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Informal institutions and international entrepreneurship

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ABSTRACT

This study examines the influence of three informal institutions, performance orientation, self-expression and social desirability, on the extent of internationalization by early stage entrepreneurial firms. We employed multi-level modeling techniques using 20,656 individual-level responses obtained from the Global Entrepreneurship Monitor (GEM) survey for 39 countries from 2001 to 2008, and supplementing with country-level data obtained from the World Values Survey (WVS) and the Global Leadership and Organizational Behavior Effectiveness (GLOBE) study. The results demonstrate that high performance orientation, high self-expression, and low social desirability of entrepreneurship in societies increase the extent of internationalization by early-stage entrepreneurial firms. The study promotes new theory and empirical findings on the relationship between informal institutions and entrepreneurial agency.

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1. Introduction

International new ventures (INVs) are originally defined as those that seek to derive significant competitive advantage from cross-border transactions especially those involving multiple countries (Oviatt & McDougall, 1994). Born Globals (BGs) are young entrepreneurial start-up firms that start international business, mainly exporting, soon after their founding (Knight & Cavusgil, 2004). Both the above are forms of international entrepreneurship that involve cross-border transactions which provide opportunities to access new markets (Smallbone & Welter, 2012). The study of INVs and BGs has since become an important part of the growing literature on international entrepreneurship (McDougall & Oviatt, 2000; Young, Dimitratos, & Dana, 2003; McDougall, Oviatt, & Shrader, 2003).

Whereas many well established firms internationalize by following a slow path of development or through a stage-based process (Johanson & Vahlne, 1977), INVs and BGs go international at the early stages of their formation. For instance, Hewerdine and Welch (2012) conceptualize them as firms that internationalize at the time of organizational emergence and international

entrepreneurs 'envision and realize the emergence of their business as an international entity' (Fletcher, 2004: 300). Key dimensions of internationalization have evolved since the 1970s when much of the extant theory on internationalization by multinational enterprises was developed (Rialp, Rialp, & Knight, 2005). The growing significance of INVs and BGs challenges traditional internationalization frameworks thereby warranting further theory development. Despite the understanding that early internationalization is likely to be driven by globalization of markets and advances in technology, there has been scant research that attempts to explain, among other research issues related to the phenomenon, why some such firms internationalize early while others do not (Busenitz, Gomez, & Spencer, 2000; Knight & Cavusgil, 2004; Zahra, 2005). *Why do some new enterprises opt to go international from inception, whereas many others opt to focus on their domestic markets (Zahra, 2005)?* Particularly, the impact of the home-country context on the internationalization of INVs and BGs needs to be better understood and integrated into existing theoretical and conceptual frameworks that explain their internationalization (Zander, McDougall-Covin, & Rose, 2015).

We attempt to address this question by specifically examining the influence of home country factors on such firms. Given the strong link between such firms and entrepreneurs who drive these firms, we need to better understand the context in which entrepreneurial intentions and motivations of such individuals induce early internationalization decisions (Zahra, Korri, & Yu,

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2005). Understanding the impact of home contextual factors helps us to theorize about and empirically compare international entrepreneurship behaviors around the world (Hayton & Cacciotti, 2013). The extant literature suggests that contextual factors may help predict early internationalization over and above individual-level factors, such as entrepreneurial orientation and market orientation (Liu, Li, & Xue, 2011), business group affiliation, international experience, and technological and marketing resources (Gaur, Kumar, & Singh, 2014). Detailed understanding of such factors also contributes to the debate on the influence of 'socio-spatial contexts' on entrepreneurship (Trettin & Welter, 2011: 575). We examine such contexts from an institutional theory perspective.

The use of institutional theory in understanding international entrepreneurship research is limited. A review by Peiris, Akoorie, and Sinha (2012) shows that only four studies have used institutional theory as a theoretical framework to understand international entrepreneurship. Institutional environments, both formal and informal, facilitate or constrain entrepreneurial aspirations, intentions, and opportunities, affecting the speed and scope of entrepreneurial entry rates (Shane, 2004). The arguments on the role of institutions in international entrepreneurship have been limited to primarily on formal institutions leaving open the need to incorporate informal institutions (i.e. normative and cultural-cognitive) into the framework in order to provide a richer explanation of the phenomenon (Szyliowicz & Galvin, 2010).

Formal institutional factors such as the regulatory and economic contexts provide a partial explanation of cross-national variability of entrepreneurship (Bowen & De Clercq, 2008; Djankov, La Porta, Lopez-de-Silanes, & Schleifer, 2002; Stephan & Uhlaner, 2010; Stephan, Uhlaner, & Stride, 2014; Van Stel, Storey, & Thurik, 2007). However, it is not unusual to see different attitudes towards entrepreneurship across societies with similar formal institutions (Lee & Peterson, 2000; Thomas & Mueller, 2000), suggesting that informal institutions (i.e., culture, social structures, and work routines), help explain such variability (Hayton, George, & Zahra, 2002; Scott, 1995; Uhlaner & Thurik, 2007). Informal institutions shaping the propensities of the social groups from which entrepreneurship stems (Baughn & Neupert, 2003), we believe must also influence the decisions of early-stage entrepreneurs to internationalize. Our belief is in line with the growing recognition of the effect of cultural institutions and national culture in shaping a firm's cross border strategic initiatives (Zahra et al., 2005).

Our study specifically examines how informal institutions such as societal-level (1) desirability of entrepreneurship, (2) performance orientation and (3) self-expression, influence internationalization by early entrepreneurial firms. These variables measure values and normative beliefs that are components of entrepreneurial motivation in various models of entrepreneurial intention (Krueger, Reilly, & Carsrud, 2000). These informal institutions influence the need for achievement and utility maximization motives that drive entrepreneurial intentions (Douglas & Shepherd, 2002; Hayton et al., 2002; Shane, Locke, & Collins, 2003). Our theory leads to an empirical design accommodating two levels – the country-level for the institutions, and the firm-level for the extent of internationalization. Using data from the Global Entrepreneurship Monitor (GEM), Global Leadership and Organizational Behavior Effectiveness (GLOBE) study and World Values Survey (WVS), we adopt multi-level estimation techniques to test our hypotheses.

Our results support the contentions that lower levels of social desirability of entrepreneurship in the home country will spur internationalization by early stage entrepreneurial firms, whereas higher levels of performance orientation and self-expression

values are positively related to internationalization by early stage entrepreneurial firms. Our multi-level study contributes to literature by explicitly exploring the effect of informal institutions on international entrepreneurship. Our key contribution is in linking societal and individual level variables to understand the specific boundary conditions of domestic informal institutions that facilitate or constrain the extent of early internationalization by entrepreneurial firms.

The article is organized as follows. We discuss the theoretical background leading to our hypotheses. We draw theoretical inputs from international entrepreneurship theory and institutional theory to develop our hypotheses on how social desirability, performance orientation, and self-expression values influence early internationalization by entrepreneurial firms. We then elaborate our methods and present our results. We conclude by discussing our findings and their implications for theory, practice, and policy.

2. Theoretical background

2.1. International entrepreneurship

Opportunity-based definition of entrepreneurship has become widely accepted in the literature (Brown, Davidsson, & Wiklund, 2001). This definition is in line with Austrian economists' views of entrepreneurship as opportunity seeking, recognition and exploitation through novel resource recombinations (Kirzner, 1973; Schumpeter, 1934). Such opportunities exist in domestic and international markets (Zahra & Dess, 2001). *International entrepreneurship* as defined by Oviatt and McDougall (2005) is the discovery, enactment, evaluation, and exploitation of opportunities across domestic borders for goods and services. International entrepreneurship research, which emerged in the early 1990s as a response to the dynamic nature of newly internationalizing firms, is perceived to be different from the traditional patterns of firm internationalization (Oviatt & McDougall, 1994). At the core of international entrepreneurship is the creation of new firms and the internationalization of new venture firms and/or born globals (Kshetri & Dholakia, 2011; Naudé & Rossouw, 2010; Shane & Venkataraman, 2000). Specific to this line of enquiry is understanding the phenomenon of early internationalization of such startups.

Internationalization of new firms is broadly understood using two frameworks i.e. Process theories and International New Venture (INV) Theories (Kalinic & Forza, 2012). As per process theories of internationalization, internationalization involves gradual acquisition, integration and use of knowledge about foreign markets and operations, and incrementally increasing commitments to foreign markets (Johanson & Vahlne, 1977, 1990). On the other hand, the INV theory of internationalization argues that the impact of technological, social and economic factors pushes firms into the international marketplace soon after their inception. Firms in the latter model do not follow the gradual incremental pattern of internationalization (McDougall & Oviatt, 2000). Contextual influences, industry conditions, and the thinking of entrepreneurs themselves are believed to be key factors determining the international involvement by startups (Oviatt & McDougall, 2005). Some of the external environmental conditions include type of sector (high/low, manufacturing/service), geographic context (country, rural, urban) and local networks (Rialp et al., 2005). A firm's external environmental context also includes social conditions both at *home* and abroad that may have an influence on the extent of internationalization (Liu, Xiao, & Huang, 2008). We examine the influence of some of these socio-cultural conditions at *home* through the understanding of informal institutions.

2.2. National institutions

A country's institutional environment, which consists of relatively stable rules, social norms, and cognitive structures (Scott, 1995), sets the framework for transactions in the market by defining the "rules of the game" (North, 1990: p. 1). Institutions have been considered as structures – from rules and regulations to culture, customs and traditions operating in a society (Szyliowicz & Galvin, 2010). These structures shape the logics governing economic decision making and actions in the market place (Yeung, 2002). Entrepreneurship, like any other economic activity, has been argued to be informed by both formal institutions (rules and regulations) and informal institutions such as social norms and mores (Baumol, 1990).

Extant research defines two streams of comparative entrepreneurship inquiry, depending on the institution (formal vs informal) chosen to understand entrepreneurship (Bruton, Ahlstrom, & Li, 2010; Jones, Coviello, & Tang, 2011). The line of inquiry based on institutional economics examines formal institutions (Autio & Acs, 2010; Estrin, Korosteleva, & Mickiewicz, 2012), whereas that based on cultural sociology and cross-cultural psychology typically examines informal institutions (Autio, Pathak, & Wennberg, 2013). These informal institutions specifically refer to culturally shared understandings associated with cultural values, and social expectations about appropriate actions which are based on dominant practices or norms prevalent in a given society or culture (Bruton et al., 2010; Javidan, House, Dorfman, Hanges, & Sully de Luque, 2006; Scott, 2005; Stephan & Uhlaner, 2010; Stephan et al., 2014). According to social psychologists, one of the critical perceptions that can predict intentions to pursue an entrepreneurial opportunity is the perceived support by informal institutions such as social values and norms (Carsrud & Krueger, 1995; Krueger & Carsrud, 1993). These values (what are considered proper) and norms (how things are to be done) establish the ground rules to which members of society conform (Locke & Baum, 2007).

Some of these implicit informal institutions facilitate entrepreneurship and some constrain it by making entrepreneurship difficult by directly influencing the need to achieve motivation of entrepreneurs (Baumol, Litan, & Schramm, 2009). We examine how social desirability of entrepreneurship and societal values of performance orientation and self-expression, which we argue are informal institutions, predict international entrepreneurship. We assume that these norms and values directly influence the need to achieve motivation that exists internally in entrepreneurs. This is further enhanced by the opportunities that international markets offer to such individuals. These opportunities address the utility maximization motives of such entrepreneurs in the gain through internationalization by taking into account the opportunity cost of potentially forgone income from these international markets (Douglas & Shepherd, 2002). Our argument is also supported by the definition of antecedents for international entrepreneurship in the view point proposed by Zahra et al. (2005:141) which is 'a combination of environmental forces and individual characteristics influence sense making which, in turn, triggers international entrepreneurial acts'.

3. Hypotheses development

New firms or start-ups with high levels of entrepreneurial orientation will tend to constantly scan and monitor their operating international environment in order to find new opportunities and strengthen their competitive positions in their international markets (Covin & Miles, 1999; De Clercq, Sapienza, & Crijns, 2005). Opportunity identification has been established to be an intentional process and intentions are considered to be a strong

predictor of planned behavior (Krueger et al., 2000). The assumption we make, therefore, is that the entrepreneurial actor somehow discovers or enacts such an opportunity because our objective in this study is not on the nature of this discovery or enactment, but on the context in which such decisions on the pace with which this opportunity is internationalized are made (Oviatt & McDougall, 2005). Further our assertion that high levels of entrepreneurial orientation precedes entry into the international arena has been supported by scholars in the area of entrepreneurship research (Dess, Lumpkin, & Covin, 1997; Jantunen, Puumalainen, Saarenketo, & Kyläheiko, 2005; Ripollés, Blesa, & Monferrer, 2012).

Further, Aldrich and Zimmer (1986: p. 3) suggest that entrepreneurial activity "can be conceptualized as a function of opportunity structures and motivated entrepreneurs with access to resources". Extant research examining entrepreneurs' motivations to internationalize suggest that some of these motivations are deeply imbedded in the entrepreneur's own needs and personality and others reflect the domestic contextual influences that the entrepreneur is located in (Zahra et al., 2005). We start with the assumption that the internal attributes of need for achievement (Carsrud & Brännback, 2011; McClelland, 1961) and utility maximization motives (Douglas & Shepherd, 2002; Hayton et al., 2002; Reynolds et al., 2005) drive entrepreneurial intentions to internationalize. Need for achievement is a key internal attribute of an individual to achieve high levels of performance (McClelland, 1961). Utility maximization motives drive decisions as to whether to engage in entrepreneurial activities depending on the net benefits over the costs of lost opportunity (Douglas & Shepherd, 2002). Such individuals would take advantage of international opportunities in order to maximize their incomes and perquisites (Fitzsimmons & Douglas, 2005) and also that such entrepreneurial behavior promises the greatest psychic utility (Douglas & Shepherd, 2002; Eisenhauer, 1995).

Since entrepreneurs are naturally embedded in the environment (Jones & Conway, 2004), they are products of his/her socio-cultural environment. Informal institutions (as reflected in the socio-cultural context) influence an individual's choice of pursuing entrepreneurship as a career by rendering that choice being socially desirable and legitimate (Scott, 2002). These informal institutions exert their influence through individual consideration of social desirability and cultural legitimacy of entrepreneurship as a career choice (Ajzen, 1991; Krueger et al., 2000). Further, informal institutions are responsible for the differences in the value placed on entrepreneurs (Bruton et al., 2010), and more importantly they act as motivational stimulants to fuel their entrepreneurial intentions (Stephan et al., 2014).

We argue that social desirability, performance orientation, and self-expression are informal institutions i.e. norms and values that can enable or constrain entrepreneurial intentions in society. Social desirability refers to the recognition that society accords to the actions of individuals (Koellinger, 2008). Although entrepreneurs exist in all countries, how they apply their talents differs according to the context in which they operate (Baumol, 1990). It would be interesting to find that entrepreneurs operating in societies where entrepreneurship is not socially desirable respond by engaging in entrepreneurship that crosses national borders – presumably because of the more favorable norms found outside of the home country. Performance orientation refers to the extent to which societies reward individuals for their efforts to succeed in their endeavors (Autio et al., 2013). Entrepreneurs may internationalize in order to maximize their need to achieve performance desires, by taking advantage of the opportunities that international markets offer. Self-expression values refer to the extent to which individuals assign priority to personal decisions over survival needs (Inglehart, 2006). Entrepreneurship being typically an individualistic behavior, early-stage entrepreneurs may

internationalize for greater volumes of business in order to satisfy their need to achieve desires quicker.

Szyliowicz and Galvin (2010) in a review of the use of institutional theory in international entrepreneurship research suggest the use of the following levels in future entrepreneurship research: entrepreneur, firm, country, and the world system. We have partially addressed their suggestion by proposing individual/firm and country levels through a multi-level framework. We have specifically used, in our study, Estrin et al.'s (2012) suggestion that Williamson's (2000) hierarchy of institutions informs factors at four levels that can affect entrepreneurial behavior (which is considered to be level 4). The hierarchy has four levels starting with informal institutions at the top (number 1), followed by formal institutions (2), next is the play of the game including the nature of the supply chain and financing opportunities (3), and finally, the resource allocation processes occurring within firms including the decisions taken by entrepreneurs (4).

Again, entrepreneurial mental models influence the type of company's organizational form, governance system, formal structure, and competitive strategy. It is suggested that the firm is an extension of the entrepreneur's ego and it is also a means of gaining social acceptance and legitimacy in international markets (Zahra et al., 2005). Strategy researchers equate firm intentions to the goals of agents and the vision and goals of founding entrepreneurs (Katz & Gartner, 1988). Further, literature on international entrepreneurship has supported the positive effect of managerial vision and intention on firm internationalization (Peiris et al., 2012). Our examination, therefore, is at the firm level given the intricate link between the entrepreneurs' personal objectives and needs, and the goals of the firms they establish (Zahra et al., 2005). In sum, our focus is on two levels, how Level-1 (informal institutions) affects Level-4 (entrepreneurial behavior of firms). Our conceptual framework is shown in Fig. 1.

3.1. Social desirability of entrepreneurship and internationalization

Social desirability in entrepreneurial research is considered as the body of commonly held perceptions about the rewards societies place on the career choice of entrepreneurship (Busenitz

et al., 2000; Koellinger, 2008). Scholars have shown that social desirability of entrepreneurship is positively associated with the formation of new firms (Busenitz et al., 2000; Reynolds, Carter, Gartner, & Greene, 2004). A society that values entrepreneurship may be more likely to reward an entrepreneur's endeavors by sharing risk, providing social capital and valuable information and through cooperation – each of these is consequential to entrepreneurs' initiatives in the country (Adler & Kwon, 2002; Fukuyama, 2001). Therefore, we can infer that social desirability of entrepreneurship may also affect the type of entrepreneurship individuals will pursue.

A national context with high social desirability for entrepreneurship will therefore be a fertile ground for budding entrepreneurs to take advantage of the opportunities and enter the market with creative offerings and satisfy their internal attributes of need for achievement. Such contexts where social desirability of entrepreneurship is higher are more conducive and are more open to legitimize entrepreneurship as a career path for individuals. Typically, in such contexts entrepreneurs are likely to be rewarded with wider media coverage leading to high visibility of their impact on the economy. Availability of social capital through networking opportunities (Adler & Kwon, 2002), improved learning through easy information sharing (Fukuyama, 2001), availability of capital from financial institutions, and voluntary cooperation from various stakeholders, are direct advantages of operating in a context with high social desirability, which reduces the uncertainty of success of individuals opening entrepreneurial ventures.

From the above we infer that low societal desirability of entrepreneurship in society constrains individuals with high entrepreneurial orientation by creating conditions of uncertainty in the home environments. Such entrepreneurs would tend to look for opportunities elsewhere. Extant research has established that uncertain local environments can influence firms to go abroad (Zahra, Neubaum, & Huse, 1997). Similarly, entrepreneurial firms operating in uncertain home country conditions may target markets abroad in order to seek additional sources of revenues (Dimitratos, Lioukas, & Carter, 2004; McDougall, Covin, Robinson, & Herron, 1994; Oviatt & McDougall, 1994). In particular, hostile

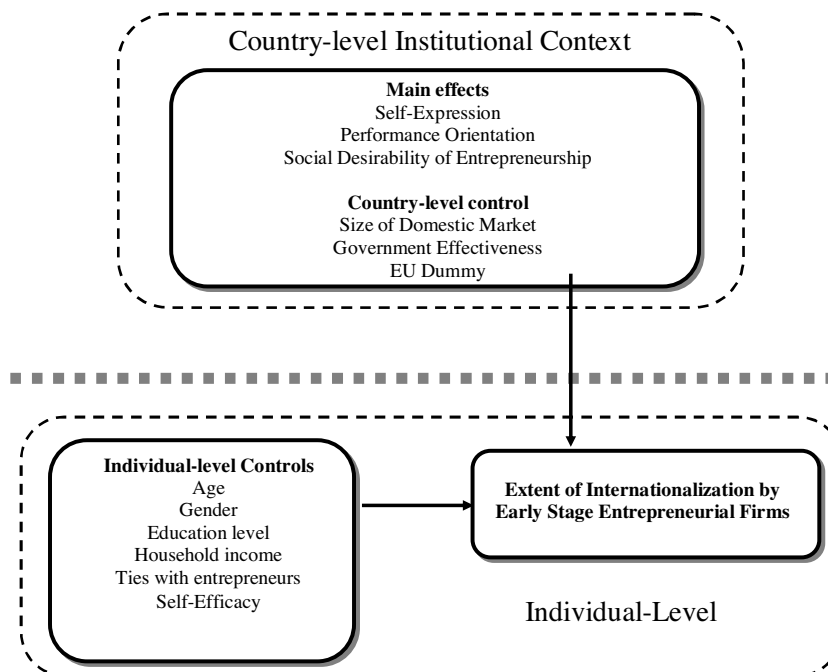


Fig. 1. Theoretical model.

domestic markets limit the opportunities to grow for individuals high on entrepreneurial intentions (Cooper & Kleinschmidt, 1985). Such hostile environments for entrepreneurship may lead to international activities since they would likely cause budding entrepreneurs to disregard opportunities in the home market (Hax, 1989) or induce them to seek attractive prospects abroad (Eshghi, 1992), where socio-cultural contexts may be more favorable. In a similar vein, Zahra et al. (1997) find that domestic hostility is positively associated with export performance since such environmental conditions may pressure firms to look for opportunities abroad in order to compensate for hostility at home. We extend the above line of argument to predict the influence of social desirability on internationalization of entrepreneurial activity.

Low social desirability of entrepreneurship in home conditions, therefore, is an uncertain or hostile environment for individuals with entrepreneurial intentions (Dimitratos & Plakoyiannaki, 2003; Dimitratos et al., 2004). Such a domestic environment does not provide the necessary motivational stimulants for individuals to satisfy their need for achievement. Opportunity based entrepreneurs, with high entrepreneurial intentions, may tend to look outside their national territories for exploiting their creative entrepreneurial instincts and satisfy their need for achievement. Such tendencies may also be partly explained by the 'push' theory where individuals with high entrepreneurial intentions are pushed into international entrepreneurship by negative external forces in their home contexts (Segal, Borgia, & Schoenfeld, 2005). Again since, entrepreneurs' personal objectives and needs, and the goals of the companies they form are intricately linked (Zahra et al., 2005):

Hypothesis 1. Domestic social desirability of entrepreneurship would be negatively associated with the extent of internationalization by early stage entrepreneurial firms.

3.2. Performance orientation and internationalization

Societal-level performance orientation facilitates entrepreneurship (Stephan & Uhlaner, 2010) and is a prerequisite for entrepreneurial success (Brinckmann, Grichnik, & Kapsa, 2010). Performance orientation as measured by GLOBE reflects the extent to which individuals are encouraged to strive for continuous improvement in their performance, and are rewarded strictly based on performance, performance improvement, and innovativeness (House, Hanges, Javidan, Dorfman, & Gupta, 2004). This is therefore an informal institution, which represents the individual's perception of how cultural norms actually are enacted in societal and organizational behaviors (Segall, Lonner, & Berry, 1998). It is also reflective of having a "can do attitude", taking initiative, and the belief that anybody can succeed if they try hard (Autio et al., 2013; Javidan, 2004: 245). We argue that societal level performance orientation directly influences the internal attribute of need for achievement present in entrepreneurs. Such societies which award high performance are ideal contexts for entrepreneurs to excel in their innovative endeavors.

In the same vein we argue that high performance orientation in society is also a prerequisite for early internationalization. As per Oviatt and McDougall (1994: 49) international entrepreneurs derive significant competitive advantage through "the sale of output in multiple countries". International entrepreneurship is also fundamentally a proactive and a competitive behavior, as early new foreign market entrants will inevitably need to overcome competition from established market players and also local players, as they seek to dislodge, substitute, and complement existing products and services in these markets (Kirzner, 1997). Moreover, overcoming the challenges of international operations in terms of addressing the country factors right at the inception is

also indicative of the 'can do' attitude of performance orientation. All these aspects reflect closely the performance orientation dimension of culture, as these entrepreneurs who internationalize early invest time and effort into pursuing international opportunities (Sagie & Elizur, 1999).

Various models have highlighted how technological advances in transportation, communication, and information technology have facilitated entrepreneurs to form new ventures that internationalized rapidly (Knight & Cavusgil, 1996; Oviatt & McDougall, 1994, 1997). Some of the prime influencers that are considered to determine the pace of internationalization are environmental factors, industry factors, and entrepreneurs themselves (Oviatt & McDougall, 2005). The other factor that influences pace of internationalization is the force of competition, the fear of which induces entrepreneurs to pre-emptively internationalize early, and not compete only in their home country (McDougall, Shane, & Oviatt, 1994). All these aspects, yet again, are reflective of the 'can do attitude' which directly stem from societal-level performance orientation in which the entrepreneur operates. Finally, the risk orientation, which refers to the entrepreneur's willingness and desire to undertake risky resource commitments in pursuit of opportunities in international markets right at the inception, is also an indicator of a performance orientation. This tendency of early internationalization would also be boosted by peer pressure in national contexts where such behavior is rewarded (McGrath, MacMillan, Yang, & Tsai, 1992). These performance orientation norms are stimulants for the need for achievement in individuals that explains why they identify certain entrepreneurial opportunities and behave differently towards them (Zahra et al., 2005). Individuals in contexts with strong performance orientation are, therefore more likely to emulate the performance of their peers by internationalizing early (Nanda & Sorensen, 2010).

Further, while norms of performance orientation in society support the need for achievement motive of the entrepreneur, the opportunity for sales in international markets addresses the utility maximization motive of the entrepreneur. Entrepreneurs' decisions to enter international markets are as a consequence driven by the expected gain from such activities taking into account the opportunity costs of potentially foregone incomes from international markets (Douglas & Shepherd 2002; Reynolds et al., 2005). Again based on the intricate link between entrepreneurs' personal objectives and needs, and the goals of the companies they form (Zahra et al., 2005):

Hypothesis 2. Societal performance orientation would be positively associated with the extent of internationalization by early stage entrepreneurial firms.

3.3. Self-expression and internationalization

Inglehart (2006) defines survival versus self-expression values as the extent to which individuals' value personal choice over the needs for survival and therefore will allot topmost priority to personal choice over survival needs. Time series analyses from the WVS show that with economic development, societies tend to give up values prevalent in low-income societies and embrace those prevailing in high-income societies (Inglehart & Baker, 2000). Inglehart has specifically shown that in countries that experience economic prosperity, concerns for survival are reduced thereby making values associated with survival less important than those that govern personal choices. This change – which is linked to economic prosperity – liberates individuals from the pressures of survival such as resource scarcity and allows them to use personal discretion (Inglehart, 2006). When societies are plagued with scarcity, individuals tend to avoid indulging in activities that have

higher chances of failures and hence leading to further losses, whereas when societies are prospering individuals are likely to aim for success through initiative and creativity or in other words by adopting self-expressive strategies (Inglehart & Oyserman, 2004). We can therefore infer that self-expression values are associated with advancement and growth. Individuals in societies that value self-expression (versus survival) are more likely not to miss any opportunities of advancement and more likely to engage in highly creative initiatives (Inglehart & Oyserman, 2004).

Integrating the discussion on self-expression values and entrepreneurship we can infer that societies high in self-expression values will more likely have a greater number of entrepreneurs who are in search of entrepreneurial opportunities. Entrepreneurship can be considered to be creating something new (Schumpeter, 1934) or recognizing and taking advantage of opportunities early (Kirzner, 1979). Although entrepreneurs can be differentiated as necessity-based (when other employment options are scarce) and opportunity-based (when entrepreneurial opportunity exists to be taken advantage of), scholars estimate that the majority of entrepreneurs classify themselves as being motivated by opportunity as opposed to necessity (Reynolds, Bygrave, Autio, Cox, & Hay, 2002). There is evidence to show that as a country reaches higher levels of self-expressive values, there is a favorable impact on opportunity-based entrepreneurship rates (Hechavarría & Reynolds, 2009).

As suggested by Oviatt and McDougall (1994) one of the key reasons for early and rapid internationalization is the recognition of “international opportunities” (p. 47). Improved communication, transportation, and liberalization of markets have increased global market opportunities (Ohmae, 1990). Extant research shows that self-expression values have a positive relationship to opportunity entrepreneurship, that is, countries with self-expressive values will likely encourage individuals to engage in entrepreneurial activity as a means to satisfy their needs for achievement. Therefore, countries with self-expressive values may encourage individuals to engage in entrepreneurial activity as a means for personal fulfillment (Hechavarría & Reynolds, 2009). International opportunities for such individuals address their utility maximization motives, where the expected gains take into account the opportunity costs of potentially foregone incomes from these international markets (Douglas & Shepherd, 2002; Reynolds et al., 2005). Finally, given the intricate link between entrepreneurs’ personal objectives and needs, and the goals of the companies they form (Zahra et al., 2005):

Hypothesis 3. Societal-level self-expression values would be positively associated with the extent of internationalization by early stage entrepreneurial firms.

4. Method

Our theoretical framework has two levels – individual-level and country-level. This is shown in Fig. 1. We test three hypotheses that relate to the effects of societal-level *self-expression*, *social desirability of entrepreneurship* and *performance orientation* on the extent of internationalization of early-stage entrepreneurship, thus making our theoretical framework multi-level in design. We analyzed survey data for 39 countries for the years 2001–2008 from the publicly available Global Entrepreneurship Monitor (GEM) survey (Reynolds et al., 2004).¹ This comprehensive data set includes responses from 20,656 individuals who were all identified as early-stage entrepreneurs but may or may not have

internationalized their ventures. Out of these 20,656 early-stage entrepreneurs, 8820 (about 43 percent) were identified as those who had internationalized their ventures.

This dataset on individual-level responses was then complemented with data on societal-level (1) self-expression obtained from the World Values Survey, (2) desirability of entrepreneurship from the GEM survey and (3) performance orientation from the Global Leadership and Organizational Behavior Effectiveness (GLOBE) study. These measures are explained in detail in the subsequent sections, and descriptive statistics are shown in Table 1.

4.1. Dependent variable

Our dependent variable was obtained from the GEM survey. Scholars have suggested the use of multiple-item measures that reflects the performance, structural, and attitudinal aspects of internationalization to examine extent of internationalization (Ruzzier, Antoncic, & Hisrich 2007). Although multiple-item measures are found to be more reliable than single-item measures, Ramaswamy, Kroeck, and Renforth (1996) cautioned that aggregating components may hide the effects of individual components. We therefore use a single-item measure of the extent of internationalization as defined by the percentage of sales in foreign countries to the total venture sales (McDougall & Oviatt, 1996). International sales as a percentage of total sales is the most widely used measure to capture the extent of international performance (Javalgi & Todd, 2011; Wagner, 2004; Yeoh, 2004). Many scholars have also established that it is a viable proxy for the extent of internationalization (Kumar & Singh, 2008; Sullivan, 1994).

Operationally an INV or a Born Global (BG) can be defined as a firm that has a share of foreign sales of at least 25% after having started export activities within three years of its inception (Knight & Cavusgil, 1996). We utilized the publicly available Global Entrepreneurship Monitor (GEM) survey data set to operationalize our dependent variable. GEM identifies (1) *nascent entrepreneurs* (individuals who are active in the process of starting a new firm during the preceding 12 months and with expectations of full or part ownership, but have not yet launched one) and (2) *new entrepreneurs* (owners-managers of new firms who have survived for 42 months and have paid wages to any employees for more than 3 months) as early stage entrepreneurs. GEM categorizes *established entrepreneurs* (owner-managers of firms 42 months old or older) separately. Only nascent and new entrepreneurs are operationalized by GEM as “early stage” entrepreneurs. We followed this operationalization too. Subsequent to this, we imposed another condition and identified early-stage entrepreneurs who went international. GEM identifies the status of internationalization of only nascent or new entrepreneurs and not of established entrepreneurs.² It asks all identified nascent or new entrepreneurs – “What proportion of your customers will normally live outside your country? Is it more than 90%, more than 75%, more than 50%, more than 25%, more than 10%, or 10% or less or none?” The responses to this question were used to operationalize the extent of internationalization. GEM thus puts these individual-level responses across seven categories. In this study, we created our dependent variable to include five categories only – (0 = No export; 1 = greater than 0 and less than 25; 2 = 25% and less than 50%; 3 = 50% and less than 75% and 4 = 75% and up to 100%). This operationalization allowed us a more evenly distributed range

² This was another reason why our dependent variable comprised of a sample of only nascent and new – early-stage – entrepreneurs.

¹ Data from only 39 countries were usable for all the variables and controls included in the regression models.

Table 1
Sample descriptives.

Country	N	Extent of Internationalization ^a	Self-expression values ^b	Social desirability ^c	Performance orientation ^d
Argentina	376	0.41	0.38	0.37	3.63
Australia	268	0.66	1.75	-0.08	4.37
Austria	132	1.23	1.43	-0.24	4.47
Brazil	732	0.24	0.61	0.68	4.11
Canada	86	0.81	1.91	0.43	4.46
China	768	0.39	-1.16	0.55	4.37
Colombia	1109	0.52	0.60	0.92	3.93
Denmark	457	0.91	1.87	-0.21	4.40
Egypt	215	0.89	-0.54	0.84	4.15
Finland	349	0.62	1.12	0.49	4.02
France	147	1.36	1.13	-0.37	4.43
Germany	562	1.08	0.74	0.00	4.42
Greece	379	0.59	0.55	0.07	3.34
Hong Kong	131	1.76	-0.98	0.22	4.69
Hungary	238	0.44	-1.22	-0.95	3.50
India	300	0.44	-0.21	0.82	4.11
Indonesia	305	0.64	-0.80	-0.27	4.14
Ireland	338	1.02	1.18	0.76	4.30
Israel	164	1.23	0.36	-0.16	4.03
Italy	115	0.79	0.60	-0.13	3.66
Japan	211	0.68	-0.05	-1.09	4.22
Malaysia	144	0.51	0.09	0.74	4.16
Mexico	267	0.38	1.03	-0.47	3.97
Netherlands	437	0.79	1.39	0.29	4.46
New Zealand	109	0.90	1.86	0.27	4.86
Philippines	346	0.19	-0.11	1.17	4.21
Portugal	93	1.06	0.49	-0.17	3.65
Russia	48	0.40	-1.42	-1.17	3.53
Singapore	283	1.56	-0.28	-0.50	4.81
Slovenia	343	1.32	0.36	0.05	3.62
South Africa	424	1.17	-0.10	-0.21	4.40
South Korea	152	0.89	-1.37	0.17	4.53
Spain	4826	0.81	0.54	-0.38	4.00
Sweden	148	0.74	2.35	-0.35	3.67
Switzerland	296	0.92	1.90	-0.06	5.04
Thailand	866	0.20	0.01	1.10	3.84
Turkey	290	0.81	-0.33	0.79	3.82
United Kingdom	3489	0.79	1.68	0.03	4.16
USA	741	1.02	1.76	-0.13	4.45

N is the number of observations.

^a Represents the country level average of the extent of internationalization by early-stage entrepreneurial firms, the average is over the five categories of the dependent variable (0, 1, 2, 3 and 4).

^b Self-expression values. Source: World Values Survey.

^c Social desirability is represented as standardized scores. Source: Global Entrepreneurship Monitor survey.

^d Performance orientation. Source: Globe Leadership and Organizational Behavior Effectiveness (GLOBE) survey.

of the percentage of internationalization.³ Although responses were obtained at the individual-level, our dependent variable reflects the extent of internationalization by early-stage entrepreneurial firms. Our dependent variable is therefore categorical in nature. Following the above mentioned steps, our usable dataset ultimately included 20,656 observations across 39 countries. The average extent of internationalization by early-stage entrepreneurial firms per country is reported in Table 1.

4.2. Predictor variables

4.2.1. Country-level (level-2) predictors

We used three country-level predictors in our analysis – *social desirability of entrepreneurship*, *performance orientation*, and *self-expression*. National aggregate measures of each of the three predictors for the 39 countries included in our study were used.

Societal-level *desirability of entrepreneurship* was created as a national aggregate measure using responses to three individual-level questions asked in the GEM survey. Individuals were asked – (1) “In your country, most people consider starting a new business a desirable career choice”, (2) “In your country, those successful at starting a new business have a high level of status and respect”, and (3) “In your country, you will often see stories in the public media about successful new businesses”. GEM captures each of these questions within separate variables. Each of the three variables either assumes a value of 1 (if the response was a “yes”) or 0 (if the response was a “no”). We conducted a principal component factor (PCF) analysis on the three variables. They loaded on to a single factor. The predicted score from this factor analysis was used as a composite measure of societal-level desirability of entrepreneurship in our study. Since this measure is a predicted score of a PCF analysis, they represent z-scores and assume positive as well as negative values. For the 39 countries included in our study, we observe an average value of 0.09, a minimum value of -1.17 (for Russia) and a maximum value of 1.17 (for Philippines).

Societal-level *performance orientation* was obtained from the GLOBE studies and measures the “extent to which a community

³ We also replicated all our estimations using GEM’s seven-category dependent variable and observed no loss of generalizability of our findings. Results are available from authors upon request.

encourages and rewards innovation, high standards, excellence, and performance improvement. GLOBE generates a composite measure of performance orientation from three sample items – (1) ‘In this society, students are encouraged to strive for continuously improved performance’; (2) “In this society, major rewards are based on performance rather than other factors”; and (3) “In this society, innovativeness and performance improvement are rewarded” (House et al., 2004). Each of these sample items are ordered as a 7-point Likert scale with 1 corresponding to “strongly agree” and 7 to “strongly disagree”. For the 39 countries included in our study, we observe an average score of 4.12, a minimum score of 3.34 (for Greece) and a maximum of 5.04 (for Switzerland).

Country-level index for *self-expression* was obtained from the World Values Survey (WVS). Since its inception in 1981, WVS has in conjunction with the European Values Survey (EVS) conducted six waves of survey – 1981–1984, 1990–1994, 1995–1998, 1999–2004, 2005–2009 and 2010–2014. Data was available publicly for the first five waves only when this study was conducted. Hence, the *self-expression* index for the 39 countries included was obtained from within the first five waves of WVS. This being said, not all countries participated in the survey in all waves. For a given country, the *self-expression* index obtained from the latest wave that the country participated in was used in our study. While the self-expression index for some countries may have come from a wave that corresponded to years outside the scope of years (2001–2008) included in our study, we assume that the perception of self-expression in a given country may not change considerably over waves. This assumption is corroborated by the fact that the WVS' self-expression index for some countries that participated in multiple waves were observed to be the same across each of those waves. WVS computes scores on self-expression using survey conducted on individual-level “attitudinal and behavioral indicators”. It uses ten sub-pillars including “teach children obedience and faith rather than independence and determination”, “respect for authority”, “priority for economic and physical security (materialist values), ‘feeling of unhappiness’, abstaining from signing petitions”, “distrusting in other people”, etc. WVS then conducts a second order factor analysis on the responses collected for the ten sub-items for each country. The ten sub-items load on to two factors which WVS calls “traditional versus secular-rational values” and “survival versus self-expression values”. The factors range in value from –2.5 to 2.5. In this study we utilize the latter, where a small value represents societal-level survival values and a large value indicates self-expression. In other words, a low to high value indicates that priorities have shifted from an overwhelming emphasis on economic and physical society toward an increasing emphasis on subjective well-being, self-expression and quality of life. The range of values represents a transition from industrial society to post-industrial society that brings a polarization between survival and self-expression values. For the 39 countries included in our study, we observe an average score of 0.69, a minimum score of –1.42 (for Russia) and a maximum of 2.35 (for Sweden).

Given that the scores have been generated separately and come from separate sources, one unit change in these scores would not mean the same thing across all sources. Hence, in order to facilitate easier interpretation of the analysis, z-scores of these country-level predictors were used such that the effects on internationalization of early-stage entrepreneurship could be interpreted based upon one standard deviation change in each of these predictors (instead of one unit change in the raw scores).

4.2.2. Country-level and individual-level controls

We used three controls at the country-level, a country's domestic market size, its regulatory institutions, and EU countries. A country's *domestic market size*, has been shown by previous

research to reduce internationalization propensity (Sigfusson & Harris, 2012). We obtained this control as national aggregate measure from the Global Competitive Index report. The size of the domestic market is constructed by taking the natural log of the sum of the gross domestic product valued at purchased power parity (PPP) plus the total value (PPP estimates) of imports of goods and services, minus the total value (PPP estimates) of exports of goods and services. Data are then normalized on a 1-to-7 scale. PPP estimates of imports and exports are obtained by taking the product of exports as a percentage of GDP and GDP valued at PPP. For the 39 countries included in our study, we observed a mean score on the size of home country market size of 5.25 (across all countries and all years).

We follow Minniti (2008) in controlling for the effectiveness of government policies, a formal institution, which has been found to facilitate entrepreneurship (Stephan et al., 2014). Our data on *government effectiveness* was obtained from the World Governance Indicators (WGI) database for the years 2001–2008 (averaged). Government effectiveness “reflects the perceptions of the quality of public services, the quality of the civil services and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies” and is likely to facilitate entrepreneurship.

Also, 38% of all countries in the sample (15 out of 39 countries) are EU members. With policies in place that allow and promote intra-EU trade, entrepreneurs from countries in the EU may perceive exporting to another EU country as closer to domestic sales than truly exporting outside the region. As such, we controlled for a country's membership in EU (=1 if a member, 0 otherwise).

We used a total of six country-level variables in our study – three as predictors and the other three as controls. Studies involving multi-level analyses must pay attention to the number of country-level variables that can be used with respect to the number of country-level observations – number of countries in our case (Maas & Hox, 2005). With a moderate number of countries (N=39 countries) used in this study, the use of six country-level variables – three predictors and three controls – is adequate. Further, the country-level variables suffer from high inter-correlations such that using them excessively in the model may yield biased estimates. This justified the use of only six country-level variables.

In addition, we also controlled for individual-level perceived entrepreneurial *self-efficacy* (Wennberg, Pathak, & Autio, 2013) and *ties with other entrepreneurs*, both of which were obtained from the GEM dataset. Perceived *self-efficacy* indicates whether the individual thought that (s) he possessed the knowledge, skills, and experience required to start a new business. This was operationalized as a dummy variable (1=yes, 0=no). *Ties with entrepreneurs* indicates vicarious exposure and was measured by asking whether or not the individual knew someone personally who had started a business in the past 2 years (1=yes, 0=no). Familiarity ties with entrepreneurs have been suggested as an important source of vicarious experience that affects the entrepreneurial intentions of individuals (Davidsson, 1991; Davidsson & Honig, 2003) as they learn and replicate actions by observing others (Rendell et al., 2010).

Further, an individual's gender and age (Arenius & Minniti, 2005) have been recognized to exercise an important influence on entrepreneurship. Hence, we controlled for them. In addition, both education level and household income (Arenius & Minniti, 2005) have been associated with entry into entrepreneurship as well. Therefore, we also controlled for individuals' level of education (five levels – 0=none; 1=some primary; 2=primary; 3=secondary and 4=graduate), and socioeconomic status represented by

household income tier (3 equally large strata in each country – 1 = lower income tier; 2 = middle income tier and 3 = upper income tier). Finally, GEM’s operationalization of early-stage entrepreneurs comprises of two sets of entrepreneurs – those who prepare for starting the business (nascent entrepreneurs reporting intentions to start a business) and those who run it (new entrepreneurs reporting results achieved in terms of being able to pay wages and surviving for 42 months). We controlled for both types of entrepreneurs. They were obtained from the GEM survey and operate at the individual-level. Identified nascent entrepreneurs were coded as 1 and 0 otherwise, new entrepreneurs were coded as 1 and 0 otherwise.

4.3. Estimation methods

The data was grouped by country, thus resulting in a hierarchical and clustered dataset. This increased the possibility of ‘false positives’ in OLS analysis due to under-estimation of standard errors because of their non-normal distribution (Hofmann, Griffin, & Gavin, 2000). Since we combined individual-level observations with country-level measures of institutions, the data was analyzed using hierarchical linear modeling methods. As the dependent variable – extent of internationalization by early-stage entrepreneurial firms – is a categorical variable, we adopted a random effects multinomial logistic regression (ML) model, assuming unobserved country-specific effects (u_i) to be randomly distributed with a mean of zero, constant variance ($u_i \sim \text{IID}(0, \sigma^2_{u_i})$), and uncorrelated to the predictor covariates. A random-effects specification was adopted. The use of random effects ensure that the groups are drawn randomly from a larger population (Peterson, Arregle, & Martin, 2012), thus allowing generalizability of the effects of group specific factors (country-level factors in our case) across all groups. Random effects mean that the intercept (that results from the regressions) can vary randomly across countries to account for the country-level variation in extent of internationalization by early-stage entrepreneurial firms. We test random intercepts (‘intercept as outcomes’) and not random slopes models. This approach allows the standard errors to vary across groups and provides a weighted level-2 regression so that groups with more reliable level-1 estimates are given greater weights and therefore exercise greater influence in the level-2 regression (Hofmann et al., 2000). Further, ML analysis does not ignore intra-class correlation, thereby reducing the possibility of committing Type-1 and Type-2 errors in estimates.

Subsequently, we adopted a three-step testing strategy for estimation (Autio et al., 2013). First, we estimated between-country variance that existed in the dependent variable by including no predictors or controls in our random-effect logistic regression model. We observed significant country-level variance in our dependent variable suggesting that county-level factors could be responsible in explaining this variance in the dependent variable. This finding mandated multi-level analyses since country-level variance could only be accounted for by country-level factors. This regression model was called the “null model” (Model 1 in Table 4). We also investigated the variance in our dependent variable over the eight years (2001–2008) included in our study and observed that to be insignificant relative to the variance across countries. This suggested that the annualized effects were non-significant contributors in explaining the observed variance relative to country specific ones. As our second step, we added individual-level as well as our country-level controls prior to the addition of the three country-level predictors (Model 2 in Table 4). This step allows us to ascertain the proportion of the variance that could be explained by the controls alone, and isolate the remaining proportion of variance explained by the three country-level predictors after the controls have been accounted

for. As our third step, we included the three country-level variables (self-expression values, social desirability of entrepreneurship and societal performance orientation) to the model in step two to investigate the main effects of the three country-level variables and explain the remaining variance accounted for by them after the controls have been accounted for (Model 3 in Table 4). The regression model took the following generalized form (Snijders & Bosker, 1999):

$$\text{Firm – level internationalization} = \beta_{0j} + (\text{individual and country level controls}) + r_{ij} \tag{1}$$

$$\beta_{0j} = \gamma_{00} + U_{0j} \tag{2}$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{country level predictors}) + U_{0j} \tag{3}$$

Above, γ_{00} = mean of the intercepts across countries (denoted by many as ‘constant’), γ_{01} = slopes of country-level (level-2) predictors. The term U_{0j} represents the random part of the equation and is a measure of the country-level residuals and r_{ij} represents individual-level residuals. The level-2 Eqs. (2) and (3) predict the effects (or gammas) of level-2 predictors on level-1 intercept. The models yielded the estimates for main effects of the country-level predictors (γ_{01}) as the “fixed part estimates” and the random intercept γ_{00} and the between-country variance component associated with the error term U_{0j} as the “random part estimates”. Analyses were performed using STATA 13.

5. Results

Table 2 provides the descriptive statistics for controls, predictors, and the dependent variable and Tables 3a and 3b depicts the correlation matrix for individual and country-level variables. Table 4 shows the effects on internationalization of early-stage entrepreneurship.

5.1. Intra-class correlation (ICC)

Significant between-country variance in the dependent variable necessitates multi-level analysis (Bliese, 2000; Hofmann et al., 2000; Hofmann, 1997). To check this, we estimated a multi-level logistic regression (Model 1 of Table 4). This yielded intra-class correlation coefficients (ICC or rho) of 10 percent in our set of 39 countries.

Table 2
Descriptive statistics.

Variable	N	Mean	Std. Dev.	Min	Max
Individual-level variables					
Extent of Internationalization	20 656	0.80	1.12	0	4
Age	20 656	39.10	11.77	18	64
Gender	20 656	0.41	0.49	0	1
Education level	20 656	2.46	1.15	1	4
Household income	20 656	1.99	0.81	1	3
Self-efficacy	20 656	0.86	0.34	0	1
Ties with entrepreneurs	20 656	0.62	0.48	0	1
Nascent entrepreneurs	20 656	0.49	0.49	0	1
New entrepreneurs	20 656	0.54	0.49	0	1
Country-level variables					
EU Dummy	39	0.58	0.49	0	1
Government effectiveness	39	1.10	0.75	–0.42	2.21
Domestic market size	39	5.25	0.79	2.82	7
Social desirability	39	0.09	0.51	–1.17	1.17
Performance orientation	39	4.12	0.29	3.34	5.04
Self-expression values	39	0.69	0.84	–1.42	2.35

Table 3a
Correlation matrix–Individual level correlations.

Variables	1	2	3	4	5	6	7	8	9
1. Extent of Internationalization	1.00								
2. Age	0.01	1.00							
3. Gender	-0.06*	0.01	1.00						
4. Education level	0.09*	0.00	-0.03*	1.00					
5. Household income	0.07*	0.00	-0.08*	0.18*	1.00				
6. Self-efficacy	0.05*	0.04*	-0.09*	0.06*	0.06*	1.00			
7. Ties with entrepreneurs	0.06*	-0.10*	-0.07*	0.09*	0.12*	0.11*	1.00		
8. Nascent entrepreneurs	0.08*	0.02*	-0.02*	0.05*	-0.02*	0.02*	0.04*	1.00	
9. New Entrepreneurs	-0.07*	-0.03*	0.01*	-0.05*	0.02*	0.02*	-0.03*	-0.94*	1.00

Correlation matrix is based on N=20,656 observations.

* p < 0.05.

Table 3b
Correlation matrix–Country level correlations.

Variables	1	2	3	4	5	6	7
1. Extent of Internationalization	1.00						
2. EU dummy	0.23	1.00					
3. Government effectiveness	0.51*	0.46*	1.00				
4. Domestic market size	-0.35*	-0.21	-0.28	1.00			
5. Social desirability	-0.27*	-0.24	-0.28	-0.05	1.00		
6. Performance orientation	0.44*	-0.29*	0.47*	0.01	0.08	1.00	
7. Self-expression values	0.12	0.36*	0.66*	-0.13	0.01	0.24	1.00

Correlation matrix is based on N=39 countries; Extent of internationalization is calculated as the country-average of the dependent variable.

* p < 0.05.

+ p < 0.10.

Table 4
Effects on extent of internationalization by early-stage entrepreneurial firms.

	1	2	3
Fixed part estimates			
Individual-level			
Age		0.99***(0.00)	0.99***(0.00)
Gender		0.85***(0.02)	0.85***(0.02)
Education level		1.08***(0.01)	1.08***(0.01)
Household income		1.15***(0.02)	1.15***(0.02)
Self-efficacy		1.14***(0.05)	1.14***(0.05)
Ties with entrepreneurs		1.22****(0.04)	1.22****(0.04)
Nascent entrepreneurs		1.43****(0.11)	1.44****(0.11)
New entrepreneurs		1.15+(0.09)	1.15+(0.09)
Country-level			
EU dummy		0.84****(0.04)	1.22****(0.07)
Domestic market size		0.89****(0.18)	0.79****(0.02)
Government effectiveness		1.59****(0.05)	1.39****(0.10)
Social desirability of entrepreneurship: Hypothesis 1			0.65****(0.04)
Performance orientation: Hypothesis 2			1.43****(0.05)
Self-expression values: Hypothesis 3			1.08 + (0.05)
Random part estimates			
Variance of intercept		0.09 (0.03)	0.05 (0.01)
% of variance explained or Rho	0.12 (0.03)	7.0	4.0
Model fit statistics			
Number of observations	20 656	20 656	20 656
Number of countries	39	39	39
Degrees of freedom (Number of variables)	0	11	14
Chi-square	-	253.83	292.35
Probability > Chi-square	-	***	***
Log likelihood	-31 189	-31 063	-31 052
Likelihood ratio test of Rho	***	***	***

Standard errors in parentheses; p < 0.001***; p < 0.01**; p < 0.05*; p < 0.1+; 2-tailed significances for hypotheses.

Note: Columns represent odds ratio (OR) instead of regression estimates. OR values greater than 1 signal positive association. OR values smaller than 1 signal negative association.

The ICC (or rho) value represents the proportion of variance in the dependent variable that resides between countries owing to country-level characteristics. Since the observed ICC values

represent significant variance, they necessitated multi-level analyses, hence warranting looking into country-level factors that could explain this variance.

5.2. Test of hypotheses

Random-effect logistic regression models are reported in Table 4, namely Models 2 and 3. These models report estimates for the fixed part (estimates of coefficients) and random part (variance estimates), as well as model fit statistics. Model 2 includes all individual-level as well as country-level controls. Model 3 includes the three country-level variables used in the regression.

Model 3 of Table 4 accommodates for the three country-level variables, namely social desirability of entrepreneurship, societal performance orientation, and self-expression values. All estimates are reported as odds ratios (exponential of the beta coefficients obtained from logistic regressions), with ratios greater than one representing positive association (percentage increase) and those less than one representing negative association (percentage decrease).

The effects of an increase of one standard deviation in societal-level self-expression values and performance orientation were observed to increase extent of internationalization by early-stage entrepreneurial firms by 8 percent (odds ratio = 1.08; $p < 0.10$) and by 43 percent (odds ratio = 1.43; $p < 0.001$) respectively. An increase of one standard deviation in the country-level social desirability of entrepreneurship was observed to decrease extent of internationalization by 35 percent ($1 - 0.65$; $p < 0.001$). Combined we find support for all of our three main-effects hypothesized – that for Hypothesis 1, Hypothesis 2, and Hypothesis 3.

The variance component decreased from 0.09 in Model 2–0.05 in Model 3, suggesting that the addition of the three country-level predictors collectively explained a significant 44 percent $((0.09 - 0.05) / (0.09)) * 100$ of the remaining variance in the internationalization of early-stage entrepreneurship across the 39 countries after the country-level and individual level controls have been accounted for.

6. Discussion

International entrepreneurship is an important area of inquiry for scholars of both entrepreneurship and international business (Cavusgil & Knight, 2015). The phenomenon of “early or rapid internationalization” has also been associated with “international entrepreneurship (McDougall & Oviatt, 2000). Researchers examining early internationalization seem to agree on the various factors that may trigger this phenomenon. Factors include, size of the firm’s domestic market, new market conditions in international markets (for example, the emergence of global niche markets), technological advancements in production and communication, global networks and alliances, and firm capabilities (Acedo & Jones, 2007; Cavusgil & Knight 2015; Fan & Phan, 2007; Kiss & Danis, 2008; Kiss & Danis, 2010; Musteen, Francis, & Datta, 2010; Oviatt & McDougall, 2005; Rialp et al., 2005). Given that entrepreneurs are products of the socio-cultural context in which they are embedded in, the study of the influence of informal institutions on international entrepreneurship is limited. As per review by Peiris et al. (2012), there were just four studies that have specifically addressed the phenomenon of international entrepreneurship using the framework of institutional theory.

Many scholars view internationalization as a measure of performance or as an activity motivated towards achieving pecuniary benefits that is primarily influenced by the incentive structures defined by a country’s formal institutions and individual attributes (Cantwell, Dunning, & Lundan, 2009; De Clercq, Danis, & Dakhli, 2010). Li (2013) has attempted to link institutions and international entrepreneurship in the context of emerging economies to examine the role of institutional transitions. While Cheng and Yu (2008) have shown that firms must cope with

institutional pressures, they also mention that future research needs to understand the detailed mechanism of what and how particular sociological institutions cause firms to internationalize. The findings of our study first, address the above calls for more research on institutions and international entrepreneurship (Li, 2013) and second, specifically examine the role of informal institutions (societal norms of social desirability and performance orientation, self-expression values as examples of sociological institutions) in internationalization by start-ups (Cheng & Yu, 2008). Our findings in detail are discussed in the following sections.

6.1. Contribution to literature

Our results indicate that the three informal institutions studied (societal level self-expression values, performance orientation and desirability of entrepreneurship) collectively accounted for 44 percent of the remaining variance in early-stage internationalization across 39 countries after all controls were accounted for. This is a substantive effect size, strongly rendering the role of informal institutions in an entrepreneur’s decision to internationalize as something important and consequential, even more so in light of recent research suggesting that individual-level attributes such as risk aversion and self-efficacy do not seem to influence internationalization intentions (Evald, Klyver, & Christensen, 2011).

We argued that national contexts which value self-expression are more likely to facilitate early internationalization of entrepreneurship by mitigating the additional uncertainty over and above the normal uncertainty of home country entrepreneurship. By contrast, contexts where survival norms are more prevalent may shun risk-taking behaviors and thus prevent entrepreneurs from spotting and capitalizing on international opportunities. Thus, we contribute to the literature by positioning early internationalization alongside opportunity entrepreneurship (Hechavarria & Reynolds, 2009) as a process which is a consequence of the prevailing societal norm that values self-expression. The effects of societal-level performance orientation on internationalization suggest that reward seeking behaviors motivate entrepreneurs to maximize utility by taking early advantage of opportunities that open up as a consequence of globalization. Finally, the societal level desirability of entrepreneurship was observed to have a negative effect on internationalization. This result suggests that individuals with an intrinsic motivation towards entrepreneurship may go international when there is weak legitimacy for entrepreneurship in their home countries.

6.2. Practical relevance

Policymakers have largely concentrated on formal institutions to increase entrepreneurial opportunities, but formal institutions may not be sufficient to stimulate international entrepreneurship (Stephan & Uhlaner, 2010). The findings of our study have implications in particular for policy-makers who are interested in encouraging early internationalization by influencing informal institutions. Informal institutions are typically altered over long periods time (Estrin et al., 2012) because they are hard to change (Williamson, 2000). Making international entrepreneurship a key pillar of economic growth (e.g., Schumpeter, 1934) may require policies that can compensate for lacking norms surrounding performance, social desirability, and self-expression. Many governments already have active campaigns aimed at convincing more individuals to consider international entrepreneurial careers. For instance, the National Science Foundation in the United States has invested in the iCorps program, which seeks to encourage entrepreneurs to start viable businesses. Similar programs (or

additional modules) could be developed with the aim of promoting early internationalization.

6.3. Limitations and scope for future research

While our measure of internationalization captures internationalized sales, we are limited in offering much insight about the other activities that comprise internationalization and how informal institutions would influence the extent of internationalization. For example, future research might examine the extent of internationalization in terms of foreign production, international sourcing, and geographical dispersion (Sanders & Carpenter, 1998). Further, we recognize the need for composite operationalizations that distinguish age, speed, scope and intensity of internationalization (Madsen, 2013), as well as performance (Sleuwaegen & Onkelinx, 2014). Also, by focusing only on the early-stage entrepreneurs, we have limited ourselves in our understanding of the scopes and reasons for internationalization by established entrepreneurs – who have been playing the game for some time.

Further, there may be concerns on the reliability of the internationalization subset as obtained from GEM survey. First, there could be possible overlapping of data. The survey does not explicitly distinguish between the kind of international activity. For example, touristic activities responses can bias the responders' response in the survey – selling products to tourists in one's home country may be thought as synonymous to internationalization. Second, the nature of the host country where customers are located, its geographic location, extent of economic development and other economic indicators may need to be considered. GEM does not identify the dyadic relationship – i.e. GEM does not offer information on the destination country to which the internationalization occurs. While we can say that our dependent variable can be considered to be aspirations, plans, or intentions for international engagement, future research can triangulate our findings with actual exporter data – corroborating it with rates of internationalization obtained from other sources such as data on the OECD countries.

Although the data used in this study allows us to examine home country conditions, future research might examine host country institutions as well – both formal and informal. For instance, Schwens and Kabst (2011) find that foreign market analysis is key to entrepreneurs' familiarity with host countries. Similarly, Butler, Doktor, and Lins (2010) suggest that a lack of operating knowledge, psychic and economic distance and physical distance can discourage entry and reduce success. It is possible that cultural distance or the degree of difference between home and host countries' institutions – formal as well informal – matters to the decision to internationalize. In this study, we are limited to using just the home country informal institutions to predict early-stage internationalization.

As some annual data on our predictors were missing for some years and some countries (making it an even narrower and unbalanced panel) our study was limited to provide 'non-transient' analyses. Future research could put an effort towards collecting more annual data points enabling a more elaborate transient study that could accommodate and account for any social, economic and technological change that may have occurred between the periods of interest in this study – 2001–2008. In as much as the study could benefit from the inclusion of more institutions – formal and informal – to predict early-stage internationalization, multi-level analyses are typically limited by the number of higher-level predictors (contextual factors such as institutions) that could be used in a regression model especially when the number of countries considered in the sample is moderate at best – 39 countries in our study.

We employed a cross-country study pooling together both developed and developing countries. However, it is possible that some informal institutions may operate differently depending on levels of socio-economic development. The quality of formal institutions may be lower in developing countries as compared to those in developed countries such that they may interact – either moderate or mediate – differently with the informal institutions towards shaping individual-level decisions to internationalize early. Future studies may examine the differences between developing and developed countries.

Informal institutions may also influence the performance of internationalization differently at different stages of the process. For instance, Gabrielsson, Kirpalani, Dimitratos, Solberg, & Zucchella (2008) suggest that internationalization follows three phases: (1) introduction and initial launch, (2) growth and resource accumulation, and (3) break out. Similarly, Peiris et al. (2012) suggest that there exist four types of internationalizing agents: born globals, enduring globals, early exporters, and mature exporters. Our study was focused on early-stage entrepreneurs, but could be extended to see if other stages of internationalization are affected differently.

7. Conclusion

Our study promises to open up the field to more research examining the effects of informal institutions on the internationalization of early-stage entrepreneurial ventures. While formal institutions and individual and firm-level factors have been widely studied, informal institutions have received limited conceptual or empirical attention. This study contributes to the literature by first, demonstrating that informal institutions account for a significant portion of the variance in internationalization of early stage entrepreneurs, and second, by showing that such institutions can have opposite effects on internationalization (i.e., social desirability of entrepreneurship had a negative effect, whereas self-expression and performance orientation had positive effects).

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