The Role of the Modern University in Supporting the Entrepreneurial Ecosystem

Mihaela DIACONU

University of Pite ti, Romania mihaela.diaconu@upit.ro

Amalia DU U

University of Pite ti, Romania pandelica.amalia@yahoo.com

Abstract

In the current market conditions of high education, the university must assume besides teaching and research functions, also the contributor function to performing the economic areas. The article is based on the premise that the university's orientation towards innovative entrepreneurship and support of entrepreneurial ecosystem will ensure the increase of competitiveness of the university and stakeholders confidence. The literature review addresses new concepts in the field of entrepreneurship and studies done at European and international level which refer to the need to promote innovative entrepreneurship which was integrative approach. Based on the literature, we developed a methodological framework on what to do in a university for it to become capable of successfully fulfil the tasks of the new economic and social context.

Keywords: entrepreneurial ecosystem; innovative entrepreneurship; youth entrepreneurship; innovative entrepreneurial university; knowledge alliances;

JEL Classification: L26; I25;

1. Introduction

The economic literature considers today the entrepreneurship as a determinant factor with a role in economic growth, an engine for development, and the innovative entrepreneurship as a factor that contributes to the economic development, increasing wealth, creating with considerable added value as a result of harnessing the opportunities and innovation.

Through the assumed mission, the modern university makes an important contribution to the development of youth skills required by the labour market, the development and dissemination of knowledge. The insertion of graduates in the labour market, the collaboration with business, the capitalization degree of the results of university research are strategic issues in assessing the quality of university management. Through the concern for developing innovative entrepreneurial culture, the university may ensure the sustainability in the condition of an unattractive governmental financial support and of an increasingly limited labour market. A key issue for the modernization of higher education institutions is to develop links between universities, research institutes and businesses to achieve excellence.

It is believed that the university develops an innovative system to the extent that creates its the necessary logistics: research centres, centres of excellence, scientific and technological structures capable of generating added value from the portfolios of knowledge, from the commercialization of the research results protected properly. In

addition, innovative spirit is also supported by promoting entrepreneurial culture among students and teachers, creating a stimulating environment able to increase the number of entrepreneurial projects. Developing partnerships with business and industry through the establishment of business incubators, industrial and research parks, university – business partnerships and stimulating the participation in the transfer of knowledge and technology also helps to support the university performance.

The new concept of university requested by the socio-economic environment, innovative university, involves change, flexibility, commitment to economic and social development of the region, the creative use of human, information resources and existing materials, organizational competitiveness, fundraising, constant concern for acquiring an important place in the value chain of the entrepreneurial ecosystem.

Starting from the new concepts presented in the economic literature related to entrepreneurship, from recent studies on the extent to which the entrepreneurial ecosystem is favourable for young people at EU level and the role played by the university in modern society, we have developed a methodological framework regarding a new type of university management, *entrepreneurial management*, to transform the current university into an entrepreneurial and innovative university, and with a clearly defined role and in the entrepreneurial ecosystem.

2. Innovative Entrepreneurship, Entrepreneurial Ecosystem - Components of Entrepreneurial Culture

The term "entrepreneur" comes from the French 'entreprendre' which refers to the activity of purchasing goods for resale. British classical economists like Adam Smith and John Stuart Mill defined entrepreneurship as business decision making regarding the allocation of resources (Cri an, 2010, p.5).

Entrepreneur and entrepreneurship concepts have been defined in various ways in the literature. Entrepreneurship has evolved from leadership in general to the management used in creating organizational success through innovative developments which may relate to changes in organizational structure, organizational culture or products / services. In the authors Ulijn and Brown (2014, p.5) opinion, 'entrepreneurship is a process of exploiting opportunities that exist in the environment or that are created through innovation in an attempt to create value. It often includes the creation and management of new business ventures by an individual or a team'. At the same time, 'entrepreneurial activity is a practice of creating a new organization or rehabilitating, recovering, upgrading and/or restructuring an existing organizations, especially in business' (Zaman et al., 2009).

In the academic environment the entrepreneurial spirit has been addressed since the early '40s at Harvard Business School (HBS) where Myles Mace developed it in 1947 within a course of management of new companies which was extended by Frank L. Tucker in the period 1964-1969, then by Patrick R. Liles in the period 1970-1973. In 1974, Liles writes the first textbook "New Business Ventures and the Entrepreneur", dedicated to the entrepreneurial spirit in terms of HBS which was accepted, acquired and subsequently implemented by Stevenson in industrial environment. Cruikshank (2005, p.226), indicates that during the period 1981 – 1982, Stevenson and his colleagues of the HBS defined the entrepreneur managers 'as having the following characteristics: (1) The tendency to seek

out opportunities; (2) A willingness to act quickly in light of opportunity; (3) Multistaged commitment of the resources at hand; (4) Skilful use of leased and/or temporary resources; (5) An interest in building a network rather than a hierarchy.' These five characteristics became the basis for a course (Entrepreneurial Management) which was used since 1983.

The definition proposed by Stevenson 'the pursuit of opportunity without regard to resources currently controlled' identified six critical dimensions of business practice involving: strategic orientation, commitment to opportunity, the resource commitment process, the concept of control over resources, the concept of management and compensation policy, where differences in these six dimensions existed between 'promoter' type and 'trustee' types (Gartner and Baker, 2010, p.3).

In general terms, an entrepreneur is the person who establishes the prospect of obtaining profit and how to use all types of resources to succeed (Dash and Kaur, 2012, p.11). Feldman (2014, p.9) considers the entrepreneurs as the agents who recognize opportunity, mobilize resources, and create value, are the key to the creation of institutions and the building of capacity that will sustain regional economic development.

In the opinion of the authors Uzunidis *et al.* (2014, p.2) the entrepreneur is 'a social actor, influenced by the social, economic and political context', and the entrepreneurship as an 'organic square of entrepreneurship' based on four pillars, namely the potential resources of the entrepreneur (knowledge, financial resources, formal and informal relationships) market characteristics (demand, supply), economic characteristics of the organization (organizational structure, financial system, the technical development), public policies for creation and development of business (direct and indirect support). The organic market of the entrepreneurial spirit is characterized by the authors as an interesting tool that highlights the strengths and limits of economic and social context in terms of entrepreneurship. The potential resources used by the authors to explain the interaction between the individual and the environment consists in three parts: knowledge obtained by attending various educational levels, through continuing education and personal experience, financial resources (personal savings, bank loans, venture capital and various forms of public support) and relationships (family, personal relationships, professional, institutional etc.).

In the economic literature, entrepreneurship is considered today to have a determinant role in the growth of economic indicators and innovation, as the engine of development. Innovation and entrepreneurship contribute to economic development, creating jobs and increasing welfare. In the opinion of the authors Grilo and Thurik (2005), the entrepreneurship is the foundation of innovation, increased productivity, competitiveness, economic development and job creation. Some authors consider the entrepreneurship as an activity carried at the micro level whereby are achieved innovation and growth (Audretsch and Thurik, 2001; Acs, 2006; Audretsch *et al.*, 2006). SMEs and the entrepreneurship are considered the key source of dynamism, flexibility and innovation (Dahlstrand and Stevenson, 2010). Also, the entrepreneurship is seen as 'the heart of innovation, productivity growth, competitiveness, economic growth and job creation' (Grilo and Thurik, 2006, p.4), and it is associated with personal success (G nescu, 2014, p.580).

Innovation as a force to support the development was the subject studied since the time of Adam Smith. Schumpeter, one of the most influential economists of the twentieth century, talks about entrepreneurship and innovation in his work "The Theory of Economic Development" (1911/1934), and considering the entrepreneur as an innovator.

According to Schumpeter (1939/2006, 1942/2014), an entrepreneur is someone who is willing and able to convert a new idea or invention into a successful innovation. The entrepreneurship is called by Schumpeter as "the gale of creative destruction" by which products and even business models are replaced in whole or in parts, executing new combinations of means of production and put the economy in motion and development. Subsequent studies have shown that innovation and entrepreneurship are prerequisites for the competitive advantage of the modern organization. In this perspective, innovation is seen as a result of scientific research and entrepreneurship as trading activity of scientific research results in order to develop.

According to OSLO Manual published jointly by OECD and Eurostat (2005), innovation is 'the implementation of a new or significantly improved product good or service, or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations', and the entrepreneurs are 'those persons business owners who seek to generate value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes and markets'.

The combination of entrepreneurship and innovation materializes in innovative entrepreneurship, meaning new organizations that develop innovative ideas. Entrepreneurs have a critical role in the process of innovation and the entrepreneurial capacity is a key element in the transfer of knowledge through commercialization process of scientific research results (Audretsch and Thurik, 2001; Acs *et al.*, 2005). Innovative entrepreneurship started to be considered a key factor of modern economic development (Szabo and Herman, 2012). Entrepreneurship and innovation are priority areas for the EU as they offer opportunities to overcome the current crisis, increase global competitiveness and ensure sustainable and profitable growth (Homolova *et al.*, 2014).

Dahlstrand and Stevenson (2010) distinguished between entrepreneurship and innovative entrepreneurship. If the entrepreneurship aims to create jobs, the innovative entrepreneurship aims to create value-added jobs with higher growth rates as a result of capitalizing on the opportunities and innovation. Szabo and Herman (2012) have analyzed the relationship between the innovative entrepreneurship and economic development in the EU Member States to highlight how innovation and entrepreneurship can influence the level of economic development of these countries. They concluded that 'innovative entrepreneurship is essential to sustain emerging market economies' (p.273) and that 'all education, flagship initiatives: innovation, information society, competitiveness, labour market present challenges for emerging market economies'. In their view, the policies that should encourage the main factors of innovation are related to the improvement of the education system, increasing the number of graduates of higher education, increased funding for higher education and research.

In the conditions of a modern business environment characterized by the many interconnections between organizations, the entrepreneurs are faced with putting their ideas into practice by developing partnerships with other organizations, causing coopetitive strategies. *Co-opetition* is defined as the behaviour that is simultaneously in cooperation and competition. The entrepreneurs need to engage in co-opetitive strategies to obtain superior results (Cri an, 2010, p.8).

Another new concept used today to describe the framework of entrepreneurship is the *entrepreneurial ecosystem*. It is composed of individuals, organizations, institutions that can influence successful entrepreneurial behaviour. In the opinion of Isenberg (2014), entrepreneurial ecosystem includes the following components: a conducive culture; enabling policies and leadership; availability of appropriate finance; quality human

capital; venture-friendly markets for products; a range of institutional and infrastructural supports. The entrepreneurial ecosystem value is influenced by external factors (public policy on entrepreneurship, access to finance for young entrepreneurs, incentives for venture capital investors, business incubators, business angels, bureaucracy, regulatory and tax environment, the existence of clubs and associations of entrepreneurs), and internal factors (entrepreneurship education, the density of new businesses).

Quantifying the relationship between economic development and entrepreneurial ecosystem is done with The Global Entrepreneurship and Development Index (GEDI) which is based on: entrepreneurial attitudes, aspirations and activity (GEDI, 2013). Acs and Szerb (2010) consider that the *entrepreneurial attitude* is given by institutional factors, market size, education and culture, the entrepreneurial activity is traced through entrepreneurship education, motivation to engage in entrepreneurship, freedom of action in business and the entrepreneurial aspirations are played by production and technological innovation, internationalization and funding availability business.

3. Youth Entrepreneurship, an Entrepreneurial Ecosystem and Entrepreneurial University Priority

The interest shown today to the entrepreneurship among young people is supported by the fact that youth unemployment is high, the unemployment rate remaining a very important problem of the economic system. The unemployment among young people worldwide was estimated at 73.4 millions in 2013, representing a growth of 3.5 millions since 2007 and over 0.8 millions since 2011 (The International Labour Organization, 2013). The high rate of youth unemployment is fuelled by the fact that the transition from school to active life is a difficult process that is not supported systematically by the academic and business environment, being a difficult process that is not supported systematically by the academia and business, by the fact that most employers want to hire young people with experience and last but not least, the fact that young people often change their work to find a satisfactory job. Among the most significant determinants of youth unemployment, the literature mentions: demographic trends, economic environment, labour market regulations and the education system. The young generation transition from school to employment is one of the critical problems of the labour market with a significant economic and social impact.

The large number of unemployed among young people caused increased interest of researchers and governments to promote entrepreneurship among young people. According to Levine (2011) there is a direct relationship between the employment rate among young workforce and economic growth. Sharma and Madan (2013, p.131) consider the entrepreneurship as 'a channel for the talents of many highly educated young people to explore their potential and cash their business acumen', a channel for many young educated talents to explore the potential and the possibility to obtain profit from their businesses. Oyelola *et al.* (2014) showed that solving youth unemployment could be achieved through programs of entrepreneurship education, by accessing finance, as well as providing support for business start-up.

Youth entrepreneurship education is meant to send that knowledge and develop those skills needed to start a business on your own in a competitive market. It is a process by which young people develop skills to identify business opportunities and stimulates

young people to improve their personal level. It is based on three elements: creativity-identifying ideas; innovation - giving value to the selected ideas and entrepreneurship-developing a business from the innovative idea.

Youth entrepreneurship is 'the practical application of enterprising qualities, such as initiative, innovation, creativity and risk-taking into the work environment (either in self-employment or employment in small start-up firms), using the appropriate skills necessary for success in that environment and culture' (Chigunta, 2002, p.5). 'Young entrepreneurs can be divided into two broad groups: those who become entrepreneurs by necessity because they are unable to find other forms of formal employment or continue their education, and what can be called "vocational entrepreneurs" who seize a business opportunity' (Llisteri *et al.*, 2006, p.3). Entrepreneurial behaviour is seen, rather, as a purely psychological phenomenon (G nescu, 2014, p.581).

Some authors (Chigunta, 2002; G nescu, 2014) talk about the stages in strengthening the entrepreneurial spirit in youth entrepreneurship development, namely: pre-entrepreneurs, the transition period from security offered by family and school to employment (15-19 years old), budding entrepreneurs (age group 20-25 years old are in the development stage due to the accumulation of skills, abilities, capital required to develop their own businesses), and the stage of emerging entrepreneurs (age group 26-29 years old, likely to have accumulated some experience in business or in other areas of life).

There are studies of many authors (Audretsch *et al.*, 2005; Beugelsdijk, 2007; Herrington *et al.*, 2009; Stephan and Uhlaner, 2010; Pinillos and Reyes, 2011) that explained the role of culture on innovation and entrepreneurial behaviour, the correlation between innovative entrepreneurship and economic development. Through the factors with significant influence on materializing the entrepreneurial behaviour among young people they include family and cultural characteristics. Among the motivations that underlie the development of entrepreneurial behaviour of young people they include: the desire to be your own boss, the ability to have a more direct control over their working lives correlated with personal life, the opportunity to develop a successful career, the opportunity to make more money. Among the obstacles in youth entrepreneurship development we find: poor access to finance and adequate working space, lack of specific skills and management skills, access to profitable markets following a mild marketing motivated by financial limitations, lack of confidence of potential partners.

In many countries programs have been created to support entrepreneurship, only that the concepts of entrepreneurship and entrepreneurship among young people were perceived as interchangeable. Youth entrepreneurship remains somewhat unsettled in many countries, while special attention is given to the entrepreneurial spirit. Entrepreneurial spirit is interpreted as a way to launch many young talents with higher education (Dash and Kaur, 2012, p.10).

The incidence and characteristics of youth entrepreneurship behaviour and the analysis of the factors that influence entrepreneurship were the purpose of a study made by Zamfir *et al.* (2013). The study results showed that 'the level and complexity of national economic development affects youth entrepreneurship; personal factors such as sex, age, values and attitudes towards work models, the behaviour of youth entrepreneurship; the educational profile of graduates influences their chances of becoming entrepreneurs, especially the teaching methods used, the number of years of education and skills acquired' (Zamfir *et al.*, 2013, p.43).

G nescu (2014) explored the relationship between entrepreneurial behaviour among

young people and the unemployment rate to assess the entrepreneurial ecosystem in EU countries. His conclusion is that at the EU level, the entrepreneurial ecosystem is not favourable for young people, although encouraging entrepreneurship could be a solution to reduce unemployment and 'states that employ quick and appropriate policies to develop the entrepreneurial ecosystem will be able to reduce the alarming unemployment among younger generations.' (p.586)

4. The University Contribution to the Success of Innovation Systems

In the current economic and social conditions it is necessary for universities to make an important contribution to the smart regional specialization and act as intermediate bodies for the implementation of several marketing tools of scientific research results obtained. Universities should become centres of knowledge with the role of implementing local authorities strategies based on the resources and priorities with major impact on development. Referring to academic research function, Kearney (2009, p.11) highlights the university education-innovation-research relationship as a key axis of knowledge. Universities should turn into open and integrated systems with the economic, administrative, political and nonprofit environment to meet effectively to the challenges of the society based on knowledge.

erb nic (2012) highlighted in the study "Best Practices in Universities' Regional Engagement Towards Smart Specialization" universities' contribution to the success of innovation systems in Europe's most innovative regions using European Regional Innovation Scoreboard (RIS) which takes into account two parameters, namely, the percentage of innovative companies that collaborate with other organizations and the number of public - private co-publications. The results show that most innovation programs in these regions should focus on cooperation and tripartite partnerships involving frequent interaction between universities, businesses, policy-makers and innovation intermediaries. Triple helix type partnerships and developing new collaborative arrangements are conditions for performing economic zones. This approach is integrated into the concept of "smart specialization", a concept that is the new paradigm at EU level and encourages the concentration of human, financial and innovative resources through cross-sectoral approaches in areas globally competitive, but also in less developed regions.

The specialized literature abounds in studies that highlight the need for more effective collaboration between academia and the business environment for ensuring the conditions of innovative capitalization of resources. Smart (2009, p. 307) argues that 'it is necessary for universities to collaborate with the regional or local business environment to develop new and innovative business'.

Increasing the role of the university in successful innovation systems is linked mainly to its concern to define and develop the elements of "a culture of research": the accumulation of knowledge, the renewal of learning methods, the enlargement of research capacity, the growth in revenues resulting from research activities, the strengthening of the links between institutions that develop research in order to meet the challenges arising from the responsibilities to the society and from pointing out the international status of the university (Grigore *et al.*, 2009, p.5).

As producers of knowledge, universities and public research institutions have a strategic role in achieving the objectives of the cross - cutting Europe 2020 strategy that requires the need for stronger partnerships between education, research and innovation, the so-called "knowledge alliances", improving the performance of education systems so as to a better employment of graduates on the labour market. It is aimed to develop the entrepreneurial culture, the creative and innovative skills, of systematic involvement in the design and implementation of integrated development plans of local and regional partnerships with business.

Studies conducted at European level in the field of cooperation between academia and business environment have shown that whilst there are some exceptions, cooperation between HEIs and business in Europe is still in the early stages of development, as approximately 40% of academics are not engaged in cooperation at all, 20% of academics undertake only a low extent of cooperation whilst only 40% of academics undertake a medium or high extent (Davey *et al.*, 2011, pp. 9 - 10).

Effective circulation of knowledge between universities and public research organizations is quantified at the European level using the following performance indicators of industry-science relationship: contracts and collaborative research, cooperation in innovation projects, science as an information source for industrial use innovation, mobility of researchers, continuing professional development, patent applications for public science, income from royalties, start-ups, informal personal contacts etc. (erb nic, 2012). One study of knowledge circulation problems at EU level-27 (erb nic, 2011, pp. 49-52) highlights the need for specific measures to stimulate the movement of international knowledge to support the ambitious goals of the Europe 2020 strategy. There are countries with a tradition of transferring knowledge, with networks and connections between all actors of innovation that have occupied the leading position, but these are faced with a low level of participation of SMEs due to economic crisis. The countries that have succeeded in implementing a number of initiatives to support the circulation of knowledge are facing risks from heavy dependence on public funding.

5. The Methodological Framework for the Implementation of Innovative Entrepreneurship in Universities

In current conditions, the successful accomplishment of the modern university functions can be provided by assimilating the concept of innovative entrepreneurship. The actions of identifying managerial and scientific opportunities in order to accomplish the mission are specific to the entrepreneurial management (Scarlat and Brustureanu, 2009, 2012), a new type of university management, different from the administrative management.

To develop the methodological framework of the implementation of innovative entrepreneurship in universities we started from the following assumptions:

- 1. Implementing the concept of innovative entrepreneurship in universities is part of change management in universities necessary for the successful accomplishment of the mission of the modern university.
- 2. Successful implementation of the concept of innovative entrepreneurship depends on the constant concern of improving organizational procedural system by considering the needs of all categories of stakeholders of the university

Proposed strategic actions necessary to support the entrepreneurial ecosystem undertaken by universities are:

- implementation of change management in universities based on the requirements of the new European Higher Education context by highlighting the particular importance of the modern university functions;
- transition from traditional university with an administrative management, to a modern, innovative, entrepreneurial university with a new culture, entrepreneurial culture:
- formulating objectives of the university so that their fulfilment to increase competitiveness, reputation and effectiveness of higher education;
- planning activities of the process of change and improvement by considering all structural levels of the university;
- awareness and acceptance of the entrepreneurial spirit at the individual level and at the entire level of functional system of the university;
- activities to stimulate individual and collective creativity, passion to work effectively for the good of society;
- activities to stimulate the ability to anticipate and approve the change and the entrepreneurship;
- activities to combine rigorous academic study with enthusiasm innovation;
- activities to promote a positive image based on professionalism, reliability, profitability, strong motivation of students and teachers;
- activities to improve the commercial function to increase the prestige of the university and to identify new sources of business financing;
- activities to cultivate the proactive attitude at all structural levels and an effective communication with industry and business in order to ensure their sustainability and of the stakeholders;
- operationalization of the concept of innovative entrepreneurship through the use of modern methods of learning that stimulates creativity of young people and training skills, professional skills and attitudes required by the labour market, interinstitutional collaborations, continuous flow of information between university stakeholders, a proper logistics framework to facilitate the transfer of knowledge;
- training and educating youth in the spirit of innovation, flexibility, transparency, academic and professional performance, adaptability to the changes of labour market;
- human resource training in the skills profile for their own community and society so as to be able to generate and transfer knowledge to society;
- priority tracking of the traffic problem of knowledge using the following indicators: flows of research and development funding in higher education and the public sector in the form of grants, donations and contracts, cooperation-based on innovation indicators, strategic partnerships between enterprises, HEIs and PROs, bibliometric data and patent applications as an indicator of technology transfer.

Steps towards implementing the focus of university's activity to support the entrepreneurial ecosystem:

- 1. Analysis of current situation of own research, innovation and development in order to move towards competitiveness and reputation in the current university educational market resources
- 2. Establishing strategic and operational objectives leading to increased contribution of the university, to support entrepreneurial ecosystem, respectively:
 - introducing entrepreneurship in university curricula;

- promoting the interactive learning methods such as simulated enterprise and creating an innovative pedagogical support in each academic structures;
- improving specialized practical training of students by establishing attractive partnerships with the industry and business environment;
- adopting the concept of lifelong learning in all departments;
- developing an adequate infrastructure to support research, innovation and development in collaboration with the industry and business environment;
- financial motivation for research and development activity;
- stimulating the creation of associative structures allowing for better use of intellectual property and to support investments in research, innovation and development.
- 3. Reorganization of organizational structure so that it is able to ensure delivery of results of scientific research, technology transfer and a good academic collaboration with industry and business environment respectively:
 - establishment of research centres, centres of excellence, technology transfer offices, structures capable of generating added value of the stock of knowledge, from the sale of intellectual property rights;
 - setting up business incubators, industrial and research parks, university business foundations to stimulate increased participation in the transfer of knowledge and technology.
- 4. Development of system procedures and operational procedures to support the development of research and innovation activity by considering the needs of industry and business from local and regional plan.
- 5. Involving members in the value chain to support the work of the university in entrepreneurial ecosystem structure, respectively the awareness of state institutions in connection with the need for a favourable legal framework designed to support attractive partnerships with business to promote innovation, excellence and exploitation of intellectual property rights.

6. Conclusions

This study was based on literature review that deals with the following concepts: innovative entrepreneurship, innovative entrepreneurial university, entrepreneurial ecosystem, youth entrepreneurship and on studies carried out at EU level on the need for modern university contribution to the development of so called "knowledge alliances". These knowledge alliances are viewed by European bodies as stronger partnerships between education, research and innovation, capable of developing entrepreneurial culture, creative and innovative skills, to support the transfer of knowledge and results of university research to implement plans integrated by local and regional development.

Entrepreneurship is addressed in the literature as a basis for innovation, increasing productivity, competitiveness, economic development. Innovative entrepreneurship is considered by the literature as essential for supporting the emerging market economies. Innovation, education, information society, competitiveness, labour market are presented as challenges for emerging market economies.

The modern university is an important component of the entrepreneurial ecosystem by the fact that it can influence the behaviour of entrepreneurial success. Education and business

culture, motivation for involvement of academic staff and students in entrepreneurial activities, the results of university research as technological innovation are the variables that are included in the equation of the relationship between economic development and entrepreneurial ecosystem played back using The Global Entrepreneurship and Development Index (GEDI).

Recent studies cite the education system among the determinants of youth unemployment. The transition of young generation from school to labour market is one of the critical problems of the labour market with a significant economic and social impact. In this context, modern university must support youth entrepreneurship through teaching methods used, the skills developed, the appropriate infrastructure and also the entrepreneurship by launching many talented young people in conditions in which, according to recent research at EU level, the entrepreneurial ecosystem is not favourable for young people.

The analysis of the university – innovation – research relationship as a key axis of knowledge has led to the conclusion that universities should turn in open systems and integrated with the economic, political, administrative environment, in order to ensure the economic local and regional development. The intersectorial approaches in the global competitive areas, but also in less developed regions, the concentration of human, financial and innovative resources, the development of new collaborative structures integrated in the concept of "specialized intelligence" a concept that represents the new paradigm at the EU level.

The literature abounds in studies that highlight the need for more effective collaboration between academia and the business environment for ensuring the conditions of innovative valorisation of resources. To ensure the success of innovation systems, the university must be concerned with the development of the elements of research culture and of the entrepreneurial culture to tap the results of university research in the economic development. Creating stronger partnerships between education, research and innovation, so-called "knowledge alliances", improving the performance of education systems so that the insertion of graduates into the labour market to be better are objectives designed to enhance the contribution of the university to support entrepreneurial ecosystem and obtaining institutional prestige.

The new university model requested by the current socio-economic context, innovative entrepreneurial university, involves the implementation of a new type of university management, entrepreneurial management, characterized by flexibility, commitment to economic and social development of the region, the creative use of human resources, information, attracting the financial resources, organizational competitiveness.

The paper proposes a set of actions of academic management with a focus on research – innovation – development axis for the university to become more entrepreneurial through the activities they carry. This set of actions refers to an overview of the change to be implemented by the top management of the university concerned about the entrepreneurial orientation approach as a process to support the entrepreneurial ecosystem. We believe that this work provides new directions for research related to studying the extent in which the universities understand and adopt this new concept in the university management.

Bibliography:

Acs, Z. J., Audretsch, D. B., Braunerhjelm, P. and Carlsson, B., (2005): The Knowledge Spillover Theory of Entrepreneurship. Discussion Papers on Entrepreneurship, Growth and Public Policy, Group Entrepreneurship, Jena, Germany: MaxPlanck Institute of Economics.

Acs, Z.J., (2006): How is Entrepreneurship Good for Economic Growth?. *Innovations: Technology, Governance, Globalization* 1(1): 97-107.

Acs Z.J., Szerb L., (2010): The Global Entrepreneurship and Development Index (GEDI). Paper presented at *Opening Up Innovation: Strategy, Organization and Technology* Conference. London: Imperial College.

Audretsch, D. B. and Thurik, R., (2001): Linking Entrepreneurship to Growth. OECD Science, Technology and Industry Working Papers, 2001/02, OECD Publishing.

Audretsch, D.B., Keilbach, M.C., Lehmann, E.E., (2006): *Entrepreneurship and Economic Growth*. Oxford University Press, Oxford.

Beugelsdijk, S. (2007): Entrepreneurial culture, regional innovativeness and economic growth. *Journal of Evolutionary Economics*, 17: 187-210.

Chigunta, F. (2002): Youth Entrepreneurship: Meeting the Key Policy Challenges. Education Development Center. Retrieved 31.05.2015 from: http://yesweb.org/gkr/res/bg.entrep.ta.doc.

Condratov, I. (2014): Determinants of youth unemployment: a survey of the literature. *Ecoforum* 3(2): 124-128.

Cri an, P. (2010): Aspecte dilematice ale rela iei antreprenoriat – strategii de co-opeti ie. *Management Intercultural*, 12 (22): 4-9.

Cruikshank, J. L. (2005): Shaping the Waves: A History of Entrepreneurship at the Harvard Business School. Boston, MA: Harvard Business School Press.

Dahlstrand, Å. L. and Stevenson, L., (2010): Innovative Entrepreneurship Policy: Linking Innovation and Entrepreneurship in a European Context. *Annals of Innovation & Entrepreneurship* 1(1), Retrieved 31.05.2015 from http://www.innovationandentrepreneurship.net/index.php/aie/article/view/5602/html_34.

Dash, M., Kaur, K. (2012): Youth Entrepreneurship as a Way of Boosting Indian Economic Competitiveness: A Study of Orissa, *International Review of Management and Marketing* 2(1): 10-21.

European Commission (2000): Innovation and SMEs. Retrieved 31.05.2015, from http://ec.europa.eu/research/sme/leaflets/pdf/smes_en.pdf.

Davey T., Baaken T., Muros V.G., Meerman A. (2011): The State of European University-Business Cooperation. Final Report - Study on the cooperation between Higher Education Institutions and public and private organisations in Europe, Science-to-Business Marketing Research Centre, Munster University of Applied Sciences, Germany.

Dindire, L., Asandei, M., G nescu, C. (2011): Intensificarea cooper rii i comunic rii dintre universit i i mediul antreprenorial, condi ie a unei bune func ion ri a triunghiului cunoa terii: educa ie, cercetare, inovare. *Economie teoretic* i aplicat 18(9/562): 89-102.

Feldman, M.P. (2014): The character of innovative places: entrepreneurial strategy, economic development, and prosperity. *Small Business Economics* 43: 9–20.

Gartner, W., Baker, T. (2010): A plausible history and exploration of Stevenson's definition of entrepreneurship. *Frontiers of Entrepreneurship Research* 30 (4): 1-15, Retrieved 31.05.2015 from http://digitalknowledge.babson.edu/fer/vol30/iss4/2.

G nescu, C. (2014): Entrepreneurship, a solution to improve youth employment in the European Union. *Management strategies*, 7 (Special Issue): 580-588.

Grigore, L.N., Candidatu, C., Blideanu, D. (2009): The Mission of Universities in the Processes of Research - Innovation and Development of Entrepreneurial Culture. *European Journal of Interdisciplinary Studies*, 1(1): 5-17.

Grilo, I., Thurik, R. (2006): Latent and Actual Entrepreneurship in Europe and the US: Some Recent Developments. *The International Entrepreneurship and Management Journal* 1(4): 441-459.

GEDI (2013): Global Entrepreneurship and Development Index. [online] Available at: http://www.thegedi.org/research/gedi-index.

Herrington, M., Kew, J., Kew P. (2009): Tracking entrepreneurship in South Africa: a GEM perspective. [online] Available at: http://www.gemconsortium.org/article

Homolová, E., Riel, A., Gavenda, M., Azevedo, A., Pais, M., Balcar, J., Antinori, A., Metitiero, G., Giorgakis, G., Photiades, P., Ekert, D., Messnarz, R., Tichkiewitch, S. (2014): Empowering Entrepreneurship in Europe: Going from the Idea to Enterprise in 4 EU Countries. *Systems, Software and Services Process Improvement Communications in Computer and Information Science* 425: 262-270.

International Labour Organisation (2013): Global Employment Trends for Youth 2013. A Generation at Risk, International Labour Office, Geneva.

Isenberg, D., (2014): Introducing the Entrepreneurship Ecosystem: Four Defining Characteristics.[online],http://www.forbes.com/sites/danisenberg/2011/05/25/introducing-the-entrepreneurshipecosystem-four-defining-characteristics/

Kearney, M.L. (2009): Higher Education, Research and Innovation: Charting the Course of the Changing Dynamics of the Knowledge Society, "Higher Education, Research and Innovation: Changing Dynamics, Report on the UNESCO Forum on Higher Education, Research and Knowledge 2001-2009". Germany: University of Kassel.

Levine, L. (2011): Implications of the Anti-Poverty Program for Education and Employment. *Vocational Guidance Quarterly* 14(1): 8-18.

Llisteri, J.J., Kantis, H., Angelelli, P., Tejerina, L.(2006): *Is Youth Entrepreneurship a Necessity or an Opportunity? A First Exploration of Household and New Enterprise Surveys in Latin America*. Washington: Inter-American Development Bank.

OECD and Eurostat (2005): Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data, 3^{rd} Edition, OECD / European Communities.

Oyelola, O.T., Igwe, N.C., Ajiboshin, I.O., Peluola, S.B. (2014): Entrepreneurship Education: Solution to Youth Unemployment in Nigeria. *Journal of Poverty, Investment and Development* 5: 149-157.

Pihie, Z.A.L. (2009): Entrepreneurship as a career choice: An analysis of entrepreneurial self efficacy and intention of university students. *European Journal of Social Sciences* 9(2): 338-349.

Pinillos, M.J., Reyes, L. (2011): Relationship between individualist–collectivist culture and entrepreneurial activity: evidence from Global Entrepreneurship Monitor data. *Small Business Economics* 37(1): 23-37.

Scarlat, C., Brustureanu, B. (2009): Opportunity-oriented university strategy. Proceedings of The 11th International Conference Society for Global Business & Economic Development (SGBED), Bratislava, Slovakia: "Striving for Competitive Advantage & Sustainability: New Challenges of Globalization". Editors: C. Jayachandran, R. Subramanian, J. Rudy, 4: 2050-2061.

Scarlat, C., Brustureanu, B. (2012): Opportunity-oriented university strategy. A qualitative survey of some West-European universities' strategic documents. *Journal of Global Business and Economic Development* 1(1) (in press).

Schumpeter J. (1934) [1911]: *The Theory of Economic Development: an inquiry into profits, capital, credit, interest, and the business cycle.* New Brunswick, New Jersey: Transaction Books.

Schumpeter, J. (2006) [1939]: Business cycles: a theoretical, historical, and statistical analysis of the capitalist process. Mansfield Centre, Connecticut: Martino Pub. ISBN 9781578985562.

Schumpeter, J. (2014) [1942]: Capitalism, socialism and democracy (2nd ed.). Floyd, Virginia: Impact Books. ISBN 978-1617208652.

Smart, J.C. (ed.) (2009): *Higher education: Handbook of Theory and Research*. Volume XXIV, Kluwer Academic Publishers, Memphis: Springer Science.

Sharma L., Madan P.(2013): Affect on individual factor son youth entrepreneurship – a study of Uttarakhand State, India. *Romanian Economic and Business Review* 8(2): 131-143.

Stephan, U., Uhlaner, L.M. (2010): Performance-based vs socially supportive culture: A crossnational study of descriptive norms and entrepreneurship. *Journal of International Business Studies* 41(8):1347-1364.

Stevenson, H.H., Roberts, M.J., Grousebeck, H.I.(1989): *New Business Ventures and the Entrepreneur*. Homewood, IL: R. D. Irwin.

Parker, S.C. (2011): Intrapreneurship or entrepreneurship?. *Journal of Business Venturing* 26: 19–34.

erb nic, C. (2011): Knowledge Circulation between Universities, Public Research Organizations and Business in the EU 27. Drivers, Barriers, Actions to be put Forward. *European Journal of Interdisciplinary Studies* 3 (2): 43-54.

erb nic, C. (2012): Best Practices in Universities' Regional Engagement. Towards Smart Specialisation. *European Journal of Interdisciplinary Studies* 4 (2): 45-55.

Ulijn, J., Brown, T.,(2014): *Innovation, entrepreneurship and culture, a matter of interaction between technology, progress and economic growth? An introduction*. Cheltenham: Edward Elgar Publishing Limited.

Uzunidis, D., Boutillier, S., Laperche, B. (2014): The entrepreneur's 'resource potential' and the organic square of entrepreneurship: definition and application to the French case. *Journal of Innovation and Entrepreneurship* 3:1 Retrieved 31.05.2015 from http://www.innovation-entrepreneurship.com/content/3/1/1.

Zaman, G., Vasile, V., Antonescu, D., Popa, F. (2009): Studiu preliminar privind poten ialul de dezvoltare a antreprenoriatului in jude ele Mures, Harghita si Covasna, in context regional si na ional. Report. Retrieved 31.05.2015 from http://antreprenoriat.upm.ro/assets/rapoarte/activitati/ASIC_PRELIMINAR_IEN_2009.pdf

Zamfir, A.M., Lungu, E.O., Mocanu, C. (2013): Studiul comportamentului de antreprenoriat în rândul absolven ilor de înv mânt superior din 13 ri europene. *Economie teoretic i aplicat* 20(11/588): 35-43.

Szabo, Z., Herman, E. (2012): Innovative Entrepreneurship for Economic Development in EU, *Procedia Economics and Finance* 3:268 – 275.

World Economic Forum (2013): Entrepreneurial Ecosystems Around the Globe and Company Growth Dynamics. WEF. Retrieved 31.05.2015 from http://www3.weforum.org/docs/WEF_Entrepreneurial Ecosystems_Report_2013.pdf.