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Institutional determinants of student employer entrepreneurs at Catalan universities

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ABSTRACT

This article investigates the influence of informal and formal institutions on the university students' decision of becoming employer entrepreneurs (university students that create a new firm with employees) in the context of Catalonia. A sample of 1207 students from the Universitat Autònoma de Barcelona (UAB) and the Universitat Oberta de Catalunya were surveyed for the period of 2012–2015, and Probit regressions over pooled data were used. The main findings suggest that formal factors (university's lack of incentives to create a new business, entrepreneurial knowledge, training and skills, and entrepreneurship education) are higher correlated with the student employer entrepreneurs than informal institutions (role models, entrepreneur's social image and fear of failure). Despite that the entrepreneur's social image does not seem to have an influence on the entrepreneurial decision of university students, the other variables analysed are statistically significant, correlated with entrepreneurship as a choice. Specifically, entrepreneurship education is the most relevant variable in explaining the decision of university students becoming employer entrepreneurs. The paper contributes with policy discussions in order to extend the current debate about the role of the universities in the entrepreneurial process and also the importance of entrepreneurial universities to the society.

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1. Introduction

Since Schumpeter (1911), there has been an explicit and generalized recognition of the role played by the entrepreneurs in generating economic development. In the last decades a growing explosion of articles providing theoretical and empirical evidence about the effect of entrepreneurship has occurred. In this respect, entrepreneurial activity has been linked to economic growth (Audretsch and Keilbach, 2008; Urbano and Aparicio, 2016), as well as cluster formation (Li et al., 2015) and new jobs creation (van Stel et al., 2014b), among other effects. According to van Praag and Versloot (2007), entrepreneurship contributes to society by including individuals in the labour market, sharing with them a common project.

Although literature dealing with the entrepreneurial decision of individuals in creating jobs exists (Millán et al., 2012, 2015; Thurik et al., 2008; van Stel et al., 2014a, 2014b; among others), most of these works are focused on understanding the individual characteristics

conditioning the probability of become an entrepreneur. However, recent evidence has suggested that other non-individual factors could affect this propensity. For instance, van Stel et al. (2014a) have found that the technological environment affects the probability of becoming an employer entrepreneur than becoming a solo self-employed. In this paper, employer entrepreneur is understood such as those entrepreneurs creating new firms that employ personnel, contributing therefore to the growth and development process. In line with the technological environment analysis, science and technology are considered some of the main sources of economic and social development at both regional and national levels (Aghion and Howitt, 1992). Presumably, the development is obtained through technical and social innovations brought to the market via knowledge mechanisms (Karaca and Öner, 2015).

In this respect, universities play an important role by providing this innovative environment, which is widely recognized (Audretsch, 2014). For example, Guerrero et al. (2015) found that entrepreneurial university, through the knowledge spillover and creation, could impact the economic growth. Also, Etzkowitz et al. (2000) suggest that the enhanced role of universities could increase the knowledge-based societies. Thus, given the universities' function creating and consuming new knowledge, their role in social value creation has gained attention in the sense that universities could be promising scenarios that encourage the worth entrepreneurial activity, and therefore, they could be

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viewed as an important policy mechanism influenced by certain institutional factors (Guerrero and Urbano, 2012). Although there are studies analyzing how institutions affecting the creation/development of entrepreneurial universities and their subsequent influence on socioeconomic performance (Guerrero et al., 2016), few studies have considered how institutional environment influences students to become entrepreneurs by hiring employees and including them into a common project (Guerrero et al., 2015). Here, further studies could extend the current debate about the role of the universities in the entrepreneurial process and also the importance of entrepreneurial universities to the society.

Based on those arguments, this article analyses the influence of informal and formal institutions on the university students' decision of becoming employer entrepreneurs in the context of Catalonia. By using institutional economics (North, 1990, 2005), we consider informal (role models, entrepreneur's social image and fear of failure) and formal institutions (the university's lack of incentives to create a new firm, entrepreneurial knowledge, training and skills and entrepreneurship education). A sample of 1207 students from the Universitat Autònoma de Barcelona (UAB) – onsite university – and the Universitat Oberta de Catalunya – online university – were surveyed for the period of 2012–2015. Applying Probit regressions over pooled data, we predict the probability of student entrepreneurs hiring between 1 and 50 workers or at least one employee and also >50 employees. Our findings show that the formal factors (university's lack of incentives to create a new firm, entrepreneurial knowledge, training and skills, and entrepreneurship education) have greater effect on the probability of becoming a student employer entrepreneur than informal institutions (role models and fear of failures). Among the formal factors, entrepreneurship education is found to have the greater impact in explaining the entrepreneurial decision of university students.

The remainder of the paper is as follows. Section 2 examines the literature on institutions and entrepreneurship in terms of university students. Section 3 then describes the data collection and the methodology used to empirically examine the influence of institutions on student employer entrepreneurs. Section 4 presents the results and the robustness check, and Section 5 discusses some of the policy implications related to the significance of entrepreneurial universities and their contribution to society. In the final section, the paper concludes and suggests future research lines.

2. Theoretical framework: institutional economics and entrepreneurial universities

As noted before, we base our analysis upon the institutional economics framework (North, 1990, 2005). In this regard, North (1990) defines the institutions as those rules shaping the human interactions and economical decisions that create specific market qualities. These rules can be either informal institutions, such as the culture, values or the social norms of a particular society, or formal, such as regulations, contracts, procedures and so on. Informal rules arguably tend to reduce the uncertainty originated by the complex and dynamic interactions between the individuals; meanwhile, formal institutions are aimed to reduce transaction costs based on regulations (North, 1990, 2005). Here, depending on whether those interactions are complex and how the individual intentionality toward progress is, higher regulative efficiency could be achieved or not, which improves or deters the social norms that create progress intentionality. Thus, informal institutions constrain the nature of formal institutions and vice versa. In terms of time, formal institutions can change in the short-term, whereas informal institutions tend to change in the long-term (Williamson, 2000).

Building upon the institutional economics, some scholars have been interested in understanding how the entrepreneurial activity is framed by institutions (Aidis et al., 2008; Bruton et al., 2010; Jennings et al., 2013; Thornton et al., 2011; Urbano and Alvarez, 2014; among others). In this respect, both informal institutions (cultural and social norms,

perception of start-up opportunities and the entrepreneur's social image, among others) and formal rules (intellectual property rights, procedures, laws and so on) have been found to be influential factors in entrepreneurship (Aparicio et al., 2016; Autio and Fu, 2015; Stenholm et al., 2013; among others). Recently, an increasing amount of works have recognized and provided additional empirical evidence about the significant effect that institutional factors, in addition to other variables, specifically have on student entrepreneurs and on the creation and development of entrepreneurial universities in general (Guerrero et al., 2016). In this sense, Guerrero and Urbano (2012) highlight that student entrepreneurs socialize according to informal institutions (e.g., role models, university community's attitude toward entrepreneurship and reward system), as well as formal factors, such as university governance structure, support measures for entrepreneurship and entrepreneurship education. Here it has been argued that knowledge-based entrepreneurship, emerging from both the institutional norms outside the university and those university's laws, structures and supports toward entrepreneurship, is quite relevant to achieve higher levels of job creations, competitiveness and economic growth (Guerrero et al., 2015).

In terms of informal institutions some authors have suggested that role models, entrepreneur's social image and fear of failure, among other factors, affect the entrepreneurial activity, urging or discouraging its development process (Aidis et al., 2008; Estrin and Mickiewicz, 2012; among others). In general, there is a vast amount of literature arguing the importance of these variables, as those institutions highly correlated with the entrepreneurial activity. Likewise, Urbano and Alvarez (2014) outline these three elements, among others, as the most relevant due to their proximity to the informal institutions. Taking into consideration the importance of these institutions, Guerrero and Urbano (2012) proposed an integrated model to understand how role models, rewards system and specific attitudes toward entrepreneurship explain the inner dynamics of entrepreneurial universities. According to Guerrero et al. (2016), these informal institutions could define the creation of new ventures among the researchers, professors and university students. In this sense, we are attempting to evaluate whether or not the already-identified institutions affect the student employer entrepreneurs.

Specifically, regarding the role models, it has been argued that people might reduce the level of uncertainty and have more confidence, since they know and learn from other entrepreneurs, which in turn raises the likelihood of starting a new venture (Davidsson and Honig, 2003). For example, some authors suggest that children with entrepreneur parents are likely to have worked with them at an early age, which allows children gaining experience and attitudes, useful later to start their own business (Carroll and Mosakowski, 1987; Lindquist et al., 2015). Role models from family and labour experience lead to the perception of oneself as an entrepreneur (Scott and Twomey, 1988; Zapkau et al., 2015). Scherer et al. (1989) argue that entrepreneurial role models are a property of a high number of entrepreneurs. Van Auken et al. (2006) and Hoffmann et al. (2015) show that many business owners include their family members like sons and daughters, among others, in their businesses, generating interaction and involvement of individuals within the new firm, which means the greatest impact on entrepreneurial intentions in those family members.

Moreover, some of the literature focused on the intentions suggests that the family background affects positively the entrepreneurial attitudes (Kolvereid, 1996; Krueger, 1993; Maes et al., 2014; Matthews and Moser, 1995; Scherer et al., 1989; among others). Thus, the presence of entrepreneurs with labour experience in family business and successful role models transmit positive effects to potential entrepreneurs (Gnyawali and Fogel, 1994). Likewise, Arenius and Minniti (2005) posit that different social sciences recognize the importance of knowing other entrepreneurs for business creation choice. For example, in psychology, some authors have discussed the importance of role models because of their ability to enhance self-efficacy (Baron, 2000;

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