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How the founders' general and specific human capital drives export activities of start-ups

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ABSTRACT

At first glance, a typical start-up does not seem to have the required capabilities to enter foreign markets. Nevertheless, 26% of the firms of a representative sample of Swiss start-ups already perform export activities three years after their foundation, and the firms with export activities generate 39% of their sales abroad on average. Previous studies identified the founders' human capital as an important driver of early internationalization. In this paper, however, we find that differences exist in the effect of the founders' general and specific human capital. While the founders' general human capital affects both export propensity and intensity, their export-specific experience only affects export propensity but not intensity. Furthermore, we find evidence that the effect of general human capital is more persistent than the effect of specific human capital.

1. Introduction

Most start-ups create few jobs and little wealth, leading several papers to conclude that encouraging individuals to become entrepreneurs is not necessarily the best policy to enhance economic growth (Astebro, 2015; Hurst and Pugsley, 2011; Shane, 2009). In order to increase the efficiency of policy activity, it is thus important to improve our knowledge of how firms with growth potential can be identified. An important measure of a firm's competitive performance is its ability to export (Westhead et al., 2001). As globalization has become an undisputed reality, internationalization is not just an option that firms can choose to follow, but has become an important precondition for economic success (Majocchi et al., 2005). Considerable advances in communication technologies and in the transport of both goods and persons facilitate international trade increasingly. Accordingly, even start-ups that normally face scarce financial and human resources can start export activities shortly after their inception. This is of particular importance for firms located in small open economies that have a small domestic market by definition.

The analysis of the drivers of firm internationalization is a key theme in international business research (for a review of this literature see Bals et al., 2013; Jones et al., 2011; Rialp et al., 2005), for which two different theoretical perspectives can be distinguished (see Wright et al., 2007). Traditional internationalization theories identify the human capital accumulated by the firm as a crucial driver of internationalization, especially in established firms (Collis, 1991; Ghoshal, 1987; Johanson and Vahlne, 1977). However, because young and new firms do not have experience in any market, traditional internationalization theory was criticized of being unable to explain the export activities of *new ventures*. As a counterpoint, the international entrepreneurship theory has been developed (Oviatt and McDougall, 2005; Zahra, 2005), according to which the human capital of the *entrepreneurs*, not the organization, is expected to play an important role for early internationalization (Bloodgood et al., 1996; Reuber and Fischer, 1997; Westhead et al., 2001). The entrepreneurial founders are seen as the main decision-makers with respect to strategic decisions dealing with export behavior. Hence, the resources and capabilities of the entrepreneurs are expected to have an important impact on the ability to identify and exploit foreign market opportunities.

Following this strand of the literature, the focus of this paper lies on analyzing the relationship between the founders' human capital and the export activities of new ventures. Even though most international entrepreneurship literature focuses on the accumulation of human capital by the firm rather than by the individual entrepreneur, we also know quite a lot about the impact of specific aspects of the entrepreneurs' human capital for early

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internationalization. From previous studies, we know, for example, that international experience is an important driver of export activities of new firms (Bloodgood et al., 1996; Reuber and Fischer, 1997). However, there are still gaps in the understanding of the relationship between the founders' human capital and the export activities of new firms.

First, most studies in this field of research have analyzed the effect of the founders' human capital either on the propensity to start export activities (dichotomous variable) or on export intensity (continuous variable), but few studies have contrasted the effect of the founders' human capital for both these measures. An exception is the paper by Ganotakis and Love (2012) that analyzed potential differences in the effect of the founders' education and experience. In this study, we argue that the differentiation between general and specific human capital (Becker, 1975) is even more relevant in order to capture potential differences between the two export measures, i.e., we expect that the differences primarily refer to the founders' specific human capital, which only affects export propensity, and not to their general human capital, which affects both export propensity and intensity. Differences in the effects of the founders' general and specific human capital for export propensity and intensity have not been analyzed before.

Second, previous studies that analyzed the effect of the founders' human capital on export activities simply pooled firms of different ages. In this study, however, we argue that the effect of the founders' human capital on export activities changes with firm age. More concretely, we expect that the effect of the founders' specific human capital on the export activities decreases as the firms grow older, while the founders' general human capital is expected to have a more persistent effect. The relevance of firm age for the impact of the founders' human capital on export activities has not been analyzed before.

By making use of a unique data set of Swiss start-ups, our hypotheses are tested empirically in the second part of the paper. Switzerland is an interesting case for such an analysis. Due to its small home market (only approximately 8 million inhabitants), exporting is clearly a must for firms that wish to grow. Moreover, the data differs from previous studies in several aspects. First, previous studies that analyzed the impact of the founder characteristics on the internationalization process of new firms were mostly drawn upon nonrandom case studies, or have focused on specific types of start-ups such as high-tech firms or firms that issued IPOs. However, as our initial discussion has shown, most start-ups are not high-tech firms and only very few of them will ever issue IPOs. Hence, it is likely that the findings of previous studies on the drivers of export activities are influenced by the specific characteristics of the used samples and cannot be applied to all start-ups. In contrast to previous studies, we do not restrict our analysis to a certain type of start-ups and empirically test our hypotheses in the second part of the paper using a data set that is based on the full cohort of firms founded in 1996/1997 in Switzerland as recorded by a census of the Swiss Federal Statistical Office for this period. In what follows, we will refer to firms that reflect a representative sample of all start-ups, and not only a specific group of them, as 'typical' start-ups (see Shane, 2009 for a related terminology)[1]. Second, we dispose of data for three cross-sections in order to follow the development of the start-ups over a period of almost 10 years, which allows us to test whether the human capital effects change with increasing firm age. Third, previous studies mostly focused on specific aspects of human capital such as international experience (Bloodgood et al., 1996; Reuber and Fischer, 1997). As different aspects of the founders' human capital are correlated with each other (e.g., the correlation coefficient between R&D experience and international firm experience is 0.74 in our sample), it is likely that some of the previous findings are driven by an omitted variable bias, and it is rather unclear which aspects of human capital indeed show a significant effect on the firms' export activities when controlling for the other aspects. In contrast to most previous studies, we reduce a potential omitted variable bias by simultaneously including a wide spectrum of control variables and variables describing the founders' human capital in our econometric model.

The empirical results are largely in line with our expectations. While the founders' general human capital affects both export propensity and intensity, their export-specific experience only affects export propensity but not intensity. Furthermore, we find evidence that the effect of general human capital is rather persistent, i.e., it changes only marginally with increasing firm age. The effect of the founders' initial export-specific human capital, however, decreases as the firms grow older.

2. The founders' human capital and export activities of start-ups

Previous studies in the field of international entrepreneurship mostly utilize a resource-based view to explain the relationship between the founders' human capital and the export activities of new firms (Bloodgood et al., 1996; Knight and Cavusgil, 2004; Westhead et al., 2001). According to the resource-based view, a direct link is assumed between a firm's competitive advantage and its inimitable resources, such as human and financial capital (Barney, 1991). However, different resources may be relevant for the performance of start-ups and established firms. Due to the smallness and newness, start-ups mostly lack general firm-specific resources. Instead, their performance largely depends on the resources of the founding teams, and especially the founders' *human capital* is regarded as a key factor influencing the performance of start-ups (Bals et al., 2013). Existing literature for example identified that the founders' human capital affects the start-ups' likelihood to receive venture capital funding (Hsu, 2007), affects firm survival (Gimmon and Levie, 2010), determines the firms' innovation input and output (Arvanitis and Stucki, 2012), and exerts a key influence on growth (Colombo and Grilli, 2005).

The founders' human capital does not only affect general firm performance but is also crucial for the export activities of start-ups. The founders' human capital is directly related to a firm's ability to identify and exploit foreign market opportunities and to manage business operations across borders (Reuber and Fischer, 1997). Moreover, as the founders act as the firms' main-decision makers, their human capital is expected to directly drive their strategic export decisions (e.g., Gray, 1997; Reid, 1981).

In this paper, however, we argue that not all aspects of the founders' human capital affect export activities of start-ups in the same way. More concretely, systematic differences in the effect of the founders' general and specific human capital are expected.

2.1. General vs. specific human capital: Effect on export propensity and intensity

Following Becker (1975), the human capital theory distinguishes between *general* and *specific* human capital by considering the specificity of the accumulated human capital. General human capital refers to overall education and practical experience (Dimov and Shepherd, 2005) that is not directly related to a specific job context (Rauch and Rijsdijk, 2013), and thus is easily transferable across

[1] This does not mean that our sample excludes high-tech start-ups as well. However, in contrast to previous studies that exclusively focus on such firms, high-tech start-ups are clearly underrepresented in our sample (see also sample description in Section 3) and should thus not drive our estimation results.