

EFFECTS OF HUMAN CAPITAL AND SOCIAL CAPITAL ON ENTREPRENEURIAL ACTIVITY

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ABSTRACT

We use a knowledge-based perspective in examining the effects of individuals' human capital and social capital on the likelihood to engage in new venture creation. Our analyses are based on data collected for the 2002 Global Entrepreneurship Monitor. More specifically, we analyzed data from 4536 individuals (living in Belgium or Finland) in terms of their education and skills, and their contacts with the entrepreneurial community. We found that skills specific to the start-up process and knowing an existing entrepreneur increase the likelihood the launch a new venture. We discuss our findings and provide directions for future research.

INTRODUCTION

The identification of factors related to new venture creation has been an important theme in the past literature. Prior research has devoted extended attention to the antecedents of venture formation (e.g., Gartner, 1985; Reynolds & Miller, 1992). The emphasis has been on elements such as personality characteristics (McClelland, 1961), decision processes (Gartner, 1985), cognitive biases (e.g., Baron, 1999), individuals' circumstances such as being laid off (Shaver & Scott, 1991) or the availability of opportunities (Shane & Venkataraman, 2000). Less attention has been paid to the role played by knowledge in the decision to start a new business. In this paper, we attempt to address this gap.

Prior research has argued that human and social capital can enhance the performance of employees (Arthur, 1994; Boselie, Paauwe and Jansen, 2001; Huselid, 1995; MacDuffie, 1995). Similarly, it has been suggested that these factors also enhance new venture performance (Blanchflower and Oswald, 1998; Bosma, van Praag, Thurik, & de Wit, 2002; Brüderl and Preisendörfer, 1998; Cooper, Gimeno-Gascon and Woo, 1994; Pennings, Lee and Van Witteloostuijn, 1998; van Praag and Cramer, 2001; van Praag, 2002). Although prior research has already examined the role of knowledge-related factors as an important asset for entrepreneurial activities, to our understanding, few efforts have been undertaken to examine explicitly the role of knowledge in the decision to start a business. An important rationale throughout the paper is that preferential access to information is crucial in the decision to launch a venture. Such access by itself may depend on the educational background and the skills the individual holds (i.e., human capital), and the relationships one holds with others (i.e., social capital).

The objective of the present paper is to answer the question: to what extent do individuals' human and social capital, besides other factors that have been suggested in the literature, affect the likelihood of start-up activity. As mentioned in the hypothesis section of the paper, we will distinguish between two types of human capital (i.e., general

human capital [education] and specific human capital [specific skills]) and two types of social capital (i.e., knowing an entrepreneur and involvement as an informal investor).

We intend to make the following contributions with this study. First, as mentioned earlier, empirical studies have already looked into the effect of human capital (Cooper et al., 1994; Van Praag and Cramer, 2001) and social capital (Brüderl and Preisendörfer, 1998; Pennings et al., 1998) on the performance of new ventures. Further, prior research has also looked already at the distinction between the effect on performance of general and specific investments (Cooper et al., 1994; Pennings et al., 1998) in human capital. We explore, however, how the presence of human capital and social capital also has an effect on the likelihood to *launch* a venture while controlling for a rich set of other factors. We therefore seek to contribute to an ongoing debate in the entrepreneurship literature and among policy makers how to foster start-up activity.

Second, we also make a contribution from a methodological point of view. That is, we measure the amount of entrepreneurial activity in a standardized way across two different cultural settings. More specifically, we base our analysis on a large sample of individuals and define “entrepreneurial activity” as one’s involvement in either grass-root start-up activities or the ownership and management of new ventures. Further, we use a relatively new technique in management and entrepreneurship research, i.e., the rare events logistic regression analysis, in order to more accurately assess the likelihood to start-up a new venture (King & Zeng, 2000).

HYPOTHESES

Human capital

The concept of human capital pertains to individuals' knowledge and abilities that allow for changes in action and economic growth (Coleman, 1988). Human capital may be developed through formal training and education aimed at updating and renewing one's capabilities in order to do well in society. That is, human capital pertains to the idea that individuals possess skills and abilities that are an important source of competitive advantage to individuals, organizations, and societies (Gimeno, Folta, Cooper, & Woo, 1997; Coleman, 1988). Prior researchers have made a distinction between different types of human capital (Florin & Schultze, 2000), which we categorize as "general" human capital and "specific" human capital. General human capital pertains to knowledge and skills that are applicable to a broad range of activities, whereas specific human capital pertains to skills relevant to a particular context, e.g., skills relevant to a particular firm or industry. In the context of our study, specific human capital includes knowledge that is in particular applicable to new venture creation.

General human capital is more widely applicable and pertains to one's formal level of education and general experience (e.g., Gartner, Starr, & Bhat, 1998; Pennings et al., 1998). In terms of the role of general human capital, prior research has mainly devoted attention to its effect on new venture performance, rather than on the likelihood of new venture *creation* [except for the lack of an effect found by Reynolds and White (1997) of the entrepreneur's education in the decision to start a new business in the USA]. For example, Gimeno et al. (1997) found a positive association between the overall level of human capital, as measured by education level and work experience, and economic performance at both the entrepreneur's level and the firm's level. Pennings et al. (1998) found a negative effect of human capital on firm dissolution. Further, Kilkenney and al. (1999) discussed a human capital model for success and suggested that business success is positively related to one's level of training, overall business experience and total income.

In a new venture, the human capital resides in the skills and capabilities of its founder(s) and the specificity of the context in which the firm operates (Gartner, Starr, & Bhat, 1998). Further, the unique and specific capabilities of the prospective entrepreneur are an important source of the human capital to the new venture, and can contribute to its survival and growth (Cooper et al., 1994). For instance, Reynolds and White (1997) found a positive relationship between the size of the start-up team and the level of sales and growth in the subsequent years.

The relationship between human capital and start-up activity is grounded in what Bourdieu (1986) termed as “conversions,” that is, different forms of capital can be converted into resources and economic activities. At the individual level, the argument is that those who are better educated and invest more resources in honing their skills are better able to secure benefits through entrepreneurial activity. That is, new venture creation, as a knowledge-intensive activity, will be more likely to occur when one has the necessary capabilities to successfully engage in such creation.

Hypothesis 1: The level of an individual’s general human capital is positively related to the likelihood to launch a new venture.

We also categorize an individual’s human capital with respect to the specificity of the knowledge that is held by that person. Prior research on human capital theory (Becker, 1964) and the resource-based theory of the firm (Barney, 1991) has shown that the more specific an investment is to its current use, the higher the expected returns should be. Further, according to human capital theory, the returns to an investment in specific knowledge is more likely to outweigh the cost attached to the investment. Contrarily, the returns to an investment in more general knowledge might only pay-off over a longer period of time (Becker, 1964). Therefore, we also focus on the role of *specific* human capital, i.e., knowledge that is specific to the particular context of our study, i.e., new venture creation.

As is the case for the literature on general human capital, prior research in the entrepreneurship field has mainly looked at the effect of specific knowledge on firm performance, rather than on start-up activity. Further, a distinction has been made between knowledge that is specific to a given firm versus industry. First, prior research has argued that *firm*-specific human capital in very young firms is reflected by the skills and capabilities held by the founder(s) (Welbourne & Andrews, 1996). The prospects for new venture survival will be heightened when sufficient know-how is present in the firm's founder(s). For instance, prior researchers have examined the impact of firm-related know-how within the founding team on the success rate of high-growth start-up firms (e.g. Sandberg, 1986). Second, *industry*-specific human capital pertains to knowledge derived from experience specific to an industry, and several researchers have examined the role of industry experience on the growth and economic performance of entrepreneurial ventures (e.g. Siegel, Siegel, & MacMillan, 1993). It has been suggested that industry experience is a critical source of knowledge for the survival, growth and success of small firms (Box, White, & Barr, 1993; Siegel et al., 1993).

In the context of our study, specific human capital pertains to experience and knowledge that is directly applicable to the launching of a new venture. We hypothesize for a positive effect of this type of human capital on the likelihood to start-up a venture. Given that the likelihood for successful new venture creation increases when one holds knowledge that is particular relevant to entrepreneurship, as indicated by the research mentioned above, one will be more likely to perceive entrepreneurial activity as a viable decision when holding such specific knowledge. Further, studies on self-efficacy have asserted that individuals might be more inclined to pursue entrepreneurship if they believed that they possessed the necessary skills to function in such an environment (Chen et al., 1998; Boyd & Vozikis 1994; Krueger & Brazeal, 1994). Therefore, we hypothesize:

Hypothesis 2: The level of an individual's specific human capital is positively related to the likelihood to launch a new venture.

Social capital

The knowledge-based view on entrepreneurial activity does not only imply a role played by human capital (i.e., individuals hold skills that can be applied to business activities), but also a role for social capital. The notion of social capital takes a sociological view of human action and perceives individuals as actors who are shaped by societal factors. Social capital has received an increased attention in the literature and has been studied at multiple levels, including the individual (Burt, 1992), organizational (Nahapiet & Ghoshal, 1998), and societal (Putnam, 1993) level. The central proposition in the social capital literature is that networks of relationships constitute, or lead to, resources that can be used for the good of the individual or the collective. For instance, at the individual level, social capital has been defined as the resources embedded in one's relationships with others. The emphasis in this case is on the actual or potential benefits that one accrues from his/her network of formal and informal ties with others (Burt, 1992).

Further, research on economic sociology has highlighted the importance of social networks in economic actions (Coleman, 1990; Granovetter, 1985). Individuals are usually engaged in a network of social relationships, and individual or firm performance can be more fully understood by examining the network of relationships in which they are embedded (Gulati, Nohria, & Zaheer, 2000). Networks of relationships provide channels for transferring valuable information and resources. An individual can use its network channels to search for useful advice and gain access to key resources needed to deal with various business-related challenges. In short, network relationships, as an important aspect of social capital, determine one's capability to create value and to achieve personal goals (e.g., Coleman, 1990; Granovetter, 1985).

Social capital may be particularly important for would-be entrepreneurs. A crucial component of the uncertainty faced by a potential entrepreneur is the absence of information specifically tied to the decision whether or not to launch a venture (Lawrence & Lorsch, 1967; Milliken, 1987). Since individuals are limited in their ability to assemble and absorb information, and to determine the results of their decision alternatives (Peters

& Brush, 1996), they have to rely on external contacts in order to obtain information necessary for making decisions. For instance, Putnam (1993) argued, and empirically found, that networking activity may foster entrepreneurial activity through membership in multiple organizations, because this membership increases one's exposure to useful sources of information.

We focus on two aspects of individuals' social capital relevant to start-up activity, i.e., (1) knowing an entrepreneur and (2) being involved with entrepreneurs through informal investments. In the following, we will outline why we would expect these to be positively linked with entrepreneurial activity.

In order to engage in entrepreneurial activity, individuals must be able to monitor changes in the environment, and to assess the impact of these changes on their new ventures (Milliken, 1990; Thompson, 1967). The inability of the prospective entrepreneur to forecast business success creates uncertainty about the environment (Duncan, 1972; Milliken, 1987), which can impede the prospective entrepreneur to engage in entrepreneurial activity. However, personal networks may provide skills and knowledge that decrease the ambiguity inherent in the entrepreneurial process (Johannisson, 1996). We argue then that those individuals who have been exposed to other entrepreneurs face less uncertainty and have more access to knowledge necessary to start a business. Also, by receiving positive feedback from others "who have done it themselves," the potential entrepreneur may have a stronger belief in the feasibility of a start-up and therefore be more inclined to move forward and to actually start a venture. Therefore,

Hypothesis 3: Knowing an entrepreneur is positively related to the likelihood to launch a new venture.

Second, we examine the role of one's direct involvement with existing entrepreneurs as informal investor. By informal investors, we mean individuals who offer financial capital to entrepreneurial ventures with whom they have either family-related, informal or more formal contacts. That is, we consider informal investors as being a broader population

than has been used in most of the prior research (e.g., Mason & Harrison, 1994). That is, we also include individuals who have no “professional” activity as business angel, i.e., we include personal investments made through informal or even family-related connections.

We suggest that one’s involvement as informal investor may have a positive effect on the likelihood to engage in start-up activity oneself. The main rationale is that knowledge about the process of new venture creation may come directly from one’s (financial) involvement in another venture. Even if such involvement is limited to the provision of financial resources, and does not involve any other operational input, the provider of capital will become directly aware of the challenges and opportunities related to launching a new venture. Thus, since those involved in entrepreneurship as informal investors should have more relevant knowledge about the start-up process, they might be more inclined to engage in entrepreneurial activity themselves.

Hypothesis 4: Being involved as an informal investor is positively related to the likelihood to launch a new venture.

METHODOLOGY

Data collection

A representative sample of the adult population from Belgium and Finland was drawn: 3102 in Belgium and 2005 in Finland. The data were collected as part of the 2002 Global Entrepreneurship Monitor. Telephone interviews were conducted during Spring 2002 with the 5107 respondents using a standardized questionnaire translated from English into the native language(s) of each country (i.e., Dutch and French for Belgium; Finnish for Finland). The interviews were undertaken by private market survey firms. The data used for this paper pertain to a selected group of variables collected through these phone surveys and to those respondents who were between 18 to 64 years old (N=4536).

In order to assure that the respondents correctly reflected the population from which they were drawn, each respondent was assigned a weighting factor that took into account their gender and age. Further, the weights were also adjusted according to the country to which the respondent belonged, i.e., the weights were normalized for the Belgian and Finnish respondents respectively.

Measures

Likelihood to launch a new venture: Our dependent variable was a binary variable indicating whether the individual had recently engaged in entrepreneurial activity (1 = Yes, 0 = No). We classified individuals as being involved in entrepreneurial activity if – at the time of the survey – they were either involved in concrete activities to start up a new business or they were owning and managing a business that was less than 42 months old.

General human capital was assessed by asking the respondents about their overall educational attainment. They could choose from the following three categories: (1) some secondary, (2) secondary degree, and (3) post-secondary. We harmonized the education variable into two binary variables: “secondary degree” and “post-secondary degree” (1 = Yes, 0 = No).

Specific human capital was assessed by asking the respondents the following question: “Do you have the knowledge, skill and experience required to start a new business?” This measure was a binary variable (1 = Yes, 0 = No). In other words, this question asked for the respondents’ perception about their capabilities to launch a venture.

Knowing an entrepreneur was assessed by asking the respondents whether “they knew someone personally who started a business in the past two years.” This measure was a binary variable (1 = Yes, 0 = No).

Involvement as informal investor was measured by asking: “Have you, in the past three years, personally provided funds for a new business started by someone else, excluding any purchases of stocks or mutual funds?” This measure was a binary variable (1 = Yes, 0 = No).

In addition to the four categories of predictor variables, we included several control variables in our model. First, since prior research has suggested that the propensity to engage in entrepreneurial activity may be related to personal trait characteristics, we included “fear of failure” as a control variable by asking the respondents whether “fear of failure would prevent them from starting a business” (1 = Yes, 0 = No). Further, since the likelihood of entrepreneurial activity has also been associated with the availability of *opportunities* in the environment (Shane & Venkataraman, 2000), we asked the respondents whether “in the next six months there would be good opportunities for starting a business in the area where you live.” This measure was a binary variable (1 = Yes, 0 = No). We also included two demographic variables: the respondents’ gender with “0” indicating male and “1” indicating female, and age (ranging between 18 and 64), which we categorized into one of the four binary categories: “25-34 yrs,” “35-44 yrs,” “45-54 yrs,” and “55-64 yrs.”

Finally, we also included a “context” variable in our model. The 2000 and 2001 Global Entrepreneurship Monitor results showed a substantially lower amount of entrepreneurial

activity in Belgium (i.e., 4.5% and 4.6% of the Belgian adult population were involved in start-ups or new firms in 2000 and 2001 respectively) compared to Finland (i.e., 12.5% and 9.3% of the Finnish adult population were involved in start-ups or new firms in 2000 and 2001 respectively). Entrepreneurial context was assessed as a binary variable with “1” indicating Finland and “0” indicating Belgium.

Methods

We used logistic regression analysis to estimate the factors that influence participation in the new venture formation process. As mentioned earlier, our dependent variable was a binary variable that assessed whether an individual had recently engaged in start-up activities or had launched a venture during the last 3.5 years. The proportion of individuals who had actually engaged in such activities was only 3.5%. As a result, our dependent variable can be considered as representing “rare events,” i.e., a binary variable with significantly fewer 1’s (“events”) than 0’s (“non-events”). King and Zeng (2000) showed that in such case commonly used data analysis techniques (i.e., ordinary logistic regression) are inefficient and that such techniques can sharply underestimate the likelihood that rare events (i.e., entrepreneurial activity in our case) happen. Therefore, in addition to carrying out ordinary logistic regression, we also ran a rare events logistic regression in order to obtain corrected logit estimates.

Results

In Table 1 we present the correlations between the variables under study. It can be seen that our dependent variable (i.e., the likelihood to launch a new venture) is positively related with three of the four predictor variables, i.e., specific human capital, knowing an entrepreneur, and being involved as informal investor. Further, although our four predictor variables are positively correlated with one another, the correlation coefficients are relatively low; therefore, multi-collinearity issues may not be a high concern.

The results of the logistic regression are reported in Table 2 and the results of the rare event regression with the corrected logit estimates are reported in Table 3. The results of the ordinary logistic regression and the rare event logistic regression differ only slightly. In Tables 2 and 3, we report, for each of the predictor variables and control variables, the maximum likelihood estimate for the coefficient (Column 2), the Wald statistic (Z, column 3), the two-tailed p-value (Column 4), and the odds ratio (Column 5). The odds ratio is a measure of association approximating how much more likely (or unlikely) it is for the outcome (i.e., being entrepreneurially active) to be true among those respondents belonging to the covariate category “1” versus “0.”

Our results indicate that education affects the likelihood of launching a new venture, but differently than what we expected. The results in Tables 2 and 3 show that those holding a post-secondary degree are half as likely to be entrepreneurially active compared to those with a lower educational level. The coefficient of the “post-secondary degree” variable is negative and statistically significant at the $p < 0.05$ level in both the ordinary and rare events logistic regression analyses. This is contrary to Hypothesis 1, which predicted that the higher the level of education, the greater the likelihood to engage in new venture formation.

As predicted by Hypothesis 2, special human capital is positively related with the likelihood to launch a new venture. The logit coefficient (Table 2) and the corrected coefficient (Table 3) for the “skills” variable are positive and significant ($p < 0.001$). Launching a new venture occurs almost six times as frequently among those respondents who perceive themselves as having the necessary skills for starting a business compared to those who do not perceive themselves as having such skills. The results provide therefore strong support for Hypothesis 2.

Consistent with Hypothesis 3, we found that knowing someone who has started a business during the past two years is a significant predictor for the likelihood to launch a venture oneself. The logit coefficient and the corrected coefficient for “knowing an entrepreneur” are positive and significant at $p < .001$. Establishing a new business occurs

about 2.5 times as frequently among those respondents who have an entrepreneur in their network than among those respondents who are lacking this type of social capital.

Finally, the results do not support Hypothesis 4. Despite the positive correlation we find between whether one is involved as informal investor and the likelihood of entrepreneurial activity, the logit coefficient and the corrected coefficient for one's involvement as informal investor are insignificant.

In terms of our control variables, "fear of failure," "opportunity" and the "35-44 yrs" age category are statistically significant. First, the coefficients for "fear of failure" are negative and statistically significant at $p < 0.01$ (Table 2) and $p < 0.05$ (Table 3). In other words, fear of failure discourages respondents from becoming entrepreneurially active. Second, the effect of "opportunity" on the likelihood to launch a new venture is positive and significant at the $p < 0.01$ level. The odds to actually launch a venture among those respondents who perceive good start-up opportunities is almost twice as high compared to respondents who do not perceive such opportunities to exist. Third, the results show that the respondents in the "35-44 yrs" age category are significantly more entrepreneurially active compared to the respondents in other age groups. The logit coefficient (Table 2) and the corrected coefficient (Table 3) are positive and significant at the $p < 0.05$ level. Respondents between 35 and 44 years are 2.5 times more likely to be entrepreneurially active compared to respondents in other age groups.

Interestingly, no significant effects are found for "gender" and "context." That is, although males are found to be more likely than females to engage in entrepreneurial activity (the signs of the "gender" coefficients are negative), we do not find significant differences between males and females. Further, we do not find a significant effect for the country context to which the respondents belong. The lack of a significant effect may be due to the relative similarity of the two Western European countries that were included in our study, i.e., Belgium and Finland.

DISCUSSION

The purpose of this paper was to examine more closely the relationship between knowledge-related factors and the decision to engage in entrepreneurial activity, i.e., new venture creation. For our analysis we relied on nationally representative data for Belgium and Finland collected through the 2002 Global Entrepreneurship Monitor study. The data comprised 4536 members of the adult population (18-64 year olds) in these two countries.

We found that individuals' *specific* human capital, measured as the perception of having the necessary skills for starting a new business, is the most important factor increasing the likelihood of entrepreneurial activity. Our results provide strong support for the self-efficacy argument asserting that individuals might be more inclined to pursue entrepreneurial activities if they believe that they possess the necessary skills to function in such environment (Boyd & Vozikis, 1994; Chen et al. 1998; Krueger & Brazeal, 1994).

However, we found individuals' *general* human capital, measured as the overall level of education, to be negatively linked with entrepreneurial activity. That is, compared to those who are less educated, those with a post-secondary degree are significantly less likely to be entrepreneurially active. This somewhat surprising finding may have different explanations. For instance, in Finland the unfavorable risk-reward ratio associated with entrepreneurial activity might drive highly educated respondents away from entrepreneurship. Also, the presence of entrepreneurship courses to only a small slice of the Belgian students makes it less likely that highly-educated graduates decide to launch their own venture. It is further interesting to note that we found a positive correlation between education (general human capital) and the perception of one's entrepreneurial skills (specific human capital). This indicates that education may not have as such a direct effect on entrepreneurial activity, but rather an indirect connection in that education may enhance self-confidence in one's entrepreneurial capabilities.

In terms of the effect of social capital, we argued that one's exposure to existing entrepreneurs may enhance the likelihood to engage in entrepreneurial activities. That is, a prospective entrepreneur needs information and therefore turns to the advice from people who have already started a business. We indeed found a positive effect of the extent to which one has been exposed to existing entrepreneurs on the likelihood to launch a new venture oneself. Someone known to the potential entrepreneur who has started a new business may serve as a source of information and resources (knowledge-based argument) or as an influential role model (social learning argument). Access to other entrepreneurs may also increase individuals' awareness of their own capabilities, and increase the necessary confidence to pursue entrepreneurship (self-efficacy argument). In short, our findings suggest that having contacts with "knowledgeable others" may function as a learning mechanism, and enable individuals' awareness to make a step towards an entrepreneurial career.

We also examined the effect of one's involvement in informal investor activities on the likelihood to launch a new venture. However, we found no statistical support for a relationship between one's involvement as informal investor and the likelihood to engage in new venture creation oneself. This is a somewhat surprising since one could expect that informal investors are more knowledgeable about the entrepreneurial process and therefore are more inclined to consider an entrepreneurial career by themselves. A possible explanation for the lack of result is that many of our informal investors may be older individuals (or seasoned entrepreneurs) who are willing to "give back" to the entrepreneurial community through their financial and moral support (Harrison, & Mason, 1992; Mason & Harrison, 1994). Those individuals may be less likely then to engage (again) in start-up activities themselves.

Limitations, future research, and implications

It is important to point to some limitations of our study. First, although the rationale for our hypotheses assumed causal relationships, we used a cross-sectional design to examine the relationship between knowledge-related factors and the decision to engage in

entrepreneurial activity. Further, some of our respondents were individuals who were engaged in some sort of start-up activity at the time of the data collection without having formally launched their venture already. Future research should follow-up these respondents to see whether they are persistent in their efforts and actually end up creating a new business entity. Another limitation of our design pertains to the use of single-item measures. That is, we measured our constructs using only one question or item. Using multiple items to measure the key constructs would increase the confidence in our results.

Future researchers could examine in more depth the nature of the relationship between human capital and social capital. For instance, one could argue for a recursive positive relationship between social capital and human capital (Coleman, 1988; Gradstein & Justman, 2000). That is, the contact with entrepreneurs may enhance one's chances to further his or her skills, ability, and education. Likewise, one's own education and skills can also lead to greater involvement in associations and greater access to others with resources. Future longitudinal studies may shed more light then on the nature of the relationship between human capital and social capital.

Further, while we focused our study to the role of human and social capital in two particular contexts, i.e., Belgium and Finland, it would be interesting to compare the drivers of start-up behavior across a wider variety of countries and cultures. Such analysis would allow to examine to what extent country-related or regional factors (such as social and cultural norms) interact with our human and social capital variables.

An important implication of this paper may be that constraints that hinder the development of entrepreneurial activity within a country may partly be explained by knowledge-related factors. For instance, access to role models (e.g., existing entrepreneurs) may be so limited that only a small portion of the population can be exposed to or benefit from the specific knowledge provided by these individuals. Therefore, it may be important to enlarge the population's entrepreneurial skills and social contacts with entrepreneurs.

An important role can be played in this regard by the educational system, the government and the media. For instance, entrepreneurs need to be invited more to the classroom to testify about their career choices, government can help organize promotion campaigns that stimulate start-ups, or the media can focus more on positive entrepreneurial role models rather than to elaborate on failures and scandals. Ultimately, by enlarging exposure to entrepreneurship-specific knowledge and facilitating access to existing entrepreneurs, individuals may be encouraged to engage in new venture creation.

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Table 1: Correlations, means, and standard deviations

	1	2	3	4	5	6	7	8	9	10
1. General human capital										
2. Specific human capital	0.13**									
3. Knowing an entrepreneur	0.12**	0.26**								
4. Involvement as inf. investor	0.05**	0.11**	0.14**							
5. Fear of failure	-0.06**	-0.09**	-0.03*	-0.01						
6. Opportunity	0.07**	0.13**	0.25**	0.06**	0.02					
7. Gender	0.02	-0.20**	-0.15**	-0.05**	0.03*	-0.08**				
8. Age	-0.20**	0.00	-0.10**	0.00	-0.02	0.00	0.02			
9. Country	0.02	-0.04**	-0.20**	-0.04**	-0.03*	-0.37**	0.00	-0.02		
10. Launching a new venture	0.01	0.19**	0.14**	0.08**	-0.06**	0.10**	-0.07**	-0.04*	-0.04**	
Mean	2.28	0.36	0.34	0.02	0.28	0.26	0.50	40.61	0.68	0.03
Stand. deviation	0.68	0.48	0.47	0.14	0.45	0.44	0.50	12.84	0.47	0.18
Minimum	1.00	0.00	0.00	0.00	0.00	0.00	0.00	18.00	0.00	0.00
Maximum	3.00	1.00	1.00	1.00	1.00	1.00	1.00	64.00	1.00	1.00

** p [two-tailed] = .01; * p [two-tailed] = .05

Table 2: Results of Ordinary Logistic Regression Model
(Dependent variable: Likelihood to launch a new venture)

<i>Variable</i>	<i>Coefficient</i>	<i>Z</i>	<i>p</i>	<i>Odds Ratio</i>
Secondary degree	-0.152	-0.43	0.669	0.86
Post-secondary degree	-0.757	-2.03	0.042	0.47
Specific human capital (skills)	1.760	5.89	0.000	5.81
Knowing an entrepreneur	0.985	4.25	0.000	2.68
Involvement as informal investor	0.465	1.12	0.261	1.59
Fear of failure	-0.737	-2.60	0.009	0.48
Opportunity	0.631	2.76	0.006	1.89
Gender	-0.313	-1.41	0.159	0.73
25-34 yrs	0.827	1.87	0.061	2.29
35-44 yrs	0.941	2.21	0.027	2.56
45-54 yrs	0.401	0.87	0.383	1.49
55-64 yrs	-0.632	-1.04	0.296	0.53
Context	-0.278	-1.21	0.227	0.76
Constant	-8.183	-3.13	0.002	
N	3222			
Wald	138.38			
P < X ²	.000			
Pseudo R ²	.20			
Log likelihood	-422.34			

Table 3: Results of Rare Event Logistic Regression Model
(Dependent variable: Likelihood to launch a new venture)

<i>Variable</i>	<i>Coefficient</i>	<i>Z</i>	<i>p</i>	<i>Odds Ratio</i>
Secondary degree	-0.171	-0.48	0.630	0.84
Post-secondary degree	-0.767	-2.07	0.039	0.46
Specific human capital (skills)	1.732	5.82	0.000	5.65
Knowing an entrepreneur	0.972	4.21	0.000	2.64
Involvement as informal investor	0.494	1.20	0.230	1.64
Fear of failure	-0.708	-2.51	0.012	0.49
Opportunity	0.626	2.74	0.006	1.87
Gender	-0.306	-1.38	0.168	0.74
25-34 yrs	0.787	1.79	0.073	2.20
35-44 yrs	0.897	2.12	0.034	2.45
45-54 yrs	0.368	0.80	0.421	1.45
55-64 yrs	-0.597	-0.99	0.322	0.55
Context	-0.280	-1.22	0.222	0.76
Constant	-7.967	-3.06	0.002	