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Individual and organizational inhibitors to the development of entrepreneurial competencies in universities

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ABSTRACT

Nascent academic entrepreneurs need to acquire entrepreneurial competencies to create successful spin-off ventures. In this article, we examine difficulties in this pursuit prior to venture formation and offer a systematic classification of inhibitors. We confirm, combine, and extend two previously identified inhibiting mechanisms into a relational inhibitor category, classify additional structural and cultural-cognitive inhibitors, and highlight how these inhibitors exist both at the individual and the organizational level. We then advance theoretical understanding of the interrelated, multilevel functions of inhibitors on the development of entrepreneurial competencies, and offer policy insights on how universities can mitigate their effects.

1. Introduction

Entrepreneurship theorists have long acknowledged that entrepreneurial competencies are linked to venture performance (Chandler and Jansen, 1992; Man et al., 2002). However, this insight has rarely been extended to understand the antecedent process of how entrepreneurial competencies are gained prior to venture formation (Rasmussen et al., 2011). To extend theory on entrepreneurial competencies, it is therefore important to focus on the early stage of the entrepreneurial journey (Chandler and Lyon, 2009; McMullen and Dimov, 2013).

Building on Man et al. (2002) and Rasmussen et al. (2011), we define entrepreneurial competencies as higher-level, improvable characteristics entailing personality traits, skills, and knowledge that bring about the ability to accomplish something through the use of resources. To become competent means, in the words of Hayton and Kelley (2006, p. 413), "to be able to behave effectively in a particular performance domain, occupation, or activity", which in the context of this article refers to the ability of an entrepreneur to identify and combine resources to start a venture. Understanding the dynamics shaping the development of entrepreneurial competencies raises theoretically intriguing questions as to how entrepreneurs gain competencies, and, more fundamentally, about the extent to which entrepreneurial competencies are the result of individual or contextual factors (Rasmussen et al., 2014, 2015).

We contribute to this line of research by examining the development of entrepreneurial competencies *prior* to venture formation. In so doing, we address an important gap in the entrepreneurship literature (Wright, 2014). While research has paid attention to competency development *post* venture formation (Baker et al., 2003; Chandler et al., 2005; Rasmussen et al., 2011), we know that key resource and asset-formation decisions (e.g., about human resources or business models) that have significant impacts on subsequent venture performance are often taken before a venture has begun (Chandler et al., 2005; Kaplan et al., 2009). Understanding the early process of competency development is hence crucial to our understanding of (later) entrepreneurial behaviors and venture performance.

To better comprehend the early process of competency development, we focus through the lens of a single case study university setting on the emergence of spin-off ventures (Mustar et al., 2006), which offer a particularly suitable context for such an investigation. This is because most university spin-offs are knowledge-based firms and require a rich set of resources and competencies to transform scientific findings into commercial entities (Baker et al., 2003; O'Shea et al., 2005; Vohora et al., 2004). Moreover, despite the positive economic impact of spinoffs for universities and society (Guerrero et al., 2015; Vincett, 2010), the dominantly non-commercial context of universities is not conducive to emerging spin-off ventures (Moray and Clarysse, 2005; Rasmussen and Wright, 2015; Siegel et al., 2003a). This presents a promising context in which to study the impact of contextual factors on the early

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process of competency development (Rasmussen et al., 2014; Rasmussen and Borch, 2010) and to generate policy recommendations.

In examining competency development among nascent academic entrepreneurs - i.e., academics who pursue the formation of a new, research-based venture (Dimov, 2010; Mosey and Wright, 2007) - we are particularly interested in developing the inhibitors perspective, which focuses on mechanisms constraining the development of entrepreneurial competencies and subsequent venture performance (Rasmussen et al., 2014). This approach is set against a policy backdrop strongly advocating the development of entrepreneurial knowledge and skills and the creation of university spin-offs (Lockett et al., 2005; Mustar and Wright, 2010; Siegel et al., 2003b; Wright, 2014). At the same time, however, recent data point to a puzzling downward trend in the creation of university spin-offs by academic entrepreneurs (Wright and Fu, 2015). For example, the number of spin-offs from the top 25% of universities in the United Kingdom (as ranked by UK University League Tables), which account for over 70% of all university spin-offs and contribute the most economic value (Guerrero et al., 2015), declined almost continuously in the period 2000-2012 (Wright and Fu, 2015). Indeed, during that period, the number of spin-offs reduced by almost half (Wright and Fu, 2015). This raises serious questions about the process of entrepreneurial competency development, and how universities influence nascent academic entrepreneurs and their spin-off activities (Wright, 2014).

By approaching entrepreneurial competencies from the inhibitors perspective, we focus on the competencies nascent academic entrepreneurs actively seek to develop prior to venture formation, but find difficult to obtain. In so doing, we are particularly interested in providing answers to the following question: 'What are individual and organizational inhibitors to the development of entrepreneurial competencies in a university and how do these inhibitors function?'

Based on extensive field research we offer grounded empirical insights into how nascent entrepreneurs do or do not develop entrepreneurial competencies. Our findings result in two main contributions: First, we classify inhibitors to the development of entrepreneurial competencies into relational, structural, and cultural-cognitive inhibitors, and show how these inhibitors exist both at individual and organizational levels. Second, we explicate the interrelated, multilevel functions of inhibitors. We provide emerging theoretical insights into how the three types of inhibitors together influence the development of entrepreneurial competencies in direct and indirect ways before venture formation. Based on our findings, we then highlight specific policy implications that suggest a more comprehensive yet decentralized approach for universities intending to enable and encourage the commercialization of research through entrepreneurial ventures by academic entrepreneurs. We conclude by outlining limitations of our work and potential future research opportunities.

2. Theoretical context

The theoretical context guiding our research on entrepreneurial competencies is structured along three questions and associated streams of literature, namely: *what* are entrepreneurial competencies, *why* are they important, and *how* do they develop?

2.1. What are entrepreneurial competencies?

The entrepreneurship literature commonly conceptualizes entrepreneurial competencies as encompassing aggregated clusters of knowledge, traits, attitudes, and skills (Chandler and Jansen, 1992; Hayton and Kelley, 2006; Man et al., 2002). From diverse angles, the concept of entrepreneurial competencies tries to capture the ability of an entrepreneur to start and grow a venture and successfully identify and combine a variety of resources (Penrose, 1959; Wright et al., 2012). Tangible and intangible resources, which the entrepreneurship literature has identified as important for the creation and performance of new ventures, include financial (Brinckmann et al., 2011; Wright et al., 2006), human capital (Vanaelst et al., 2006; Zucker et al., 1998), organizational, and routine-based (Di Gregorio and Shane, 2003; Jong, 2006; Lockett and Wright, 2005; Powers and McDougall, 2005; Wood, 2009), social network and social capital (Kreiser et al., 2013; Mosey and Wright, 2007; Newbert and Tornikoski, 2012; Nicolaou and Birley, 2003), and technological (Danneels, 2002; Heirman and Clarysse, 2004) resources.

What and how knowledge, traits, attitudes, and skills exactly fall under the umbrella of entrepreneurial competencies is less clear. Classifications differ in their scope, locus, and temporal assessment of entrepreneurial competencies, as summarized in Table 1. The articles listed in this table represent the most-cited contributions providing distinct classifications of entrepreneurial competencies. We identified these articles following several stages recommended in the systematic literature review procedure outlined by Tranfield et al. (2003). A comprehensive search of key terms in titles and abstracts allowed us to ascertain relevant, peer-reviewed articles related to entrepreneurial competencies. We then screened for and identified articles offering classifications of entrepreneurial competencies, and we subsequently ranked these classifications based on citations. In addition to the foundational paper by Chandler and Jansen (1992) and the almost equally well-cited paper by Man et al. (2002), four articles stand out. Each of these four articles was written in the past ten years and received over 100 citations as calculated as the arithmetic mean of citations provided by Google Scholar, Web of Science, and Scopus.

Table 1 highlights differences in scope between classifications. Classifications of entrepreneurial competencies range from six categories (Chandler and Jansen, 1992; Man et al., 2002) to three categories (Oosterbeek et al., 2010; Rasmussen et al., 2011), and there is, in various cases, little overlap between classifications with regard to the elements they entail. There are also differences in the locus of competencies: the majority of classifications locate competencies at the individual level (Chandler and Jansen, 1992; Hayton and Kelley, 2006; Man et al., 2002; Mitchelmore and Rowley, 2010; Oosterbeek et al., 2010), but some studies seek competences at the organizational level (Rasmussen et al., 2011). Finally, there are important differences in the temporal assessment of entrepreneurial competencies. While all studies highlight the development of competences as a longitudinal (but not necessarily continuous) process, some classifications focus on competencies required after a venture had been formed (Chandler and Jansen, 1992; Man et al., 2002; Mitchelmore and Rowley, 2010; Rasmussen et al., 2011), whereas other classifications focus on competencies prior to venture formation (Hayton and Kelley, 2006; Oosterbeek et al., 2010).

Although the above conceptualizations of entrepreneurial competencies clearly provide a useful overview of the different types of competencies entrepreneurs may require to develop a new venture, there is a notable disconnect between the classifications that have examined competencies before venture formation and those that have examined them after. The resulting problem is that competencies are viewed in isolation and detached from the process of starting a new venture. In other words, research focusing on competencies before venture formation tends to examine the status quo of entrepreneurial competencies in a specific setting, such as classes of students (Oosterbeek et al., 2010) or companies (Hayton and Kelley, 2006), but does not examine if and how these competencies were gained to start a new venture - and possibly even more importantly, if they actually led to the formation of a successful one. Conversely, studies focusing on entrepreneurial competencies after venture formation do examine competencies in new and mostly successful ventures, but it remains unclear if those competencies were the same that led to the formation of the ventures in the first place. What is missing, therefore, are in-depth investigations reconciling these differences. We hence need studies focusing on how competencies are actively developed and gained by nascent entrepreneurs at the pre-venture formation stage while also Download English Version:

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