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WORKING PAPER

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INDUSTRY CHOICE BY YOUNG ENTREPRENEURS IN DIFFERENT COUNTRY SETTINGS: THE ROLE OF HUMAN AND FINANCIAL CAPITAL

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Abstract: Entrepreneurial entry happens as a consequence of a general choice of an individual to become an entrepreneur. While most entrepreneurial entry studies rarely consider an entry into a particular industry to be an aspect of entrepreneurial decision making process, we address this issue taking into account individual, industrial, and country specific attributes. Using data from the Global University Entrepreneurial Spirit Students’ Survey (2013-2014) on young and active entrepreneurs and extending it with objective indicators derived from World Bank, Global Entrepreneurship Monitor, and International Property Rights Index datasets, we investigate how various factors influence entrepreneurial industry choice on an aggregated level of industrial typology: knowledge-intensive and capital-intensive industries. Drawing on the RBV and contingency approach, we link an industry choice with the level of human capital development and an access to financial capital and test for possible country-specific moderation effects. Our findings indicate that both types of capital have a significant impact on industry choice by young nascent entrepreneur. Our results also suggest that specific country environment serves as a moderator in this relationship. Thus, our study contributes to entrepreneurial entry research stream extending the understanding of entrepreneurial entry decision making nuances related to individual access to resources and both industry- and country-level contingencies.

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Industry Choice by Young Entrepreneurs in Different Country Settings: the Role of Human and Financial Capital

Introduction

Development of entrepreneurship and small business is crucial to economy as it triggers economic growth, increases an overall societal well-being, and fosters new jobs creation (Busenitz et al. 2003; Garcés-Ayerbe et al. 2012; Lee et al. 2012; Wennekers, Thurik 1999). Entrepreneurs represent a unique market force, as they are able to spot and use previously unnoticed opportunities, thus driving market and economic development and growth. With their ability to innovate and spill over knowledge, entrepreneurs increase overall industrial productivity and social welfare (Baumol, Strom 2007). Moreover, entrepreneur’s entry creates structural changes in industries and helps reallocate economy growth factors among different sectors (Noseleit 2015). Therefore, understanding the factors that shape entrepreneurs’ behavior gains a paramount importance as it may have crucial implications for further entrepreneurship development.

In the cohort of individuals making their decision on entrepreneurial entry, there is a distinct group of young entrepreneurs whose background, access to resources and general doing business approaches may significantly differ from those of older and more experienced ones. A classic career path of being a wage laborer becomes rather uncertain for many young people. This tendency can encourage them to turn their attention to the career of an entrepreneur as an alternative way of entering the labor market. However, today only a few of them consider starting their own firm after the university’s studies (Sieger et al. 2014). Research showed that there were multiple reasons for such a low level of entrepreneurial intentions among young people. These include the lack of financial resources, business skills and knowledge, lack of infrastructure, support structures, mentorship, and links to professional networks (Kew et al. 2013).

In general, entrepreneurial entry research comprises a broad range of focus areas and usually explores various factors that drive individuals to participate in entrepreneurial process. The reason behind entrepreneurs’ entry is often related to individuals’ desire to maximize their utility function (Douglas, Shepherd 2000). Entrepreneurs assess environment, spot market opportunities that have positive expected outcomes, compare them against embedded factors and act on will (Arenius, Minniti 2005; Minniti 2004). Entrepreneurial entry is related to such environmental determinants as industry profit margins (Dunne et al. 1988), technology life cycle (Utterback 1994), economic growth stage (Reynolds et al. 1995), and cost of capital (Shane 1996). Additionally, entrepreneurs assess their own chances to pursue a market opportunity as a function of particular resources and skills they have at hand. Among those, scholars often distinguish the importance of prior entrepreneurial experience (Carroll, Mosakowski 1987) and access to capital (Acs, Audretsch 1989; Evans, Jovanovic 1989). If an individual evaluates a combination of environmental conditions and personal attributes as promising, an actual entrepreneurial entry is more probable. However, the personal attributes aspect may gain a greater importance for young entrepreneurs as they usually are more resource-constraint and find themselves less confident in terms of entrepreneurial skills.

While the triggers of the general decision to become an entrepreneur are well documented in the literature (McCann, Folta 2012; Nocke 2006; Santarelli, Vivarelli 2007), the majority of studies treat entrepreneurial entry as an industry-independent action with only a few pieces taking into account series of industrial effects (Bates 1995; Bayus, Agarwal 2007; Lofstrom et al. 2013). However, specific industry conditions create a unique decision context,
thus entrepreneurial entry studies that omit possible industry peculiarities may be biased by inter-industrial differences (Bates 1995). It may be inferred that the same applies to specific country conditions.

Explaining how and why an entrepreneur discovers and develops specific opportunities is considered as one of the key issues of entrepreneurship research (Venkataraman 1997). In this paper, we aim to address one of the major entrepreneurship research questions “why, when and how different modes of actions are used to exploit entrepreneurial opportunities?” (Shane, Venkataraman 2000, p. 218), and specifically “what are the drivers determining young entrepreneurs’ choice of an industry for their entrepreneurial entry?”

In order to address the research question we adopt the resource-based view (RBV) and contingency approach investigating how specific industry choice is related to available resources as well as country and industry specific contingencies. In particular, we explore the role of human and financial capital used by young resource constrained entrepreneurs while launching a venture in a particular industry. We further explore the contingencies, which externally predetermine conditions of individual decision, including the role of a country institutional development and industry characteristics, particularly whether the innovation- or efficiency-driven economies facilitate the link between different types of resources and the choice between knowledge- and capital-intensive industries among young entrepreneurs.

To test the study hypotheses, we use data from the 2013-2014 Global University Entrepreneurial Spirit Students’ Survey (GUESSS) - an international study of university students that records founding intentions and activities on a yearly basis. For the purposes of this study, only those respondents who were actually involved in the process of starting up a business were selected to a usable sample of 12,671 students from 28 countries across the world.

Our study provides a number of contributions to entrepreneurship theory and has important public policy implications. First, the study contributes to the literature on youth entrepreneurship by improving the understanding of how different types of resources influence start-up activities of young nascent entrepreneurs. More specifically, it enriches the knowledge of the mechanisms that relate entrepreneurial entry by young entrepreneurs to industry dependent factors (Lofstrom et al. 2013). Second, our study highlights the importance of country institutional development in industry choice, providing new explanations for entrepreneurial entry into particular industry type by young entrepreneurs in different groups of countries by combining industrial and country-specific factors.

The paper proceeds as follows. We first examine the extant literature and develop the theoretical foundation for the study. Based on this foundation, a research model and a set of hypotheses are formulated. The research design used to test these hypotheses is then presented, followed by a discussion and future research directions. Finally, we proceed with the conclusion as well as with implications and limitations of our research.

Theory and Research Hypotheses

Resources and industry choice

According to the resource-based view and empirical evidence from entrepreneurship studies, people’s likelihood of becoming an entrepreneur is influenced by their access to valuable and unique resources (Alvarez, Buzenitz 2001; Barney 2001; Cetindamar et al. 2012). In order to start a venture an entrepreneurs needs a bundle of various abilities and assets. However, the most important of them may be split into categories of human (Chiles et
Human capital is defined as ‘the knowledge, skills, competences and other attributes embodied in individuals that are relevant to economic activity’ (OECD, 1998 p.9). The concept of human capital is rooted in the idea that people possess skills, experience and knowledge that have useful economic value (Cetindamar et al. 2012). Many scholars argue that human capital is the most critical resource that economic actors own (Hitt et al. 2001). The entrepreneurship literature has found that nascent entrepreneurs with prior entrepreneurial or managerial experience have knowledge regarding the various activities associated with starting a firm, including how to develop contacts with customers and financiers, gather and allocate resources, organize internal processes and structures, attract and retain employees (Delmar, Shane 2006; Dimov 2010; Grichnik et al. 2014). Given the importance of the domain specific insights, young inexperienced entrepreneurs lack important knowledge about the ways to address liabilities and constraints when starting a new business and competing for resources (Grichnik et al. 2014; Hitt et al. 2001; Seghers et al. 2012). Prior entrepreneurial and managerial experiences provide greater repertoire of skills needed to start a new business (Kim et al. 2006). Young nascent entrepreneurs typically lack both of these useful insights sources; therefore, they should find another ground to facilitate their human capital development.

As many of young entrepreneurs are most probably involved into various higher education programs, university environment and the knowledge they gain in the course of their studies may serve an important source of their human capital extension. University context can provide a pool of resources for students thus helping them to develop a viable new venture (Bae et al. 2014; Liñán et al. 2011; Saeed, Muffato 2012; Sesen 2013; Turker, Selcuk 2009; Zhang et al. 2014). The provision of different courses aimed to increase students’ knowledge and skills, access to business contacts, networking and coaching offerings are critical to the formation of the opportunity recognition capability (Shane 2000; Zhao et al. 2005). This is especially important for innovative new venture as to launch one of those young entrepreneurs should possess specific knowledge and be able to explore and exploit innovation-driven entrepreneurial opportunities.

Inexperienced young entrepreneurs usually have troubles trying to assess resources they need and barriers they may face (Hitt et al. 2001; Seghers et al. 2012; Grichnik et al. 2014). As universities provide a set of various valuable insights, education may partly serve as a substitute of experience (Shane 2000; Zhao et al. 2005). This is especially important for knowledge intensive industries and innovation-driven countries, since such conditions require young entrepreneurs to have a minimal amount of knowledge and be capable to spot and develop sometimes previously non-existent market opportunities.

Level of education is usually taken as a proxy for human capital (Shane 2000; Shepherd, DeTienene 2005). Education provides an individual with skills, knowledge, motivation and abilities to solve problems (Davidsson, Honig 2003). Aside of education, human capital may include individual’s previous employment experience, background, and skills (Davidsson, Honig 2003).

High level of education may be an important trigger for entrepreneurial entry to unleash in knowledge-intensive industries as it may serve as a predictor of an entrepreneur’s proclivity to explore opportunities that are promising in terms of innovations and knowledge dissemination (Soriano, Huarng 2013). Thus, we may assume that:

Hypothesis 1. The level of human capital development is positively associated with the likelihood of knowledge-intensive industry choice by young entrepreneurs.
Yet another cornerstone of entrepreneurial entry decision making process is financial capital availability (Schweinbacher 2007). Previous research showed that financial capital is crucial for a long-term success of start-ups as it creates a buffer against random shocks and provide more opportunities for capital-intensive strategic options (Cooper et al. 1994). Kim et al. (2006) argued that financial capital is one of the key factors encouraging a new venture establishment. Inability to get access to required financing is a common reason for exiting an entrepreneurial career path (Meier, Pilgrim 1994).

This issue is especially crucial for young nascent entrepreneurs who usually lack personal savings and ‘credit history’ to get a bank loan. To overcome these difficulties, they usually look for any other potential ways to obtain additional subsidization. One of the possible opportunities is to receive financial support from families. Family financial assistance is of a particular importance for young aspiring entrepreneurs who often have promising business ideas, but lack the financial capital necessary to make a transition from entrepreneurial intention to action (Lévesque, Minniti 2011). Moreover, provision of financial means by family usually presumes less rigid conditions compared to other possible financial capital sources, thus giving a young entrepreneur more freedom in her actions (Bygrave et al. 2003; Colombatto, Melnick, 2008). Additionally, family financial support creates a platform that allows attracting alternative investment sources as the business grows (Chua et al. 2011). This is especially important in the capital-intensive industries as conducting business in such conditions requires large investments on each and every stage of its development. Ergo, we assume that:

**Hypothesis 2.** A better access to financial capital is positively associated with the likelihood of capital-intensive industry choice by young entrepreneurs.

**External environment and industry choice**

Institutional aspect of entrepreneurial entry has received a considerable attention from academics. Institutions determine entrepreneurs’ strategic choices, which are directly connected to the specifics of entrepreneurial behavior (Bruton et al. 2010; Peng et al. 2008). Institutional framework influences their decision on entrepreneurial entry, industry choice and ways to proceed with exploitation of possible opportunities (Bates 1995; McCann, Folta 2012). Objective environment conditions shape entrepreneurial intentions to enter a specific industry. Country-based or even region-based environment predetermines subjective perceptions of an individual and his or her entrepreneurial motivation (Kibler 2013).

Industry choice decision of nascent entrepreneurs is tightly connected to country specific economic attributes. Institutional economics and transaction cost theory provide important insights on the influence of various conditions on emergence of new organizations (Coase 1937; Felin, Knudsen 2012; Williamson 1981). Environmental factors also influence an entrepreneur’s perceived behavioral control thus making it appear more or less possible to actualize a specific business idea in a given context.

The usage of environmental variables when studying entrepreneurial intentions is well documented in the literature (Arenius, Minniti 2005; Bergmann, Stephan 2012; Venesaar et al. 2014). Entrepreneurs’ strategic actions are to a large extent driven by multicontextuality they face (Luo et al. 2011). Prior research provides an evidence of various institutional variables, economic characteristics, and cross-country differences explaining the proclivity to entrepreneurship (Acs, Audretsch 1993; Bergmann, Stephan 2012; Freytag, Thurik 2006). These effects may be due to essential differences that predetermine countries allocation to
various groups formed based on certain similarities they share.

One of many possible approaches to countries classification is to consider the variety of factors that drive their development. Building on this criterion, one may distinguish efficiency-driven and innovation-driven economies (Porter 1990; Porter et al. 2002). In efficiency-driven countries, firms depend on higher technological efficiencies in production, large markets for operations and economies of scale (Acs et al. 2008). They mainly apply capital and labor intensive market strategies. On the contrary, innovation-driven countries show an active growth of innovative smaller scale firms. In these countries, enterprises rely on knowledge-intensive technologies, and innovativeness as a source of competitive advantage (Acs et al. 2008). Peculiarities that direct a country fall into one of the two groups may also increase entrepreneurs’ proclivity to engage into relevant industries and increase the importance of corresponding types of capital. Therefore in such conditions a type of country may serve as a moderator for the relationship between different types of capital and industry choice. Therefore, we suggest that

**Hypothesis 3a.** The positive relationship between human capital and the likelihood of knowledge-intensive industry choice by young entrepreneurs will be stronger in innovation-driven countries.

**Hypothesis 3b.** The positive relationship between the availability of financial resources and the likelihood of capital-intensive industry choice by young entrepreneurs will be stronger in efficiency-driven countries.

The overall theoretical model is presented in Figure 1.

![Theoretical model diagram](image-url)

**Figure 1. Theoretical model**
Method

Sample

Our research is based on the Global University Entrepreneurial Spirit Students’ Survey (GUESSS) carried out in 2013-2014 by an international research team. GUESSS project is active since 2003 being initially created by the Swiss Research Institute of Small Business and Entrepreneurship from the University of St. Gallen. This survey is aimed at measuring university students’ entrepreneurship attitudes, intentions and activities, across different countries, focusing on students’ individual features and, university environment, socio-cultural context and family role (Zellweger et al. 2011).

The 2013-2014 dataset included responses of 109,026 students from 34 countries and 759 universities, which gives a response rate of 5.5% of the initial sample (1,959,229 students). For the purposes of this study, we have narrowed the sample to the students who self-reported themselves as “active entrepreneurs” and to a subgroup of nascent entrepreneurs who have performed at least three crucial gestations on the way towards firm creation. We also dropped the responses from exchange students, post-docs, and faculty members to avoid possible biases in educational, cultural and professional backgrounds. Moreover, in order to allow within-country variability, we excluded the cases with less than 10 respondents from a country. We also dropped countries that are not included in Global Entrepreneurship Monitor 2014 study and International Property Rights Index survey. This resulted into a sample of 12,671 usable responses given by students coming from 28 countries. The students in our sample were on average 24.47 (SD=5.01) years old, and 41.02% of them were female.

In order to address the missing data issue we used mean substitution approach (Afifi, Elashoff 1966) as the initial number of missing values accounted no more than for 3-5%. Posterior comparison tests revealed no imputation-related bias in the data.

Measures

Dependent variable

The dependent variable reflects the choice of an industry type by a young entrepreneur. Using the OECD industry classifications (OECD, 2001) we have defined 6 industries as a high-technology and knowledge-intensive group (KTI industries) and 4 industries as a capital-intensive group. The former includes IT, education & trainings, consulting, health, and financial services while the latter comprises trade (wholesale and retail), construction, manufacturing, and engineering. Since two separate choices are made, we construct two dummy variables for each scenario: one for a knowledge-intensive industry choice and the other for a capital-intensive industry choice.

Independent variables

To assess young entrepreneurs’ human capital, we created 4 dummy variables that capture their involvement into an educational program of undergraduate, graduate, PhD, and MBA levels Each variable is dummy variable that equals (1 if a respondent is on the corresponding education level and 0 otherwise).

Financial capital is captured by a measure for financial assistance provided to young entrepreneurs by their families. This variable is operationalized with a 7-point Likert scale on assessing the following item: “How much do your parents support you during foundation of your firm in terms of financial resources (loan, equity capital, and other assets)”.

10
Innovation-driven and efficiency-driven countries. The classification of countries was derived from 2014 Global Entrepreneurship Monitor (GEM) report (Singer et al. 2014). Efficiency-driven countries include Hungary, Mexico, Estonia, Romania, Russia, Argentina, Brazil, Colombia, Poland and Malaysia. Innovation-driven economies include Austria, Australia, Belgium, Canada, Denmark, England, Spain, Finland, France, Germany, Greece, Israel, Italy, Japan, Luxembourg, Netherlands, Portugal, Singapore, Slovenia, Switzerland, and United States.

Control variables

To ensure sufficient internal validity, we use a number of control variables, accounting both for endogenous and exogenous effects providing an alternative explanations for industry choice.

We control for entrepreneur’s gender as males and females have different motivations and unequal chances to enter a selected industry successfully (Bates 1995). This variable is operationalized as a dummy variable coded as 1 if a respondent is female and 0 if he is male.

We also control for the presence of family business as a dummy variable coded as 1 if at least one of the student’s parents is an entrepreneur and 0 otherwise. The importance of family entrepreneurial background for the entrepreneurial process to unleash has been confirmed by several studies (Arenius, Minniti 2005; Bhandari 2012; Van der Zwan et al. 2010).

For students who have an entrepreneurial family background, we control for the type of industry chosen by his or her parents. Family can provide the entrepreneurial role models and become a possible source of relevant human capital (Bosma et al. 2012). The industries of students’ family businesses are classified using the same approach as for the dependent variable industry groups.

In order to control for a possible impact of a specific field of study, we introduce a dummy variable comprising students’ involvement into business, economic or law education. It is coded as 1 if a respondent follows an educational program in these fields and 0 if otherwise.

With a purpose to control for the level of country institutional development, we use 2014 International Property Rights Index (IPRI). The index is based on an assessment of legal and political environment parameters as well as physical and intellectual property rights protection. We also include a natural logarithm of the gross national income per capita (in PPP) (GNIC) derived from World Bank database. This measure have been widely used as a relevant predictor for entrepreneurial entry (a U-shaped relationship is assumed) (Wennekers et al. 2005).

A general access to financial resources on a country level is another aspect that can affect entrepreneurial entry. We control for this factor introducing a weighted national experts’ assessment of the item initially measured on a five-point Likert scale: “The availability of financial resources-equity and debt-for small and medium-sized enterprises (SMEs) (including grants and subsidies)” derived from the 2014 Global Entrepreneurship Monitor report. Descriptive statistics and the correlation matrix are presented in Tables 1 and 2 (see Table 2 in Appendix).

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Table 1. Descriptive statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital-intensive industry</td>
<td>0.284</td>
<td>0.451</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Knowledge-intensive industry</td>
<td>0.386</td>
<td>0.487</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

**Human capital**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>0.737</td>
<td>0.441</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Graduate</td>
<td>0.204</td>
<td>0.402</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>PhD</td>
<td>0.028</td>
<td>0.166</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>MBA</td>
<td>0.022</td>
<td>0.148</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

**Financial capital**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family financial assistance</td>
<td>3.511</td>
<td>2.216</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

**Interaction terms**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency-driven countries</td>
<td>0.583</td>
<td>0.493</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Innovation-driven countries</td>
<td>0.416</td>
<td>0.493</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

**Control Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>0.410</td>
<td>0.491</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Family business</td>
<td>0.417</td>
<td>0.493</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Knowledge intensive industry of family firm</td>
<td>0.092</td>
<td>0.290</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Capital intensive industry of parent's firm</td>
<td>0.161</td>
<td>0.368</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Business, economic and law education</td>
<td>0.394</td>
<td>0.488</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>IPRI</td>
<td>3.511</td>
<td>2.216</td>
<td>4.4</td>
<td>8.5</td>
</tr>
<tr>
<td>Log GNIC</td>
<td>10.237</td>
<td>0.466</td>
<td>9.38</td>
<td>11.24</td>
</tr>
<tr>
<td>Access to finance on a country level</td>
<td>2.712</td>
<td>0.372</td>
<td>2.03</td>
<td>3.56</td>
</tr>
</tbody>
</table>

Results

On the first stage of the empirical analysis we estimated a two-steps model of probabilistic logistic regression. The estimation is carried out for each group of industries separately. The results of the logistic regression analysis can be found in Table 3.

Table 3. Estimation results

<p>|                   | Model 1a — | Model 1b — | Model 2a — | Model 2b — |</p>
<table>
<thead>
<tr>
<th></th>
<th>Knowledge-intensive industry (KTI)</th>
<th>Capital-intensive industry (CTI)</th>
<th>Knowledge-intensive industry (KTI)</th>
<th>Capital-intensive industry (CTI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Human capital</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate education</td>
<td>0.201</td>
<td>0.575**</td>
<td>0.159</td>
<td>0.602**</td>
</tr>
<tr>
<td>Graduate education</td>
<td>0.052**</td>
<td>0.045*</td>
<td>0.0487**</td>
<td>0.461*</td>
</tr>
<tr>
<td>PhD education</td>
<td>0.737***</td>
<td>0.249</td>
<td>0.710***</td>
<td>-0.236</td>
</tr>
<tr>
<td>MBA education</td>
<td>0.662***</td>
<td>0.042</td>
<td>0.627***</td>
<td>0.398</td>
</tr>
<tr>
<td><strong>Financial capital</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family financial assistance</td>
<td>-0.037***</td>
<td>0.053***</td>
<td>-0.057***</td>
<td>0.081***</td>
</tr>
<tr>
<td><strong>Moderation effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation-driven country x Undergraduate education</td>
<td>-</td>
<td>-</td>
<td>0.224**</td>
<td>0.008</td>
</tr>
<tr>
<td>Innovation-driven country x Graduate education</td>
<td>-</td>
<td>-</td>
<td>0.173</td>
<td>0.037</td>
</tr>
<tr>
<td>Innovation-driven country x PhD education</td>
<td>-</td>
<td>-</td>
<td>0.197</td>
<td>0.878***</td>
</tr>
<tr>
<td>Innovation-driven country x MBA education</td>
<td>-</td>
<td>-</td>
<td>0.217</td>
<td>0.198</td>
</tr>
<tr>
<td>Efficiency-driven country x Family financial assistance</td>
<td>-</td>
<td>-</td>
<td>0.034**</td>
<td>-0.046**</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-0.284***</td>
<td>-0.218***</td>
<td>-0.283***</td>
<td>-0.211***</td>
</tr>
<tr>
<td>Family business</td>
<td>-0.406***</td>
<td>-0.117**</td>
<td>-0.407***</td>
<td>-0.122**</td>
</tr>
<tr>
<td>Knowledge-intensive industry of parent's firm</td>
<td>0.778***</td>
<td>-0.168*</td>
<td>0.780***</td>
<td>-0.162*</td>
</tr>
<tr>
<td>Capital-intensive industry of parent's firm</td>
<td>-0.053</td>
<td>0.916***</td>
<td>-0.053</td>
<td>0.921***</td>
</tr>
<tr>
<td>Business, Economic and law education</td>
<td>-0.058</td>
<td>0.174***</td>
<td>-0.055</td>
<td>0.186***</td>
</tr>
<tr>
<td>IPRI</td>
<td>0.115***</td>
<td>-0.354***</td>
<td>0.092**</td>
<td>-0.382***</td>
</tr>
<tr>
<td>Log GNIC</td>
<td>-0.084</td>
<td>-0.099</td>
<td>-0.149</td>
<td>-0.077</td>
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<td>Access to finance on a country level (GEM)</td>
<td>-0.014</td>
<td>0.603***</td>
<td>0.038</td>
<td>0.723***</td>
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<tr>
<td>Constant</td>
<td>-0.233</td>
<td>2.094***</td>
<td>0.388</td>
<td>-0.47</td>
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<tr>
<td>Log likelihood</td>
<td>-8252.71</td>
<td>-7256.53</td>
<td>-8250.30</td>
<td>-7247.41</td>
</tr>
</tbody>
</table>

Log likelihood: -8252.71, -7256.53, -8250.30, -7247.41
Higher level of education, such as Graduate, PhD and MBA education, provide statistically significant positive estimations in Models 1a, 2a (choice of knowledge-intensive industries). Therefore, we support the Hypothesis 1. As for the lower educational level (“Undergraduate education”), it seems to increase a probability of entrepreneurial entry into capital-intensive industries (Models 1b, 2b).

Estimations of coefficients related to financial capital availability also coincide with our assumptions, thus supporting the Hypothesis 2. The results reveal positive significant estimations on this coefficient for capital-intensive industries and negative significant estimations for knowledge-intensive industries.

Moderating effects estimation shows an insightful outcome providing positive estimates on the interaction between innovation-driven country and undergraduate education for choice of knowledge-intensive industry (Model 2a), and of an interaction between innovation-driven country and PhD level of education for choice of capital-intensive industry (Model 2b). As for financial capital, the results imply that in efficiency-driven countries it would lead to a choice of both knowledge- and capital-intensive industries.

As for the control effects, IPRI and knowledge intensive industry of parent’s firms exhibit a positive relation to the probability of entrepreneurial entry to knowledge-intensive industries, and negative relation to the probability of entrepreneurial entry to capital intensive industries (Models 1a, 2a, 1b, 2b). At the same time, capital intensive industry of parent’s firm, an access to financial resources on a country level, and business, economic or law education demonstrate positive relation to the probability of entrepreneurial entry to capital intensive industry (Models 2a, 2b). Gender and presence of family business indicate negative relation to the probability of entrepreneurial entry to both industry types.

Discussion

Summary

Our study implies that young entrepreneurs derive benefits from specific resources such as human and financial capital. The unique bundle of resources that an entrepreneur possesses together with environmental contingencies determine individual reasoning when answering the questions “Whether to do business at all” and “Where to do business?” In the search for answers, entrepreneurs analyze both the environment where they intend to do business and their possibilities, shaping in this way a unique entry solution. Thus, the primary purpose of this study is to analyze factors that influence an entrepreneur’s decision to enter a specific kind of industry (knowledge-intensive and capital-intensive) using a sample of young entrepreneurs.

Our findings indicate that with higher level of human capital development expressed as a stage on the education ladder there is a better chance of an entry into a knowledge-intensive industry, whereas access to financial capital predicts an entry into a capital-intensive industry. However, country environmental attributes may significantly alter these relationships. Specifically, in innovation-driven countries, an undergraduate education level increases the proba-
bility to enter a knowledge-intensive industry, while a doctoral education level predicts an entry into a capital-intensive one. A possible explanation to that may be grounded on the following premises: younger individuals (those, who are usually involved into lower level educational programs) are more perceptive to knowledge spill-overs and innovative spirit that characterize innovation-driven economies, while older individuals may still be more prone to enter less risky traditional capital-intensive industries. Another insightful finding is that in efficiency-driven countries, a better access to financial capital increases the probability of entering both knowledge-intensive industries, the latter being rather unexpected. This may be due to a less constraint framework for innovative projects development as with larger financial capital young entrepreneurs have more freedom to transform their creativity into knowledge-intensive initiatives.

**Theoretical contributions and future research directions**

Our study contributes to the entrepreneurship entry literature in the several ways. First, we reveal a complex mechanism for making an entrepreneurial entry decision based on specific attributes of both individual and industrial levels explaining tacit nuances of entrepreneurial entry process. Second, while the resource-based view is usually being employed to investigate the triggers of a general decision to pursue an entrepreneurial career, we extend its application to a specific industry selection process. Finally, drawing on interplay between entrepreneurship theory and contingency approach, we demonstrate the importance of country characteristics in the relationship between individual’s resources and a particular industry choice.

Further studies in this field might consider cultural aspects impact on an industry choice. According to a study by Nam et al. (2014), institutional and cultural aspects, such as in-group collectivism, education, uncertainty avoidance, and political stability, have a complex influence on context innovation levels thus driving entrepreneurs to develop knowledge-intensive projects.

**Practical implications**

Our study has certain practical implications for young entrepreneurs, entrepreneurship professors, and developers of entrepreneurship support policy. We demonstrate that an entrepreneurial process is related to a complex set of contingencies that includes both entrepreneur’s resources and perception of environmental opportunities, as well as peculiarities of economic context. This should be taken into account at various stages of venture development both by aspiring entrepreneurs and by entrepreneurship educators who assist them in their human capital advancement. At the same time, policy makers may draw on these insights while developing entrepreneurship promoting programs and initiatives.

**Limitations**

This study should not be considered without taking into account a set of limitations. First, we apply a somewhat simplistic view of industrial effects based on a niche-kind industries classification (knowledge-intensive and capital-intensive industries). This creates a multiplicity of possible drawbacks in explaining issues like inter-industry differences and intra-industry complications (Sharp et al. 2013). Therefore, other ways of studying entrepreneurial industrial entry, including mono-industry models and multiple industry entry models are encouraged to be developed.
Second, we use the cross-sectional data, which results in a short-term decision making perspective. We assume that this research will benefit from longitudinal data usage (e.g., Panel Study of Entrepreneurial Dynamics), as it allows to observe multiple stages of entrepreneurial decision making process.

Third, we consider a limited number of moderation effects using only country types; however, more complex impact of the interplay between cultural and institutional contingencies may be the case for further investigation.

Conclusions

Entrepreneurial entry decision is inseparable from entrepreneur’s choice of specific industry where she plans to launch a venture. Yet, the entrepreneurship research mostly focuses on entrepreneurs’ entry decisions without paying attention to a particular industry and country context. This research contributes to an emerging literature branch that reveals crucial differences in multi-industry decision settings driving young entrepreneurs to a certain industry choice.

References


Noseleit, F. 2015. The role of entry and market selection for the dynamics of regional diversity and specialization. Regional Studies, 49(1), 76-94.


## Appendix

### Table 2. Correlation matrix

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*Correlation coefficients marked with an asterisk (*) are significant at the 0.05 level.
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Notes: * significant at p=0.05