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Entrepreneurial Career Capital, Innovation and New Venture Export Orientation

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Abstract

This paper explores the role of entrepreneurial human capital, entrepreneurial social capital and innovation in explaining new ventures' levels of export orientation. We use Global Entrepreneurship Monitor data from 9,342 early-stage venture entrepreneurs in 36 countries. Our results suggest that both entrepreneurial human capital and entrepreneurial social capital are important in explaining new ventures' export orientation. Entrepreneurial human capital increases the probability for new ventures to offer new products or services. New ventures with unique products or services are more likely to export, indicating that entrepreneurial human capital both has a direct positive relationship with new ventures' export and an indirect positive relationship through the venture's new product or service offerings. We also find that compared to moderate exporters, new ventures with higher export orientation levels are more likely to possess entrepreneurial human and entrepreneurial social capital and to be more innovative.

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INTRODUCTION

Traditionally, most international flows of foreign direct investment (FDI), trade and labor were carried out by large, established multinational enterprises (MNEs), however an increasingly number of new firms pursue international markets (Rennie, 1993; Oviatt and McDougall, 1994; Moen and Servais, 2002). Firms with international operating domains from at or near inception are commonly labeled 'international new ventures' (INVs) (Oviatt and McDougall, 1994). INVs benefit from reductions in international transportation costs and international trade and investment barriers and advancements in technology (Gregorio et al., 2008; Moen, 2002). The emergence of INVs challenges long-held assumptions about the staged nature of internationalization as a process of increasing involvement in foreign markets (e.g. Johanson and Vahlne, 1977; 1990). Exporting is the first and most common step in a firm's international expansion (Young et al., 1988; Young, 1987), including for new ventures (Zahra et al., 1997).

We follow previous research in considering firm internationalization (including exports) as an act of entrepreneurship (e.g. Ibeh, 2003; Lu and Beamish, 2001; Lumpkin and Dess, 1996). Internationalization is entrepreneurial as it is involves risk-taking: firms face higher levels of risk when operating in foreign than in domestic markets (Lu and Beamish, 2001; Leiblein and Reuer, 2004). Furthermore, internationalization is associated with innovativeness: international market entry often requires innovative products (Leiblein and Reuer, 2004; Zahra et al., 2001). Firms with an entrepreneurial orientation are more likely to survive and succeed in international expansion (Zahra et al., 2001). In the present study, we consider all new ventures that enter foreign markets through exports as entrepreneurial, with the high-level exporters considered "more entrepreneurial" than their counterparts with lower levels of export (Fletcher, 2004; Moen, 2002). As export is a strategy of an entrepreneurial firm, we argue that any explanation of the export decision must consider *entrepreneurial* drivers.

Our research answers calls for further understanding of the characteristics that make INVs entrepreneurial, including dimensions of both the individual entrepreneur and the venture. Exporting involves the discovery and exploitation of opportunities abroad and requires substantial quantities of time, information, money, and other resources which are often limited in new ventures. We focus on two entrepreneurial career-specific drivers of new venture export: "entrepreneurial human capital" and "entrepreneurial social capital" which have received limited attention in INV research. Entrepreneurial human capital describes an entrepreneur's skills and experiences regarding entrepreneurship. Entrepreneurial social capital refers to an entrepreneur's networks with other entrepreneurs and the resources which can be drawn from these relationships. In addition we consider the role of innovation as a firm-level entrepreneurial driver of new ventures' export. Innovation is critical to a firm's international expansion (Zahra et al., 2001) as unique products/services are easier to sell abroad (Oviatt and McDougall, 1994). Innovation may be important for enabling new ventures' export and also as an outcome of entrepreneurial human capital and entrepreneurial social capital. Therefore, innovation may mediate the relationship between entrepreneurial career capital and new venture export orientation.

In sum, this paper explores: How are entrepreneurs' entrepreneurial human capital and entrepreneurial social capital and new venture innovativeness related to new venture export orientation? Most extant INV research draws on case studies or small sample sizes from a handful of countries (Coviello and Jones, 2004). The present study is based on Global Entrepreneurship Monitor (GEM) data from 9,342 early-stage entrepreneurs in 36 countries.

THEORETICAL BACKGROUND

Entrepreneurial career capital

Through their careers individuals accumulate 'information and knowledge embodied in skills, experience and relationship networks acquired through an evolving sequence of work experience over time' (Bird, 1994, p. 326). Career capital includes both human capital and social capital. Entrepreneurial career capital refers to entrepreneurship-specific experience, such as past roles starting and managing an own business (entrepreneurial human capital), and networks of entrepreneurs (entrepreneurial social capital). Entrepreneurial career capital will help people to become more efficient in running their businesses, to become more alert to promising opportunities and to be more aware of what is needed for the business to survive. Consequently, we argue that entrepreneurs with entrepreneurial career capital may be more alert to recognizing promising opportunities abroad, more aware of the advantage of an early focus on international markets or the necessity of international expansion for growth and, because running the business has become more routine, may have more time to explore foreign market opportunities. Therefore, we argue that ventures established by individuals with entrepreneurial career capital are more likely to be export-oriented and that entrepreneurial career capital has a direct and an indirect impact, through innovativeness, on new venture export orientation.

Innovativeness and export orientation

Schumpeter (1939: 84) defines innovation as "technological change in the production of commodities already in use, the opening of new markets or of new sources of supply, Taylorization of work, improved handling of material, the setting up of new business organizations such as department stores – in short, any 'doing things differently' in the realm of economic life." Innovation is essential for entrepreneurship (Schumpeter, 1934).

Entrepreneurs are more innovative than non-entrepreneurs (Mueller and Thomas, 2000). Innovation is important in enabling new venture export (Oviatt and McDougall, 1994; Bloodgood et al., 1996): new ventures that possess new products or services and a strong technology base are more likely to enter foreign markets (Keeble et al., 1998; McDougall, 1989; McDougall et al., 1994; Oviatt and McDougall, 1995).

Hypothesis 1: Product/service innovativeness is positively related to new venture export orientation.

Entrepreneurial human capital, innovativeness and export orientation

Human capital describes an individual's investments in skills and knowledge (Becker, 1964), predicting that investments in knowledge, skills and experiences enhance cognitive abilities and subsequently result in more productive or efficient behavior. Entrepreneurial human capital refers to an individual's knowledge, skills and experiences related to entrepreneurial activity. Individuals typically develop entrepreneurial human capital when they devote time to working in an entrepreneurial firm (Iyigun and Owen, 1998). Previous research considers many aspects of entrepreneurial human capital, including previous start-up experience, in explaining entry into (nascent) entrepreneurship (Bates, 1995; Davidsson and Honig, 2003; Gimeno et al., 1997; Kim et al., 2006; Robinson and Sexton, 1994) and in explaining new ventures' business performance (Bosma et al., 2004). However, aspects of entrepreneurial human capital have only sporadically been considered in research into new venture internationalization.

New ventures lack organizational experience and do not have established routines. In particular, new ventures are based on the skills and experiences that entrepreneur(s) and their networks bring to a new organization. Prior start-up experience with new ventures may provide basic business skills and confidence that can help compensate for liabilities of newness and may therefore facilitate the new market entry (Shrader et al, 2000). Also, individuals with previous start-up experience may be more efficient at decision making and at running the firm, for example because they have developed routines, processes and relevant networks (Gimeno et al., 1997). Consequently, experienced entrepreneurs may have more time to devote to international activities. Furthermore, individuals with prior start-up experience may have developed skills for

recognizing promising opportunities (Shane, 2003), and may be more capable in identifying promising foreign markets opportunities. The same is true for current owner-managers who are apt at spotting new business opportunities (Kim et al., 2006). Following the rationale developed above, we expect that ventures started by individuals with entrepreneurial human capital are more likely to be export-oriented.

In addition, based on the premises of human capital theory, we expect a positive relationship between entrepreneurial human capital and new venture innovativeness. Individuals with entrepreneurial human capital are likely to be alert to new market niches and to develop innovative activities. Furthermore, as we expect a direct positive relationship between innovation and export orientation (H1), we further expect that entrepreneurial human capital will have an indirect positive relationship with export through innovation.

Hypothesis 2: An entrepreneur's stock of entrepreneurial human capital is positively related to the new venture's export orientation.

Hypothesis 3: An entrepreneur's stock of entrepreneurial human capital is positively related to the new venture product's innovativeness.

Hypothesis 4: An entrepreneur's stock of entrepreneurial human capital is indirectly positively related to the new venture's export orientation via the new venture product's innovativeness.

Entrepreneurial social capital, innovativeness and export orientation

Social capital is "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" (Nahapiet and Ghoshal, 1998, p. 243). The fundamental proposition of social capital theory is that network ties provide individuals or organizations with access to resources including knowledge (Nahapiet and Ghoshal, 1998). Entrepreneurial social capital captures an individual's network with other entrepreneurs and the resources which can be drawn from these relationships. We expect that entrepreneurs' relationships with other entrepreneurs in their network can play a role in the decisions about firm internationalization. For example, an entrepreneur's social network can increase alertness to business opportunities (Ardichvili et al., 2003) and can help in discovering opportunities abroad, developing specific competitive advantages and gaining access to knowledge and information, e.g. about foreign markets (Coviello and Martin, 1999; McDougall et al., 1994). Furthermore, through network relationships, entrepreneurs can learn from their network partners' responses to various challenges (Yeoh, 2004). Also networks may contribute to a faster pace of penetration of the market and may help firms access relevant knowledge from external actors (Eriksson et al., 1997; Ireland et al., 2001). Based on the above, we expect that an entrepreneur's personal experience and skillset are important in explaining new venture internationalization, but it is also relevant to consider social capital from networks with other entrepreneurs.

We expect a positive relationship between entrepreneurial social capital and innovation. Social capital stimulates innovation (Cohen and Fields, 1999). The presence of entrepreneurial social capital enables interactions with other entrepreneurs which provide access to resources. We expect that entrepreneurial social capital induces innovation since it is increasingly recognized that entrepreneurial firms make an important contribution to the realization of innovation and technological change (Acs and Varga, 2005; Audretsch and Thurik, 2000). Thus entrepreneurial networks contribute to developing new ideas or to accessing new technologies. We further posit that entrepreneurial social capital has an indirect positive relationship with export through innovation.

Hypothesis 5: An entrepreneur's stocks of entrepreneurial social capital is positively related to the new venture's export orientation.

Hypothesis 6: An entrepreneur's stocks of entrepreneurial social capital is positively related to the new venture product's innovativeness.

Hypothesis 7: An entrepreneur's stock of entrepreneurial social capital is indirectly positively related to the new venture's export orientation via the new venture product's innovativeness.

Export orientation level

International involvement, even for new ventures, is not always entrepreneurial, for example because internationalization may involve the implementation of routines that the firm has previously developed (Zahra et al., 2005). Fletcher (2004) and others suggest that only those new ventures that have an intense international presence from inception can be regarded as truly entrepreneurial. A large number of INV studies focus exclusively on firms with a significant export involvement, such as research into the born global phenomenon (Knight et al., 2004). However, other authors regard internationalization per se as an act of entrepreneurship or as entrepreneurial (Lu and Beamish, 2001). In accordance with this view, we consider all new ventures that enter foreign markets through exports as entrepreneurial, while at the same time proposing that high-level exporters are "more entrepreneurial" than their counterparts with lower levels of export (Fletcher, 2004; Moen, 2002). Following this rational, we expect that individuals who possess entrepreneurial human capital and entrepreneurial social capital are more likely to found new ventures with a high export orientation than with a moderate export orientation. We

also expect high-level exporters to have more innovative products: new ventures with a substantial focus on international markets are likely to rely on sophisticated technological knowledge (Knight and Cavusgil, 1996).

Hypothesis 8: All else being equal, the more export-oriented the venture, the more likely the entrepreneur will possess entrepreneurial human capital.

Hypothesis 9: All else being equal, the more export-oriented the venture, the more likely the entrepreneur will possess entrepreneurial social capital.

Hypothesis 10: All else being equal, the more export-oriented the venture, the more likely the venture will have innovative products/services.

DATA AND METHODOLOGY

We use data from the adult population survey of the Global Entrepreneurship Monitor (GEM), an annual population-based survey of entrepreneurial activity in over 40 countries. Each year a door-to-door or telephone survey is conducted with at least 2,000 adults (18-64) in each participating country. We use individual data from 2002 and 2003 from 36 countries. GEM's Total early-stage Entrepreneurial Activity (TEA) measures the percentage of the population who are either actively involved in setting up an own firm (i.e. nascent entrepreneurs) or who are owner/manager of a young business (i.e. a business that exists for less than 42 months). For the purpose of our analysis, we focus on export orientation among new and early-stage ventures and select individuals who are involved in TEA. In total, 12,689 people were involved in TEA in the 36 countries that participated in GEM in 2002 and 2003. After omitting missing values and don't knows,¹ the final sample consists of 9,342 entrepreneurs.

¹ For a large number of observations data was missing on industry type and therefore it was not possibly to assign the venture to one of the four industry categories. This is the most important reason for losing a large number of our observations.

Export orientation

We use several measures of export orientation. GEM respondents provide information about what proportion of customers who normally live abroad. *Export orientation* is coded 1 for new ventures with at least 1% customers that live outside the country's borders and coded 0 for new ventures that have no customers abroad. In the analysis we further distinguish new ventures' *export orientation level*: medium export orientation (i.e. ventures with 1-25% customers that live abroad) and high export orientation (i.e. new ventures with more than a quarter of customers that live abroad). High export orientation is based on research that commonly operationalizes born globals or high level exporters as firms that generate at least 25 percent of their total sales from exports (Knight et al., 2004; Moen, 2002).

It is a defining characteristic for international new ventures that they are international at their inception (McDougall, 1989; Oviatt and McDougall, 1994; 1997). As it is difficult to observe a firm's inception (Katz and Gartner, 1988), previous studies incorporate definitions up to 6 or 8 years old (e.g. Coviello and Jones, 2004). Oviatt and McDougall (1997) suggest that the time of business founding occurs when the first serious planning for the business takes place. Accordingly, our measure of new ventures' export orientation includes entrepreneurs that are currently involved in the start-up processes of their venture or have recently gone through this process. This is also consistent with recent research highlighting the importance of considering a firm's very early phases when studying international new ventures (Coviello, 2006; Moen, 2002). Finally, research indicates that foreign market entry by new ventures often takes place within three years of the firm's establishment (Autio et al., 2000; McDougall and Oviatt, 2000). Our definition of new venture export orientation includes ventures up to 42 months old.

Innovation

Two indicators (dummy variables) are used for new venture's innovativeness. First, an indicator is used that reflects a venture's *new product/service offerings*, coded 1 when the emerging venture offers a product or service is new to the market. Second, a venture's *new technology base* is coded 1 in case a venture uses technologies that have been available for less than one year.

Entrepreneurial human capital and entrepreneurial social capital

An individual's entrepreneurial human capital is determined by three dummy variables. First, *perceived entrepreneurial skills* is based on the individual's assessment of whether he/she perceives to have the knowledge, skills and/or experience to start a new venture (coded 1 if 'yes'). Second, *previous entrepreneurial experience* is constructed based on individual's responses to whether he/she has quit activities as a self-employed or has shut down a firm in the past twelve months which they personally owned or managed (coded 1 if 'yes'). Third, *established business owner* captures whether an individual currently owns or manages a firm that exists for 3.5 years or more (coded 1 if 'yes').

We capture entrepreneur's entrepreneurial social capital with two dummy variables. The first variable, *knowing an entrepreneur*, is based on the individual's response to the question of whether he/she personally knows an entrepreneur who started who started a new venture in the past two years (coded 1 if 'yes'). A second indicator reflects *informal investor experience* since informal investment experience may enable the individual to establish a network of entrepreneurs. This indicator is based on individual's response to the question of whether he/she has personally invested money in the start-up of someone else's new venture in the past three years (coded 1 if 'yes').

Table 1 presents descriptives for the variables for export orientation, innovation entrepreneurial human capital and entrepreneurial social capital.

	Mean	Standard deviation
Export orientation		
Export orientation (0=no foreign customers; 1=at least 1% foreign customers)	0.47	0.49
Export orientation level (0=no foreign customers, 1=1-25% foreign customers; $2 = >25\%$ foreign customers)	0.62	0.72
Innovation		
New product/service offerings (0=no, 1=yes)	0.16	0.37
New technology use (0=no, 1=yes)	0.15	0.35
Entrepreneurial human capital		
Entrepreneurial skills (0=no, 1=yes)	0.85	0.36
Previous entrepreneurial experience (0=no, 1=yes)	0.11	0.31
Established business ownership (0=no, 1=yes)	0.05	0.23
Entrepreneurial social capital		
Knowing an entrepreneur (0=no, 1=yes)	0.65	0.48
Informal investor experience (0=no, 1=yes)	0.10	0.30

Table 1: Mean and standard deviation for key variables (n=9,342)

Controls

We include a number of controls. First, four industry dummies are constructed for extractive industries, transforming industries, business services and consumer-oriented industries. In the regression analyses, consumer-oriented industries are taken as the reference category. We also control for the age of the entrepreneur and the entrepreneur's level of education. Three dummies are constructed for low education (no education or some secondary education), medium education (secondary education) and high education (post-secondary or graduate education). Low education is the reference category in the regression analysis. Furthermore, we control for opportunity motivation. Opportunity motivation is voluntary participation in entrepreneurial activities; necessity motivation is characterized by the individual's perception that entrepreneurship is the best option for employment, however not necessarily the preferred option. Opportunity entrepreneurship is a dichotomous variable where the responses 'take advantage of business opportunity' and 'have a job but seek better opportunities' are coded 1=yes and 'no better choices for work' is coded 0=no. Entrepreneurs' risk-taking propensity is likely to have a positive

influence on the discovery and exploitation of international business opportunities (Oviatt and McDougall, 2005). Low risk aversion and low perceived risk increases the propensity for entrepreneurs to internationalize, since internationalization is usually regarded as more risky than operating in domestic markets (McDougall and Oviatt, 1996; Fletcher, 2001). Therefore, we also include a control variable reflecting entrepreneurs' fear of failure. When the entrepreneur of the early-stage venture indicates that fear of failure would prevent him/her from starting a new venture this variable is coded 0 and otherwise coded 1. Furthermore, since growth objectives are considered to be relevant in the context of internationalization (Shrader et al., 2000) we also include an indicator for high job growth expectations coded 1 when an entrepreneur indicates to expect to create 20 or more jobs in five years time with his firm and otherwise coded 0. Next, we also include a measure for the extent of competition as a control variable since research suggests that competition is a driving force for early internationalization (McDougall et al., 1994). This is a dummy variable, coded 1 when the entrepreneur of the early-stage venture indicates to have little or no competitors and otherwise coded 0. We also include a dummy variable for gender (1=male, 0=female). Since we use data for two years, we construct a year dummy for 2002 (0) and 2003 (1). Finally, because our sample includes entrepreneurs of early-stage ventures from 36 countries we construct country dummies for Argentina, Australia, Belgium, Brazil, Canada, Chile, China, Croatia, Denmark, Finland, France, Germany, Greece, Hong Kong², Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Mexico, the Netherlands, New Zealand, Norway, Poland, Russia, Singapore, Slovenia, Sweden, Switzerland, Thailand, Uganda, the United Kingdom and the United States. The United Kingdom is used as the reference category in the regressions.

² Although Hong Kong is officially a part of China, it is included separately because of its special status.

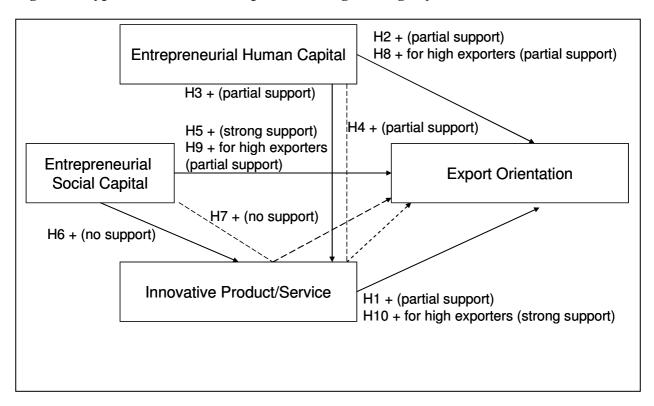
Methodology

We present the results of the binomial and multinomial logistic regression analyses used to test our hypotheses. We tested for multicollinearity using variance inflation factors (VIFs). Tolerance We do not observe VIF above 10 (the highest VIF is 2.021), indicating that multicollinearity is not a concern.

RESULTS

Figure 1 depicts the predicted relationships and findings among the key variables.





To investigate whether our variables for entrepreneurial human capital, entrepreneurial social capital and innovation relate to new ventures' export orientation we first carry out binomial logistic regression with export orientation as the dependent variable (see Table 2). The coefficients indicate the effect of a corresponding variable on the odds (ratio of two probabilities) of "export orientation" relative to "no export orientation" which is the base category. The

coefficients should be interpreted as follows. A coefficient is above unity implies that the corresponding variable increases the odds of export orientation relative to the "no export" group. A coefficient below unity implies that the variable decreases the odds of belonging to the category "export orientation" to "no export". We find that new ventures with entrepreneurs that perceive entrepreneurial skills are more likely to export. Furthermore, new ventures with entrepreneur and personally invested money in someone else's new venture are also more likely to export. For the innovation variable 'new product/service offering' we find a positive association with export orientation, whereas we find no significant association for 'new technology use'. Thus, we find partial support for H1, some support for H2 and strong support for H5.

	Dependent variable= Export orientation	
		= reference category)
	Odds	p-value
Entrepreneurial human capital		
Entrepreneurial skills	1.221	.003
Previous entrepreneurial experience	1.126	.117
Established business ownership	1.355	.003
Entrepreneurial social capital		
Knowing an entrepreneur	1.241	.000
Informal investor experience	1.287	.001
Innovation		
New product/service offering	1.235	.001
New technology use	1.015	.829
Controls		
Extractive	.820	.051
Transforming	1.087	.148
Business Services	1.039	.533
Age (business owner)	.994	.001
Medium education (business owner)	1.030	.654
High education (business owner)	1.321	.000
Opportunity motivation	1.267	.000
Fear of failure	1.059	.316
High job growth aspirations	1.214	.000
Little or no competition	1.492	.000
Gender	1.169	.001
Year dummy 2003	1.616	.000
Constant	.184	.000
Nagelkerke R ²	0.222	
-2 Log Likelihood	11,221.200	
Observations	9,342	
Home country dummies included (not r	reported)	

Table 2: Entrepreneurial career capital, innovation and export orientation (binomial logistic regression estimates)

Home country dummies included (not reported).

To investigate whether entrepreneurial human capital and entrepreneurial social capital relate to new ventures' innovativeness, we carry out binomial logistic regressions with our indicators for innovation as the dependent variables. Table 3 presents our results with new products/service offerings as the dependent variable. We find that two indicators for entrepreneurial human capital (perceived entrepreneurial skills and established business ownership) increase the odds for new ventures to offer new products or services. We find no significant relationship for previous entrepreneurial experience and for our entrepreneurial social capital variables. Table 3 also contains results with new technology use as the dependent variable. We find a weak negative association (p<0.10) for perceived entrepreneurial skills with new technology use and no significant association for other entrepreneurial human and social capital variables. These results provide partial support for H3 and no support for H6.

estimates)	-			
	Dependent variable= New		Dependent variable= New	
		rice offerings	technology use	
	(no offering of new		(no new technology use =	
	products/services =		reference category)	
	reference category)			
	Odds	p-value	Odds	p-value
Entrepreneurial human capital				
Entrepreneurial skills	1.265	.011	.844	.056
Previous entrepreneurial experience	.954	.626	.934	.515
Established business ownership	1.806	.000	1.054	.686
Entrepreneurial social capital				
Knowing an entrepreneur	1.042	.538	.984	.807
Informal investor experience	1.162	.125	1.152	.157
Controls				
Extractive	.497	.000	.829	.193
Transforming	.945	.449	1.080	.330
Business Services	.895	.165	1.292	.001
Age (business owner)	1.002	.516	.998	.539
Medium education (business owner)	1.018	.839	.882	.163
High education (business owner)	1.019	.833	.919	.336
Opportunity motivation	1.014	.856	1.089	.286
Fear of failure	1.018	.811	.918	.283
High job growth aspirations	2.430	.000	2.408	.000
Little or no competition	1.369	.000	1.254	.005
Gender	.929	.251	.969	.630
Year dummy 2003	1.063	.393	1.047	.537
Constant	.066	.000	.107	.000
Nagelkerke R ²	0.148		0.125	
-2 Log Likelihood	7,418.882		7,097.631	
Observations	9,342		9,342	
TT + 1 + 1		L	/	1

 Table 3: Entrepreneurial career capital and innovation (binomial logistic regression estimates)

Home country dummies included (not reported).

The results presented so far allow us to identify indirect associations for entrepreneurial human capital and entrepreneurial social capital with export through the innovation variables. In particular we find that perceived entrepreneurial skills and established business ownership display an indirect positive association with export through new product/service offerings. Overall, our results provide some support for H4 and no support for H7.

As a next step we distinguish between new ventures with a medium or moderate export orientation level and new ventures with a substantial or high export orientation level. We first use multinomial logistic regression analysis with "no export orientation" as the reference category. The aim of this analysis is to explore the drivers of having a moderate export orientation and of having a high export orientation. The results of the multinomial regression estimates are presented in Table 4. We find that all entrepreneurial human and social capital and innovation variables increase the odds of high export orientation (relative to no export orientation). Three of our independent variables (perceived entrepreneurial skills, currently owning an established firm and knowing an entrepreneur) increase the probability of moderate or medium export orientation (relative to no export orientation). These findings suggest that entrepreneurial resources may differ for new ventures along their level of export orientation.

``````````````````````````````````````	Dependent variable = Export orientation			
	(no export = reference category)			
	Medium export		High exp	ort
	Odds	p-value	Odds	p-value
Entrepreneurial human capital				
Entrepreneurial skills	1.160	.042	1.402	.001
Previous entrepreneurial experience	1.022	.798	1.386	.002
Established business ownership	1.274	.033	1.531	.002
Entrepreneurial social capital				
Knowing an entrepreneur	1.249	.000	1.223	.006
Informal investor experience	1.134	.149	1.657	.000
Innovation				
New product/service offering	1.073	.332	1.620	.000
New technology use	.910	.209	1.255	.011
Controls				
Extractive	.672	.001	1.240	.125
Transforming	.964	.564	1.418	.000
Business Services	1.070	.302	.966	.697
Age (business owner)	.994	.007	.992	.009
Medium education (business owner)	1.075	.319	.935	.491
High education (business owner)	1.297	.000	1.377	.001
Opportunity motivation	1.271	.000	1.254	.008
Fear of failure	1.020	.750	1.164	.068
High job growth aspirations	1.091	.096	1.565	.000
Little or no competition	1.264	.001	2.076	.000
Gender	1.128	.024	1.274	.001
Year dummy 2003	1.710	.000	1.399	.000
Nagelkerke R ²	0.235			
-2 Log Likelihood	16,139.7	16		
Observations	9,342			
Home country dummies included (not	,			

## Table 4: Entrepreneurial career capital, innovation and new venture's level of export orientation (multinomial logistic regression estimates)

Home country dummies included (not reported).

To investigate whether entrepreneurial characteristics of entrepreneurs and ventures are indeed more important for explaining the formation of high export-oriented new ventures than for moderate export-oriented new ventures we carry out binomial logistic regression analysis. The sample now only includes only the 4,424 export-oriented entrepreneurs. The results (see Table 5) indicate that entrepreneurs of highly export-oriented new ventures are more likely than their moderate export-orientated counterparts to perceive having entrepreneurial skills and to have previous entrepreneurial experience. Also, high export-oriented entrepreneurs are more likely to have informal investor experience, to offer new products or services and to use the latest technologies. There are only two independent variables on which these two groups of exporters do not differ significantly: currently owning an established firm and knowing an entrepreneur. In sum, we find strong support for H10 and some support for H8 and H9.

	Dependent varial	ble = Export orientation level
	(medium export = reference category)	
	Odds	p-value
Entrepreneurial human capital		
Entrepreneurial skills	1.209	.086
Previous entrepreneurial experience	1.343	.008
Established business ownership	1.214	.161
Entrepreneurial social capital		
Knowing an entrepreneur	.984	.835
Informal investor experience	1.444	.000
Innovation		
New product/service offering	1.501	.000
New technology use	1.387	.001
Controls		
Extractive	1.847	.000
Transforming	1.451	.000
Business Services	.890	.204
Age (business owner)	.997	.408
Medium education (business owner)	.867	.166
High education (business owner)	1.050	.620
Opportunity motivation	1.001	.989
Fear of failure	1.144	.126
High job growth aspirations	1.431	.000
Little or no competition	1.650	.000
Gender	1.133	.102
Year dummy 2003	.898	.182
Constant	.328	.000
Nagelkerke R ²	0.121	
-2 Log Likelihood	5,006.179	
Observations	4,424	

# Table 5: Entrepreneurial career capital, innovation and new venture's level of export orientation (binomial logistic regression estimates)

Home country dummies included (not reported).

#### **DISCUSSION AND CONCLUSION**

We investigate the role of individuals' entrepreneurial human capital and entrepreneurial social capital and a firm's innovativeness in explaining new venture export orientation. Our research makes several contributions. First, we highlight the potential importance of several entrepreneurial drivers in explaining export orientation among new ventures. Furthermore, we contribute to empirical research in the field of international entrepreneurship by using international comparable data on a large sample of early-stage ventures from 36 different countries. While previous research on international new ventures mainly focused on one country or specific industry samples, our sample includes multiple countries and covers all sectors of industry.

We acknowledge several limitations of our study. First, even though we include a large number of potentially relevant control variables in our analysis, the use of secondary data limits the availability of information. Consequently, we are not able to control for factors like entrepreneurs' previous international experience (Oviatt and McDougall, 1994; Westhead et al., 2001) and previous industry experience (Madsen and Servais, 1997; McDougall et al., 2003) which have been considered as a relevant factor for explaining new venture internationalization in previous research. Second, the cross-sectional nature of our analysis makes it difficult to disentangle causal relationships. Third, this study did not assess performance effects. Future research could consider the role of entrepreneurs' entrepreneurial human capital and of entrepreneurial social capital in new ventures' export success or firm performance. Fourth, future research could consider mediation and interaction effects between firm and entrepreneur characteristics. We considered entrepreneurial human capital and entrepreneurial social capital as separate influences on new venture export, however interdependencies may exist. For example, individuals who have developed entrepreneurship-specific skills and experiences are more likely to have build up networks of entrepreneurs than people without entrepreneurial human capital. Entrepreneurial social capital may also increase pressure or provide incentives for individuals to become entrepreneurially active (Stam et al., 2007) and thus may also contribute to the building up of entrepreneurial human capital. Also, various interactions possibly exist between entrepreneurial human capital, entrepreneurial social capital and innovation. Preliminary analysis with our data provides little evidence for such interactions, which supports the relevance of the straightforward models that are used in this study. However, future research could seek to develop more refined measures for entrepreneurial human capital and entrepreneurial social capital than the ones used in this study (which are based on secondary data) and then further explore the potential interrelationships between entrepreneurial human and entrepreneurial social capital. Fifth, although we find a clear link between new product/service introductions and new venture export, the quality of new products/services is likely to vary greatly and also the speed with which new products or services penetrate the market (Jovanovic and Lach, 1997). Such aspects are likely to affect the extent to which these new products/services enhance exports. Future research could provide greater insight into the link between new product/service introductions and new venture export by taking into account the nature and quality of new products and services.

Our study provides additional insight into how entrepreneurs' influence new venture behavior and demonstrates the importance of entrepreneurs' entrepreneurial human capital and entrepreneurial social capital for new venture internationalization. We find that entrepreneurs of export-driven new ventures, as compared to entrepreneurs of domestic new ventures, are more likely to have higher levels of entrepreneurial human capital and entrepreneurial social capital. In particular, new ventures that have entrepreneurs that perceive entrepreneurial skills, have displayed entrepreneurial activities in the past, personally know an entrepreneur and have experience as informal investors are more likely to have export-oriented ventures. This supports our suspicion that entrepreneurial human capital and entrepreneurial social capital provides basic business skills and confidence, making individuals more capable of and focused on developing an international orientation with their new firm. Our research provides insight into the relationship between entrepreneurship and internationalization since our findings suggest that fostering entrepreneurship may increase exports. For policymakers these findings imply that investing in entrepreneurship education and support for entrepreneurship in general may also contribute to a higher number of export-oriented new ventures. Previous research indicates that export-oriented new ventures serve as successful role models, making entrepreneurship a more desirable career option for others (De Clercq et al., 2007), thus positive two-sided linkages exist between general and export-driven entrepreneurship, which may provide a rationale for policy makers to integrate entrepreneurship and export policies.

Also, our findings provide more insight into the relationship between new venture innovativeness and export orientation. We find that innovation is only important as a driver for high-level export and not for explaining a moderate export orientation. Furthermore, our findings suggest that new ventures' new products or service offerings has a mediating role in the relation between entrepreneurial human capital and entrepreneurial social capital with new ventures' export. Oviatt and McDougall (1994) posit that control over unique resources is one of the necessary and sufficient conditions for the existence of INVs. Thus, our finding that moderate exporters are relying neither on unique products/services nor on sophisticated technologies could imply that INV research should not consider moderate exporters. However, although our findings indicate that new ventures that have a substantial export orientation are more entrepreneurial than moderate exporters, we also find that the latter are more entrepreneurial than non-export oriented new ventures in terms of entrepreneurial human capital and entrepreneurial social capital. This supports the view that export per se may be considered as an act of entrepreneurship or as entrepreneurial (Ibeh, 2003; Lu and Beamish, 2001; Lumpkin and Dess, 1996). Overall our findings imply the importance of distinguishing between new ventures with a high export drive and those that only have a minor focus on foreign markets in international entrepreneurship research (Moen, 2002). Such a distinction may also be relevant to consider in research that seeks to differentiate the level of entrepreneurial orientation of exporting firms (Yeoh and Jeong, 1995) or that seeks to understand internationalization as an entrepreneurial behavior over time (Jones and Coviello, 2005). Our findings confirm that new ventures with a high focus on exports are likely to have a greater knowledge base or to have a higher level of firm-specific advantages

(enabling them to have a high focus on exports) than moderate exporters. In addition it can be argued that the efficiency by which new knowledge is learned and accumulated through internationalization may be higher in ventures with a substantial focus on exports, for example because such ventures are likely to have a greater exposure to various kinds of knowledge (Yeoh, 2004). Thus, new ventures with a high or substantial focus on exports may be a particularly interesting target group for policymakers and our results suggest that the prevalence of these ventures can be enhanced by fostering innovativeness and by stimulating the development of entrepreneurial human and social capital in society.

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