculiar features of the states in terms of geographical position, culture and economic structure. It has been determined that without European integration, the current welfare level would have been 12% lower. According to Castro (2011), the increase in the level of integration in the European Union has positively influenced the economic growth of the community as a whole.

Institutional development is a determinant factor assuring better coordination in economic policies across the Union. Maastricht and Stability and Growth Pact regulating the general framework of the fiscal rules in the European Union has increased economic growth in the community. In such a way, strengthening the institutions of the EU is a key direction in enhancing economic growth.

Hout (2010) points out that security is a crucial precondition to assure favourable economic growth of a country or a region. Despite that overall, the European Union can be viewed as a stable and powerful global economic player, inside the community, there is a range of fragile states characterised by the weaknesses of institutions in dealing with modern social and political tensions. In such a way, the economic dominance of oligarchy, corruption, poverty, interethnic tensions and human rights violations can menace the future growth perspective of the EU.

Gänzle (2012) adds that sustainable development could not be achieved without security and stability within the European Union as well as in the neighbouring regions, including poverty eradication, which is one of the key elements in determining future perspectives of sustainability. In this context, it is in the interest of the European Union to promote stability and poverty eradication in the neighbouring states. Fragile countries are menacing future regional stability and therefore considerably reduce the perspectives of economic development.

Ignatov (2016) underline that the sustainable development of the economy of the European Union can only be achieved through consolidating its energy sector. On one hand, it is necessary to develop renewable energy–generating capacities; nevertheless, the role of traditional energy supplies should not be neglected. It is imperative to rationalise their use and

increase the economic productivity. Moreover, the European Union, alongside with the Eastern Partnership, should build up unique energy infrastructure and minimise the influence and monopolistic position of the Russian Federation in the regional energy market. In this way, energy stability can be reached through larger integration of the neighbouring EU states into the common energy framework. This fact allows more active coordination of efforts and expanded economic growth potential.

The idea is developed and broadened by Sirbu et al. (2017), who specify that the European Union has developed various strategies on promoting sustainable economic development through increasing the efficiency of its energy capacities. Despite the criticism, the research has identified that the EU policies had favourably influenced its energy sustainability. Considering the fact that EU as a whole is the largest economy on the planet, moving it to sustainable energy requires titanic effort and huge investments. Nevertheless, the right steps have been undertaken, and the first positive results have been reported.

Apergis et al. (2010) conclude that cheaper and more accessible energy is the key to sustainable development. In the short run, nuclear-generated power can reduce the pressure upon the environment, yet in the long run, its effects are unpredictable. At the same time, in the short run, renewable power tends to be economically nonjustifiable; nevertheless, long-term advantages are considerable. The key to overcoming energy deficits relies not only in developing generating power but also in enhancing storage capacities and distribution.

Lee and Brahmasrene (2013) say that entrepreneurship is the driving force of economic growth in the European Union. Within the European Union's business sector, a strategic role is played by the touristic industry, which is a determinant factor of the economic growth of the community. A particular feature of the tourism industry is the fact that it is dominated by SMEs. Moreover, touristic industry is the key to European economic sustainability since it is inversely related with the level of CO2 emissions. Furthermore, the more favourable the development of the touristic industry is, the more attractive is the EU for FDI.

Audretsch (2007) comes also to highlight that entrepreneurship is the key driver of economic growth. It is catalysing the transformation of capital and knowledge resources into economic development. Lack of knowledge and competencies, as well as excessive regulation, could be regarded as barriers which impede knowledge commercialisation and therefore favourable economic spillovers of entrepreneurship. Contrarily, the role of regulation is to create favourable conditions in which entrepreneurial competencies are stimulated and bureaucracy is limited. Thus, for the entrepreneurship to be efficient, regulation should be a filter and not a barrier.

Millán et al. (2014) identify that entrepreneurship is the driving force which can help the European Union overpass the present and future challenges. Policies promoted should encourage entrepreneurial persistence and minimise the costs of entering business and operating and activating, as well as exiting, the business. Particular attention should be offered for entrepreneurs who enter business from being unemployed since in this area, persistence is lower compared with the overall entrepreneurial survival. Thus, European policymakers should provide a balanced business environment which is flexible and competition-oriented.

At the same time, it should be underlined that according to Liñán and Fernandez-Serrano (2014), culture determines the level of entrepreneurial activity within a society and therefore its economic performance and income. Although the European Union tends to level the economic differences through specifically designed policies, including the cohesion policy, the cultural peculiarities make it difficult to reach similar results for all countries. Besides culture, geographical position is also influencing countries' economic success.

In conclusion, despite all the differences, the European Union in general tends to rely more on autonomy and egalitarianism than on embeddedness and hierarchy. Moreover, Central and Northern Europe are closer to this general European image, whilst English-speaking states, Eastern Europe and the Mediterranean have their own distinguishable characteristics. In such a way, entrepreneurial behaviour varies, as well as the

attitudes, towards economic sustainability and quality of economic growth.

Rosenbusch et al. (2013) consider that the external environment is determinative in motivating entrepreneurs to undertake certain activities related to risk, including innovation. Specific external economic and environmental settings motivate firms to use one or another tool to foster their adaptability to new conditions to achieve above-average business performance. The entrepreneurial environment's munificence, hostility, dynamism and complexity determine for firms which steps should be undertaken to satisfy stakeholders' interests, maximising social benefits. Moreover, government involvement in business, particularly in the high-technology area, is pointless. Thus, Grilli and Murtinu (2014) state that the European Union established several governments and managed venture capital funds. These aimed at boosting EU's economic competitiveness through increasing the community's innovation and entrepreneurial capacities. They also have been directed towards stimulating the sales and employee competencies of the European Union high-tech firms.

The analysis performed highlighted that the initiative had little effects as compared with the expected impact. At the same time, independent venture capital funds demonstrated a favourable and relevant impact on firms' economic performance. Moreover, the favourable effects are also reported by both types of investors, however, only when syndicated funding is led by private funds. Thus, it has been concluded that governmental control over venture capital is rather ineffective.

Copeland and James (2014) mark that the European Union delayed economic reforms in 2009, worsening the overall community's competitiveness. Europe 2020 strategy has been influenced by two major factors—sovereign debt crisis and politics stream. In this context, entrepreneurship has been prioritised, and the changes in the policies created major economic opportunities for the business environment. At the same time, Croce et al. (2013) determine that high-technology industries play an important role in the development of European capital productivity. Although venture capital investments do not bring

the expected impact in the short run, they are decisive in the long run. It is necessary to underline that an important driving force for investors to finance venture-related activities is the value added which can be reached. At the same time, it should be highlighted that productivity and value-added growth must be regarded separately since they do not always match.

Furthermore, according to Varis and Littunen (2010), to be successful when introducing a new product or innovation on a market, it is necessary to consider the use of information dissemination channels. Moreover, the launch of new products or market innovations is associated with firms' development and growth. Nevertheless, it should be considered that entrepreneurial innovation activity is not always oriented towards increasing firms' profitability, particularly in the short term. Furthermore, in the process of developing new products and processes, firms should consider regular competencies' re-actualisation to keep up with the changing environment. In this condition, sustainability should be rationalised and economically justifiable.

Entrepreneurship depends on various factors, including education, macroeconomic environment, country's policies and others. Nevertheless, one of the most important determinants of country's business success is the dominant culture within the society, which is either socially supportive or performance-based culture. It should be underlined that each type has its own economic stimulating and limiting factors. However, overall, it can be specified that socially supportive entrepreneurship is rather stimulated by the supply side and performance-based entrepreneurship by the demand side (Stephan and Uhlaner 2010).

Moreover, Provasnek et al. (2017) highlight that although the sustainable corporate entrepreneurship is in its incipient stage, its importance is increasing. Developing sustainable strategies help entrepreneurs in creating a favourable image, bringing multiple advantages for the company. Nevertheless, presently being sustainable can reduce short term a company's competitiveness; therefore, it is the task of the government to stimulate clean businesses to grow and flourish. Furthermore, Lumpkin et al. (2010) mention that successful entrepreneurship should prioritise long-term strategic goals over short-term mercantile

interests. This fact is valid both for large corporations and for SMEs, which often are represented by family-owned business.

Nevertheless, short-term entrepreneurial objectives must not be neglected since they assure day-to-day business performance. Usually, long-term goals are composed of areas related to innovativeness, proactiveness and autonomy, whilst short-term objectives involve risk-taking and competitive aggressiveness. Overall, a favourable economic performance is achieved through providing an efficient business environment which should be dynamic to stimulate competition but at the same time with clear and predicable environmental conditions to foster long-term innovation.

Considering the framework offered by the literature studied previously, it is also imperative to mention that for Olaru et al. (2010), the maturity of management quality is an important part of the general economic success of a country. SMEs in this regard often lack professional managerial competencies which can improve business productivity. Therefore, the government should stimulate a business environment which is transparent and relatively accessible from the point of view of regulation. The process of evaluating and monitoring the performance of SMEs' management at the governmental level should be efficient without burdensome procedures.

Furthermore, Perkmann (2002) say that cross-border cooperation is a significant pillar supporting entrepreneurship. The main task of European policymakers is to stimulate interregional cooperation since it allows the business environment to become uniform and thus create larger and more competitive markets. Supranational, regional and national authorities should work in this direction as it is a cornerstone of European economic success.

By analysing the previously mentioned literature, several ideas can be underlined. First, entrepreneurship is the driving force of the economic development in the European Union. External factors influencing business activity across the community, including legislative framework, level of security and stability, as well as transparency, are decisive in motivating people to undertake entrepreneurial activities. At the same time, it should be remembered that cultural environment is a key determinant in stimulating the environment; therefore, legislation across

the Union shall have a certain degree of flexibility. Yet the universal principles of doing business should be equally protected within each member state; thus, entrepreneurs from Romania or Bulgaria must benefit from the same quality of justice of administration as, for instance, businesses do in Germany and Sweden.

Second, to provide general sustainability of the European economy, the government of the community at the supranational and national level should direct efforts in providing cheap, accessible and nonpolluting energy.

Finally, favourable conditions must be created for the business to innovate and invest in productivity growth to be able to tackle the pressure from external competitors, that is, China, the USA, South Korea, the Russian Federation and others.

The present research comes with a synthesis of the role of entrepreneurship in the economic development of the European Union considering the issues of sustainability as well as underlining which conditions should be respected to boost economic competitiveness and innovation. In short, this paper highlights the steps the European Union has made in promoting economic development, considering modern-day social, economic and environmental challenges.

METHODOLOGY

The present research is based on both qualitative and quantitative methods of analysis. This double approach is aimed to raise the accuracy of the results obtained and therefore increase the scientific relevance of the conclusions reached. Qualitative assessment is applied to overview the main European Union initiatives to enhance entrepreneurship, innovation and sustainable development. In this way, the provisions of the main European level development strategies and their key characteristics are analysed. Consequently, the most important features shaping the economic development framework in the European Union both at the national and supranational levels are identified. Furthermore, there are described particular sustainability and economic goals which should be realised to provide the countries of the European Union increased competitiveness and capacity.

Likewise, these areas are covered considering the issues related to social welfare and social-oriented marker economy, the principles widely promoted in the European Union.

Quantitative methodology is applied to evaluate the entrepreneurial performance of the European Union in general and of the member states in particular. The business efficiency is analysed considering several indicators of sustainable economic development. Thus, entrepreneurial performance is investigated through assessing the EU countries' business competitiveness reflected by per capita R & D expenditure made by the business sector of the EU countries. Afterwards, general economic competitiveness and growth potential is analysed by assessing the evolution of the intra- and extra-European per capita exports. In such a way, it is possible to identify the effects of integration upon internal and external economic competitiveness of the member states.

Moreover, the real GDP per capita growth, EUR per inhabitant in chain-linked volumes (2010), is determined. This fact makes it possible to assess the real change in the socio-economic performance of the EU states within the last decade. Furthermore, there are assessed resource productivity (euro per kilogram, chain-linked volumes [2010]) and energy productivity (euro per kilogram of oil equivalent). In addition, the share of renewable energy in gross final energy consumption is analysed. Thus, these three indicators provide a general view of the evolution of the European Union's sustainability performance. In such a way, all the indicators which were quantitatively assessed describe the performance of the European Union in general and in particular of the member states in terms of entrepreneurship, innovation, economic competitiveness and sustainability.

Finally, correlation coefficient is calculated between business R & D expenditure and the examined indicators, that is, intra- and extra-European per capita exports, real GDP per capita growth, resource productivity, energy productivity and share of renewable energy in gross final energy consumption. Consequently, the interdependence between the EU countries' entrepreneurship and business performance and the selected indicators of socio-economic development is investigated.

Furthermore, the most important socio-geographic variables determining the countries' entrepreneurial and innovation performances are identified. They are reflected through the venture capital and private equity country attractiveness index, which covers various aspects such as economic strength, complexity of capital markets, tax efficiency and investor protection. It also marks the influence of socio-geographic variables upon the business attractiveness of countries comprising the human and social environment, institutional strength, entrepreneurial culture, risk aversion, business opportunities (including population density, resources), environment quality and innovation capacities. Thus, countries having higher rankings and scores are viewed as having stronger business potential to foster sustainable development of the economy.

As a result, it can be identified whether there is a connection between EU entrepreneurship and countries' sustainable development perspectives. If the connection is strong, then European Union policymakers should prioritise entrepreneurship as the main driver of sustainability, motivating business to increase the performance of their activities and minimise bureaucratic interferences in the socio-economic processes.

RESULTS

Overview of the Main European Initiatives to Enhance Entrepreneurship, Innovation and Sustainable Development

In the first decade of the 21st century, it has become clear that the European Union countries must change development priorities to adapt to the new global conditions as well as to tackle internal challenges. Thus, Europe 2020 has emerged as the main document of the European Union in which it has been settled the main development directives to be realised within the period of 2010–2020. The strategy came to reinforce the leadership of the European Union in terms of social equity and environmental protection, aiming to promote smart, sustainable and inclusive growth. It should be underlined that Europe 2020 follows the Lisbon Strategy (2000–2010) and has considered the errors made in the previous generation. In such a way, enhanced cooperation

between the supranational bodies of the EU and national governments became a cornerstone of the overall expected success.

Europe 2020 has seven flagship initiatives which are directed towards bringing the European Union empowered economic activity, lower unemployment and, as a result, higher economic competitiveness. These initiatives are Innovation Union, Youth on the Move, a digital agenda for Europe, an agenda for a resource-efficient Europe, an industrial policy for the globalisation era, an agenda for new skills and jobs and a European platform against poverty. As it can be observed from the names of the initiatives, they aim at boosting the main economic drivers of competitiveness, including entrepreneurship, innovation, technological literacy and sustainability of human activities. Overall, Europe 2020 brings new perspectives to the socio-economic integration amongst countries by stimulating the development and standardisation of a unique European entrepreneurial environment. In other words, it is oriented towards offering the same opportunities in terms of legislative framework and regulation for the population all across the Union.

Thus, the values and principles of social market economy were strengthened, stressing the importance of environmental protection. To be more specific, Europe 2020 is directed towards reaching the following objectives: employment (75% of people aged 20–64 to be in work), research and development (at least 3% of GDP to be spent on R & D), climate change and energy (20% increase in the energy efficiency and in the share of renewable energy in the total consumption balance), education (lowering school leaving rate below 10% and at least 40% of people aged 30–34 having full higher education) and poverty and social exclusion (to decrease the number of people at risk of poverty and social exclusion with at least 20 million) (European Commission 2018).

In 2014–2015, the European Commission (2018) performed an analysis of Europe 2020 and its suitability to realise the proposed objectives. The review made, the conclusions reached and the discussions which followed showed that this strategy is still relevant to stimulate sustainable development of the European Union through the promotion of job creation and growth. In such a way, until 2020, the Europe 2020 strategy remains the

main act in coordinating the European Union's efforts in boosting its economic competitiveness, considering the issues related to social equity and environmental protection.

Entrepreneurship 2020, an initiative of the European Union, aimed to boost business activity within the community. The key idea behind this initiative regards the necessity to motivate entrepreneurs to develop efficient businesses to provide the rest of the population with jobs. Entrepreneurship 2020 is composed of three dimensions of immediate intervention, including the provision of proper business education to the population, optimisation of administrative and bureaucratic barriers and reignition of the business culture in the EU member states. It is necessary to underline that the strategy is developed within the framework of competitiveness and industrial policy of the European Union. At the same time, it should be mentioned that the action plan developed on the base of this strategy considers the provisions of Small Business Act. In such a way, the pack of actions aims at boosting entrepreneurial activity within the citizens of the European Union through easing regulatory burden by establishing clearer and more transparent rules.

Furthermore, the strategy fosters the access of business, especially of SMEs and start-ups, to cheap financial resources and enhances their internationalisation opportunities. Therefore, the European decision-making factors intend to create a more liberalised market for developing business, providing equal opportunities for entrepreneurs from each member state. The roles which the EU supranational bodies, as well as national governments, assume in the framework of this strategy are oriented towards increasing the quality of the business environment, for instance, making more efficient intellectual property protection or corporate social responsibility. Thus, overall, they have to promote a more competitive environment for business activities in the European Union.

Horizon 2020 is one of the main strategic initiatives of the European Union directed towards increasing the competitiveness of community's research and technological capacities. It is necessary to underline that Horizon 2020 represents the eighth generation of the Framework Programmes for Research

and Technological Development. The first generation of the programme started in 1984 and was allocated a budget of 3.8 billion of EUR equivalent. As the interest of the European Union has considerably grown in this area, so did the financial resources allocated. Thus, Horizon 2020 was offered funding of EUR 80 billion for the period of 2014–2020, whilst the prior generation was allocated 53.2 billion. It can be remarked that the sixth generation was directed only 16.3 billion. Consequently, it can be remarked that from 2002 to 2014, the funding for the EU Framework Programmes for Research and Technological Development has increased five times. This fact underlines that the European Union has established as a determinative priority to reinforce its technological capacities to be able to compete on the global arena with the superpowers, that is, the United States of America and China as well as other economies, including South Korea, Japan, Brazil or India.

Horizon 2020 is the financing instrument implied to realise the other EU strategies, including several initiatives of Europe 2020 related to research and technological development. In this regard, it should be mentioned that through the framework of the Horizon 2020, the European environmental research and innovation policy is realised. In this way, it is stressed that sustainability is one of the main cornerstones of the future economic development of the European Union.

Generally, Horizon 2020 has three pillars determining the main areas of interests, including excellent science, industrial leadership and societal challenges. In such a way, the European Union is aiming to comprehensively tackle the issues related to technological development and research, investing in raising the quality of scientific research and improving its commercialisation opportunities as well as economic applicability. Furthermore, research and technological outputs obtained with the support of Horizon financing are aimed at solving present and future environmental and societal challenges.

Concluding this section, it is necessary to underline that the political, economic and scientific elites of the European Union understood that the community is losing positions in the global economic competition. Moreover, modern challenges such as

climate change, environmental degradation, water shortage, global warming and energy crisis determined the European elites to react. Thus, stimulation of entrepreneurship and innovation aim to boost the economic competitiveness of the European Union countries, considering the sustainability issues. In this framework, the key to European development is entrepreneurship or the organised efforts of individuals to combine available resources to obtain a certain benefit. Thus, the main task of policymakers is to provide additional initiatives for business to become more viable to support further growth, offer jobs and innovate.

Business Competitiveness of the European Union Countries

Per capita R & D expenditure made by the business sector has been selected as an indicator showing the competitiveness level of the EU countries' entrepreneurial environment. This indicator reflects the stock of knowledge present in a certain society and the efficiency this knowledge is involved in the creation of new added value. In such a way, the higher is the per capita research and development investments, the larger is the contribution of a society made to enhance innovation, technological development and productivity. Thus, countries with a more competitive and powerful business sector are characterised by higher per capita business R & D expenditures.

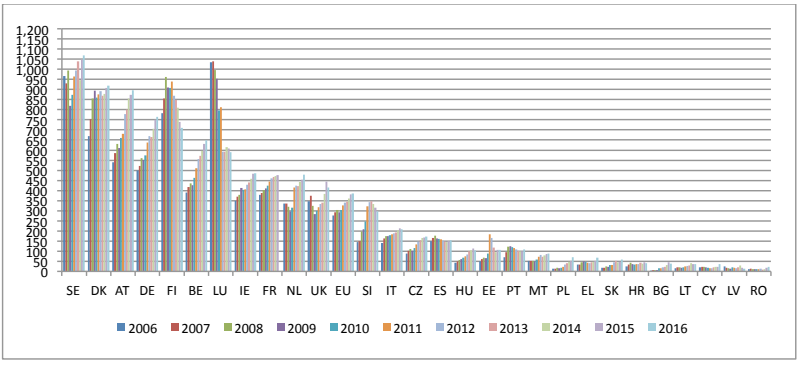
By examining Figure 1, the best-performing EU countries in terms of entrepreneurial competitiveness, as well as their registered dynamics, can be identified. Accordingly, the EU states with highest business research and development spending (for 2016) are Sweden, Denmark, Austria, Germany and Finland. Moreover, it should be underlined that within the period 2006–2016, the mentioned states have increased the spending. Finland and Luxembourg, in this regard, are exceptions. It is necessary to remark that the overall European Union's level of business research development expenditures has constantly grown within the researched period as to reach 386 EUR per capita in 2016.

The least-performing countries are Romania, Latvia, Lithuania, Bulgaria and Croatia. These countries' business competitiveness is relatively low since the function ability of

their market economy mechanisms is weaker, former communist past influencing negatively the entrepreneurial capacities of the population. However, Slovenia, Czech Republic and Estonia succeeded in reaching a relatively high level of business competitiveness, being closest to the EU average amongst former communist EU states (Figure 1). At the same time, it can be remarked that the discrepancy in terms of entrepreneurship between the leading EU nations and out siding ones is huge. This fact is signalling about the poor performance of entrepreneurial policies which have been promoted within the period of 2006–2016.

In these conditions, the application of the principles of social market economy in the countries with weak entrepreneurial activity is improper. Instead, the governments, as well as the supranational European Union bodies, should focus on boosting entrepreneurship through liberal policies. In this regard, it can be mentioned the instance of Estonia, which relied in a greater extent on liberal market principles than the other former communist EU nations and reported more favourable results in terms of entrepreneurial activity (Ignatov 2017).

Figure 1: Per capita R & D expenditure made by the business sector of the EU countries expressed in EUR



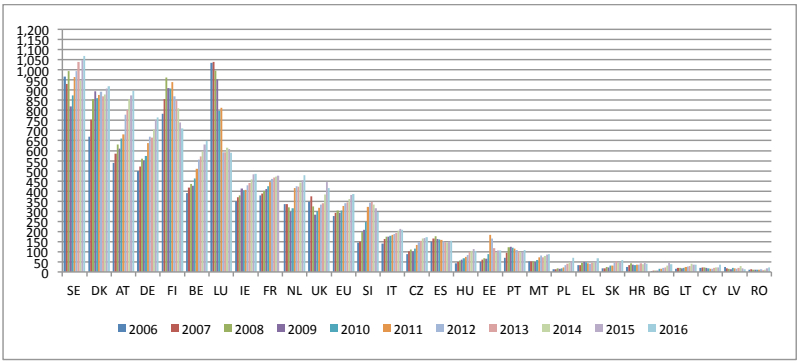
Source: Eurostat, indicator's code [rd_e_gerdtot].

By analysing the intra- and extra-European Union per capita exports, the effect of the overall entrepreneurial efficiency of a country upon its general economic competitiveness can be concluded. The first indicator assessed is the intra-European per capita exports, million EUR (Figure 2), which informs about business efficiency in the context of the European Union. In such a way, by 2016, the most economically competitive nations were the Netherlands, Belgium, Luxembourg, Ireland and Czech Republic. Surprisingly, Germany, Italy and France register relatively average results. Therefore, the idea that these countries benefit the most from European integration is rather incorrect since their intra-EU per capita exports are closer to EU average than to top 5. The least-performing countries are Greece, Cyprus, Croatia, Romania and Bulgaria. It is important to mention the UK, which also registered relatively low results.

If for the first countries, it can be mentioned that the business environment is weak, and therefore, the states are less competitive than the results of the UK, which are justified by the fact that the economy is equally connected to the former colonial possessions, that is, India, as well as by the specific characteristics of its economy. At the same time, considering the dynamics, it can be underlined that the vast majority of the EU countries have registered growth, including Czech Republic and the Netherlands; however, there are few exceptions, that is, Sweden. Thus, it can be observed that the general intra-EU per capita exports have increased within the period.

In such a way, it can be concluded that the integration of the countries has offered more opportunities for the business and therefore strengthened the countries' economic competitiveness.

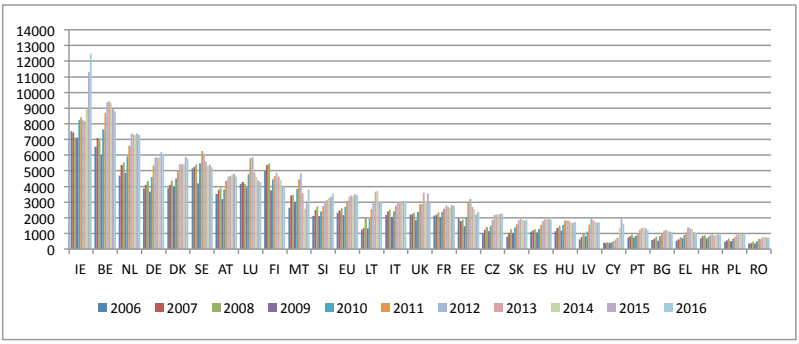
Figure 2: The intra-European per capita exports expressed in EUR



Source: Eurostat, indicator's code [ext_lt_intratrd] & [tps00001]

The extra-European per capita exports are indented to show how the integration of the countries under the European Union has affected their capacities to face external competition. Considering the information presented in Figure 3, it can be underlined that the dynamics at the general level of the European Union are favourable since the extra-European per capita exports have increased from almost 2,470 EUR in 2007 to 3,400 EUR in 2016. Amongst the European Union countries, the greatest growth was registered by Ireland, the Netherlands, Germany and Denmark. In the case of Germany, European integration enhanced its business competitiveness, making the economy of this country highly efficient. Considering that by 2016, its intra-European exports reached 8,500 EUR per capita and extra-European by 6,100 EUR, reporting these indicators to the population of more than 80 million inhabitants, then it can be inferred that the wide access of German entrepreneurs on the EU market allowed an increase in business efficiency and, as a result, external competitiveness.

Figure 3: The extra-European per capita exports expressed in EUR



Source: Eurostat, indicator's code [ext_lt_extratrd] & [tps00001]

Evolution of the Socio-Economic Performance of the European Union Countries

The real economic growth of the European Union in the last decade was rather weak (Figure 4). Thus, within 2006–2016, the real GDP per capita has increased from 25,6 thousand EUR to only 27 thousand EUR in 2016. This fact reflects the stagnation of the European Union's economy, which had a real growth of 5.4% during this time. Many countries from the community have recorded a fall of real GDP per capita, including Greece, Italy, Portugal and Spain.

In these particular cases, the decrease is determined by the heavy sovereign debt the states have incurred, which undermined entrepreneurship, innovation and investments. The social market model which these countries promoted caused the reduction of the entrepreneurial activity and therefore of overall economic competitiveness. Other important economies of the European Union, including France, Belgium and Austria, reported modest growth, highlighting the idea that the excessive social spending these states made caused business stagnation.

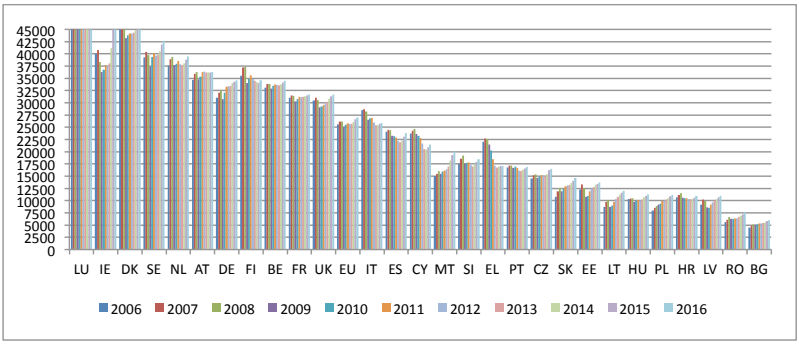
Another point worth mentioning regards the former communist nations which integrated into the European Union in 2004 and 2007. Despite the fact that all the nations registered growth in this period, the increase is insufficient to minimise the development gap present in the European Union between the Western and Eastern nations. Thus, during 2006 and 2016,

few steps have been made by the European Union states in reducing economic differences amongst the states. Furthermore, to improve the situation of the Eastern EU countries, it is necessary to reframe the present economic policies promoted in these states as well as the European Union priorities in the region. As a result, several causes of economic stagnation of the European Union, including excessive regulation, extensive bureaucracy and slow decision-making process, can be underlined.

Moreover, depending on the country, other problems hamper the development, that is, corruption, immigration or emigration, social environment degradation and erosion of entrepreneurial culture. Therefore, the excessive attention paid by the national and supranational EU decision-making factors to issues related to social equity, considering the social market economic principles, brought the European Union in a crisis of entrepreneurship, especially including SMEs. Since the EU is not a uniform structure, this inference is more or less valid for a particular country.

Considering these ideas, entrepreneurship should be offered more support at each level of EU and national governments. The support offered proved to weakly help reignite entrepreneurship, and therefore, a deeper and more comprehensive legislative approach is required to minimise the cost of business in terms of time, money and other resources.

*Figure 4: Real GDP per capita, EUR per inhabitant, chain-linked volumes (2010)**

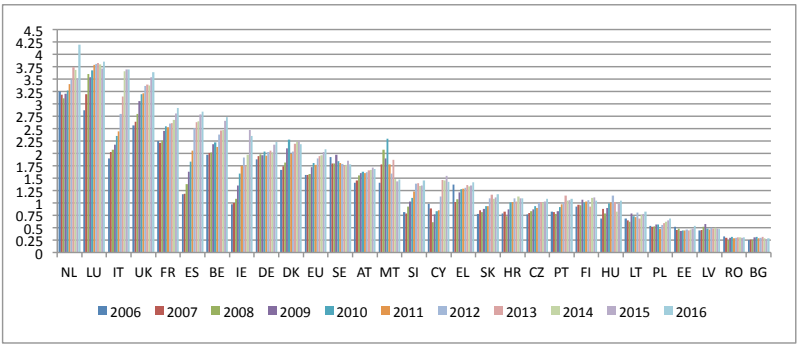


Source: Eurostat, indicator's code [sdg_08_10]
*Note: Several EU countries have registered real GDP per capita of more than 45,000 EUR

One of the main indicators reflecting sustainability is resource productivity, which is calculated as the ration between GDP divided by domestic material consumption, which is the totality of all materials directly used by an economy. Overall, the European Union has recorded growth of its resource productivity. Thus, in 2006, it was 1.5 EUR per kilogram, whilst in 2016, it reached almost 2.1 EUR (Figure 5). The most performant economies in terms of resource productivity are the Netherlands, Luxembourg, Italy and the UK, whilst Bulgaria, Romania, Latvia and Estonia are the least productive (Figure 5). At the same time, it is important to remark the dynamics by country.

Consequently, the highest growth of resource productivity was registered by Spain, Ireland and Italy. Romania and Sweden are the only states from the European Union whose resource productivity was higher in 2006 than in 2016. In general, resource productivity in the European Union has grown to 32%. Therefore, it is necessary to underline the idea that the efforts undertaken by the EU, as well as most of the national governments, increased the sustainability of the European Union's economy.

Figure 5: Resource productivity and domestic material consumption, euro per kilogram, chain-linked volumes (2010)

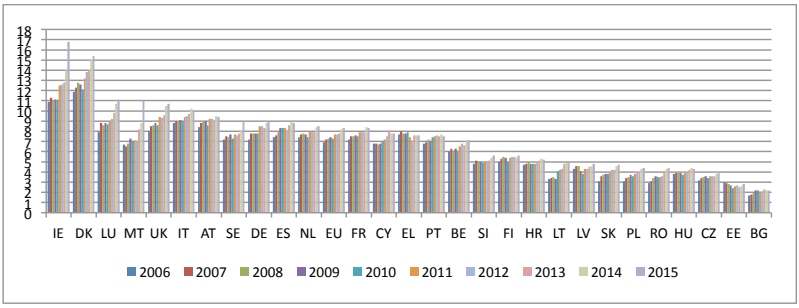


Source: Eurostat, indicator's code [sdg_12_20]

Another indicator showing economic sustainability is energy productivity (Figure 6). Within the researched period, energy productivity has increased at the level of the European Union to 20%. The most efficient countries in terms of energy productivity by 2015 were Ireland, Denmark, Luxembourg, Malta and the UK, whilst the least performing were Hungary, Czech Republic, Estonia and Bulgaria. Despite the modest overall growth in energy productivity, several countries from the European Union registered impressive results. These countries are Malta, Ireland, Romania, Slovakia and Lithuania, whose energy productivity within the period of 2006–2015 has grown to more than 48%. At the same time, for Poland, Luxembourg, the UK, Denmark, Bulgaria, Sweden and Czech Republic, the energy productivity increased to at least 25%. Estonia and Greece are the only European Union nations whose energy productivity has dropped. The rest of the states registered a modest rise of this indicator (Figure 6).

The rise in energy productivity is one of the most important signals showing the growth of the countries' economic sustainability since fewer fuel supplies would be involved in the production and distribution of at least same quantity of goods and services. To draw relevant conclusions, energy productivity should be analysed considering the state geographical conditions. Thus, for the countries from the Northern Europe and regions with low temperatures in the winter, energy productivity will be lower since important resources are directed towards heating up houses and social and economic infrastructure. In this regard, temperature fluctuations should be paid attention to, to minimise their effect a larger portion of time has been addressed. Romania and Poland, as well as Slovakia and Lithuania, have favourable evolutions in terms of energy productivity.

Figure 6: Energy productivity, euro per kilogram of oil equivalent

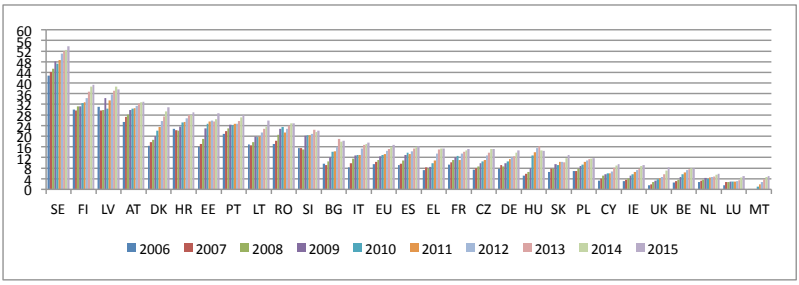


Source: Eurostat, indicator's code [sdg_07_30]

The European Union succeeded in developing important renewable energy–generating capacities. Thus, according to Figure 7, within the period of 2006–2015, the share of renewable energy in gross final energy consumption has grown from 9.5% to 16.7%. This achievement is a direct result of the national and European level policies which were promoted within the period. The countries leading in terms of renewable energy are Sweden, Finland, Latvia, Austria, Denmark and Croatia. Very close in position to these countries are Estonia, Lithuania and Romania. The least-performing European Union states in this regard are the UK, Belgium, Netherlands, Luxembourg and Malta.

At the same time, it is necessary to mention that all the countries registered positive dynamics. The countries which had registered the largest increase are Denmark (14.5%), Estonia (12.5%), Sweden (11.2%), Hungary and Italy (9%). In such a way, it can be remarked a powerful development of the European renewable energy–generating capacities. If the present tendency is followed, then this sector will expand and provide the European Union's citizens with clean and nonpolluting energy, a key to sustainability.

Figure 7: Share of renewable energy in gross final energy consumption in %



Source: Eurostat, indicator's code [sdg_07_40]

Calculation of Correlation Coefficient Between per Capita R & D Expenditure Made by the Business Sector and Several Indicators of Sustainable Economic Development (Annex 1)

Research and development expenditure of the business sector is a relevant indicator expressing the level of entrepreneurial competitiveness of a country. Thus, the higher is the spending, the more the business is oriented towards engaging in innovation-related activities aimed at boosting its economic efficiency. By calculating the correlation coefficient between the per capita R & D expenditure made by the EU countries' business sector and several relevant indicators of sustainable economic development, it can be assessed which is the relation between entrepreneurship and sustainability of economic activities.

As it can be observed in Annex 1, the vast majority of the countries register strong positive correlations between the indicators classified under the letters A, B, C, D, E, F and G. A strong correlation is identified by the light grey colour of the cells, which dominates the table. It can be observed that the countries whose entrepreneurship eroded because of worsening business climate, that is, Greece, Portugal, Cyprus, Spain, Latvia and Luxembourg, record negative or no correlation for almost all indicators examined. This fact underlines that business does not bring the expected impact upon sustainable economic development. This situation occurred as a result of decreasing entrepreneurship.

At the same time, it is necessary to mention the case of Finland, a Northern European country which faced also decline of entrepreneurial competitiveness in the researched period (Figure 1), and as a result, its sustainable economic development rather was driven by other factors, including government support. For the rest of the European Union states, entrepreneurship is closely linked to sustainability and economic development. In such a way, the European Union's national and supranational authorities should consider efforts to reinforce business culture to boost economic competitiveness without increasing the pressure upon the environment. Some of the measures include reduction of bureaucracy and simplification of regulative environment.

Socio-geographic Variables Influencing the European Union Countries' Individual Entrepreneurial and Innovation Performances

The European Union is a heterogeneous structure comprising 28 nations of different development levels, economic and social priorities and geographical context. The variety of factors inevitably influences the countries' individual entrepreneurial and innovation performances. Moreover, they determine the character of economic activities and the framework through which sustainable development is promoted. Accordingly, the present research identifies the following socio-geographic factors as inevitably determining the EU states' sustainable economic development: population density, historical context, vicinity and location and dominant culture.

Consequently, the regions registering higher population density have increased perspectives to progress since they report several advantages, that is, larger human capital and resources, stronger economic activity and value-added creation, higher cost efficiency, more intensive technology orientation and public services. It is important to mention that these advantages are valid only in the conditions of developed infrastructure and institutions, which can assure advanced living standards to the population.

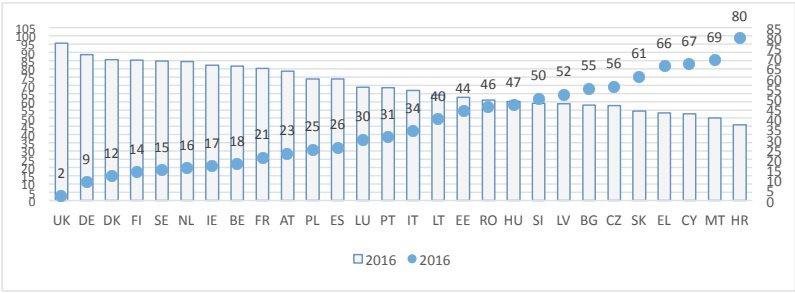
Historical context is another important factor affecting the business and innovation performance of the EU countries. This

defines the inheritance of nations, that is, tangible (infrastructure, buildings, industrial facilities and touristic attractions) and intangible (institutions and the principles they function). Thus, it can be mentioned that there is an important difference between the Western and Eastern EU, the first inheriting stronger infrastructure and more developed infrastructure. This is a direct consequence of the past, the West being influenced by capitalist whilst the East by communist.

Vicinity and location is also a determinative factor marking the success of countries in pursuing sustainable economic development. Thus, it can be highlighted that it is more advantageous to have wealthier and more stable neighbours, contributing to higher economic growth and development. Dominant culture is another important factor marking the development and sustainability of countries. It determines the values which are prevailing, including the risk aversion, an important element of entrepreneurship and innovation. The lower is the risk aversion, the higher is the entrepreneurial orientation of the nation since business and uncertainty are strongly interconnected.

Figure 8 shows the global rankings of the European Union countries in terms of entrepreneurial and innovation attractiveness with stronger potential to support higher sustainable economic development. The UK and Germany are the leading countries of the EU with strongest business competitiveness, opportunities, economic sustainability and innovation capacities. They are followed by Denmark, Finland, Sweden and the Netherlands. The most vulnerable countries are Greece, Malta, Cyprus and Croatia.

Figure 8: The Global Venture Capital and Private Equity Country Attractiveness Index, 2016



Source: IESE Business School, University of Navarra & EM Lyon Business School (2016).

CONCLUSION

The present research concludes that the present economic model chosen by the European Union policymakers, namely, the social market one, is rather slowing down economic growth within the community. As it was demonstrated, entrepreneurship is a driving force of sustainable economic development in the vast majority of the European Union countries. Despite the fact that in the period of 2006–2016, business activity and its competitiveness increased on average in the European Union, it was insufficient to assure quick recovery from the crisis and provide stable and viable economic growth.

The main factors undermining economic progress in the European Union were related to eroding the business environment. Depending on the country, these factors include high bureaucratic pressure, declining social environment, high level of corruption, complex business regulation, inefficient social protection mechanisms and so on. In these conditions, the cost of entering, developing or exiting the business went up, demotivating people to engage in business. Or in other words, poor growth in terms of entrepreneurship in most of the European Union states was determined by the high cost of failure. This fact is closely linked to the present social market economic model widely promoted by the policymakers.

In such a way, the wide European and national-level government support provided through various programmes and mechanisms to the business sector is not bringing the expected impact since entrepreneurship is not depending only on financing but also on a wide variety of social conditions and individual characteristics. Moreover, national and supranational government support to business creates market misbalances as market interferences in supporting one or another player determine overall business intensity decline. Furthermore, governmental business support motivates high inefficiency of entrepreneurship since it determines an increased level of financial waste occurring as a result of shadow scheming involving both bureaucratic and business representatives. At the same time, a high level of bureaucratic regulation increases market inflexibility, which in the conditions of raising global competition reduces the overall economic efficiency of the European Union.

Therefore, it is necessary to implement more liberal economic policies both at the level of European Union as well as of national governments to provide increased opportunities for the business sector. As it was demonstrated in the present research, entrepreneurship is capable of accelerating economic growth in a sustainable manner by increasing innovation and overall efficiency. Thus, revitalisation of business activity in the European Union is required to enhance the community's economic competitiveness capacities.

A limiting factor of the present research includes the difficulty in assessing the heterogeneity of the cultural and social environments present in the European Union. Moreover, it can be assessed deeper the impact of specific European Union mechanisms upon increasing the community's entrepreneurial and innovation capacities. At the same time, there is the possibility to specifically determine the EU countries' priorities considering the sustainability of economic activities depending on environmental and social conditions.

Further research opportunities include the identification of mechanisms through which the European Union can reduce bureaucratic pressure and increase administration efficiency. Likewise, the sustainability and economic performance of the

European Union countries by regions can be analysed, offering the possibility to determine more exactly specific economic characteristics. Moreover, the impact of cultural and social environment upon business activity can be assessed.

The present article is addressed to increase the awareness of policymakers and academic community regarding the importance of dynamic entrepreneurship in boosting the economic development of the European Union in a sustainable and innovative way. Furthermore, it underlines the necessity of providing a favourable business environment for the population to motivate people to develop entrepreneurial activities. Finally, it highlights the necessity to promote sustainable business values within the society to empower the economic competitiveness of the EU countries.

ANNEX 1: SUMMARY OF CORRELATIONS

*	A & B	A & C	A & D	A & E	A & F	A & G
EU	0,88	0,94	0,69	0,93	0,97	0,95
BE	0,75	0,90	0,68	0,96	0,92	0,96
BG	0,93	0,74	0,90	0,21	0,61	0,87
CZ	0,97	0,98	0,75	0,95	0,85	0,97
DK	-0,11	0,68	-0,51	0,80	0,61	0,70
DE	0,77	0,96	0,94	0,87	0,96	0,98
EE	0,68	0,91	0,04	-0,22	-0,45	0,67
IE	0,24	0,87	0,66	0,96	0,87	0,97
EL	0,52	0,28	-0,50	0,41	-0,03	0,49
ES	-0,48	-0,64	0,66	-0,65	-0,44	-0,56
FR	0,20	0,93	0,24	0,95	0,92	0,92
HR	0,62	0,64	0,13	0,37	0,76	0,51
IT	0,40	0,87	-0,86	0,93	0,90	0,96
CY	0,65	0,65	-0,25	0,44	0,13	0,32
LV	0,04	-0,04	0,01	-0,40	0,21	0,28
LT	0,86	0,85	0,92	0,53	0,92	0,88
LU	0,84	-0,75	0,24	-0,80	-0,79	-0,75
HU	0,87	0,74	0,55	0,56	0,86	0,88

MT	0,56	0,40	0,85	-0,53	0,69	0,93
NL	0,90	0,92	0,25	0,86	0,83	0,80
AT	0,77	0,93	0,67	0,86	0,85	0,93
PL	0,95	0,87	0,92	0,88	0,94	0,90
PT	-0,17	0,00	0,13	-0,04	0,31	0,27
RO	0,63	0,35	0,74	0,06	0,36	0,23
SI	0,74	0,79	-0,46	0,95	0,48	0,88
SK	0,94	0,94	0,91	0,98	0,88	0,83
FI	-0,04	0,40	0,45	-0,29	0,00	-0,52
SE	0,74	0,58	0,79	-0,58	0,43	0,39
UK	0,36	0,61	0,91	0,41	0,63	0,58

*Note: Correlation calculated among the following indicators:
A) Per capita R & D expenditure made by the business sector
B) Intra-European union exports in million EUR
C) Extra-European union exports in million EUR
D) Real GDP per capita chain-linked volumes (2010), euro per capita
E) Resource productivity euro per kilogram, chain-linked volumes (2010)
F) Energy productivity euro per kilogram of oil equivalent
G) Share of renewable energy in gross final energy consumption

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