

Preliminary communication/Prethodno priopćenje

**DO UNIVERSITIES AND STUDENTS NEED TO BE
ENTREPRENEURIAALLY ORIENTED?
A LITERATURE REVIEW***

IVANA DVORSKI LACKOVIĆ

Faculty of organization and informatics
University of Zagreb
Pavlinska 2, 42 000 Varaždin, Hrvatska
idvorski@foi.hr

VLADIMIR KOVŠČA

Faculty of organization and informatics
University of Zagreb
Pavlinska 2, 42 000 Varaždin, Hrvatska
vkovsca@foi.hr

ROMAN LACKOVIĆ

PBZ stambena štedionica d.d.
Radnička cesta 44, 10 000 Zagreb, Hrvatska
roman.lackovic@pbz.hr

ABSTRACT

Entrepreneurial orientation is a theoretical concept defined by three dimensions: innovativeness, proactivity and risk-taking. Entrepreneurial orientation researchers suggest that entrepreneurial orientation is a concept that pervades through all organizational levels of the company (Wiklund and Shepherd, 2005; Wales, Monsen and McKelvie, 2011). Although focus of early research on the concept has been oriented on the company level and its influence on profitability, cotemporary research has put much accent both on research of individual entrepreneurial orientation, as well as on research of entrepreneurial orientation of non-profit companies.

Having on mind the fact that contemporary university should be an incubator of practical and applicable knowledge, but also being aware of many practical dimensions related to university management, in this paper we will focus on investigating whether there is a rationale for incentives for universities and students to be more entrepreneurially oriented by systematizing the findings of research papers whose focus has been on measuring individual entrepreneurial orientation of students and on researching different dimensions of entrepreneurial orientation of universities.

KEYWORDS: Entrepreneurial orientation, innovativeness, proactivity, risk-taking, universities

*This research was conducted as part of a broader research within the scientific-professional project "Integrated marketing in small and medium enterprises". The project leader is CRODMA - Croatian Association for Direct and Interactive Marketing.

1. INTRODUCTION

Entrepreneurial orientation is a concept that has been in the focus of scientific research in the last thirty years (Covin and Lumpkin, 2011) due to its image as an incentive force in the company, having influence on profitability. The concept has been theoretically developed on the premise that there are three main dimensions of entrepreneurial orientation: innovativeness, proactivity and risk-taking.

Main question arising from our scientific interests is whether this concept is applicable on the level of universities and students. i.e. Is there a rationale for universities to be entrepreneurially oriented? Is there a rationale for students to be entrepreneurially oriented? With the aim of trying to answer the named questions, we have structured the paper so that in the second section we are analysing roles of a modern university, in third the concept of entrepreneurial orientation in general and in fourth we are trying to indicate whether entrepreneurial orientation is applicable on the level of universities and students. Finally, we provide conclusions and references.

2. ROLES OF A MODERN UNIVERSITY

The role of a modern university is far from the antique view of university as an institution reserved only for a selected few. On one hand a modern university needs to be open to students and to the public and on the other hand it needs to keep and defend its status and elite role in the society as a spot of knowledge sharing and contribution to the society. This is in line with Oosterlinck (2004) who states that there are three core activities of universities: research, education and service to the society.

Guerrero et al. (2016) state that the role of universities is crucial in the development of human capital, knowledge capital and entrepreneurship capital and argue that universities are changing in content, structure, governance and strategies. Stensaker (2018) argues that academic development may be regarded as cultural work and that universities are perceived as cultural constructs. According to Reilly et al. (2019) universities play a vital role in the knowledge economy in supporting information and facilitating regional economic growth.

The demands of the modern society also impose the need that the universities cooperate with the government and the economy and that they help students become visible and competitive on the labor market. All of the mentioned points, as also regulatory requirements, have implications on university management and impose the need for universities to become more corporate-like, thus creating environment in which traditional and modern roles of university are mixed. One of the modern roles of universities is entrepreneurship, i.e. its entrepreneurial dimension. According to Thorp and Goldstein (2010) entrepreneurial university is defined by two elements: its culture of entrepreneurship and the development of entrepreneurial mindset in graduates.

This is in line with our reasoning that when analyzing the role and status of students in the society, the key element that needs to be considered in this context is students' employability,

i.e. a holistic set of students' personal characteristics, knowledge and skills, both professional and communication. In this context one may analyze students' individual entrepreneurial intention not only as something desirable or reserved for business students, but also as an aggregate of traits that might be useful in any field a student inclines to and plans to study and develop professional career.

Having on mind the fact that contemporary university should be an incubator of practical and applicable knowledge, while at the same time being aware of many practical dimensions related to university management, we would like to draw attention on the concept of entrepreneurial orientation that has widely been used in the business world and that may find its application in scientific research of universities' entrepreneurial role.

3. CONCEPT OF ENTREPRENEURIAL ORIENTATION

The roots of defining the concept of entrepreneurial orientation (EO) can be found in the work of Mintzberg (1973) who states that entrepreneurs are actively seeking new opportunities and are making a dramatic leap towards the unknown and uncertainty. In that context Miller (1983) has defined entrepreneurial company as the company open to innovation, taking risky ventures and is proactive in innovation, thus leading to competitive advantage. In continuation to the mentioned, Miller (1983) has defined three main dimensions of the EO concept: innovativeness, proactivity and risk-taking. Innovativeness is related to development of new products or services, significant change or improvement of the existing products or services and general tendency of the company towards research and development. Proactivity may be characterized as the tendency of the company towards initiation of actions that competition is reacting to and being competitively oriented. Risk-taking is related to preferences according to high risk-low return projects or investment and aggressive approach towards opportunities with uncertain outcome.

According to Lumpkin and Dess (1996) the EO is defined as „processes, practices and activities in decision making, leading to new entry in one or more dimensions: autonomy in behavior, readiness for innovation and risk-taking, tendency towards aggressive behavior towards competition and proactive behavior towards market opportunities.“ This way, Lumpkin and Dess (1996) have added two new dimensions to the previously defined EO concept: autonomy and competitive aggressiveness.

Scientific research following these first definitions of the concept has been oriented in two main directions. First, in measuring concrete level of EO in companies and second, measuring influence of the EO on the profitability of companies. While measuring the concept of the EO, most of the authors have used the concept comprising three dimension and the others the concept with five dimensions. The EO is measured through a standardized set of questions where companies are estimating their level of agreement with certain statements, each corresponding to and reflecting a different EO dimension.

In order to gain more insight into the importance of the EO concept for managerial research we will further on present a short overview of some of the most important findings in the field. Lumpkin and Dess (1996) have presented a conceptual model on the relationship between the EO and performance measured by the growth rate ration, market share, profitability, satisfaction of shareholders and overall performance. This paper is an excellent example where the authors have tried to capture the company profitability in its multidimensionality. According to Rauch et al. (2009) the EO is leading towards improvement in company performance, but the significance of this relationship varies in different research. According to Covin and Slevin

(1986), Hult, Snow and Kandemir (2003) and Wiklund and Shepherd (2005) there is a clear and strong positive connection between the EO and performance. Lumpkin and Dess (2001) have found a positive, but weak connection between the mentioned variables, while George, Wood and Khan (2001) have not been able to confirm the hypothesis on the relation between these variables. Rauch et al. (2009) have come to the conclusion that the effects of the EO on company performance may be characterized as moderately high in positive direction.

4. ENTREPRENEURIAL ORIENTATION OF UNIVERSITIES AND STUDENTS

When researching EO, one must separate the EO measured on the level of organizations and individual entrepreneurial orientation (IEO). In the context of this paper, the EO may be measured on the level of university, but also on individual students' level. In continuation we will present a short overview of literature from both domains.

Kalar and Antoncic (2015) have conducted a research in four European universities and have found that perceiving a certain university department as having a high EO has effect on academics' engagement in some activities that are entrepreneurial in nature. They also found that academics in natural sciences perceive their departments as more entrepreneurially oriented in comparison to the social science academics. Riviezzo et al. (2017) have measured EO of university department and its effect on creation of spin-offs on the sample of Italian and Spanish universities. The results of the research indicate that the EO has a significant effect on the ability of departments to generate patents and spin-offs. Migliori et al. (2019) have conducted a research on Italian university spin-offs and have found that the EO, together with market orientation of the university, has implications on the university spin-off perceived and objective performance. In his study, Sidrat (2019) has found that the EO has a positive effect on the development of entrepreneurial university and that the entrepreneurial university is a step further in the evolution of universities without excluding the traditional roles of the university, such as teaching and research.

When analyzing the results of the existing research related to measurement of the IEO of students, we would like to point out that Koe's (2016) research indicates that two dimensions of the IEO, innovativeness and proactivity, have a positive effect on students' entrepreneurial intention. Further on, Gorostiaga et al. (2019) have found a relationship between the IEO and self-efficacy, with special accentuation of the proactivity dimension. We must point out that the syntagm "individual entrepreneurial orientation" is present in more scientific papers, but when analyzing them in-depth, we found that the papers are not directly oriented on the EO as measured by three dimensions (innovation, proactivity and risk-taking), but are oriented on research of entrepreneurial self-efficacy, entrepreneurial intention or entrepreneurial education.

Although research of the EO of universities is at its beginning, we believe that the initial scientific efforts have pointed out the importance of putting efforts into this direction in the future research.

5. CONCLUSION

In this paper we have provided a brief overview of the roles of the modern university and have tried to put accent on the fact that research results indicate that universities should, besides

keeping their traditional roles, also regard their entrepreneurial abilities and roles. These are important from two points of view: managerial and educational.

Firstly, as most of the research indicates a positive effect that the EO has on performance, universities' management should take this construct into consideration when formulating their strategy and making strategic decisions. On the other hand, universities should pay attention when formulating educational curricula that the IEO may be a relevant factor for students and put effort into encouraging these dimensions in students.

Since this paper has been a short overview of findings in the field, we strongly recommend future research in this field, both conceptual and empirical.

REFERENCES

Covin, J., Lumpkin, G. (2011). Entrepreneurial Orientation Theory and Research: Reflections on a Needed Construct. *Entrepreneurship Theory and Practice*, Vol. 35 (5), pp. 855-872.

Covin, J., Slevin, D. (1986). The development and testing of an organizational-level entrepreneurship scale. *Frontiers of Entrepreneurship*, pp. 628-639.

George, G., Wood, D., Khan, R. (2001). Networking Strategy of Boards: Implications for Small and Medium-Sized Enterprises. *Entrepreneurship and Regional Development*, Vol. 13 (3), pp. 269-285.

Gorostiaga, A., Aliri, J., Ulacia, I., Soroa, G., Balluerka, N., Aritzeta, A., Muela, A. (2019). Assessment of Entrepreneurial Orientation in Vocational Training Students: Development of a New Scale and Relationships with Self-efficacy and Personal Initiative. *Frontiers in Psychology*, Vol. 10.

Guerrero, M., Urbano, D., Fayolle, A., Klofsten, M., Mian, S. (2016). Entrepreneurial universities: emerging models in in the new social and economic landscape. *Small Business Economy* (47), pp. 551-563.

Hult, G.T., Snow, C.C., Kandemir, D. (2003). The role of entrepreneurship in building cultural competitiveness in different organizational types. *Journal of Management*, Vol. 29 (3), pp. 401-426.

Kalar, B., Antoncic, B. (2015). The entrepreneurial university, academic activities and technology and knowledge transfer in four European countries. *Technovation*, Vol. 36-37, pp. 1-11.

Koe, W. (2016). The relationship between Individual Entrepreneurial Orientation (IEO) and entrepreneurial intention. *Journal of Global Entrepreneurship Research*, Vol. 6.

Lumpkin, G.T., Dess, G. (2001). Linking two dimensions of organizational orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing*, Vol. 16, pp. 429-451.

Lumpkin, G.T., Dess, G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance. *Academy of Management Review*, Vol. 21 (1), pp. 135-172.

Migliori, S., Pittino, D., Consorti, A., Lucianetti, L. (2019). The relationship between Entrepreneurial Orientation, Market Orientation and Performance in University Spin-Offs. *International Entrepreneurship and Management Journal*, Vol. 15 (3), pp. 793-814.

Miller, D. (1983). The Correlates of Entrepreneurship in Three Types of Firms. *Management Science*, Vol. 29 (7), pp. 770-791.

Mintzberg, H. (1973). Strategy-making in three modes. *California Management Review*, Vol. 16 (2), pp. 44-53.

Oosterlinck, A. (2004). The modern University and its main activities. Chapter 9 in: Weber, L., Duderstadt, J. (Eds), (2004). *Reinventing the Research University*, London: Economica.

Rauch, A., Wiklund, J., Lumpkin, G.T., Frese, M. (2009). Entrepreneurial orientation and business performance: Cumulative empirical evidence. *Management Studies*, Vol. 33 (3), pp. 761-788.

Reilly, N.M., Robbins, P., Scanlan, J. (2019). Dynamic capabilities and the entrepreneurial university: a perspective on the knowledge transfer capabilities of universities. *Journal of Small Business and Entrepreneurship*, Vol. 31 (3), pp. 243-263.

Riviezzo, A., Linan, F., Napolitano, M.R. (2017). Assessing the Entrepreneurial Orientation of University Departments. A Comparative Study between Italy and Spain. In: Peris-Ortiz, M., Gomez, J., Merigo-Lindahl, J., Rueda-Armengot, C. (eds). *Entrepreneurial Universities. Innovation, Technology and Knowledge Management*. Springer, Cham.

Sidrat, S. (2019). Entrepreneurial orientation at university: a necessity? *International Journal of Entrepreneurial Venturing*, Vol. 11 (2), pp. 187-206.

Stensaker, B. (2018). Academic development as cultural work: responding to organizational complexity of modern higher education institutions. *International Journal for Academic Development*, No. 23 (4), pp. 274-285.

Thorp, H., Goldstein, B. (2010). *Engines of Innovation: The Entrepreneurial University in the Twenty-First Century*. Chapel Hill, NC: The University of North Carolina Press.

Wales, W., Monsen, E., McKelvie, A. (2011). The Organizational Pervasiveness of Entrepreneurial Orientation. *Entrepreneurship Theory and Practice*, Vol. 35 (5), pp. 895-923.

Wiklund, J., Shepherd, D. (2005). Entrepreneurial orientation and small business performance: A configurational approach. *Journal of Business Venturing*, Vol. 20, pp. 71-91.