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THE ENTREPRENEURIAL UNIVERSITY – PROBLEMS AND EXPERIENCES

Summary: *The information and communication technology revolution and the turbulence of the economy arises new demands on higher education systems across the world. The model of the entrepreneurial university is the most successful to date. Their functionality is linked to problems and success. This paper focuses on the experiences of the 15 countries.*

Keywords: *Entrepreneurial University, Academic Entrepreneurship, Spin-offs.*

Introduction. Universities have gone through several stages of development to reach their present state, with their roles and missions changing. In the late twentieth century, the term “Entrepreneurial University” appeared in the academic literature to describe universities that have improved various mechanisms by developing their local economy and increasing their incomes. For greater clarity, we will present an analysis of the experiences of the 15 countries.

Purpose. Study of the problems and experiences of the entrepreneurial universities on the example of different countries.

Results. The education system faces unprecedented challenges due to rapid economic development and the digital era. The studies are particularly diverse by its content, which includes the analysis of experiences of various countries.

After studying entrepreneurial orientation of *US universities* O’Shea et al., [1] derive eight hypotheses that link attributes of resources and capabilities, institutional, financial, commercial and human capital, to university spin-off outcomes.

OECD [2] studied the best practices of entrepreneurial universities in different countries and as indicated in the research universities in *Eastern Germany* have developed criteria for business activities of entrepreneurial university, namely: “(i) their strategy in supporting entrepreneurship, (ii) their pool of financial and human resources, (iii) the support structures they have established, (iv) their current approaches in entrepreneurship education and start-up support, and (v)

their evaluation practices”. The same study describes one of the most successful entrepreneurial universities in *France*, EM Lyon Business School. As analysts point to the success here, “activities include education and teaching (seminars, Master’s degree courses and extra-curricular activities), entrepreneurship research and entrepreneurship educational research, and start-up support through provision of infrastructure (business incubator), support programs, and access to networks”.

Muscio and Pozzali [3] have given analysis “based on original data from interviews with 197 university departments in *Italy*. The econometric analysis provided further evidence that cognitive distance has a strong negative influence on the frequency of interactions between universities and firms”. Dominici and Levanti [4] demonstrate that academic incubators play a key role in firm viability.

According to the research conducted at the universities in *Austria*, Sperrer et al., [5] noted that the entrepreneurial university represents the next step of development in higher education and to get the best results students motivation has been highlighted.

Jacob et al., argue that in *Sweden* “the difficulties in creating the entrepreneurial university: transparency; organization of the infrastructure for entrepreneurship; integration and the commercialization of the research” [6].

Wright and Fu [7] analysed the trends in spin-outs from universities in *the UK* and argue that it is important to develop a more comprehensive ecosystem for academic entrepreneurship that includes a wider range of actors and mechanisms.

Bak [8] presents various aspects of Academic Entrepreneurship and its application in *Poland*. As a result of research, the author concludes TTOs final results directly linked to the age of TTOs and the experience of its staff.

Two *Spanish* entrepreneurial universities were surveyed and noted that “implementation of entrepreneurial methodologies and courses, the support for technology transfer and the development of appropriate reward systems have been some of the most successful actions adopted by the universities” [9].

After discussing the problems of knowledge triangle in *Estonia*, Kirch [10] considers the modernization of higher education institutions as a key element in enhancing the competitiveness of Estonian economy.

“A sample of 1,401 researchers from *Portuguese* universities showed that when the institutional strategy is to increase patenting and spin-off activities, the university should begin investing in

creating a networking environment capable of reinforcing the researchers' Social Capital" [11].

After studying the two *Hong Kong* entrepreneurial universities Sharif and Baak (2008) concluded that "Universities should better manage TTOs, and the government, through better understanding of the capacity of TTOs to create spin-offs, should develop policy measures that facilitate the process" [12].

Mudde et al., [13] explore university entrepreneurial transformation in *Indonesia* with a case of Bogor Agricultural University and emphasized that the development of entrepreneurial activity, learning and teaching processes need more attention.

Studying Incubators of nine *Brazilian* Universities Stal et al., [14] argue that "there are few efforts to attract the academic audience, which leads to underutilization of this important channel for the transfer of research results".

Lazzeretti and Tavoletti [15] through a case study regarding the *Dutch* University of Twente, argue that, "a strong entrepreneurial vision and the adoption of a different concept of knowledge may be the key for other small and peripheral European universities, in order to reach both local economic relevance and international excellence."

In Georgia, reforms have been launched to unify science and education in one university space. We dedicated some works to the effective functioning of the entrepreneurial universities [16;17;18]. In general, Georgian authors write about the necessity of reforms in various areas of the education system, namely: Gogorishvili [19;20], Lekashvili [21;22], Papachashvili [23;24], Sepashvili [25;26], Tsetskhladze [27] and Tsetskhladze [28].

Conclusions. Thus, the formation of an entrepreneurial university is very important for the innovative development of the economy. It directly influences the indices that determine the innovative development of the economy.

References

1. O'Shea, R.P., Allen T.J., Chevalier, A. & Roche F. Entrepreneurial orientation, technology transfer and spinoff performance of U.S. universities, Research Policy, Vol. 34 No.7, (2005), pp. 994–1009.
2. OECD. Universities, Innovation and Entrepreneurship criteria and examples of good practice. (2009), <https://www.oecd.org/cfe/leed/43201452.pdf> (Accessed 13 November 2017).
3. Muscio, A. & Pozzali, A. The effects of cognitive distance in university-industry collaborations: some evidence from Italian universities, J Technol

Transf Vol. 38, No. 4, (2013) pp. 486–508. DOI 10.1007/s10961-012-9262-y <https://link.springer.com/article/10.1007/s10961-012-9262-y>

4. *Dominici, G. & Levanti, G.* The incubation process for the creation of viable firms: the case of ARCA Consortium, *Int. J. Markets and Business Systems*, Vol.1, No. 1, (2015), pp.4–27.

5. *Sperrer, M., Muller, Ch., and Soos, J.* The Concept of the Entrepreneurial University Applied to Universities of Technology in Austria: Already Reality or a Vision of the Future? *Technology Innovation Management Review*, Vol.6 No.10, (2016) pp.37-44.

6. *Jacob, M., Lundqvist, M. & Hellsmark, H.* Entrepreneurial transformations in the Swedish University system: the case of Chalmers University of Technology, *Research Policy* 32, (2003), pp.1555–1568.

7. *Wright, M. & Fu, K.* University Spin-outs: What do we know and what are the policy implications? Evidence from the UK, *Journal of Innovation Management*, Vol.3 No.4, (2015) pp. 5-15.

8. *Bak K.* Academic Entrepreneurship – conceptual framework and example from Poland, *Forum Scientiae Oeconomia* Vol. 4 No. 3, (2016) pp. 105-114.

9. *Guerrero-Cano M., Linan F., Toledano N. & Urbano D.* Entrepreneurial Universities and Regional Development: A Spanish Case Study, Editor: Nolin T.P. In: *Handbook of Regional Economics*, Chapter 24, (2009), pp. 589-606, Nova Science Publishers, Inc.

10. *Kirch, A.* Process of the Implementation of Knowledge Triangle in Estonia, *Inzinerine Ekonomika-Engineering Economics*, Vol. 21 No. 3, (2010), pp. 274-282 <http://www.inzeko.ktu.lt/index.php/EE/article/viewFile/11691/6360> (accessed 7 January, 2018).

11. *Moutinho, R., Au-Yong-Oliveira, M., Coelho, A. & Manso, J. P.* Determinants of knowledge-based entrepreneurship: an exploratory approach. *International Entrepreneurship and Management Journal*, 12(1), (2016), pp. 171-197.

12. *Sharif N. & Baak E.* Mobilizing technology transfer from university to industry The experience of Hong Kong universities, *Journal of Technology Management in China*, Vol. 3 No. 1, (2008), pp.47-65.

13. *Mudde, H. L.M., Widhiani, A.P. & Fauzi A.M.* Entrepreneurial University Transformation in Indonesia: A Comprehensive Assessment of IPB, *GSTF Journal on Business Review (GBR)*, Vol.5 No.1, (2017), pp. 46-61.

14. *Stal E., Andreassi T. & Fugino A.* The Role of University Incubators in Stimulating Academic Entrepreneurship. *Revista de Administração e Inovação*, ISSN: 1809-2039, Vol. 13, No.2, (2016), pp.27-47.

15. *Lazzeretti, L. & Tavoletti, E.* (2005), *Higher Education Excellence and Local Economic Development: The Case of the Entrepreneurial University of Twente*, *European Planning Studies*, Vol. 13, No. 3, April 2005, ISSN 0965-4313 print=ISSN 1469-5944 online=05=030475–19 # 2005 Taylor & Francis Group Ltd.

16. *Gagnidze, I.* The Role of International Educational and Science Programs for Sustainable Development (Systemic Approach), *Kybernetes*. Vol. 47, No. 2, (2018), pp. 409-424. <https://doi.org/10.1108/K-03-2017-0114> (Accessed 16 February, 2018).

17. *Gagnidze, I.* Cluster as a tool for the challenges of development“, *Strategica International Academic Conference, Third Edition'Local versus Global'*, Bucharest, Romania, October 29–31, 2015, ISSN: 2392-702X; ISBN: 978-606-749-054-1, (2015), pp. 336–344. <http://strategica-conference.ro/wp-content/uploads/2016/01/Strategica-2015-Challenges-of-Integration-into-the-World-Economy.pdf> (Accessed 17 February 2018)

18. *Gagnidze, I.* Entrepreneurial University: Subsystem Determining the Success of Clusters, *Book of Abstracts, Business Systems Laboratory 4th International Symposium, “Governing Business Systems. Theories and Challenges for Systems. Thinking in Practice”*, ISBN: 9788890824234, Vilnius, Lithuania, August, 24–26, (2016) pp. 179–182. http://bslab-symposium.net/Vilnius.2016/BSLab-Vilnius2016-e-book_of_Abstracts.pdf (Accessed 16 February, 2018).

19. *Gogorishvili, I.* Foreign economic policy of Georgia since gaining the Independence'. *Estonian Discussions on Economic Policy, Topical issues in the EU Member States. 1/2016, Berlin-Tallin*. ISSN 2228-1878, (2016), pp. 33-47. http://www.mattimar.ee/publikatsioonid/majanduspoliitika/2016/1_2016_kroonika.pdf (Accessed 30 November 2017).

20. *Gogorishvili, I.* Expansion of Social Responsibility in the Business Process Engineering. *Business Systems Laboratory 3RD International Symposium. Advances in Business Management. Towards Systemic Approach*. January 21-23, 2015. University For Foreigners of Perugia. ISBN: 9788890824227, <http://bslab-symposium.net/Perugia.2015/Online-Proceedings-Book-Abstracts-BSLAB-2015.pdf> (Accessed 16 February, 2018).

21. *Lekashvili, E.* Entrepreneurial Way of Thinking and Its Development Challenges in Georgia. *Journal L'Association 1901 'SEPIKE', Ed., 8, Poitiers (France), Frankfurt (Germany), Los Angeles (U.S.)*, (2015), pp. 121-126. ISSN 2196-9531. ISSN 2372-7438. http://docs.wixstatic.com/ugd/b199e2_004a4752ab114d47b94800998f727abb.pdf (Accessed 30 November 2017).

22. *Lekashvili, E.* International Assessments Analyses of Systemic Transformation of Georgia's Economy, *Global Journal of Management and Business Research : B, Economics & Commerce*, Online ISSN:2249-4588; Print ISSN:0975-5853, DIO: 10.17406/GJMBR, Volume 17 ISSUE 5 (VER 1.0), Open Association of Research Society, (2017), pp. 33-41; [https://globaljournals.org/GJMBR_Volume17/E-Journal_GJMBR_\(B\)_Vol_17_Issue_5.pdf](https://globaljournals.org/GJMBR_Volume17/E-Journal_GJMBR_(B)_Vol_17_Issue_5.pdf) (Accessed 9 February, 2018).

23. *Papachashvili, N.* Global Trade Order: The lessons from Doha Round, *Book of Abstract, Business Systems Laboratory 4th International Symposium, “Governing Business Systems. Theories and Challenges for Systems. Thinking in Practice”*, ISBN: 9788890824234, Vilnius, Lithuania, (2016). pp.84-86.

http://bslab-symposium.net/Vilnius.2016/BSLab-Vilnius2016-e-book_of_Abstracts.pdf (Accessed 20 February 2018).

24. *Papachashvili N.* Developments in Model-Based Trade Policy Analysis. MODEL-BASED GOVERNANCE FOR SMART ORGANIZATIONAL FUTURE. BSLab-SYDIC International Workshop — Roma, 2017. Rome, Italy, (2017), pp. 93-97. <http://bslab-symposium.net/BSLab-Sydic-2017/Book-Abstracts-BSLab-Sydic-2017-final.pdf> (Accessed 20 February 2018).

25. *Sepashvili, E.* Eastern Partnership Integration with the EU and Inclusive Growth of National Economies. Management Dynamics in the Knowledge Economy, Vol. 5, No.3 (2017), pp.439-454, ISSN 2392-8042 (online). <http://www.managementdynamics.ro/index.php/journal/article/view/225/186> (Accessed 30 November 2017).

26. *Sepashvili, E.* Globalized World Economy, Innovations and National Policies for Economic Growth. Business Systems Laboratory 4th International Symposium, ‘Governing Business Systems. Theories and Challenges for Systems. Thinking in Practice’, ISBN: 9788890824234, Vilnius, Lithuania, (2016), pp. 174–176. http://bslab-symposium.net/Vilnius.2016/BSLab-Vilnius2016-e-book_of_Abstracts.pdf (Accessed 9 February, 2018).

27. *Tsetskhladze, M.* Economic Potential of Georgia and Perspectives of Economic Integration with Europe, Proceedings of the Finance and Economics Conference Lupcon Center for Business Research, In Frankfurt am Main, Germany, Vol. 7 (2016). <http://www.lcbr-archives.com/media/files/Murman-Tsetskhladze.pdf> (Accessed 16 February, 2018).

28. *Tsetskhladze, L.* Innovation – determining factor of business competitiveness, The Journal Innovative Economy and Management, No. 1 (2016), pp. 82–86.

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ПРИНЦИПИ ЗАБЕЗПЕЧЕННЯ КОНКУРЕНТНИХ ПЕРЕВАГ ПІДПРИЄМСТВАМИ АВТОМОБІЛЬНОГО ТРАНСПОРТУ

Анотація: Визначено особливості формування конкурентних переваг підприємствами автомобільного транспорту. Виділено уніфіковану і спеціалізовану групу принципів, що забезпечують конкурентні