Innovative Entrepreneurship Policy- the European Union Case

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Abstract

One of the reasons the western civilisation came to dominate the world was the scientific revolution. It assured the western nations with advanced technologies which stood at the base of conquering the globe. Western Europe was the pioneer in terms of innovation and has hold total domination over this area, alongside with the USA, until the last quarter of the 20th century when Japan, then South Korea and China extended their economic power. Nowadays, the wars and territorial conquests have been replaced by economic and political rivalry. Europe united under the European Union to face the growing economic and technological pressure as to register wider-range competitive boost. Presently, the European Union is paying much attention towards its innovation and entrepreneurial policies in order to create favourable conditions to technological progress and economic development, at the same time keeping the environmental standards high. Thus, the current paper is intended to examine the most relevant innovative entrepreneurship policies promoted by the EU in order to assess their functionality and resistance against growing globalisation. Also, the research plans to assess the effects of innovative entrepreneurship over industrial development, social welfare and regional prosperity.

Key-words: entrepreneurship; innovation; cutting-edge economic development; geriatric economics; social welfare; European integration; sectorial development

JEL: O14; O16; O25; O38; O35

Introduction

Nowadays, innovative entrepreneurship has become a key priority for nations which want to keep up with the fast changing world. The necessity of innovation is highly regarded by various governments which provide initiatives in terms of taxation and resources of different kind as to stimulate technological development as well as the complexity of entrepreneurship. Moreover, it should be underlined the major role of transnational companies in this field, innovation bringing higher business competitiveness. Last but not the least; the SME's role is of soaring significance too. The inter-play of the previously mentioned factors, government, transnational and multinational corporations and SMEs created favourable conditions of establishing entrepreneurial innovation hubs (or nexuses) comprising wide-ranges of human activities starting with financial and banking services and finishing with high-tech manufacturing and ITC.

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The innovative entrepreneurship is of high concern within the business and political elites of the European Union, they pooling considerable financial and human resources in the sector as to assure economic progress. These efforts are supposed to re-enforce the EU's primacy in the domain of high end technology, advanced computing and ICTs as since the late 90's the technological weight of the EU has confined due to the rise of East Asian states, including Japan, South Korea, Singapore, Hong Kong and Taiwan. The EU's weight in the advanced entrepreneurship has diminished even at greater extent due to China's ascension since the late first decade of 21st century. Nevertheless, it is necessary to mention that the European Union, despite of lower pace of tech development, possess a crucial advantage comparing to previously mentioned nations and namely a higher level of societal awareness regarding sustainable economic development and environment quality (CRUDU; IGNATOV, 2016[1]).

The goal of the present paper is to assess the impact of the previous and recent innovation and entrepreneurial policies promoted by the European Union upon the key socio- economic sectors and in special upon the business environment. Also, there will be provided a comprehensive analysis of the prospective innovative entrepreneurial initiatives the EU develops as to keep up with current global trends. Moreover, the paper will consider the EU best entrepreneurial strategies forwarded to keep up with pace of increasing competition from other economically developed regions as well as from emerging one.

1. General overview of geriatric versus the leading edge economic concepts

Nowadays, the global economy faces important structural changes re-formulating the current conceptual framework as well as destroying the established dogmas, the process which is driven through the influence of technology. The paper will introduce for the first time the concept of geriatric economy through which it is defined the old model of oil driven economic system putting high level of pressure upon the environment and essential resources such as water, air and wild-life. The geriatric economy expresses high use of natural resources modifying the global ecosystems and worsening the regional quality of environment. It should be mentioned that the wild-life and landscape affected by the geriatric driven economy would take much time to restore to initial phase. The leading edge economy is opposite to geriatric through which it is defined highly efficient economic mechanisms which recycle almost all the waste minimising the environmental impact at the maximum possible.

2. Defining entrepreneurs, enterprises and innovation as factors of leading edge economy. The Experience of the European Union

According to P. Thornton and K. Flynn entrepreneurship is both the "discovery and exploitation of entrepreneurial opportunities and the creation of new organisation structures which occur as a context dependent socio-economic process" (Thornton and Flynn, 2003). The area of entrepreneurship is comprehensive comprising two main aspects entrepreneur- individual which risks gaining economic advantages and enterprises which are organisations structured according to certain principles and directed towards achieving specific socio-economic goals.

Inevitably, enterprises and entrepreneurs lead to innovation and re-formulation of traditional economic framework. The entrepreneurship is the driving force of economic, social and technological progress due to implementation of new technological processes and knowledge progress into various productive mechanisms. In such a way, the societal wellbeing is taken to a higher level characterises by increased socio-economic welfare of the population. Revising general ideas of Schumpeter, entrepreneurial innovation is the link connecting the two ends and namely the research centres and final consumers, as enterprises realise the potential of new ideas (CUEVAS, 2005). Taking into account the same Schumpeterian ideas, the entrepreneurship can be classified according to its qualitative content starting from stronger to weaker entrepreneurial innovation depending on internal and external environment. In this regard, it be underlined the ideas of O' Kean, 1991 who distributed entrepreneurship according to socio-economic impact including 1) excellent entrepreneurial structure, 2) imitator structure, 3) routine structure and 4)

empty structure. Rationally, it can be expected that excellent entrepreneurial structure with a high level of innovation activity and outcomes provides greater economic growth and socio-economic impact. Yet, besides the innovation activity there are several other factors influencing the productivity of entrepreneurial innovation including personnel, size, quality of established logistic networks and cooperation among various enterprises (CUEVAS, 2005).

Presently, the global economy is facing impressive technological development re-formulating the previous conceptual and systemic framework. These changes are driven under the influence of the technological super-cycle called in economics *Kondratieff waves*. The beginning of the second decade of the 21st century is characterised by the decline of the geriatric economy on which most of modern countries are based and the ascension of new leading edge economy promoted by the innovative entrepreneurship (according to ŠMIHULA (2009) the period of y. 2015-2035 is called the hypothetical wave of the post-informational technological revolution).

Despite the consequences of the World Crisis of y. 2008-2009 and "5 minute" delay in technological development, the European Union is ahead of other global regions in terms of leading edge economy. The main advantages putting its economy as one of the most advanced include: the possibility to trade free across the EU; free circulation of capital and labour; economy stimulating entrepreneurial activities, especially SME; social driven economy and low pressure upon the environment. So, according to the Environment Performance Index (EP) 2016 provided by Yale University, the European Union is present with 9 countries in top 10 and 14 states in top 20 most environmentally friendly economies, the leader being Finland, followed Sweden, Denmark, Slovenia and Spain (Environmental Performance Index 2016). In such a way, it could be underlined that the European Union is developing its economic model minimising the level of negative influence upon the environmental conditions. It is essential for having future favourable prospective of assuring society's wellbeing in terms of sufficient income and qualitative living standards. This fact could be considered as a major achievement of EU's economy and these states' experience could serve as suitable examples of where the human developed economies are in commensalism with environment (CRUDU; IGNATOV, 2016[1]).

3. Main focus of EU entrepreneurship and related innovative issues

The European Union is certainly the best performing global region in terms of balancing the geriatric economy, the society's quality of living and the need to increase economic progress, offering much more priority to the last two directions. In the entrepreneurial field the European countries balanced their policies either stimulating the large enterprises (throughout 70's and early 80's) or stressing the role of SME (late 80's and throughout 90's). The SME certainly are the greatest promoters of economic growth promoting employment and a stable middle class which is the driver of the economy in most countries of the EU (DAHLSTRAND et all, 2010). The European Union has developed a strong sector of SME as followed the late 90's policies which reduced the discrepancy income and created favourable conditions for entrepreneurial development. The concentration on SME, however, had some adverse effects in terms of technological and managerial stagnation. In this regard, the company size is crucial as larger enterprises allows for strong concentration of financial resources and human capital, while the SME are less potent in this regard. Moreover, there are several other issues related to SME including the incertitude in applying specific business models. Furthermore, the company life-cycle for SME tends to shorten, therefore fewer investments will be considered and the role of long term strategies will be diminished (ORTEGA-ARGILÉS and VOIGT, 2009). Thus, the entrepreneurial innovation policy of the European Union in the last 25 years concentrated in strengthening the SME domain.

In this condition, the success of innovative entrepreneurship was defined by the ability of diverse companies to collaborate and develop wide and comprehensive networks capable of transferring technological products and experience.

4. Entrepreneurship environment of the European Union

Due to the specific characteristics and habits, the entrepreneurial spirit across the European Union is distinct compared to the USA and East Asian nations. One major aspect determining the communitarian business environment is a higher degree of rigidity which makes it difficult for EU policy makers in developing more flexible economic models (ORTEGA-ARGILÉS and VOIGT, 2009). The entrepreneurs in the European Union tend to consider risks more than for example US counterparts. In such a way, many European entrepreneurs hesitate to launch their business due to low propensity to risk. Some inferred causes of this tendency are perceived lack of skills or existence of entry or exit barriers. So, the EU policies should tackle these concerns as to propel the EU business spirit (DAHLSTRAND et all, 2010). In this regard, it can be observed that the citizens of the European Union tend to have preference towards being an employee rather than self-employed. So, according to the preference for self-employment provided by OECD (2012), the countries of European Union recorded on average 36.3% preference for men and 26.5% for women, while in the USA these percentages account for 48.8 and 39.6 respectively. In the Popular Republic of China the preference is even higher 52% for men and 51% for women. Nevertheless, it should be underlined that the European Union is ahead of US in terms of self-employed, total (% of total employment) with 16.51% compared to 6.6% in the USA (World Bank, 2014-2013). Unfortunately, there are not any data available for China. So, despite having lower preference for self-employment, the European Union policy framework comes to provide larger opportunities for smaller businesses as compared to the United States. The entrepreneurship policies of the EU created favourable environment for business development promoted through various support systems.

The entrepreneurial across the European Union varies depending on the internal economic policies promoted by the host country. Nevertheless, the general framework of functioning is regulated by the communitarian agreements. These agreements are directed towards solving the specific challenges each country is facing including education which should broaden entrepreneurial knowledge, easy access to finance, issues related to transferring the business to other markets, the punitive effects of sanctions related to business failure and burdensome administrative procedures (European Commission).

According to the ENTREPRENEURSHIP 2020 ACTION PLAN, the European Union is directing efforts towards fostering the business activity through assuring more interconnected and functional communication networks among member countries. The plan is supposed to re-ignite the entrepreneurial spirit within the community which had much to suffer as a result of the World Economic Crisis of y. 2008.

It could seem bizarre but the varying European Union business environment could be viewed as an advantage, as it could be created favourable networks of providing experience from entrepreneurially successful states towards countries with less proficiency in this field. This situation could bring immense growth prospective for the Union as a whole in terms of entrepreneurial activity and economic development. Though, there are several EU countries which meet difficulties in terms of implementing communitarian directives regarding the business climate and its effectiveness. So, according to the Annual Growth Survey 2016 (European Commission), several European countries are to realise fiscal reforms to balance the budgetary deficits, eradicate tax evasion and fraud.

Therefore, it could be underlined that the entrepreneurial policies of the European Union are directed towards reducing the level of unemployment and re-start robust economic growth of the communitarian economy while keeping the public debt under the control. Developing human capital is also of high significance being pivotal part of restoring jobs. As it has been remarked by the EU commission, 20% of working age population has only basic literacy and numeracy skills, at the same time 39% finding problems in employing people with necessary knowledge and abilities. These issues have accentuated as a result of the crisis, as well as due to growing pressure from the digitalisation global trend (EU Commission, Annual Growth Survey 2016).

The key-directions of the European Union regarding the re-thinking of the business environment takes into consideration the following areas including the mobilisation of private and public investments through assuring right regulatory framework (at the national and EU) and funding through the Investment Plan for Europe. Another direction will be followed in the area of pursuing structural reforms to modernise our economies through effective coordination of productivity related issues and propelling of EU convergence. The business environment is to balance right considerations of flexibility and worker security as to have increased social performance. Besides the responsible fiscal policies, the national governments of the EU as well as the communitarian institutions are to promote the innovation and technological development in order to face the growing outbound competitions and external economic pressures, including from the Russian Federation in the East European countries (IGNATOV, 2016).

5. Innovation policy of the European Union in the field of entrepreneurship

According to Entrepreneurship 2020 Action Plan (European Commission), the main goal of the EU policies is to encourage productivity, employment and business spirit. Nevertheless, it also states the necessity of building new collaborative networks between businesses and research and development facilities in order to propel the implementation of innovation at larger scale. The plan consists of three pillars. Firstly, the European Union aims to provide entrepreneurial education and training to support growth and business creation. Secondly, it is targeted the right environment for business activity in terms of financing, authorities' support and simplified procedures. The third pillars aims at fostering the comprehensiveness of business. The innovative part of this directing document is covered in the pillar 2, where the EU targets the unleashing new business opportunities in the digitalisation era. The main objectives in this domain include creation of lucrative networks through which it can be risen the awareness regarding the EU provided opportunities, creation of links between the labour supply and demand as to have higher degrees of matching. It also supposes to enlarge the opportunities and support for talented entrepreneurs in the area of digital products and the goal of strengthening competences and creativity skills as well as the entrepreneurial and managerial knowledge as to improve the quality of tackling the modern issues of markets. So, through the innovative entrepreneurship the European Union intends to build a well-functioning economy conceptualizes on integrative as well as innovative business networks (BRINKLEY, 2010).

In promoting its innovative entrepreneurship policy the European Union focuses first on endogenous growth prospects as to occupy the internal business niches. The evolutionary models will concentrate on promoting human capital with the right mix of the abilities and skills which are to be demanded on the market. The development of human capital is intended to be promoted through different initiatives and support of different kind provided by the institutions and authorities (BRAUNERHJELM, 2015).

The need for innovative entrepreneurship in the European Union is evident due to the stagnation period of the 90's early 2000's when the innovation process was not viewed as a result of the systematic effort but rather as "manna from heaven". The past policy prescriptions concentrated more on the optimisation of the relationship between the capital and labour productivity to reach the proposed amount of growth. Nowadays approach besides these two dimensions introduces the third one-knowledge. So, it was demonstrated that even if the labour and capital productivity remains constant the average increase in the level of knowledge increases the economic progress. In past, in order to foster the development of knowledge, the authorities provided support in terms of tax initiatives and subsidies. The efficiency of these initiatives tends to reduce unless having the proper educational system and favourable business environment (ANTONELLI, 2007).

The innovation policy promoted by the European Union had a major weakness in the past as it tended to overestimate the role of initiatives structure and underestimate the role of profit-driven firms. It has been put an emphasis over the interactive learning among key agents which in fact poorly drives the overall productivity increase. Presently, the focus and the main stress of policies

tend rather to concentrate on the profit driven firms which are regarded as the main vehicles of implementing the new business experience and absorb new technology. So, the interventionist approach that was widely exploited till present had little impact on the overall innovation and entrepreneurial performance. The underestimation of competition was another error considering the fact that it was view with scepticism, supporting rather the quantity and not the quality of businesses (BRAUNERHJELM, 2015).

6. Linking entrepreneurship and innovation

As it was previously mentioned in 80's and 90's the European Union shifted its economic focus from large scale enterprises to SMEs to provide extensive employment and economic progress. Surely, there is a range of benefits this move assured one of them being the stimulation of the EU middle and upper middle class. There was considerable increase in the entrepreneurial activity across the EU. The main consequences of this shift includes the increase in the level of business activity, the routes of innovation has been changed, re-thinking of the industry dynamics as well as provision of jobs. Some authors argue that the re-specialisation of the entrepreneurial activity to SMEs brought important advantages to economic development and technological progress (ACS, 1992). Other authors argue that an increase in the weight of SMEs, ceteris paribus, may lead to lower willingness to export, lower preference towards exporting employment, structural change in the field of capital demand and consultancy inputs, nevertheless providing a larger variety in the range of produced products and services (WENNEKERS, 1999).

Galbraith (1967) assumed that the influence of the large scale firms will increase due to superior technology and advantages related to economies of scale. So, at the first glance it is evident that large firms assure increased prospective for technological development due to higher investment power. Though, the "Fordism" approach has its advantages it belongs to the old-fashioned or geriatric economy which lacks key attributes to dominate. Firstly, it is less potent in assuring the right balance between consumer preferences and efficiency. Due to their sizes, the SMEs are more mobile and can shift faster to meet the changing consumer tastes. Secondly, the smaller firms create more space for employees to manoeuvre, thus allowing higher degree of creativity and smoother networking between consumers and producers. Finally, the concept of entrepreneurship tend to be more evident for SMEs due to the fact that the owners of the business are supposed to endure higher risks and volatile markets compared to greater businesses (WENNEKERS, 1999).

Taking into account the information provided above it can be concluded that the European Union at first stage focused the entrepreneurship on solving the problems of unemployment and assuring economic growth based primary on internal consumption. The necessity of innovation appeared later when the European Union faced the external pressure from outside players. In this way, the need for entrepreneurship was completed with the necessity of innovation.

Therefore, it can be stated that the entrepreneurship goals of the community focused on developing functional enterprises to increase internal production and consumption. This aim was achieved during past policies switching to SME driven economy. The main challenge for EU policy maker at the moment is to create favourable conditions for entrepreneurs to assume higher risks and invest in innovations and technologies.

7. Measuring the inter-connection between the growth in the EU entrepreneurial activity and innovation performance

The life cycle of entrepreneurship includes three stages: stand up; start up and scale up. The first phase includes the promotion of starting of a new venture or entrepreneurship. It could seem impressive, but according to European Commission conducted survey, 45% of Europeans have not considered starting a business. In the second business stage, it is required to provide low cost access for businesses to capital resources for funding. According to the same source, 79% of all European argue that it is difficult to start a business on their own due to lack of financial support. In the last stage as the business to be functioning, it is required to develop entrepreneurial

connections and realise successful partnerships. It was concluded that 69% of companies do not achieve unbroken record of revenue growth in year two to five of their existence (WEF). The following function explains the main drivers of the economic growth through the entrepreneurship perspective.

$$E_n = f\,(G, PG, PG, PR, INS, SE, EM, GS, R\ \&\ DE, INV, TO)\ (1)$$

Where: En = Total Entrepreneurial Activity, G = GDP Growth, PG = per capita Growth, PR= Socio-economic conditions, INS-institutions, SE-secondary education, EM- employment rate, GS-government spending, R&DE- research and development expenditure, INV- investment profile and TO-government stability.

The above equation represents the general functional dependence of the entrepreneurship upon various macroeconomic factors. It shows constant elasticity of substitution and is linear homogenous (RASOOL). As it could be observed, the total entrepreneurship activity, based on the formula (1), connects to innovation not only through the dimension of the research and development and through secondary education but also other factors. In such a way, it could be concluded that particularly innovative entrepreneurship (part of total entrepreneurial activity) depends on range of factors with less or more connection to the process of innovation, but without which it could not be developed sustainable economic development.

Further, it be examined the extent to which entrepreneurship and innovation are inter-connected for the European Union, USA and China. As an indicator for entrepreneurship it will be used the total number of listed domestic companies. In its turn, as an indicator for innovation will be used the number of total resident patent applications. The results are provided in the table number 1.

Table 1: Correlation listed domestic companies & total resident patent applications

	Correlation indicator
European Union	0,63
United States	-0,94
China	0,87

Source: Drafted by the authors based on data provided by the WB

As it can be observed, the European Union registers moderately high correlation index compared to strong negative in the USA and strong positive correlation for China. Taking into account this data it can be concluded that increasing the number of companies and therefore of entrepreneurship will have a positive impact on innovation activity of both EU and China, this factors being directly related. In the case of the USA, it can be stated that the number of companies does not influence at all the innovation activity the fact demonstrated through the strong negative correlation.

So, from the point of view of the European Union, developing entrepreneurship activity inside the community will accelerated the innovation. Thus, the efforts directed towards building up innovative power of the community through the prism of entrepreneurship could be an efficient way in fostering economic growth prospective. In such a way, business is capable of raising the level of innovation. Nevertheless, further efforts should be directed in filtering the business activities promoting innovation active companies able of creating new opportunities for the increase in the research and development outputs.

8. Sources of innovative entrepreneurship

Entrepreneurship is marked by different factors most influential being the individual treats which establish the fundamental basis for development of business. Thus, according to

WENNEKERS, 1999 pivotal conditions for the development of entrepreneurship are the persistence in the cultural and educational environment of the following characteristics: open-mindedness towards other cultures; curiosity, creativity and experimentation; perseverance; valuation of wealth and savings; acceptance of risk and failure, as well as the tendency to be competitive.

P. Drucker (1985) stated that despite of the general believe that entrepreneurship is a "flash of genius", it consists predominantly from discipline and pragmatism. The entrepreneur is in a permanent search for change and responds to it by exploiting its potential. The key feature remarked by Drucker about entrepreneurship is persistency, so business must be systematic. The author also remarked the systematic innovation as being an essential condition to entrepreneurial development. Thus, the search for improvement and the implementation of opportunities provided by it fosters economic development. In its policies the European Union is stimulating the development of consistent business which aims at functioning for a longer period of time providing employment and economic development to the society.

The European Union has a strong commitment at increasing the competitiveness of the business environment in the long run. To successfully realise this goal there have been set up several important directions of development including mainly in the field of persistent businesses focused on innovations. So, since the mid 2000's there have been undertaken extensive efforts meant to reduce the level of anti-competitive product market regulations. This measure intends to accelerate R&D of the businesses motivated to provide the market with products and services. In this regard, a lower level of regulation provides larger possibilities for European businesses for cross-border knowledge transfer. Since the world economic crisis hit the EU economy, one of the main directions followed by the decision making factors was to assure stable macroeconomic conditions. Under this initiative, the monetary policy was oriented towards keeping the interest rates. This condition is aimed to provide low cost financial resources under low risk terms for businesses oriented towards innovation related activities.

The European Union has also undertaken a wide set of actions in the field of taxation. So, in the conditions of financial restraint, the firms can benefit from extensive taxation relief for R&D activity as to provide the business with stronger motivation to spend more on R&D. Another area covered by EU policies regards the attraction of foreign investment in sectors of innovative businesses. The FDI are supposed to raise the productivity standards and, therefore, establish an enforced framework for economic development.

It can be observed that the European Union policies in the area of entrepreneurship had registered impressive results. So, according to EUROSTAT within the period of y. 2012-2014 there have been created additional 622,290 businesses to the existing 25,642,461 one in y. 2012.

Conclusion

Innovation has become of high importance in the European Union as to increase the level of countries' competitiveness and to face in a more efficient way the modern challenges. There has been demonstrated that in the 21st century, developing the innovative entrepreneurship is not only a priority of the national governments but also a common necessity in the conditions when economy gets more complex and societal clusters more inter-connected. Sustainable development of the world in general and in particular of the European Union resides in the capacity of nations to find solutions to present and future challenges. In modern conditions when economic growth of the European Union is slow, the necessity for innovation is highly important and only the private sector can exploit the most benefits from R&D and make projects prosperous for future.

Despite the efforts of Brussels to stimulate the innovation within the European Union, the results are unevenly distributed. This fact is a direct impact of regional cohesion divergences in terms of economic and society conditions. Countries from the northern European Union such as Germany or Sweden are more competitive in assuring much more perspectives of sustainable development of innovative entrepreneurship in comparison with the southern and eastern

counterparts. Moreover, the northern European Union concentrate the largest portion of investments in the area of innovation allowing them to foster the economic development as sustainable and long-term oriented. Unless, the European Union cumulate more investment in the economic projects in the eastern European countries, in order to reduce the existing disparities, the Union as a whole will face difficulties in assuring more effective sustainable development (CRUDU; IGNATOV, 2016[2]).

It is necessary to mention that the concentration of investments in assuring better functioning sustainable innovative entrepreneurship is not self-sufficient condition as the Union should determine deeper reforms in political and social area. Moreover, there is necessary considerable political willingness in order to reform the existing heavily operating bureaucratic system to a more task-oriented as to solve the current challenges the business environment faces (for example heavy regulation).

Thereof, the current initiatives proposed as Horizon 2020 and other national policies in the area of innovation and sustainable development are worthwhile and necessary in order to reassure the European Union the primacy in the technological development, environmental protection and society welfare. Currently, the northern EU countries are the closest in terms of achieving leading edge economy as their economic performance is most industrious and the impact upon the environment is minimised.

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