HOW TO ENHANCE ENTREPRENEURSHIP IN UNIVERSITIES. BUCHAREST UNIVERSITY OF ECONOMIC STUDIES CASE STUDY

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Abstract: *Entrepreneurship has been an area of interest among academics across the world. It is admitted as a booster for market innovation, product and technological growth. Small and medium enterprises (SMEs) are considered an important factor for health of the economy. It is seen as the force that revitalizes the economy and leads to economic progress, job creation for the community. Higher education institutions play a vital role in providing society with skilled human resources, owning specific skills accordingly to economy needs. The aim of this study is to investigate ways in which the Bucharest University of Economic Studies (BUES) could amplify the entrepreneurial potential of their students. Results showed that cooperation of universities with entrepreneur NGO's and other local institutions and organizations, apprenticeship courses, innovative educational content and use of creativity- centred methods of teaching were the most effective improving entrepreneurial skills of students. Detecting the challenges and competencies of entrepreneurial students could help professor to consider these challenges in developing the student's capabilities that allow them to successfully conduct entrepreneurial activities. Thus, we propose three major implications for actors involved in enhancing entrepreneurial engagement at higher education institutions. First, differences between universities organizational structures (i.e. faculties and departments) regarding organizational norms and cultures should be taking account when encouraging entrepreneurial engagement. Second, all levels of the university hierarchy should be considered when developing the support system for academic entrepreneurship. Third, despite their subordinate position, today's students will soon have influential positions in the university. Hence, any attempt to create a more entrepreneurial university should pay particular attention to this group of academics. Whilst senior academics may be difficult to influence, our study shows that students seem to be receptive to communication about the commercialization of research results. Our findings indicate that initiatives and research about the creation of entrepreneurial universities should put students in a central position.*

Key words: *University education, entrepreneurial skills, students, entrepreneurship*

JEL classification: L26, M1, O30, O10

1. Introduction

Universities are currently in the "process of change and adaptation to shifting environment and social context expectations regarding increased facilitation of entrepreneurship among faculty and graduates" (Ceptureanu SI, 2015a). By

supporting academic entrepreneurship, universities can address these expectations whilst also becoming more entrepreneurial institutions. However, more knowledge is needed on how this support provided by different levels in the university organization is perceived by academics.

Entrepreneurial activity has seen a mean of revitalizing economy and helps to cope with unemployment problems (Hatten et al., 1995; Green et al., 1996; Alstete, 2002; Gurol and Astan, 2006, Ceptureanu SI et al., 2012). Furthermore, entrepreneurship it is admitted as an booster for market innovation, product, and technological growth (Jack and Anderson, 1999; Ceptureanu EG et al., 2012). On the other hand, small and medium enterprises are considered an important factor for health of the economy. It is seen as the force that "revitalizes the economy and leads to economic progress, job creation for the community" (Ceptureanu SI, 2015a).

For last couple of decades the importance of entrepreneurship for economic health of a country is widely understood, as evidenced by interest taken in establishing universities, colleges for imparting entrepreneurial education, establishment of different supporting and facilitating authorities, and forums and platforms at different national and international levels (Nicolescu O et al., 2009).

Entrepreneurship education would produce better quality entrepreneurs in the future (Cavaller, 2011; Ceptureanu SI, 2015b). We have been "witnessing a remarkable escalation in entrepreneurship education at various universities in Romania" (Ceptureanu EG et al., 2012). Entrepreneurship generates "millions of job opportunities, offers a variety of consumer goods and services, and generally increases national prosperity and competitiveness" (Nicolescu O et al., 2009, Ceptureanu SI, 2015b).

Unemployment is one of the most important issue of Romanian society nowadays, "with more than 25% of young people being unemployed" (Ceptureanu EG, 2015a). Delivering job opportunity for "thousands of unemployed university graduates has been recognized as one of the most demanding challenges facing our society today" (Ceptureanu EG et al., 2014).

In Romania, a significant "boost in the development of higher education institutions all across the country during the last two and a half decades corroborated with lack of a rather holistic and comprehensive strategy on supply and demand of educated manpower represent the holistic "picture" of academic trends" (Ceptureanu SI, 2015b). As a result of emergent, entrepreneurship has recently been an interesting issue in much of the developed countries as well (Block and Stumpf, 2003; Mccline, 2004; Ceptureanu EG, 2015a).

2. Theoretical background

The concept of the entrepreneurial university was addressed as early as 1983 by Etzkowitz in his discussion of American academic science and how research results can be applied in commercial settings. Since then, this concept has been broadened and developed, for example by Clark (1998) who described entrepreneurial universities as striving to 'include more useful knowledge, to move more flexibly over time from one programme emphasis to another, and finally to build an organizational identity and focus' (p. 14). It has become increasingly established that universities and how they interact with other actors are crucial components in knowledge-based regional development (Etzkowitz & Klofsten, 2005; Svensson et al., 2012; Ceptureanu EG, 2015a, Ceptureanu SI, 2014).

Development towards an entrepreneurial university entails working with organisational capacity, people and incentives; external relationships with stakeholders for knowledge exchange; as well as supporting various pathways for entrepreneurs (OECD, 2012). From this, it follows that academic entrepreneurship has become a vital part of a university's activity portfolio. Klofsten and Jones-Evans (2000) suggest that it should be viewed broadly and that it can encompass eight types of activities, ranging from academic spin-offs and patents to contracted research, consulting services and provision of external educational courses. It has often been argued that a bottom-up approach which engages individuals is more conducive to fostering academic entrepreneurship than a top-down approach (Jacob et al., 2003; Ceptureanu SI, 2015c). However, it seems as if there are synergies between approaches at different levels, such as central university management, departments and individual faculty and students, as well as external actors at national and regional level (Graham, 2014). This can lead to differences between faculties, departments and research groups on problems regarding i.e. concerning how commercialisation is encouraged, interpreted, and practised. Furthermore, a significant variation in the actual level of entrepreneurial activity can develop between departments within the same university (Bercovitz & Feldman, 2008). The local environment can strongly influence faculty engagement in academic entrepreneurship through specific histories, cultures and rules, as has been shown by Kenney and Goe (2004) in their study of electrical engineering and computer science at UC Berkeley and Stanford.

Davies (2001, p. 27) proposed a more holistic view where entrepreneurial culture included 'mutually supportive and informal relations between individual, department and centre' as well as abilities within the organisation to learn collectively and change structures and rules. A recent review of the literature on academic engagement and commercialisation shows that these are multi-level phenomena (Perkmann et al., 2013). The study concluded that academic engagement was influenced by interplay between factors at institutional, organisational, and individual levels. Furthermore, it found that commercialisation activities were more dependent on support provided at the organisational level than on academic engagement (Perkmann et al., 2013). Hence, the perceived support for academic entrepreneurship at different levels within the university seems to be of importance when academics decide whether or not to behave entrepreneurially (Rasmussen et al., 2010). A better understanding of such perceptions is warranted because they may be linked to actual behaviour. The entrepreneurship literature recognises entrepreneurial intentions as the best predictor of entrepreneurial behaviour and perceived support may have an important impact on these (Kolvereid et al., 2006; Krueger et al., 2000). To sum up, universities are heterogeneous organisations and it has been recognised that the support may vary between the supervisor, research group, department and central university level.

3. Method

In our survey, academia of BUES university formed access population of the study (N= 771 according to 2011 data) out of which a sample size of 72 were selected using criteria such as qualification on entrepreneurship and past experience in develop programmes or conference with students on this area of research. Respondents ratify 26 items regarding potential impact on the improvement of

entrepreneurial skills of students, utilizing a Likert-type scale for impact. Table 1 and 2 shows findings regarding our research.

Table 1: Ways to improve student's entrepreneurial skills in BUES(Cronbach's alpha= 0.90).

Rank	Mechanisms	Mean	SD	CV
1	BUES- entrepreneurs (young) NGOs	4.211	0.752	0.171
2	BUES- apprenticeship courses	4.178	0.747	0.162
3	BUES- educational content and recent scientific advances	4.181	0.571	0.129
4	BUES- creatively-centred methods of teaching	4.142	0.705	0.161
5	BUES curricula based on job market demands	4.122	0.622	0.149
6	BUES- experiential opportunities	4.093	0.749	0.177
7	BUES- academic projects regarding entrepreneurship	3.865	0.819	0.204
8	BUES- career counselling regarding future job	3.835	0.768	0.195
9	BUES- extracurricular activities regarding entrepreneurship	3.831	0.755	0.189
10	BUES- students' entrepreneurial ideas	3.782	0.649	0.168
11	BUES- simulations regarding practical experience on future job opportunities	3.759	0.844	0.216
12	BUES- entrepreneurial education content	3.752	0.759	0.198
13	BUES- business incubators and start-ups inside university	3.709	0.812	0.211
14	BUES- TIC skills	3.692	0.915	0.242
15	BUES- teaching entrepreneurship as the content of education	3.681	0.725	0.192
16	BUES- workshops on creative thinking	3.680	0.758	0.201
17	BUES- entrepreneurship centres' inside universities	3.591	0.837	0.227
18	BUES- mentorship	3.577	0.904	0.248
19	BUES- writing proper business plan	3.492	0.888	0.249
20	BUES- developing academia entrepreneurial skills	3.451	0.857	0.242
21	BUES- agreements with student entrepreneurial organizations	3.432	0.862	0.247
22	BUES- adapting educational planning to students' needs	3.429	0.801	0.229
23	BUES- number of conferences on entrepreneurship	3.381	0.900	0.253
24	BUES- publishing educational materials regarding entrepreneurship	3.301	0.864	0.257
25	BUES- providing information regarding record of a new enterprise	3.292	0.895	0.269
26	BUES- proper financial tools on business plans for students	3.113	0.761	0.232

Table 2: Factors and variables

Factor	Variable	Eigen value
Entrepreneurship focus	BUES- mentorship	0.488
	BUES- agreements with student entrepreneurial organizations	0.637
	BUES- publishing educational materials regarding entrepreneurship	0.632
	BUES- providing information regarding record of a new enterprise	0.772
	BUES- writing proper business plan	0.813
	BUES- proper financial tools on business plans for students	0.689
Education	BUES- experiential opportunities	0.638
	BUES- apprenticeship courses	0.688
	BUES- creatively-centred methods of teaching	0.574
	BUES- students' entrepreneurial ideas	0.561
	BUES- developing academia entrepreneurial skills	0.589
Curriculum	BUES- workshops on creative thinking	0.531
	BUES- academic projects regarding entrepreneurship	0.509
	BUES curricula based on job market demands	0.632
	BUES- entrepreneurial education content	0.681
	BUES- teaching entrepreneurship as the content of education	0.511
	BUES- adapting educational planning to students' needs	0.621
Others issues	BUES- number of conferences on entrepreneurship	0.558
	BUES- extracurricular activities regarding entrepreneurship	0,492
	BUES- simulations regarding practical experience on future job	0.498

	opportunities	
	BUES- business incubators and start-ups inside university	0.611
	BUES- entrepreneurship centres' inside universities	0.521
	BUES- TIC skills	0.579
	BUES- career counselling regarding future job	0.628
	BUES- entrepreneurs (young) NGOs	0.551

4. Results and discussion

Academic education must be transformed in order to be able to meet the needs of upcoming economy needs. In our opinion, a combination of activities integrating academic- organizational learning experiences followed by a redefinition of educational curricula and teaching methods were the most important mechanisms in order to stimulate entrepreneurship behaviour in our university (Ceptureanu EG, 2015b, 2015c). Findings support, Nicolescu O et al. (2009), Chambers (2002) and Ceptureanu SI et al. (2015b) researches. We can consider that academic staff must stay focus on:

- Innovative teaching techniques,
- Entrepreneurs and entrepreneurships,
- Creativity techniques

and

- Incubating student's ideas.

We propose three major implications for actors involved in enhancing entrepreneurial engagement at higher education institutions. First, differences between universities organizational structures (i.e. faculties and departments) regarding organizational norms and cultures should be taking account when encouraging entrepreneurial engagement. As shown by Louis et al. (1989), the policy and structure of the university may have little effect on scientists' entrepreneurial behaviour, whilst characteristics at lower hierarchical levels might be more salient in influencing attitudes and intentions concerning academic entrepreneurship. Second, all levels of the university hierarchy should be considered when developing the support system for academic entrepreneurship. As noted above, there could be a need to involve the departments and divisions, i.e. the middle levels of the university hierarchy, more strongly in the promotion of entrepreneurial activities. These levels are often responsible for managing resources and choosing priorities that directly influence the ability of academics to engage in commercialization activities. Third, despite their subordinate position, today's students will soon have influential positions in the university. Hence, any attempt to create a more entrepreneurial university should pay particular attention to this group of academics. Whilst senior academics may be difficult to influence, our study shows that students seem to be receptive to communication about the commercialization of research results. Our findings indicate that initiatives and research about the creation of entrepreneurial universities should put students in a central position.

References

Alstete AW (2002). "On becoming entrepreneur: an evolving typology". *International Journal of Entrepreneurship Behaviour. Res*. 8(4), pp. 222-234.

Block A, Stumpf SA (2003). *Entrepreneurship Education Research: Experience and Challenge*; in Sexton DL, Kasarda JD (Eds), *The State of the Art of Entrepreneurship*; PWS-Kent Publishing Company, Boston.
Cavaller V (2011). "Portfolios for entrepreneurship and self-evaluation of higher education institutions". *Procedia- Social and Behavioural Sciences*, 12, pp.19-23
Ceptureanu E.G. (2015a), 'Survey regarding resistance to change in Romanian innovative SMEs from IT Sector', *Journal of Applied Quantitative Methods*, 10 (1), pp.105-116
Ceptureanu E.G. (2015b), 'Employee's reaction to change in Romanian SMEs', *Review of International Comparative Management*, 16(1), pp.77-87
Ceptureanu E.G. (2015c), "Research Regarding change management tools on EU SMEs", *Business Excellence and Management Review*, 5(2), pp.28-32
Ceptureanu E.G. and Ceptureanu S.I., (2014) 'Change management survey on innovative ITC Romanian SMEs', *Quality- Access to success*, 16 (144), pp.62-65
Ceptureanu EG and Ceptureanu SI (2012), "Practice in management and entrepreneurship: some facts from the Bucharest University of Economic Studies", *Review of International Comparative Management*, 13(5), pp.703-716
Ceptureanu S.I. (2014), "Knowledge based economy in Romania: comparative approach", *Journal of Applied Quantitative Methods*, 9 (4), pp.51-61
Ceptureanu S.I. (2015a), "Knowledge management in Romanian young SMEs", *Review of International Comparative Management*, 16(1), pp.5-22
Ceptureanu S.I. (2015b), "Competitiveness of SMEs", *Business Excellence and Management Review*, 5(2), pp.55-67
Ceptureanu S.I. and Ceptureanu E.G., (2015b) "Knowledge management in Romanian companies", *Quality- Access to success*, 16 (145), pp.61-66
Ceptureanu S.I. and Ceptureanu EG (2015a). "Challenges and Barriers of European Young Entrepreneurs", Management Research and Practice, Vol. 7 Issue 3 (2015) pp. 34-58
Ceptureanu SI (2015c), Romanian Young SMEs Overview. Business Environment Situation, Proceedings of the 25th International Business Information Management Association (IBIMA), ISBN: 978-0-9860419-4-5, 7-8 May 2015, Amsterdam, Nederlands, pp.1555-1567.
Ceptureanu SI, Ceptureanu EG, Tudorache A. and Zgubea F (2012), "Knowledge based economy assessment in Romania", *Economia, Seria Management*, 15(1), pp.70-87
Clark, B. R. (1998) "The entrepreneurial university: demand and response", *Tertiary Education & Management*, 4, pp. 5–16.
Cunningham JB, Lischeron J (1991). "Defining Entrepreneurship". *Journal of Small Business Management*, 29, pp. 45-61.
Davies, J. L. (2001) "The emergence of entrepreneurial cultures in European universities", *Higher Education Management*, 13, pp. 25–43.
Etzkowitz, H. & Klofsten, M. (2005) "The innovating region: toward a theory of knowledge-based regional development", *R&D Management*, 35, pp. 243–255.
Etzkowitz, H. (1983) "Entrepreneurial scientists and entrepreneurial universities in American academic science", *Minerva*, 21, pp. 198–233.
Graham, R. (2014) *Creating University-based Entrepreneurial Ecosystems: evidence from emerging world leaders*. MIT Skoltech Initiative Report
Green R, David J, Dent M, Tyshkovsky A (1996). "The Russian entrepreneur: a study of psychological characteristics". *Int. J. Entrepr. Behav. Res*. 2(1), pp. 49-58.

Jacob, M., Lundqvist, M., & Hellsmark, H. (2003) “Entrepreneurial transformations in the Swedish university system: the case of Chalmers University of Technology”, *Research Policy*, 32, pp. 1555–1568.
Kenney, M., & Goe, R. W. (2004) “The role of social embeddedness in professorial entrepreneurship: a comparison of electrical engineering and computer science at UC Berkeley and Stanford”, *Research Policy*, 33, pp. 691– 707.
Klofsten, M., & Jones-Evans, D. (2000). “Comparing academic entrepreneurship in Europe – the case of Sweden and Ireland”, *Small Business Economics*, 14, pp. 299–309.
Kolvereid, L., & Isaksen, E. (2006) “New business start-up and subsequent entry into self-employment”, *Journal of Business Venturing*, 21, pp. 866–885.
Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000), “Competing models of entrepreneurial intentions”, *Journal of Business Venturing*, 15, pp. 411–432.
Louis, K. S., Blumenthal, D., Gluck, M. E., & Stoto, M. A. (1989) Entrepreneurs in academe: an exploration of behaviors among life scientists, *Administrative Science Quarterly*, 34, pp. 110–131.
Mccline RL (2004). “Opportunity Recognition: An Exploratory Investigation of a Component of the Entrepreneurial Process in the Context of the Health Care Industry: Theory and Practice, *Tertiary Education Management*, 25(2), pp. 81-94.
Nicolescu O, Nicolescu C, Popa I, Ceptureanu SI, Dobrin C, Ceptureanu EG (2009), “Innovation in Romanian SMEs and its impact on performance”, *Computer Science and Information Technology-Spring Conference*, 2009. IACSITSC'09, 978-0-7695-3653-8, pp. 336-339
OECD (2012) *A guiding framework for entrepreneurial universities*, www.oecd.org
Perkmann, M., Tartari, V., Mckelvey, M., Autio, E, Brostro¨ M, A., D’este, P., Fini, R., Geuna, A., Grimaldi, R., Hughes, A., Krabel, S., Kitson, M., Llerena, P.,Lissoni, F.,Salter, A., & Sobrero, M. (2013) “Academic engagement and commercialisation: a review of the literature on university–industry relations”, *Research Policy*, 42, pp. 423–442.
Rasmussen, E., & Borch, O. J. (2010) “University capabilities in facilitating entrepreneurship: a longitudinal study of spin-off ventures at mid-range universities”, *Research Policy*, 39, pp. 602–612.
Svensson, P., Klofsten, M., & Etzkowitz, H. (2012) “An entrepreneurial university strategy for renewing a declining industrial city: the Norrkoping € way”, *European Planning Studies*, 20, pp. 505–525.