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Introduction

Commercial entrepreneurship (CE) contributes through its potential for wealth creation, productivity and economic growth. Socially motivated forms of entrepreneurship such as social entrepreneurship (SE), on the other hand, contribute through their potential for alleviating poverty, illiteracy, discrimination or exclusion. Through individual-level entrepreneurial behaviors, the two forms of entrepreneurship thus render either economic or social benefits or both. Entrepreneurial behaviors may in part be shaped by the context in which such behaviors are performed (Welter and Smallbone 2006; Welter 2011). Considering context facilitates the recognition of important institutional forces that influence entrepreneurship (Welter 2011; Zahra and Wright 2011). Institutions refer to the aspects of social context that facilitate and constrain behavior (North 1991; North 2005; Scott 2005), and they act as implicit guidelines for individuals' actions (Powell and DiMaggio 1991). They shape the national framework within which individuals choose CE and SE (Baumol 1990; Baker, Gedajlovic, and Lubatkin 2005).

Much of extant literature has predominantly looked at linking national institutional frameworks with CE (Autio and Acs 2010). Specifically, the effect of national institutional frameworks on SE warrants further research (Bacq and Janssen 2011; Stephan and Uhlaner 2010). Further, SE research has mainly examined the role of formal institutions in SE (Dacin, Dacin, and Matear 2010; Zahra et al. 2009; Stephan, Uhlaner, and Stride 2014). Therefore, there exists a scholarly need to understand the influence of informal institutions on SE. We address this gap by using a comparative perspective between SE and CE. While extant findings suggest that national formal institutions exercise similar influences on both SE and CE (Estrin,

Mickiewicz, and Stephan, 2013a), our study specifically examines the influence of national informal institutions on both SE. Drawing insights on the role of informal institutions in the recognition, exploitation, and access to resources (Welter, 2011), we attempt to predict the effect of societal values of in-group collectivism and inter-personal trust on SE through a comparative perspective with CE.

Our examination is valuable for several reasons. First, societal “values are beliefs that are linked inextricably to affect and refer to desired goals that motivate action” (Schwartz 2006, p. 143). Consequently, the social embeddedness of values may motivate entrepreneurs to undertake pro-social entrepreneurial actions over commercial ones or vice versa, in turn either crowding out or reinforcing one form of entrepreneurship over the other. Thus, before investing their effort, time, and resources in a particular entrepreneurial pursuit, entrepreneurs in a given society may be better served if they align their actions with societal goals.

Second, “values serve as standards or criteria that guide the selection or evaluation of actions” (Schwartz 2006; p. 143). Certain forms of entrepreneurial activities that satisfy these criteria (i.e., they meet the societal standards and are evaluated favorably) may be more likely than other forms to receive support within their society. Society shows such support for a given entrepreneurial venture by providing resources that would otherwise be difficult for entrepreneurs to acquire. It also provides appropriate mechanisms through which entrepreneurs can mitigate risks associated with entrepreneurship. Consequently, prevailing social support could potentially lower transaction costs, thus paving the way for entrepreneurs to access newer information and opportunities (Estrin et al. 2013a). It would therefore be useful to investigate the various ways in which societal values guide entrepreneurs’ selection into SE and CE.

Finally, our study aims to identify societal values that may favor social entrepreneurship in the first place. In doing so, we establish a pathway wherein social entrepreneurship would first find conducive grounds that leads to the build-up of social capital within a nation – capital that could eventually be appropriated by commercial entrepreneurs (Estrin et al. 2013a).

In this study, we examine how informal institutions – societal values of *in-group collectivism* and *inter-personal trust* – compare with respect to their influence in predicting the likelihood of individual-level engagement in SE and CE. In developing our framework, we draw upon North’s definitions of informal institutions and Scott’s manifestation of the cognitive institutional pillar (North 1991; Scott 1995). The presence of social entrepreneurship is expected to be higher in societies that demonstrate high in-group collectivist values in view of their underlying motivation to create social value as opposed to creating individual wealth, as in the case of commercial entrepreneurs. Further, inter-personal trust in a given society is likely to enhance cooperative norms, which are required both for CE and SE. However, social entrepreneurs would rely more heavily on inter-personal trust in order to reduce the transaction costs associated with starting and running their enterprises.

We test our related hypotheses using a multilevel design by constructing a cross-national dataset, consisting of population-representative surveys from the Global Entrepreneurship Monitor (GEM) involving 58, 918 respondents from 27 countries for the year 2009. We combine this information with data on in-group collectivism and inter-personal trust from the Global Leadership and Organizational Behavior Effectiveness (GLOBE) study and the World Values Survey (WVS), respectively. We believe this study contributes to the comparative entrepreneurship literature by examining the influence of informal institutions on CE and SE. Specifically, our study contributes to theory development in SE by examining its contextual

antecedents. Finally, our study makes a methodological contribution to the use of multi-level studies in entrepreneurship research thus allowing accounting for the observed variation in rates of social as well as commercial entrepreneurship across countries.

Our article is organized as follows. First, we discuss the literature comparing SE and CE. We then discuss the theoretical background leading to our hypotheses. Drawing on insights from informal institutions, we hypothesize the effects of in-group collectivism and inter-personal trust on SE and CE. Thereafter, we describe our methods and present our results. We conclude with a discussion of our findings and their implications.

Theoretical Framework

Commercial and Social Entrepreneurship

Entrepreneurship represents efforts toward the creation of a viable business resulting from the entrepreneur's choice to work for her/his own interests (Gartner 1989). While the goal of commercial entrepreneurs is to maximize profits by relying on the dynamics of market exchange, the goal of social entrepreneurs is to address social needs that are not serviced by ventures that focus primarily on profits (McMullen 2011). SE revolves around the recognition, evaluation, and exploitation of opportunities that result in meeting the basic and long-standing needs of society. In other words, SE focuses on the creation and establishment of social values as opposed to the creation of personal wealth or shareholder wealth, as is typically the case with CE (Austin, Stevenson, and Wei-Skillern 2006). For social entrepreneurs, value creation involves solving and fulfilling society's basic needs, such as food, shelter, education, and basic health and hygiene services. A social mission is central to how this group of entrepreneurs perceives and assesses opportunities. Thus, SE entails collective, focused aspirations such as community development (for a detailed comparison of self-interests versus collective-interests in enterprises,

please see Van de Ven, Sapienza, and Villanueva 2007). The focus on social goals over the goal of economic wealth creation therefore constitutes a key difference between social and commercial entrepreneurs and is consistent with the recent definitions of SE (Mair and Marti´ 2006).

Since social entrepreneurs are defined by objectives that stretch beyond the firm to include the improvement of society (Tracey and Phillips 2007), they must rely on community-based resources rather than on internally based ones (Austin et al. 2006). For example, one of the key differences with regard to external resources relates to financing. Compared with commercial entrepreneurs, social entrepreneurs rely on a wider range of funding sources, such as individual contributions, grants from foundations, member dues, user fees, and government payments (Austin et al. 2006). For commercial entrepreneurs, whose objective is to create economic wealth, financial performance stands as a measure of value creation, and therefore, access to resources from market institutions will not be a problem as long as these resources are put to economically productive use (Dees 1998).

Although organizations have multiple stakeholders, not all stakeholders are viewed with an equal degree of importance (Freeman 1984). The factors that determine stakeholder importance are power, legitimacy, and urgency (Mitchell, Agle, and Wood 1997). Commercial entrepreneurs recognize individuals with higher levels of these three factors as their stakeholders; examples include owners, executives and employees within the firm. Social entrepreneurs recognize these internal stakeholders too, but they also perceive external stakeholders, such as donors, local communities, government agencies, the environment, and others (Gras and Lumpkin 2012). Therefore, unlike most commercial entrepreneurs, social entrepreneurs remain highly accountable to these external stakeholders, even involving them in the governance of their

enterprises (Domenico, Tracey, and Haugh 2009). In summary, a key difference between SE and CE stems from the fact that, in SE, the influencing factors are more externally oriented. That is, compared to commercial entrepreneurs, social entrepreneurs are more highly driven by social goals, resources, and stakeholders that are external to the enterprise (Gras & Lumpkin 2012).

Informal Institutions and Entrepreneurship

While formal institutions are explicit constraints and incentives arising from government regulation, for example (Scott 1995; 2005), informal institutions are implicit, socially constructed, and culturally transmitted (Stephan et al. 2014). Informal institutions reflect collective meanings and understandings that influence cooperation and coordination among individuals in a society (North 1990). Scott (1995; 2005) differentiates two types of informal institutions – cognitive and normative – that correspond to the concepts of cultural values and practices, as observed in cross-cultural research (Javidan et al. 2006). Specifically, whereas normative institutions model on dominant practices (or norms) in a given culture, cognitive institutions refer to shared understandings associated with cultural values (Javidan et al. 2006; Scott 2005; Stephan and Uhlaner 2010). These shared values stand out as important reflections of a country's informal institutions (Peng, Wang, and Jiang 2008).

Comparative entrepreneurship research based on institutional economics (Estrin, Korosteleva, and Mickiewicz 2013b), and that based on cross-cultural psychology, examine how formal and informal institutions respectively predict entrepreneurship (Stephan et al. 2014); however, these studies examine only one form of entrepreneurship – namely, CE. Very few studies exist that predict the effect of national institutions on the emergence of both forms of entrepreneurship, CE and SE. Whereas Estrin et al. (2013a) examine the ways that formal institutions predict the emergence of SE and CE, we examine the effect of informal institutions

on the emergence of both forms of entrepreneurship by offering a comparative perspective. Although certain cultural values, such as independence and autonomy, may be equally relevant to both CE and SE, the relevance of other cultural values may differ (Stephan et al. 2014). For example, whereas post-materialist values are negatively associated with CE (Uhlener and Thurik 2007; Morales and Holtschlag 2013), these values may be positively associated with SE (Stephan et al. 2014).

In our proposed model in Figure 1, in-group collectivism and inter-personal trust – labeled as a wider radius of trust (Fukuyama 2001; Stephan and Uhlener 2010) or bonds of cooperation within a society/nation or bonds of solidarity within a given community/nation (Portes and Landolt 2000) – represent values. Both of these values are “embedded in the social structures of society that enable people to coordinate action and to achieve desired goals” (Molina-Morales and Martínez-Fernández 2010, p. 261).

Research on career decision-making suggests that individuals’ values serve as important determinants of their occupational choices (Knafo and Sagiv 2004; Noseleit 2010). Such choices can be argued to be deliberate decisions that are predicted by personal values (Roccas et al. 2002). Values reflect the importance of certain beliefs for a society’s population, that is, the aggregate of personally important goals that a society’s inhabitants hold (Schwartz 2006). Extant research has used aggregate trait hypothesis (Davidsson and Wiklund 1997; Uhlener and Thurik 2007) to explain why cross-cultural differences in values can account for differences in individual occupational choices for CE. As per aggregate trait theory, the greater the number of society members who hold certain values consistent with a particular form of entrepreneurship, the greater the number of individuals who want to engage in that form of entrepreneurship, and hence, the greater the aggregate supply of such entrepreneurs (Stephan et al. 2014). In

developing our framework, we use the aggregate trait theory and leverage the strength of a multi-level design to compare the effects of in-group collectivism and inter-personal trust on the individual likelihood of CE and SE.

-----Please insert Figure 1 about here-----

In-Group Collectivism and Entrepreneurship

Entrepreneurship is typically an individual-centric behavior (Baumol 1990), and this concept is in line with the values of the individualism-collectivism dimension identified in the literature on culture (Autio et al. 2013; Hayton, George, and Zahra 2002). Individuals consider the pursuit of opportunities in relation to their societal environment and the need to mobilize external resources (Baker et al. 2005). Whereas Autio et al. (2013) examined the ways that societal-level institutional collectivist practices shape the entrepreneurial behaviors of individuals; we examine the influence of collectivist values. In-group collectivist values refer to the extent to which individuals *should* express pride, loyalty, and cohesiveness in their organizations or families (Dorfman et al. 2012; House et al. 2004). Specifically, these values refer to the extent to which members take pride in being part of a given society (Dorfman et al. 2012). These values, we argue, are similar to the kinship that Fukuyama (1999) defines as a “social institution” (p. 55), and such values play an important role in the development of a social mission.

Drawing on the above premise, we expect in-group collectivist values to exercise different effects on commercial and social entrepreneurial entry. Commercial enterprises are based on self-focused goals, such as profit or wealth creation, whereas the goals of social enterprises are community-focused, such as wealth-sharing or community development

(Lumpkin et al. 2013). The focus of commercial enterprises stems from the process of individualization or the separation of individuals from communal social structures, as defined by Nisbet (1993), and the “separation of the economy from other social institutions” (Sud, VanSandt, and Baugous 2009, p 206). The emphasis of in-group collectivism rests on group interests over an individual’s interests. Such societies tend to develop structures and mechanisms that attempt to create benefits for all citizens (Thelen 2004). Scholars have argued that the process of establishing social objectives is a political process that is influenced by values that may differ, depending on its private or public conception (Cho 2006). In other words, the social objective must be determined through a public political process, must have the approval of the stakeholders external to the social entrepreneurs (Cho 2006), and is more likely to occur in societies that value in-group collectivism. Using the same premise, we argue that societies that value in-group collectivism and group cohesion may discourage entry into CE since such entries signal that the individual places his or her interests over that of the group and therefore may not need the approval of stakeholders external to the commercial entrepreneur. Societies that have strong collectivistic tendencies will therefore prefer large corporations over individuals opening commercial enterprises (Autio et al. 2013; Henrekson 2005). Such a bias would place challenges on individuals to access information and mobilize resources for their entrepreneurial endeavors in collectivistic societies. In the case of social entrepreneurs, we would expect them to receive support from societies that have more collectivistic orientations. In other words, in societies that value in-group collectivism, the support that social entrepreneurs would receive in accessing information and resources from local social networks will be higher since the objectives of the enterprise are group-oriented.

In summary, the underlying motivation for a social enterprise is to create social value rather than personal wealth (Zadek and Thake 1997). This social value, we argue, does not contribute to the individual's interests over those of the group, unlike the profit motive of commercial enterprises. Typical social issues that are addressed are those that aim to improve education in society, improve health in society, improve housing in society, reduce pollution in society, and reduce crime in society, among other issues (Dees 1998; Sharir and Lerner 2006). We argue that such objectives, which form the agenda of social entrepreneurs, may not signal individual interests over those of the group and therefore may not lead to bias against individuals opening social enterprises. If a society has more individuals who value group interests over individual interests, according to the aggregate trait hypothesis, we would expect in-group collectivist values to favor social entrepreneurs. We therefore posit:

Hypothesis 1a: In-group collectivism is negatively associated with the likelihood of individual-level commercial entrepreneurship.

Hypothesis 1b: In-group collectivism is positively associated with the likelihood of individual-level social entrepreneurship.

Inter-Personal Trust and Entrepreneurship

Inter-personal trust is a value that has long been considered an essential component of social transactions and interdependence, and many scholars have argued that the willingness to interact with others in a society is contingent on the prevalence of trust (Blau 1964). Trust is a necessary condition for cooperative behavior in a society (Brunetto and Farr-Wharton 2007), and for that reason, entrepreneurs are more likely to become successful if they can build on networks of trust that help them create legitimacy in the market or society (Aldrich 2000). They need to gain, build, and maintain trust among the participants within an environment in order to gain information about opportunities and access to resources (Brunetto and Farr-Wharton 2007).

Actors who trust (i.e. the various stakeholders) and those who are trusted (i.e. the entrepreneurs) give and receive information and provide and receive resources freely, without the fear of being deceived or misled (Molina-Morales and Martínez-Fernández 2010).

According to Kramer (1999), the level of trust in a society, or “societal trust,” consists of a general disposition to trust others within a given country. Dispositional trust is based on the expectation that others are trustworthy (Mayer, Davis, and Schoorman 1995) and on a general tendency to trust others (McKnight, Cummings, and Chervany 1998). Meuthal and Bond (2013) argue that in countries wherein the citizens have a high propensity to trust, individuals are likely to trust not only the people they know but also strangers. Cross-cultural research offers evidence that the relationship between a country’s social and economic performances emphasizes the role of dispositional trust at the country level (Meuthal and Bond 2013). The degree to which individuals within a country demonstrate general trust in others has also been used as a country-level indicator of social capital (Bjørnskov 2010).

Both types of entrepreneurs – commercial and social – require updated information on entrepreneurial opportunities and access to resources in order to fulfill their commercial or social ambitions. They must be in constant touch with the various stakeholders in society and must cooperate with these stakeholders, while at the same time pursuing their own entrepreneurial ambitions. Further, recognizing and pursuing a new idea or starting an enterprise is a risky endeavor that involves substantial investment in time, money, capital and other resources. Starting a new venture, either social or commercial, also involves reliance on others for various resources, ranging from social and emotional support to tangible and concrete assets (De Carolis and Saporito 2006). A growing body of evidence reveals that when trust exists among members of society, individuals are more eager to engage in cooperative activity (Fukuyama 1997).

Societies that display a higher tendency to trust others facilitate the exchange of confidential information by reducing the risk that one party will opportunistically exploit information to the disadvantage of another party (Knack and Keefer 1997). Greater levels of trust facilitate social exchange, provide and share resources unconditionally, and reduce the need for time-consuming and costly monitoring (Dakhli and De Clercq 2004). In both commercial and social transactions, trust has been conceptualized as the willingness to place one's welfare in the hands of others for mutual benefit (Rousseau et al. 1998). Successful enterprises emerge when entrepreneurs are able to achieve an understanding across all parties – potential customers, creditors, suppliers, and other stakeholders. Greater trust can facilitate this understanding, especially for new entrepreneurs who bring new forms of activities to the market (Aldrich 2000). In summary, if a society has more individuals who value trust, according to the aggregate trait hypothesis, we would expect societal trust to constitute an important antecedent for both forms of entrepreneurship, SE and CE. We therefore posit:

Hypothesis 2a: Inter-personal trust is positively associated with the likelihood of individual-level social entrepreneurship.

Hypothesis 2b: Inter-personal trust is positively associated with the likelihood of individual-level commercial entrepreneurship.

Differences, however, do exist in the extent to which the goals of social and commercial entrepreneurs are shared with members of society, as well as in the degree of access they have to information and resources (Austin et al. 2006) and in the number of stakeholders they handle. Inter-personal trust in society will help to build legitimacy for social entrepreneurs (more so than for commercial entrepreneurs, who are driven by individual aspirations) to embark on their ventures that are driven by collective societal aspirations (Van de Ven et al. 2007). Whereas

commercial enterprises that have an expectation of generating profit likely represent attractive prospects for financial loans or investment funds, social enterprises represent less likely candidates or have less access to such forms of funding (Lumpkin et al. 2013). Wealth creation acts as an indicator of value creation by a commercial entrepreneur and, hence, defines his or her measure of success in the enterprise. Market dynamics will therefore force commercial entrepreneurs out of business when they are unable to generate value from societal resources. It is, however, difficult to quantify the value created in SE because markets do a poor job of valuing the social benefits created by the social entrepreneur (Dees 1998). The social objectives of a social entrepreneur therefore create greater challenges for measuring performance compared to the commercial entrepreneur, who can be judged on quantifiable measures of performance, such as financial performance and market-share indicators (Austin et al. 2006; Short, Moss, and Lumpkin 2009).

In view of the difficulty involved in assessing SE, in order to gain access to financial resources, social entrepreneurs rely more heavily on external resources (such as perceived trustworthiness, which, we argue, is based on the inter-personal trust that exists in society) than do commercial entrepreneurs (Domenico et al.2009). Further, compared to those of commercial entrepreneurs, the various financial and nonfinancial stakeholders involved with a social entrepreneur are greater in number and more varied in nature, which results in a greater degree of complexity in managing such relationships (Kanter and Summers 1987; Lumpkin et al. 2013). While firms may have a number of stakeholders, the salience of each stakeholder to a given firm may differ (Freeman 1984; Mitchell et al. 1997). In the case of commercial enterprises, investors, employees, suppliers, and consumers of its goods and services constitute the most influential stakeholders since they hold a fiduciary stake in the company (Lumpkin et al. 2013; Rutherford,

Buller, and Stebbins 2009); other groups such as “local citizens, government agencies, or the community” (Lumpkin et al. 2013, p. 766) in which the enterprise operates may have less of a say. Typically, then, social enterprises must deal with a wider range of stakeholders – those who are involved with commercial enterprises plus the others listed above (Lumpkin et al. 2013). In order to successfully manage relationships with multiple stakeholders, social entrepreneurs must focus on building “a rich network of contacts” and develop skills to “manage various relationships in this network effectively” in society (Austin et al. 2006, p.13). We argue that productive arrangements with external stakeholders in society can be enhanced when inter-personal trust in society is high.

We therefore argue that in view of a collective or shared vision with members of society, combined with the difficulties in measuring the social value created and the challenges involved in handling multiple stakeholders, a social entrepreneur will need to rely on society’s inter-personal trust to a greater extent than a commercial entrepreneur in order to reduce the transaction costs incurred when starting and managing a social enterprise in a sustainable manner. Hence we posit:

Hypothesis 2c: The effect of inter-personal trust is stronger in the case of social entrepreneurship than in the case of commercial entrepreneurship.

Methodology

Data

We test our hypotheses that relate to the direct effects of inter-personal trust (*societal-level inter-personal trust*) and in-group collectivism (*societal-level values of in-group collectivism*) on the individual-level likelihood of social and commercial entrepreneurship. We

analyzed survey data on 58,918 individual-level responses from 27 countries¹ for the year 2009, obtained from the publicly available Global Entrepreneurship Monitor (GEM) survey (Reynolds et al. 2005), and we complemented this database with data on trust obtained from World Values Survey (WVS) and data on in-group collectivism from the Global Leadership and Organizational Behavior Effectiveness (GLOBE), with a variety of country-level controls. The publicly available GEM dataset comprises 2,000 random survey responses from each of the participating countries' adult population (age 18-64) from over 70 countries spanning eight years (2001-2008). The number of usable countries, however, was reduced to 27 in our study, owing to missing values across all variables obtained from different datasets. Since our data is clustered by country, we used multi-level estimation methods.

GEM's 2009 adult population survey provided the first comprehensive data that used social entrepreneurship as its unique theme. The operationalization of individual-level social entrepreneurship was based on earlier pilot studies² in such a manner that the survey questions were theoretically grounded in the social entrepreneurship literature (Lepoutre, Justo, Terjesen, and Bosma 2013).

Dependent Variables: Social and Commercial Entrepreneurship

Our dependent variables are individual-level likelihood of engaging in (1) social entrepreneurship and (2) commercial entrepreneurship (both likelihoods measured with respect to the general population and not one over the other), and they were obtained from the GEM

¹ Argentina, Brazil, China, Colombia, Denmark, Ecuador, Finland, France, Germany, Greece, Hong Kong, Hungary, Israel, Italy, Malaysia, Morocco, Netherlands, Russia, Slovenia, South Africa, South Korea, Spain, Switzerland, Uganda, United Kingdom, USA and Venezuela.

² GEM UK team (for example, Harding and Cowling 2004; Harding 2006; Levie et al. 2006).

dataset. GEM identifies three types of entrepreneurs (1) *nascent entrepreneurs* - individuals who are active in the process of establishing a new firm during the preceding 12 months and with expectations of full or part ownership, but who have not yet launched; (2) *new entrepreneurs* - owner-managers of young firms who have survived for 3.5 years and have paid wages to any employees for more than three months; and (3) *established entrepreneurs* - owner-managers of established firms 3.5 years old or older. As such, these three types of entrepreneurial activities broadly represent entrepreneurial behaviors in *pre* and *post* entry (category 1, above, represents pre-entry, and categories 2 and 3 represent post entry). Each of these three categories was identified separately for social and commercial entrepreneurship such that some of the respondents may simultaneously represent multiple categories (Bosma et al. 2010; Lepoutre et al. 2013).

In our study, we classified social and commercial entrepreneurship (by imposing condition) such that individuals were identified as either social or commercial entrepreneurs but never both. This classification method was used to ensure that an individual did not exhibit mixed traits and behaviors of both social and commercial entrepreneurs and that the effects of country-level factors could be examined exclusively for social and commercial entrepreneurships. We sampled nascent, new, and established entrepreneurs such that entrepreneurs – social and commercial – represented the *total* pool of the respective entrepreneurial activities in a given country. This criterion seemed reasonable since *all* social entrepreneurs could be assumed to be driven by pro-social behaviors and *all* commercial entrepreneurs could be assumed to be driven by motivations of monetary benefits – irrespective of the stage of entrepreneurship and especially given that we had rendered the two groups mutually exclusive.

Nascent, new, or established entrepreneurs were identified as *commercial entrepreneurs* if they responded affirmatively to (1) “You are, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others,” (2) “Over the past 12 months, have you done anything to help start a new business, such as looking for equipment or a location, organizing a start-up team, working on a business plan, beginning to save money, or any other activity that would help launch a business?” (3) “Will you personally own all, part, or none of this business?” (4) “Has the new business paid any salaries, wages, or payments in kind, including your own, for more than three months?”³

The GEM Social Entrepreneurship survey methodology (Reynolds et al. 2005) screens social entrepreneurs as those individuals who respond yes to the question “Are you, alone or with others, currently trying to start or currently owning and managing any kind of activity, organization or initiative that has a particularly social, environmental, or community objective?” Nascent, new or established entrepreneurs were therefore identified as *social entrepreneurs* if they answered affirmatively that the primary reason for starting and owner-managing pertained to “any kind of activity, organization or initiative that has a particularly social, environmental or community objective”(Mair and Marti´ 2006; Zahra et al. 2009). Each of the two dependent variables assumed a value of 1 if the individual responses were in affirmation and 0 otherwise, making our dependent variables dichotomous in nature. Table 1 shows the percentage rates of social and commercial entrepreneurship in each of the 27 countries.

-----Insert Table 1 about here-----

Country-level predictor variables (Hypotheses H1 and H2)

³ Question 4 was asked for the purpose identifying new/established business owner-managers who would have survived for at least 3.5 years.

Scores on country-level, in-group collectivism were obtained from the GLOBE dataset. We utilized the “in-group collectivism values” dimension for the purpose of this study. These values are obtained using a questionnaire that asks participants to report on their beliefs about norms and values in their society (Dorfman et al. 2012; House et al. 2004). In particular, *in-group collectivism* cultural values refer to the extent to which individuals should express pride, loyalty, and cohesiveness in their organizations or families (Dorfman et al. 2012; House et al. 2004). Cronbach’s alpha reliability score for this cultural dimension was 0.66, while that of ICC (2) was 0.87 and showed evidence of within-culture agreement and cross-cultural variation (ICC (1).13, House et al. 2004). The sub-items that make up this measure are (1) “In a society, children should take pride in the individual accomplishments of their parents,” (2) “In this society, parents should take pride in the individual accomplishments of their children,” (3) “It should be important to members of your society that your society is viewed positively by persons in other societies,” and (4) “Members of this society should take a great deal of pride in being a member of the society” (House et al. 2004).

GLOBE study provides two sets of measures on cultural dimensions – *practices* and *values*. Cultural practices capture the way things in society stand “as is,” and values capture the way things “should be.” For the following reasons, we chose to use the cultural-values measures as opposed to practices. First, the extant literature suggests that individuals’ career decisions are often influenced by the core *values* they hold (Knafo and Sagiv 2004; Noseleit 2010). Cross-cultural differences in values can, in part, explain differences in individual-level occupational choices for CE (Davidsson and Wiklund 1997; Uhlaner and Thurik 2007), and, at the same time, decisions pertaining to the choice of engaging in SE have been shown to be predicted by values (Roccas et al. 2002). Second, in GLOBE’s own operationalization and explanation of scores, a

high value score was often associated with a low practice score. As these researchers note (House et al. 2004, p. 729), this result runs contrary to conventional wisdom, which states that people behave in a certain way *because they hold certain values in high esteem*. But worthy of consideration is the fact that if people, in practice, possess a low degree of something that is perceived as good, its absence may lead them to value it all the more. But, in practice, if people have a high degree of something that is perceived as good, the value they put on it does not need to be high. This line of argument further defends our choice of values over practices. Third, the use of cultural values is consistent with the other predictor used in this study – inter-personal trust.

A country-level index for trust (*inter-personal trust*) was obtained from the World Values Survey (WVS), which is one of the largest investigations on attitudes, beliefs, and values around the world (Inglehart and Baker 2000; Inglehart et al. 2005). Trust, as per WVS, is measured as the response to the question “Generally speaking, would you say that most people can be trusted or that you can’t be too careful in dealing with people?” Possible responses could be: “Most people could be trusted” (coded as 1) or “You can never be too careful when dealing with others” (coded as 2). Based on the response, WVS creates the trust index as “100 + (percent of “Most people can be trusted”) – (percent of “Can’t be too careful”).” Thus, indexes over 100 correspond to countries where a majority of people trust others, while those under 100 correspond to countries where a majority of people think one can never be too careful when dealing with others. For each of the 27 countries in our study, country scores of both these predictors are shown in Table 1.

Country-level control variables

Rates of entrepreneurial activities across countries vary with their levels of economic development (Lepoutre et al. 2013). We control for this factor by using the GDP *per capita* (expressed as USD) (Aidis, Estrin, and Mickiewicz 2012; Autio and Acs 2010) obtained from the World Bank (WB) data base for 2009. We follow Minniti (2008) in controlling for the effectiveness of government policies, and our data on *government effectiveness* was obtained from the World Governance Indicators (WGI) database for 2009. 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 influence SE and CE.

In addition, we controlled for whether or not entrepreneurship is desired in a given country in the first place. The social desirability of entrepreneurship refers to “the subjective norms or commonly held perceptions regarding the status and rewards of entrepreneurship in a given population” (Stephan and Uhlaner 2010, p. 1348). Hence, we controlled for the *desirability of entrepreneurship* in a given country, and our data was obtained from the GEM survey. It was computed as a composite measure following a principal component factor analysis on the country-means of individual-level responses to three statements from the GEM survey – (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.”

We used only three country-level controls because studies involving multi-level analyses are limited by the number of country-level variables that can be used with respect to the number

of country-level observations (Mass and Hox 2005). With a moderate number of countries (N = 27 countries) used in this study, the use of five country-level variables – two predictors and three controls – is adequate. Further, the country-level variables suffer from high inter-correlations such that using them excessively in a model may yield biased estimates.

Since the five country-level variables were obtained from different sources – the raw scores thus representing different scales and making interpretation difficult – we z-standardized each one of them. The results are therefore interpreted from the point of view of one standard deviation in the predictors.

Individual-level controls

All individual-level controls were obtained from GEM data. Individual attitude such as perceived entrepreneurial *self-efficacy* and vicarious exposure to other entrepreneurs (measured as *ties with other* entrepreneurs) are known to influence entrepreneurial behaviors (Wiklund, Davidsson, and Delmar 2003; Krueger, Reilly, and Carsrud 2000; Zhao, Seibert, and Hills 2005). Perceived *self-efficacy* indicates whether the individual thought that he or she possessed the knowledge, skills, and experience required to start a new business. This concept was operationalized as a dummy variable (1 = yes, 0 = no) (Wennberg, Pathak, and Autio 2013). *Ties with entrepreneurs* captures vicarious exposure and was measured by asking whether or not the individual knew someone personally who had started a business in the past two years: 1= yes, 0 = no (Davidsson and Honig 2003). Further, since an individual's *age* (Arenius and Minniti 2005; Reynolds et al. 2005) and *gender* (Hecchavarria et al. 2012; Leahy and Villeneuve-Smith, 2009; Witte, 2013) (male = 0, female =1) influence entrepreneurship, we controlled for these aspects as well. Additionally, both *education level* and *household income* (Allen, Elam, Langowitz, and Dean 2008; Arenius and Minniti 2005) have been linked to entry into entrepreneurship;

therefore, we also controlled for *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* (three equally large strata in each country: 1 = lower income tier; 2 = middle income tier; and 3 = upper income tier). We have provided the operational definition, concept, and data source for each measure included in our study in Appendix 1. Table 2 reports the descriptive statistics of each of the variables used in the study.

-----Insert Table 2 about here-----

Results

Tables 3 and 4 show the correlation matrix for individual and country-level variables, respectively. (Table 4 also reports the Variance Inflation Factor (VIF) scores on the country-level controls and predictors.⁴) Table 5 reports the effects on social and commercial entrepreneurship. Given that both our dependent variables were dichotomous, we carried out our outcome regressions using random-effect logistic regressions⁵ (using *xtlogit* command in Stata 13.0 software tool).

-----Insert Table 3, 4, and 5 about here-----

Intra-Class Correlation (ICC)

Significant between-group variance in the dependent variables requires multilevel analysis (Bliese 2000; Hofmann 1997; Hofmann, Griffin, and Gavin 2000; Hox 2010). To check this variance, we estimated multilevel logistic regressions without any predictors or controls in the model (Models 1 and 5 of Table 5) that yielded significantly high ICC values of 18.10 percent and 25.07 percent in social and commercial entrepreneurship, respectively, across the 27

⁴ We observed no multi-collinearity as the VIF scores were considerably <10 (Hair, Anderson, Tatham, & Black, 1998).

⁵ Only the intercept varied randomly across countries and not the slope

countries included in our study, thus warranting multi-level analyses.

Random-effect logistic regression models are reported in Models 2 to 4 (for SE) and 6 to 8 (for CE) of Table 5. The estimates are reported as odds ratios (exponential of the beta coefficients obtained from logistic regressions), with ratios greater than 1 representing positive association (percent increase) and those less than 1 representing negative association (percent decrease).

As our second step, we included in our models (Models 2 and 6 of Table 5) the two country-level predictors only. This approach allowed us to gauge the effects of our predictors in the absence of any controls and to ascertain whether the addition of controls (in subsequent models) resulted in any model misspecifications. We observed that in-group collectivism (odds ratio = 1.15; $p < 0.05$) and inter-personal trust (odds ratio = 1.54; $p < 0.001$) moved in the proposed directions (both positive) and were statistically significant for social entrepreneurship, while in-group collectivism (odds ratio = 0.71; $p < 0.001$) and inter-personal trust (odds ratio = 1.01; not significant) moved in the proposed directions (one negative and the other positive) for commercial entrepreneurship. As our third step, we added individual-level and country-level controls into the model (Models 3 and 7 of Table 5).

Effects of Inter-Personal Trust and In-Group Collectivism on SE and CE (Hypotheses H1a, H1b, H2a-c)

As our fourth step, and in order to examine the effects of inter-personal trust and in-group collectivism and to discern the proportion of the remaining variance (after the individual and country-level controls have been accounted for) explained by the predictors, we added the two country-level predictors to the model (Models 4 and 8 of Table 5). The odds ratios indicate that an increase of 1 standard deviation in values of in-group collectivism increased the likelihood of

social entrepreneurship by 39 percent (1.39; $p < 0.001$) and decreased the likelihood of commercial entrepreneurship by 21 percent ($1 - 0.79$; $p < 0.001$), thus supporting H1a and H1b. We also observed that an increase of 1 standard deviation in levels of inter-personal trust increased the likelihood of social entrepreneurship by 39 percent (1.39; $p < 0.01$) and increased that of commercial entrepreneurship by 16 percent (1.16; $p < 0.001$), thus supporting H2a and H2b. To test whether the influence of inter-personal trust was stronger on social entrepreneurship than on commercial entrepreneurship, we performed a test that is consistent with the methodology adopted by Estrin et al. 2013a. We conducted a coefficient difference Wald test that revealed a stronger positive effect of inter-personal trust on social entrepreneurship compared to commercial entrepreneurship (Chi-square ($df = 1$) = 3.86, $p < .05$), thus supporting hypothesis H2c.

We observed that the variance component of random intercepts decreased from 0.51 in Model 3 of Table 5 to 0.39 in Model 4, and from 0.59 in Model 7 of Table 5 to 0.39 in Model 8, suggesting that the addition of the two country-level predictors – inter-personal trust and in-group collectivism – explained up to 24 percent and 34 percent of the remaining variance in the individual-level likelihood of social and commercial entrepreneurship, respectively, after the individual-level and country-level controls were accounted for.

Supplementary analysis

For the purpose of our main study, we operationalized our two dependent variables in a manner that they were mutually exclusive – i.e., social entrepreneurs did not exhibit any economic motives and commercial entrepreneurs did not exhibit any social motives. GEM, however, has subsets within identified social and commercial entrepreneurs that exhibit

economic and social motives respectively⁶. We performed additional analyses on these two subsets of entrepreneurs.

For instance, Lepoutre et al., (2013) and Stephan, (2010) have previously established that revenue-generation through market-based transactions manifests the “entrepreneurial” element in social entrepreneurs. We created a second measure of social entrepreneurship - “revenue-generating social entrepreneur”. Revenue-generating social entrepreneurs are a subset of the identified social entrepreneurs who responded “yes” to “Will any of the revenue for this activity, organization or initiative come from income, for example through sales of products or charging for services?” A response of “yes” was coded as 1, and 0 otherwise. Further, for the identified commercial entrepreneurs, there is a subset for which GEM provides information on the score they assign to social, environmental, and economic goals for their businesses. We created a second measure of commercial entrepreneurship – “socially oriented commercial entrepreneur” - that assumed a value of 1 if the sum of scores for social and environmental goals was greater than those for economic goals, and 0 otherwise.

Thereafter, we replicated our main analyses for both these measures. We observed that an increase of one standard deviation in levels of in-group collectivism and interpersonal trust increased the likelihood of revenue-generating social entrepreneurship by 68 percent (odds ratio = 1.68; $p < 0.001$) and 76 percent (odds ratio = 1.76; $p < 0.001$) respectively and that they increased the likelihood of socially oriented commercial entrepreneurship by 26 percent (odds ratio = 1.26; $p < 0.01$) and 49 percent (odds ratio = 1.49; $p < 0.001$) respectively. While the positive influence of interpersonal trust is consistent across both these dependent variables that

⁶ These are the subsets that were dropped when we operationalized our two dependent variables such that social entrepreneurs represented a set of entrepreneurs driven *only* by social behaviors and commercial entrepreneurs driven *only* by economic behaviors.

of in-group collectivism has changed sign from our main analyses reported in Model 8 of Table 5. Its negative influence on commercial entrepreneurship – driven solely by economic motives and exclusive of social entrepreneurship (dependent variable for our main analyses) – changed sign and exercised a positive influence on socially oriented commercial entrepreneurship, suggesting that in-group collectivist values favor *all* forms of entrepreneurship that have a social component associated with them.

Discussions

CE revolves around the activities of identification, evaluation, and exploitation of opportunities that exist in the environment (Shane and Venkataraman 2000). These opportunities represent occasions for entrepreneurs to sell new products and services at profitable prices, thereby implying that the fundamental objective of CE involves profit generation (Certo and Miller 2008). SE, on the other hand, revolves around the detection and exploitation of opportunities that result in the creation of social value through leveraging resources and providing innovative solutions to social problems (Bacq and Janssen 2011). For both forms of entrepreneurship, success depends on contextual factors since such factors influence the opportunities and risks that new ventures face as entrepreneurs compete for resources (Austin et al. 2006). Additionally, contextual factors may exert differential impacts on social versus commercial entrepreneurs.

In order to address our research question, we use insights from institutional theory (Scott, 1995) to study the comparative influences of informal institutions on SE and CE. Extant research has mainly examined the role of institutions on CE (Autio and Acs 2010). Although scholars have examined the influence of formal institutions on SE (Estrin et al. 2013a; Zahra et al. 2009), recent literature has begun to examine the effect of informal institutions on SE

(Stephan et al.2014). Most of these studies, however, have modeled the influence on SE and CE in isolation. By offering a comparative study, we establish value in understanding whether the same institutions influence SE and CE differently. Further, since this study is cross-cultural in design, it provides us with newer perspectives on the lesser-examined links between informal institutions and SE.

We contribute to the literature in the following ways. First, we contribute to theory development in social entrepreneurship by addressing the scholarly need to identify informal institutions (manifested in societal values) that favor social entrepreneurship through a comparative study with commercial entrepreneurship. In doing so, we enhance our understanding of contextual influences – those of *informal institutions* – on social and commercial entrepreneurship. Second, extant social entrepreneurship research calls for enriching the field with more diverse designs and quantitative analysis (Dacin, Dacin, and Tracey 2011; Short et al. 2009; Zahra and Wright 2011). Further, single-level studies of context-entrepreneurship links are likely to be affected by either individualistic or ecological fallacies (Autio et al. 2013). Using multi-level empirical methodology, we examine the combined influence of individual as well as context-specific determinants of entrepreneurial behaviors, thereby attempting to consolidate findings from other studies that examine the links between informal institutions and entrepreneurship (Autio et al. 2013). Finally, our findings also address the need to investigate contextual drivers specific to distinct types of entrepreneurship (Stephan et al. 2014; Zahra and Wright 2011)

Our analysis shows that while in-group collectivistic values constrain creation of commercial enterprise that are driven solely by economic motives, they facilitate creation of social enterprise. Our supplementary analyses however reveal that in-group collectivist values

are conducive even for CE that has a social motive in addition to economic. Our results therefore suggest that in many societies, both types of endeavors may be considered as incompatible. Our supplementary analysis, however, acknowledges that the very essence of SE, as opposed to a traditional non-profit organization, is about making both types of activities (commercial and social) not only compatible, but also mutually beneficial. Similarly, inter-personal trust was found to be important for both types of entrepreneurship in that, for individuals to enter into either social or commercial entrepreneurship there has to be a general tendency to trust others in society.

Our study has the following practical implications. First, our supplementary analysis on SE is particularly insightful since it signals that all types of entrepreneurs (social or commercial) benefit from the availability of societal support if part or all of their efforts are geared towards meeting social goals too. Entrepreneurs with purely economic motives may therefore need to necessarily amend their objectives to include social goals explicitly along with their economic motives.

Consequently, our findings also inform entrepreneurial education by emphasizing the importance of including a social dimension in educational curriculums imparting knowledge on traditional forms of entrepreneurship. Further, one can infer that the positive effects of informal institutions on SE can be an indirect path to CE, since increased individual agency in SE leads to the creation of a country's social capital, which then facilitates individual agency in CE (Estrin et al. 2013a).

However, in the event of constraining influences of informal institutions (i.e. in-group collectivism) on CE, it would be insightful to examine whether the above indirect path is dominant over the negative direct effect of the informal institutions on CE. Our findings can ultimately inform policymakers wanting to increase the levels of commercial entrepreneurial

activity. Policies geared to incentivize firms to increase their social commitments would serve to gain support all kinds of entrepreneurial activity.

Limitations and Future Research

Our study has some limitations, which represent avenues for future research. We have considered only one dimension of trust – interpersonal or dispositional trust and their effects on entrepreneurship. Since trust contains both a dispositional (general disposition to trust others within a society) and an institutional (rule of law based trust, i.e., general trust in the effectiveness of governance) component within a given country (Muethel and Bond 2013), future research may examine the combined effects of both types of trust on entrepreneurial activity.

Next, our study is limited to the use of only two values. While we have been successful in observing their contrasting influences on SE and CE, we acknowledge the need for identifying additional institutions that may drive SE and CE distinctly differently and the use of seemingly unrelated regressions to investigate their comparative influences. This is particularly important as recent studies have started to inform us that entry into SE or CE may be driven by the need to fill institutional voids or exploit institutional support (Stephan et al. 2014).

Further, GEM asks social entrepreneurs to allocate points across three categories – economic, social and environmental. This information could be useful in understanding the antecedents of different types of social entrepreneurs and the motivations that drive them. Unfortunately, the GEM dataset is missing 98 percent of the observations for these three types, thus limiting our scope in terms of reporting how inter-personal trust and in-group collectivism link to types of social entrepreneurship. Future GEM surveys could gather more data on these questions.

Methodologically, we are limited in the use of control variables that pertain to information on founding team members in a social entrepreneurial endeavor. The decision to set up a social business may, in part, be shaped by the goals of the different co-founders, thus warranting future investigation along these lines. In addition, our dependent variables accommodate (exclusively) for *all* social and commercial entrepreneurs – nascent, new, or established – thus making no distinction on the stage of entrepreneurship. Future research has the scope to look into the nuances of the influence that our predictors would have on the entrepreneurial behaviors of social and commercial entrepreneurs across each of these stages.

Conclusion

Our study offers a multi-level theoretical and empirical design to explicate the comparative influence of country-level factors on individual-level social and commercial entrepreneurial behaviors and consequently avoids both ecological and individualistic fallacies and simultaneously contributes to cross-country comparative entrepreneurship literature. We started with the assumption that formal institutions have similar effects on SE and CE, prompting us to investigate if informal institutions' effects are felt alike. Our study establishes in-group collectivist values and inter-personal trust as salient predictors of CE and SE. We find evidence that while collectivist values inhibit individual-level commercial entrepreneurship, they favor social entrepreneurship. Similarly, inter-personal trust is required for both commercial and social entrepreneurship; however, it is a stronger predictor of social entrepreneurship than of commercial entrepreneurship. Our study also informs us that in-group collectivist values are conducive for all forms of entrepreneurship (CE and SE) provided that there is a social element along with economic objectives in the overall mission of the enterprise.

References

- Aidis, R., S.Estrin, and T.M. Mickiewicz (2012). "Size matters: Entrepreneurial Entry and Government," *Small Business Economics* 39(1), 119-139.
- Aldrich, H. (2000). "Entrepreneurial Strategies in New Organizational Populations," in *Entrepreneurship: The social science view*. Ed. R. Swedberg. Oxford: Oxford University Press, 211–228.
- Allen, I. E., A.Elam, N.Langowitz, and M.Dean (2008). 2007 Global Entrepreneurship Monitor Report on Women and Entrepreneurship. Babson College: The Centre for Women's Leadership.
- Arenius, P., and M.Minniti (2005). "Perceptual Variables and Nascent Entrepreneurship," *Small Business Economics* 24(3), 233-247.
- Austin, J., H.Stevenson, and J.Wei-Skillern (2006). "Social and Commercial Entrepreneurship: Same, Different or Both?" *Entrepreneurship Theory and Practice* January, 1-22.
- Autio, E., S.Pathak, and K.Wennberg (2013). "Consequences of Cultural Practices for Entrepreneurial Behaviors," *Journal of International Business Studies* 44, 334-362.
- Autio, E., and Z.Acs (2010). "Intellectual Property Protection and the Formation of Entrepreneurial Growth Aspirations," *Strategic Entrepreneurship Journal* 4(3), 234-251.
- Bacq, S., and F. Janssen (2011). "The Multiple Faces of Social Entrepreneurship: A Review of Definitional Issues based on Geographical and Thematic Criteria," *Entrepreneurship and Regional Development* 23(5-6), 373-403.
- Baker, T., T.Gedajlovic, and M.Lubatkin (2005). "A Framework for Comparing Entrepreneurship Processes across Nations," *Journal of International Business Studies* 36(5), 492–504.
- Baumol, W. J. (1990). "Entrepreneurship: Productive, Unproductive, and Destructive," *Journal of Political Economy* 98(5), 893–921.
- Bjørnskov, C. (2010). "How does Social Trust lead to better Governance? An Attempt to separate Electoral and Bureaucratic Mechanisms," *Public Choice* 144(1), 323–346.
- Blau, P. M. (1964). *Exchange and Power in Social Life*. New York: Wiley.
- Bliese, P. D. (2000). "Within-group Agreement, Non-independence, and Reliability: Implications for Data Aggregation and Analysis," in *Multilevel Theory, Research, and Methods in Organizations: Foundations, Extensions, and New Directions*. Eds. K. J. Klein, and S. W. J. Kozlowski. San Francisco, CA: Jossey-Bass, 349-381.

- Bosma, N., J. Levie, W. Bygrave, R. Justo, J. Lepoutre, and S. Terjesen. (2010). *Global Entrepreneurship Monitor. 2009 Executive Report*. Babson Park, MA: Babson College.
- Brunetto, Y., and T. Farr-Wharton (2007). "The Moderating Role of Trust in SME Owner/Managers' Decision-Making about Collaboration," *Journal of Small Business Management* 45(3), 362-387.
- Certo, S.T., and T. Miller (2008). "Social Entrepreneurship: Key issues and concepts," *Business Horizons* 51, 267-271.
- Cho, A. H. (2006). "Politics, values and social entrepreneurship: a critical appraisal," *Social entrepreneurship* 280.
- Cohen, B., B. Smith, and R. Mitchell (2008). "Toward a sustainable conceptualization of dependent variables in entrepreneurship research," *Business Strategy and the Environment* 17(2), 107-119.
- Dacin, M. T., P.A. Dacin, and P. Tracey (2011). "Social entrepreneurship: A critique and future directions," *Organization Science*, 22(5), 1203–1213.
- Dakhli, M., and D. De Clercq (2004). "Human Capital, Social Capital, and Innovation: A Multi-Country Study," *Entrepreneurship and Regional Development* 16(2), 107-128.
- Davidsson, P., and J. Wiklund (1997). "Values, beliefs and regional variations in new firm formation rates," *Journal of Economic Psychology* 18(2), 179-199.
- Davidsson, P., and B. Honig (2003). "The Role of Social and Human Capital among Nascent Entrepreneurs," *Journal of Business Venturing* 18, 301–332.
- De Carolis, D.M., and P. Saporito (2006). "Social Capital, Cognition, and Entrepreneurial Opportunities: A Theoretical Framework," *Entrepreneurship Theory and Practice* January, 41-56.
- Dees, J. G. (1998). The Meaning of Social Entrepreneurship. *Comments and suggestions contributed from the Social Entrepreneurship Funders Working Group*, 6.
- Domenico, M., P. Tracey, and H. Haugh (2009). "The dialectic of social exchange: theorizing corporate social enterprise collaboration," *Organization Studies* 30, 887–907.
- Dorfman, P., M. Javidan, P. Hanges, A. Dastmalchian, and R. House (2012). "GLOBE: A Twenty Year Journey into the Intriguing World of Culture and Leadership," *Journal of World Business* 47(4), 504-518.
- Elkington, J., (2004). "Enter the Triple Bottom Line," *The Triple Bottom Line: does it all add up*. Eds. A. Henriques and J. Richardson. Earth Scan: London UK.

- Estrin, S., T.Mickiewicz, and U.Stephan (2013) a. "Entrepreneurship, Social Capital, and Institutions: Social and Commercial Entrepreneurship Across Nations," *Entrepreneurship Theory and Practice* May, 479-504.
- Estrin, S., J. Korosteleva, and T. Mickiewicz (2013) b. "Which institutions encourage entrepreneurial growth aspirations?" *Journal of Business Venturing* 28(4): 564–580.
- Freeman, R.E. (1984). *Strategic Management: A Stakeholder Approach*. Boston: Pitman.
- Fukuyama, F. (1997). *Trust: The Social Virtues and the Creation of Prosperity*. New York: Free Press.
- Fukuyama, F. (1999). "The Great Disruption", *The Atlantic Monthly* 283, 55-85.
- Fukuyama, F. (2001). "Social capital, civil society and development," *Third World Quarterly* 22, 7–20.
- Gartner, W.B. (1989). "Who is an entrepreneur?" is the wrong question," *Entrepreneurship Theory and Practice* 13(4), 47–68.
- Gras, D., and G.T. Lumpkin (2012). "Strategic foci in social and commercial entrepreneurship: A comparative analysis," *Journal of Social Entrepreneurship* 3(1), 6-23.
- Hair, J. F., R.E.Anderson, R.L.Tatham, and W.C. Black. (1998). *Multivariate data analysis*, 5th edn. Upper Saddle River, NJ: Prentice Hall.
- Harding, R. (2006). GEM UK 2006.
- Harding, R., and M. Cowling (2004). *The GEM UK social entrepreneurship monitor*. London, UK: Barclays Bank.
- Hayton, J. C., G.George, and S.A. Zahra (2002). "National Culture and Entrepreneurship: A Review of Behavioral Research," *Entrepreneurship Theory and Practice* 26(4), 33–52.
- Hechavarria, D. M., A.Ingram, R.Justo, and S.Terjesen (2012). Are women more likely to pursue social and environmental entrepreneurship. *Global women's entrepreneurship research: Diverse settings, questions and approaches*, 135-151.
- Henrekson, M. (2005). "Entrepreneurship: A Weak Link in the Welfare State?" *Industrial and Corporate Change* 14(3), 437–467.
- Hofmann, D. A. (1997). "An Overview of the Logic and Rationale of Hierarchical Linear Models," *Journal of Management* 23, 723–744.

- Hofmann, D.A., M.A.Griffin, and M.B.Gavin (2000). "The Application of Hierarchical Linear Modeling to Organizational Research," in *Multilevel Theory, Research, and Methods in Organizations: Foundations, Extensions, and New Directions*. Eds. K. J. Klein and S. W. J. Kozlowski. San Francisco, CA: Jossey-Bass, 467–511.
- House, R. J., P.J.Hanges, M. Javidan, P.W. Dorfman, and V.Gupta. (2004). *Culture, Leadership, and Organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage.
- Hox, J. (2010). *Multilevel Analysis*, 2 ed. London: Routledge.
- Inglehart, R., and W.E.Baker (2000). Modernization, cultural change, and the persistence of traditional values. *American sociological review*, 19-51.
- Inglehart, R., B. Puranen, T. Pettersson, J.D. Nicolas, and Y.Esmer (2005). The World Values Survey.
- Javidan, M., R.J. House, P.W. Dorfman, P.J. Hanges, and M. Sully de Luque (2006). "Conceptualizing and measuring cultures and their consequences: A comparative review of GLOBE's and Hofstede's approaches," *Journal of International Business Studies* 37(6), 897–914.
- Kanter, R.M., and D.Summers. (1987). "Doing well while doing good: Dilemmas of Performance Measurement in Nonprofit Organizations and the need for a Multiple-constituency Approach," *The Nonprofit Sector: A Research Handbook*. Ed. W.W. Powell. New Haven: Yale University Press, 154–166.
- Knack, S., and P. Keefer. (1997). "Does Social Capital have an Economic Payoff? A Cross-Country Investigation," *The Quarterly Journal of Economics* November, 1251-1288.
- Knafo, A., and L.Sagiv (2004). "Values and work environment: Mapping 32 occupations," *European Journal for Psychology of Education* 19(3): 255–273.
- Kramer, R. M. (1999). "Trust and Distrust in Organizations: Emerging Perspectives, Enduring Questions," *Annual Review of Psychology* 50, 569–598.
- Krueger, N. F., M.D.Reilly, and A.L.Carsrud. (2000). "Competing Models of Entrepreneurial Intentions," *Journal of Business Venturing* 15(5-6), 411-432.
- Leahy, G., and F.Villeneuve-Smith (2009). "State of Social Enterprise Survey 2009," *Social Enterprise Coalition*, London.
- Lepoutre, J., R.Justo, S.Terjesen, and N. Bosma. (2013). "Designing a Global Standardized Methodology for measuring Social Entrepreneurship Activity: the Global Entrepreneurship Monitor Social Entrepreneurship Study," *Small Business Economics* 40(3), 693-714.

- Levie, J., D. Brooksbank, D. Jones-Evans, R. Harding, and M.Hart. (2006). "Measuring social entrepreneurship: Lessons from three years of experimentation by the UK Global Entrepreneurship Monitor team," *Frontiers of Entrepreneurship Research* 26, Article 3.
- Lumpkin, G. T., T.W.Moss, D.M.Gras, S.Kato, and A.S.Amezcuca. (2013). "Entrepreneurial Processes in Social Contexts: How are they different, if at all?" *Small Business Economics* 40(3), 761-783.
- Maas, C.J.M., and J.J.Hox. (2005). "Sufficient Sample Sizes for Multilevel Modeling," *Methodology* 1, 1614-1881.
- Mair, J., and I. Martí'. (2006). "Social Entrepreneurship Research: A Source of Explanation, Prediction, and Delight," *Journal of World Business* 41(1), 36-44.
- Mair, J., and I. Martí'. (2009). "Entrepreneurship in and around institutional voids: A case study from Bangladesh," *Journal of Business Venturing* 24(5), 419-435.
- Mayer, R. C., J.H.Davis, and F.D.Schoorman. (1995). "An Integrative Model of Organizational Trust," *Academy of Management Review* 20(3), 709-734.
- McKnight, D. H., L.L.Cummings, and N.L.Chervany. (1998). "Initial Trust Formation in New Organizational Relationships. *Academy of Management Review* 23(3), 473-490.
- McMullen, J.S. (2011). "Delineating the Domain of Development Entrepreneurship: A Market-based Approach to Facilitating Inclusive Economic Growth," *Entrepreneurship Theory and Practice* 35(1), 185-215.
- Minniti, M. (2008). "The Role of Government Policy on Entrepreneurial Activity: Productive, Unproductive, or Destructive?" *Entrepreneurship Theory and Practice* 32(5), 779-790.
- Mitchell, R. K., B.R.Agle, and D.J.Wood. (1997). "Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts," *Academy of Management Review* 22(4), 853-886.
- Molina-Morales, F. X., and M.T. Martínez-Fernández, (2010). "Social networks: effects of social capital on firm innovation," *Journal of Small Business Management* 48(2), 258-279.
- Morales, C. E., and C. Holtschlag. (2013). "Postmaterialist values and entrepreneurship: A multilevel approach," *International Journal of Entrepreneurial Behaviour and Research* 19(3), 266-282
- Muethel, M., and M.H.Bond. (2013). "National Context and Individual Employees' Trust of the Out-group: The Role of Societal Trust," *Journal of International Business Studies* 44, 312-333.

- Nisbet, R. (1993). *The Sociological Tradition*. New Brunswick, CT: Transaction Publishers.
- North, D. C. (1991). "Institutions," *Journal of Economic Perspectives* 5(2), 97–112.
- North, D. C. (2005). *Understanding the process of economic change*. Princeton, NJ: Princeton University Press.
- Noseleit, F. (2010). "The entrepreneurial culture: Guiding principles of the self-employed," in *Entrepreneurship and culture*, Eds. A. Freytag and R. Thurik: 41–54. Berlin: Springer.
- Peng, M.W., Wang, D.Y., and Jiang, Y. (2008). "An institution-based view of international strategy: A focus on emerging markets," *Journal of International Business Studies* 39, 920-936.
- Portes, A. and P.Landolt. (2000). "Social Capital: Promise and Pitfalls of its Role in Development," *Journal of Latin American Studies* 32(2), 529–547.
- Powell, W. W., and P.J.DiMaggio (1991). *The new institutionalism in organizational analysis*. Chicago: University of Chicago Press.
- Reynolds, P. D., N.Bosma, E. Autio, S. Hunt, N. De Bono, I. Servais, P. Lopez-Garcia, and N.Chin.(2005). "Global Entrepreneurship Monitor: Data Collection Design and Implementation 1998-2003," *Small Business Economics* 24(3), 205-231.
- Roccas, S., L. Sagiv, S.H. Schwartz, and A.Knafo (2002). "The Big Five personality factors and personal values," *Personality and Social Psychology Bulletin* 28(6), 789–801.
- Rousseau, D., S.Sitkin, R. Burt, and C.Camerer. (1998). "Not so different after all: A Cross-Discipline view of Trust," *Academy of Management Review* 23, 393-404.
- Rutherford, M., P.F.Buller, and J.M.Stebbins. (2009). Ethical Considerations of the Legitimacy lie," *Entrepreneurship Theory and Practice* 33(4), 949–964.
- Schwartz, S. H. (2006). "A theory of cultural value orientations: Explication and applications," *Comparative Sociology* 5(2–3), 137–182.
- Scott.W.R. (1995). *Institutions and organizations*. Thousand Oaks, CA: Sage
- Scott, W.R. (2005). "Institutional Theory: Contributing to a theoretical research program", in *Great minds in management: The process of theory development*. Eds. K.G.Smith and M.A.Hitt. Oxford: Oxford University Press.
- Seelos, C., and J.Mair. (2005). "Creating New Business Models to Serve the Poor," *Business Horizons* 48, 241-246.

- Shane, S., and S.Venkataraman. (2000). "The Promise of Entrepreneurship as a Field of Research," *Journal of Management* 25(1), 217—226.
- Sharir, M., and M. Lerner. (2006)."Gauging the success of social ventures initiated by individual social entrepreneurs," *Journal of World Business* 41(1), 6-20.
- Short, J.C., T.W.Moss, and G.T.Lumpkin. (2009). "Research in Social Entrepreneurship: Past Contributions and Future Opportunities," *Strategic Entrepreneurship Journal* 3, 161-194.
- Sigmund, S., T.Semrau, and D.Wegner, (2013). "Networking Ability and the Financial Performance of New Ventures: Moderating Effects of Venture Size, Institutional Environment, and Their Interaction." *Journal of Small Business Management*. Article first published online: 16 SEP 2013, DOI: 10.1111/jsbm.12009
- Stephan, U., and L.M.Uhlaner. (2010). "Performance Based vs. Socially Supportive Culture: A Cross-national Study of Descriptive Norms and Entrepreneurship," *Journal of International Business Studies* 41, 1347–1364.
- Stephan, U., L.M. Uhlaner, and C.Stride (2014). "Institutions and social entrepreneurship: The role of institutional voids, institutional support, and institutional configurations," *Journal of International Business Studies* 46, 308-331.
- Sud, M., C.V.VanSandt, and A.M.Baugous. (2009). "Social Entrepreneurs: The Role of Institution," *Journal of Business Ethics* 85, 201-216.
- Thelen, K. A. (2004). *How Institutions Evolve: The Political Economy of Skills in Germany, Britain, the United States, and Japan*.Cambridge: Cambridge University Press.
- Tracey, P., and Phillips, N. (2007). "The distinctive challenge of educating social entrepreneurs: A postscript and rejoinder to the special issue on entrepreneurship education," *Academy of Management Learning & Education* 6(2), 264-271.
- Uhlaner, L. M., and R.Thurik. (2007). "Postmaterialism influencing total entrepreneurial activity across nations," *Journal of Evolutionary Economics* 17(2), 161–185.
- Van de Ven, A.H., H.J. Sapienza, and J.Villanueva (2007). "Entrepreneurial pursuits of self- and collective interests", *Strategic Entrepreneurship Journal* 1 (3–4), 353–370.
- Venkataraman, S. (1997). "The distinctive domain of entrepreneurship research," in *Advances in entrepreneurship, firm emergence, and growth*. Eds. J. Katz and R. Brockhaus. Greenwich, CT: JAI Press, 119–138.
- Welter, F. (2011). "Contextualizing Entrepreneurship- Conceptual Challenges and Ways Forward", *Entrepreneurship Theory and Practice* January, 165-184.

- Welter, F., and D.Smallbone. (2006). "Exploring the Role of Trust in Entrepreneurial Activity," *Entrepreneurship Theory and Practice* July, 465-475.
- Wennberg, K., S.Pathak, and E.Autio. (2013). "How Culture moulds the effects of Self-efficacy and Fear of Failure on Entrepreneurship," *Entrepreneurship and Regional Development* 25(9-10), 756-780.
- Wiklund, J., P.Davidsson, and F.Delmar. (2003). "What do they think and feel about growth? An Expectancy-Value Approach to Small Business Managers' Attitudes towards Growth," *Entrepreneurship Theory and Practice* 27(3), 247-269.
- Witte, C. T. (2013). Cultural determinants of social entrepreneurship.
- Zadek, S., and S.Thake. (1997). "Send in the social entrepreneurs," *New Statesman* 26, 31.
- Zahra, S.A., E.Gedajloviv, D.O. Neubaum, and J.M.Shulman. (2009). "A Typology of Social Entrepreneurs: Motives, Search Processes and Ethical Challenges," *Journal of Business Venturing* 24, 519-532.
- Zahra, S. A., and M. Wright, M. (2011). "Entrepreneurship's next act," *The Academy of Management Perspectives* 25(4), 67-83.
- Zhao, H., S.Seibert, and G.Hills. (2005). "The Mediating Role of Self-efficacy in the development of Entrepreneurial Intentions," *Journal of Applied Psychology* 90(6), 1265-1272.

Figure 1
Theoretical framework

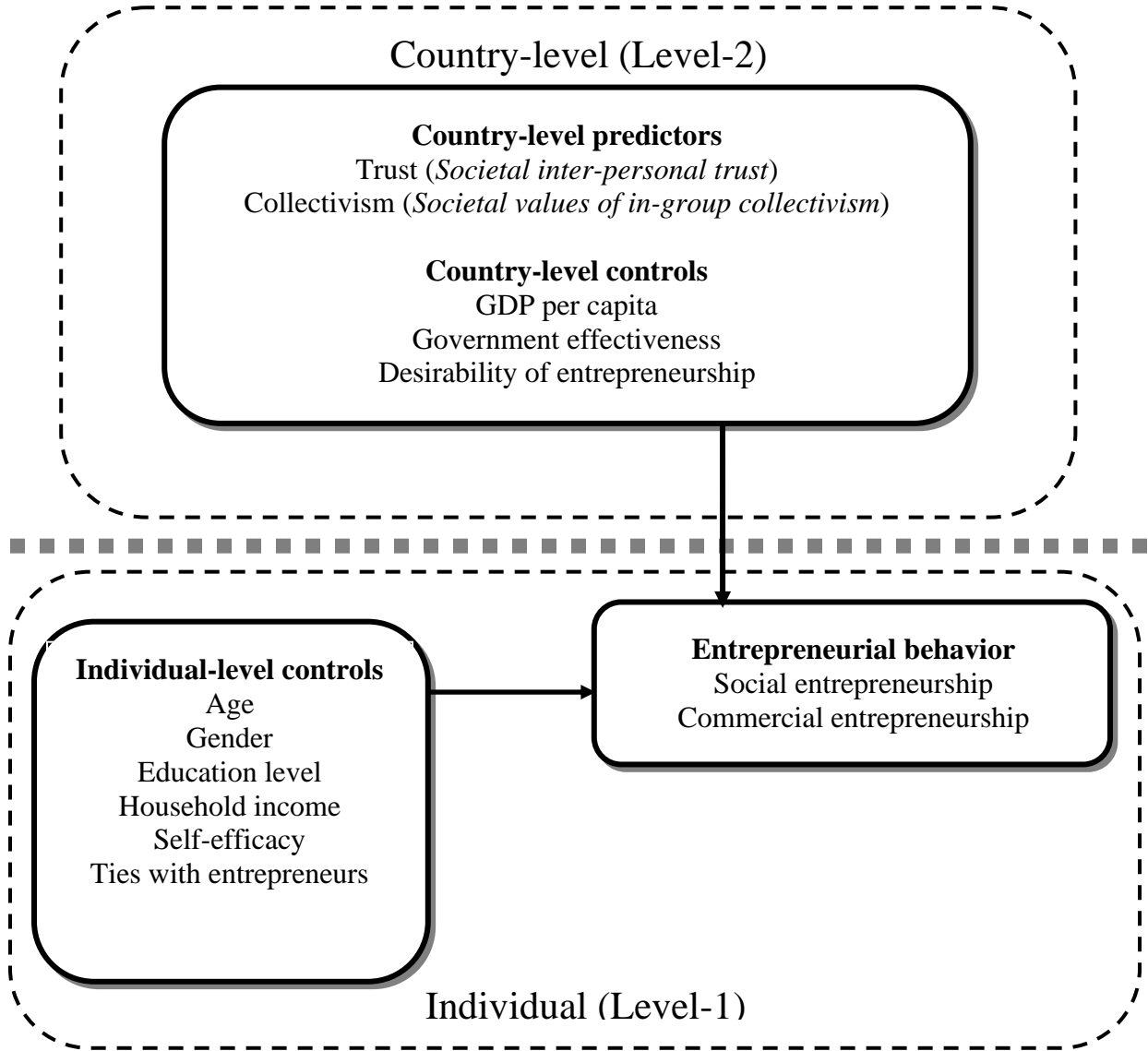


Table 1
Sample descriptives

Country	N^a	Social entrepreneurship (%)	Commercial entrepreneurship (%)	Trust	In-group collectivism
Argentina	883	7.30	31.07	40.6	6.07
Brazil	1 407	0.69	37.78	17.5	5.17
China	2 412	2.01	39.60	120.9	5.12
Colombia	1 642	3.53	29.79	30.9	5.99
Denmark	937	14.82	10.64	131.9	5.71
Ecuador	1 637	0.28	38.41	72.7	5.81
Finland	1 026	5.91	19.34	117.5	5.6
France	683	2.33	0.00	37.9	5.88
Germany	2 459	1.39	16.45	75.8	5.42
Greece	1 026	4.40	28.96	54.6	5.47
Hong Kong	423	1.11	9.48	82.4	5.11
Hungary	1 192	3.24	17.62	44.8	5.58
Israel	1 142	4.69	11.80	48.3	5.69
Italy	580	2.08	9.84	60.8	5.76
Malaysia	895	0.24	16.04	17.7	5.77
Morocco	204	0.97	35.29	27.4	6.03
Netherlands	1 459	2.28	20.66	90.6	5.39
Russia	382	2.08	6.84	55.4	5.9
Slovenia	1 288	4.29	13.48	38.6	5.71
South Africa	1 792	2.72	8.79	38	5.48
South Korea	584	2.82	46.30	56.9	5.5
Spain	16 397	0.80	10.72	40.9	5.82
Switzerland	1 021	2.92	18.40	107.4	5.16
Uganda	1 624	1.13	54.48	33.8	5.5
United Kingdom	13 134	4.37	13.96	61.7	5.66
USA	2 306	4.86	17.05	78.8	5.79
Venezuela	385	1.92	20.83	48.5	5.92
Total^b	58 918				

^a Number of observations per country vary due to unequal resources available by the GEM team in respective countries

^b Weighted in order to give equal weights to all countries

Table 2
Descriptive statistics of all variables

Variables	N	Mean	SD
Social entrepreneurship	58 918	0.03 ^a	0.17
Commercial entrepreneurship	58 918	0.18 ^b	0.38
Age	58 918	44.13	14.17
Gender	58 918	0.50	0.50
Education level	58 918	2.02	1.04
Household income	58 918	2.21	0.81
Self-efficacy	58 918	0.52	0.50
Ties with entrepreneurs	58 918	0.36	0.48
GDP per capita, USD	27	28 483.33	14 420.15
Government effectiveness	27	0.96	0.70
Desirability of entrepreneurship	27	-0.18	0.75
In-Group Collectivism	27	57.45	25.44
Inter-Personal Trust	27	5.66	0.22

^a Multiplying this number would yield percent of social entrepreneurship as mean across countries, here shown as raw mean

^b Multiplying this number would yield percent of commercial entrepreneurship as mean across countries, here shown as raw mean; N = 58 918, Weighted in order to give equal weights to all countries

Table 3
Correlation matrix for individual-level variables

	1	2	3	4	5	6	7	8
1. Social entrepreneurship	1.00							
2. Commercial entrepreneurship	-0.05*	1.00						
3. Age	0.00	-0.12*	1.00					
4. Gender	0.00	-0.05*	-0.01	1.00				
5. Education level	0.09*	-0.03*	-0.05*	-0.03*	1.00			
6. Household income	0.03*	0.04*	-0.12*	-0.11*	0.28*	1.00		
7. Self-efficacy	0.04*	0.20*	-0.06*	-0.15*	0.09*	0.12*	1.00	
8. Ties with entrepreneurs	0.06*	0.16*	-0.21*	-0.10*	0.05*	0.12*	0.23*	1.00

*p < 0.05 (two-tailed); N = 58,918, Weighted in order to give equal weights to all countries

Table 4
Correlation matrix for country-level variables

	1	2	3	4	5	6	7	VIF^a
1. Social entrepreneurship	1.00							1.06
2. Commercial entrepreneurship	-0.20	1.00						1.06
3. GDP per capita, USD	0.43*	-0.63*	1.00					4.57
4. Government effectiveness	0.41*	-0.65*	0.81*	1.00				4.17
5. Desirability of entrepreneurship	-0.30	0.65*	-0.39*	-0.38*	1.00			1.23
6. In-Group Collectivism	0.47*	-0.20	0.61*	0.54*	-0.16	1.00		1.82
7. Inter-Personal Trust	0.18	-0.09	-0.24	-0.35	-0.01	-0.41*	1.00	1.34

*p < 0.05 (two-tailed); N = 27; ^a VIF = Variance Inflation Factor

Table 5
Effects on social and commercial entrepreneurship

	1	2	3	4	5	6	7	8
Fixed part estimates								
Individual-level								
Age			0.99(0.00)	0.99(0.00)			1.01(0.00)	1.01(0.00)
Gender			1.09+(0.05)	1.09+(0.05)			0.70*(0.05)	0.69*(0.05)
Education level			1.49***(0.04)	1.49***(0.04)			0.89***(0.01)	0.88***(0.01)
Household income			1.11**(0.04)	1.11**(0.04)			1.26***(0.02)	1.24***(0.02)
Self-efficacy			1.46***(0.07)	1.45***(0.07)			4.82***(0.14)	4.87***(0.14)
Ties with other entrepreneurs			1.78***(0.09)	1.81***(0.09)			1.54***(0.04)	1.56***(0.04)
Country-level								
GDP per capita, USD			0.99(0.00)	0.99(0.00)			0.99(0.00)	0.99(0.00)
Government effectiveness			1.95***(0.14)	1.59***(0.14)			0.88(0.14)	0.71(0.14)
Desirability of entrepreneurship			1.25***(0.06)	1.25***(0.06)			1.59***(0.02)	1.28***(0.02)
In-Group Collectivism		1.15*(0.07)		1.39***(0.05)		0.71***(0.00)		0.79***(0.01)
Inter-Personal Trust		1.54***(0.03)		1.39***(0.04)		1.01(0.02)		1.16***(0.01)
Random part estimates								
Variance of intercept	0.73	0.49	0.51	0.39	1.10	1.04	0.59	0.39
Variance of overall residue	3.30	3.27	3.26	3.25	3.28	3.26	3.24	3.22
percent of variance explained (ICC)	18.10	13.02	13.51	10.72	25.07	24.17	15.39	10.79
Model fit statistics								
Number of observations	58 918	58 918	58 918	58 918	58 918	58 918	58 918	58 918
Number of countries	27	27	27	27	27	27	27	27
Degrees of freedom (Number of variables in the model)	0	2	9	11	0	2	9	11
Chi-square	-	10.34	500	508	-	1.26	4 292	4 306
Probability > Chi-square	-	**	***	***	***	n.s	***	***
Log likelihood	-7 312	-7 307	-7 047	-7 041	-25 558	-25 551	-22 894	-22 881
Likelihood ratio (LR) test	***		***	***	***		***	***

Standard errors in parentheses

Note: Columns 2, 3, 5 and 6 represent odds ratio (OR) instead of regression estimates. OR values greater than 1 signal positive association. OR values smaller than 1 signal negative association.

p < 0.001***; p<0.01**; p<0.05*; p<0.1+; n.s (non-significant)

2-tailed significances for hypotheses; statistically significant LR test suggests that a multi-level model is preferred over OLS

Appendix 1
Operational definition, concept, and data source for each measure

Variables	Definition	Source
Country-level		
In-Group collectivism	Extent to which individuals should express pride, loyalty, and cohesiveness in their organizations and families; GLOBE variable name <i>ingroup collectivism</i>	<i>GLOBE</i>
Inter-Personal Trust	% survey participants responding 'most people can be trusted' as opposed to 'one cannot be too careful'; WVS variable name <i>V24</i>	<i>WVS</i>
GDP per capita	GDP Per Capita in USD at purchasing power parity; WB variable name <i>GDP, per capita (PPP)</i>	<i>WB</i>
Government Effectiveness	Effectiveness of government policies; WGI variable name <i>government effectiveness</i>	<i>WGI</i>
Social Desirability of entrepreneurship	Desirability of entrepreneurship in a given country; principal component factor analysis of country mean of individual-level response on <i>nbgoodc, nbstatus</i> and <i>nbmedia</i> (variable names) that loaded on one factor was used	<i>GEM</i>
Individual-level		
Self-efficacy	Whether individual thought that he or she possessed the knowledge, skills, and experience to start a new business (1=yes, 0=no); GEM variable name <i>suskill</i>	<i>GEM</i>
Ties with entrepreneurs	Whether or not the individual knew someone personally who started a business in the past 2 years (1=yes, 0=no); GEM variable name <i>knowent</i>	<i>GEM</i>
Age	Age of the respondent; GEM variable name <i>age</i>	<i>GEM</i>
Gender	Female =1, Male=0; GEM variable name <i>gender</i>	<i>GEM</i>
Level of education	None=0, 1=some primary, 2=primary, 3=secondary, and 4=graduate; GEM variable name <i>gemeduc</i>	<i>GEM</i>
Household income	1=Lower income tier, 2= middle income tier, and 3=upper income tier; GEM variable name <i>gemhhinc</i>	<i>GEM</i>
Dependent Variables		
Startup- Social	1= survey respondent involved in social startup, 0 otherwise; created using GEM variable name <i>sestart</i>	<i>GEM</i>
Startup- Commercial	1= survey respondent involved in commercial startup, 0 otherwise; created using GEM variable names <i>teayy, suboanw, babybuso</i> and <i>estbbuso</i>	<i>GEM</i>