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Societal Ethics and Social Entrepreneurship: A Cross-Cultural Comparison

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ABSTRACT

Using multilevel modeling and data from 26 countries that includes 93,439 individual-level responses on social entrepreneurship for the year 2015, we seek to understand how societal-level ethical orientations impact the likelihood of individuals engaging in social entrepreneurship. We develop a multidimensional representation of societal ethics, in that we draw close parallels between the three institutional pillars—normative, cognitive, and regulatory—with three forms of ethics and use this understanding to predict their effects on the demand for and supply of social entrepreneurs. We find that low *behavioral ethics* (normative ethics) at the societal level provide opportunities for individuals to become social entrepreneurs. Further, while *unselfishness* (cognitive ethics) motivates individuals to become social entrepreneurs, high *public-sector ethics* (regulatory ethics) provide the institutional support for such entrepreneurs to thrive. We contribute to cross-cultural comparative entrepreneurship by providing ethical antecedents of social entrepreneurship through a deeper understanding of the influence of ethics as national-level institutions.

Keywords: social entrepreneurship, institutional framework, behavioral ethics, public sector ethics, unselfishness

Introduction

Social entrepreneurs are increasingly recognized for providing solutions to complex and persistent social concerns across the world (Zahra, Gedajlovic, Neubaum, & Shulman, 2009). Despite this increasing recognition, there is limited understanding of the societal (macro level) drivers of this type of entrepreneurship (Estrin, Mickiewicz, & Stephan, 2013; Stephan, Uhlaner, & Stride, 2014). Further, scholarly attention on the links between ethics and entrepreneurial behaviors has garnered momentum (Harris, Sapienza, & Bowie, 2009). Specifically, examining what ethical factors drive socially responsible behaviors is a growing area of interest (Bacq, Hartog, & Hoogendoorn, 2014).

Donaldson (2001) argues that for ethical drivers to be effective they have to be embedded in and supported by the institutional fabric of society (Jennings & Velasquez, 2015). Further, consistent with the aggregate trait theory, societal ethics can be argued to be manifestations of ethical behaviors displayed by the majority of its individuals (Schwartz, 2006). We identify three distinct *forms* of societal-level ethics (public-sector ethics, behavioral ethics, and unselfishness) as regulatory, normative, and cognitive institutions respectively (Donaldson, 2017), and examine their influence on the likelihood of individuals engaging in social entrepreneurship (SE).

The above societal ethics could assume different forms. For example, the level of enforcement and the quality of *regulatory* institutions (public-sector ethics) in a country may in part be the outcome of ethical (or unethical) practices in that context. Countries that adhere to practicing stricter ethical standards are likely to have higher-quality regulatory institutions that may subsequently promote entrepreneurial behaviors (Stephan, Uhlaner, & Stride, 2014). Also, ethical values may be embedded culturally, such that being ethical may be aligned with the

prevailing cultural norms in a society (Schwartz, 2006). Ethical attitudes and values may thus line up with the cultural orientations that are representative of a country's *normative* institutions (behavioral ethics). Such orientations have been known to influence entrepreneurial behaviors (Autio, Pathak, & Wennberg, 2013; Muralidharan & Pathak, 2017). Finally, being ethical may in part be morally driven. For example, one may find it morally obligatory to be unselfish, or be respectful to others, express gratitude, etc., such that being ethical may be an expression of moral emotions and social responsibility. Displays of prosocial emotions are cognitive responses largely triggered by motivations to engage in social value creation. This "others-focused" value of being prosocial has been discussed as a *cognitive* institution (unselfishness) that affects entrepreneurial behaviors (Stephan et al., 2014). Combined, we present a holistic understanding of the influence of the above societal-level ethics as prevailing institutions on individual-level SE, and hence contribute to research on cross-cultural entrepreneurship.

We test our related hypotheses using a multilevel design by constructing a cross-national data set, consisting of population-representative surveys from the Global Entrepreneurship Monitor (GEM) involving 93,439 respondents from 26 countries for the year 2015. We combine this information with data on national-level indicators of behavioral ethics and unselfishness from the World Values Survey (WVS), and public-sector ethics from the Global Competitiveness report of the World Economic Forum (WEF).

Our paper is organized as follows. First, we discuss literature linking ethical context, national-level institutions, and SE. We then discuss the theoretical background leading to our hypotheses. Drawing on insights from institutional theory, we hypothesize the effects of behavioral ethics, unselfishness, and public-sector ethics on SE. Thereafter, we describe our methods and present our results. We conclude with a discussion of our findings.

Institutions, Ethical Context, and SE

Extant literature in comparative entrepreneurship suggests that societal-level institutions are linked with entrepreneurial activity (Muralidharan & Pathak, 2017; Terjesen, Hessels, & Li, 2016). Institutions are "the humanly devised constraints that structure human interaction" (North, 1990, p.3). They refer to the key aspects of social structure, which act as authoritative guidelines and constraints for behaviors (North, 2005; Scott, 2005). They act as taken-for-granted rules that can be explicit and consciously perceived by individuals or can be implicit guidelines for individuals' actions (Powell & DiMaggio, 1991). Scott (1995; 2008) classified North's formal and informal dimensions of institutions into three pillars: regulatory, normative, and cultural-cognitive.

The regulatory pillar consists of formal rule systems like laws and regulations as well as enforcement mechanisms that are sanctioned by the state (Scott, 1995). The three-pillar perspective further differentiates two types of informal institutions, cognitive and normative, arguably corresponding to the concepts of cultural values and practices in cross-cultural research (Javidan et al., 2006). Specifically, cognitive institutions are culturally shared understandings that are associated with cultural values, and normative institutions refer to social obligations and expectations about actions that are modeled on existing practices or norms in each culture (Javidan et al., 2006; Scott, 2005; Stephan & Uhlaner, 2010).

We posit that societal ethics map closely with the three pillars of institutional theory. Behavioral ethics can be referred to as the normative dimension since they comprise practices or norms of moral behaviors displayed in a society. Unselfishness, which can be considered as reflective of societal values, refers to the cognitive dimension. These values represent shared beliefs and attitudes among the individuals of a society. Public-sector ethics can be referred to as

the regulatory dimension since they facilitate or constrain the outcomes of individual's activity through the enforcement of rules and regulations required to conduct transactions in a fair manner. Stephan et al. (2014), in their study that examines the influence of institutions on SE, suggest that individual agency of SE is facilitated and constrained by both formal as well as informal institutions. These ethical institutions, we posit, represent institutional conditions (or ethical contexts) that determine the demand and supply of social entrepreneurs (Stephan et al., 2014).

We use the institutional void and institutional support perspectives to understand the influence of these ethical contexts on individuals' engagement in SE. In the *institutional void* perspective, SE motivation increases in contexts where resources are scarce and social problems are abundant (Estin et al., 2013a; Stephan et al., 2014). Contexts where governments are less active may trigger a greater demand for SE (Zahra et al., 2009). On the other hand, the *institutional support* perspective proposed by Stephan et al. (2014) refers to contexts that provide easy access to information and resources and thereby increases supply of social entrepreneurs. Drawing on the institutional void perspective, low behavioral ethics in society, which represent an institutional void, provide the opportunity for social entrepreneurs to direct change. Drawing on the institutional support perspective, unselfishness can be argued to be a value that motivates individuals to undertake SE. Similarly, strong public-sector ethics reduce transaction costs in society and thereby facilitate SE.

In summary, societal-level ethical institutions facilitate or constrain SE. We develop a multilevel model (represented in Figure 1) that proposes main effects of ethical institutions on individual SE. In the subsequent sections, we discuss the influence of each of these ethical institutions in predicting SE.

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

Hypotheses Development

As discussed earlier, low behavioral ethics are contexts that create opportunities for SE. Similarly, unselfishness in society and high public-sector ethics are ethical contexts that facilitate SE. In the subsequent sections, we elaborate on each context to develop our main hypotheses.

Behavioral Ethics (Normative Ethical Context) and Social Entrepreneurship

We define behavioral ethics as morally justifiable actions by members of a society. The higher the prevalence of unethical behaviors, the more frequently the members of a society will engage in unjustifiable actions—be it justifying claiming benefits one is not rightfully entitled to, avoiding paying taxes, bribing to ensure personal gains, etc. Whatever the case may be, these members represent a section of the society that puts personal benefits above those of the society's by engaging in wrongful use as well as acquisition of resources and having unfair access to potential opportunities. They are likely to distance themselves from the pursuit of any social cause leading to reduced participatory interaction with other members in the society. Such a context, we argue, is an opportunity for social entrepreneurs.

Entrepreneurial activity can be considered as a function of opportunity structures and of motivated entrepreneurs (Aldrich & Zimmer, 1986). It is conceived as a product of the individual and the context that provides an opportunity to act entrepreneurially (Shane & Venkataraman, 2000). SE can be defined as the recognition and exploitation of those opportunities that stem from the long-standing needs of society (Austin, Stevenson, & Wei-Skillern, 2006). Every society has its fair share of agents that are prosocial—who genuinely wish to contribute toward social value creation by bringing about social change. A society with low behavioral ethics (or the presence of high unethical behavior) will represent a context that presents itself as an opportunity for prosocial individuals to "right the wrong" and take the onus upon themselves to engage in socially responsible behaviors. Baumol (1990) states that society's

norms create incentives or opportunities that influence entrepreneurial activities. Extant research connecting entrepreneurship and society also suggests that an entrepreneur can stimulate positive change by discarding existing norms or helping to create new ones (Harris et al., 2009). Examples lie in the many civic anti-corruption organizations in society, such as Bharat Swabhiman Trust, 5th Pillar, etc., in India.

In sum, we therefore maintain that social entrepreneurs, who typically are high on prosocial motivations, would advance social change by improving behavioral ethics through their enterprises. Such entrepreneurs essentially step in to correct the constraining normative institutional arrangements (Mair & Marti, 2009) as reflected by weak behavioral ethics in society. Hence, we posit:

> **Hypothesis 1**: Unethical behaviors in a society will be positively associated with the likelihood of individuals engaging in social entrepreneurship.

Unselfishness (Cognitive Ethical Context) and Social Entrepreneurship

Unselfishness is an ethical value that motivates individuals to undertake SE and distinguishes social entrepreneurs from commercial entrepreneurs by their attaching importance to actively doing good for society as opposed to private gain (Zahra et al., 2009). It is an individual's willingness to put the needs of others before one's own—making it a prosocial behavior. It is a distinct aspect of psychological functioning related to the self and is closely related to characteristics like kindness, altruism, empathy, and compassion (Dambrum & Ricard, 2011). Unlike self-centered psychological functioning, unselfish or selfless functioning is based on a strong connection between self and others (Leary, Tipsord, & Tate, 2008). We reason that the motivation to make a prosocial difference emerges through the experience of the psychological state of unselfishness or selflessness. Our rationale is in line with the perspective that being motivated to make a positive difference in others' lives consists of an emotional concern for and

dedication toward the people in society, a feeling for others (Grant, 2008). Such altruistic concerns for others are leadership characteristics that are prompted by a sense of duty toward others without any regard for self-interest and are causes of considerable personal sacrifice to the leader (Kanungo, 2001).

By the aggregate trait hypothesis, a country would rank high on such prosocial values if they were held by a majority of its individuals. Selfless values in a society can thus be classified as a cognitive ethical institution. When applied to SE, this aggregate trait perspective maintains that the greater the number of individuals in a society who hold values consistent with SE, the greater the number of individuals in that society who will be motivated to engage in SE (Stephan et al., 2014). Social entrepreneurs in societies with high unselfishness values are more likely to perceive the tendencies and willingness of its members to share otherwise scarce and difficult-to-acquire resources—enabling them to acquire them more comfortably. The display of prosocial behaviors by the majority of individuals around them would also be indicative of the social cooperation available to them—that there would be participatory interaction from the members toward the pursuit of a social cause. They would feel confident and motivated to pursue social value creation when there would be more members willing to share the moral responsibility of doing something good for the society—lending legitimacy to the social entrepreneur's vision. Combining these insights, we suggest that societal unselfishness values offer institutional support, which the social entrepreneurs act upon and benefit from, in creating social value (Bacq et al., 2014). Hence, we posit:

> **Hypothesis 2**: Unselfishness in a society will be positively associated with the likelihood of individuals engaging in social entrepreneurship.

Public-Sector Ethics (Regulatory Ethical Context) and Social Entrepreneurship

In the public sector, ethics addresses the fundamental premise of a public administrator's duty as a "steward" to the public. In other words, it is the moral justification and consideration for decisions and actions made during the completion of daily duties when working to provide the general services of the government. As defined by Kaufmann (2004), public-sector ethics relate to bribery, favoritism, and integrity in the public sector. Prevalence of bribery, presence of favoritism, and lack of integrity in the public sector represent a lack of government support that may impair the initiatives that social entrepreneurs take in their endeavors.

Extant research suggests that government participation and involvement, by providing tangible and intangible support for social entrepreneurs, can enhance SE (Zahra & Wright, 2011). While tangible support includes provision of grants, subsidies, and other direct funding for entrepreneurs, intangible support may include assistance with completion of grant applications, endorsements, and sponsorship of activities that help social entrepreneurs to network with one another and other stakeholders (Meyskens, Carsrud, & Cardozo, 2010). We identify public-sector ethics as contextual factors that can facilitate or constrain entry of individuals in SE. These factors, we argue, are the intangible operational constraints that social entrepreneurs face in establishing their entities, getting relevant clearances and permits, accessing funding, and carrying out day-to-day operations with government or public sector entities. We believe that such operational constraints would increase the transaction costs for social entrepreneurs to commence and operate their enterprises in a sustainable manner.

In this institutional support perspective, while the key role of government is to provide public goods and to take care of the welfare of its citizens, social entrepreneurs create organizations to address social needs. Thus, government, public institutions, and social organizations could all be regarded as natural partners to achieve social objectives (Zahra &

Wright, 2011). Higher ethical standards of government and public institutions may enhance the effective use of the social entrepreneur's own resources and of those gained through the entrepreneur's social networks (Stephan et al., 2014). For example, Saxton and Benson (2005) found a positive relationship between government support and the creation of nonprofit organizations. Case studies of CDI (in Brazil) and Unis-Cité (France) also illustrate how governmental support for social entrepreneurs helped them achieve scales of operation (Santos, 2012). These studies highlight the importance of support provided by governments, which is reflected to a very large extent through a highly ethical public-sector environment, lack of which would increase transaction costs of operating social enterprises. Hence, we posit:

> **Hypothesis 3**: High public-sector ethics will be positively associated with the likelihood of individuals engaging in social entrepreneurship.

Methodology

Data

We analyzed survey data on 93,439 individual-level responses from 26 countries for 2015, obtained from the publicly available Global Entrepreneurship Monitor (GEM) survey (Reynolds et al., 2005) conducted by the Global Entrepreneurship Research Association (GERA). We complemented the GEM database with data on national-level indicators of behavioral ethics and unselfishness from the World Values Survey (WVS), and with that on public-sector ethics from the Global Competitiveness report of the World Economic Forum (WEF).

Dependent variable

Our dependent variable is the *individual-level likelihood of engaging in SE* (likelihood measured with respect to the general population) and was obtained from the GEM data set. The GEM data set identifies three types of entrepreneurs: (1) *nascent entrepreneurs*—individuals who were

active in the process of establishing a new firm during the preceding 12 months and who have expectations of full or part ownership but 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 of 3.5 years old or older. *Nascent entrepreneurs* represent entrepreneurial behavior in the pre-entry phase; new entrepreneurs and established entrepreneurs represent entrepreneurial behaviors in the post-entry phase. Each of these three categories was identified separately for SE such that some of the respondents may simultaneously represent multiple categories (Lepoutre, Justo, Terjesen, & Bosma, 2013). We considered all the above three types of entrepreneurs in our sample of social entrepreneurs since all social entrepreneurs could be assumed to be driven by prosocial behaviors, irrespective of the stage of entrepreneurship.

The GEM SE survey methodology (Stephan et al., 2014) identified social entrepreneurs as those individuals who responded 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 their 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" (Zahra et al., 2009). The dependent variable, therefore, assumed a value of 1 if the individual responses were affirmative, and a value of 0 otherwise, thus making it dichotomous in nature. Table 1 shows the percentage rates of SE in each of the 26 countries.

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

Predictor variables: country-level (level 2) ethical standards

Behavioral ethics: The index for behavioral ethics was obtained from the Integrated Values Survey data file of the World Values Survey and European Values Survey, which have data for six waves of the survey: 1981-1984, 1989-93, 1994-1998, 1999-2004, 2005-2009, and 2010-2014. To calculate the index that measures the behavioral ethics in a country, we took the average of the scores for the following four questions asked in the WVS survey: 1) It is justifiable to claim benefits to which you are not entitled; 2) It is justifiable to avoid paying a fare on public transport; 3) It is justifiable to cheat on taxes if you have a chance; 4) It is justifiable to accept a bribe in the course of one's duties. Each of these four questions is a 10-point Likert scale with 1 denoting "never justifiable" and 10 denoting "always justifiable." WVS reports the weighted (percentage of respondents) mean score for each of these four items. Our score for behavioral ethics—as used in this study—is the arithmetic mean of the scores on those four sub-items. Thus, on an aggregate, a higher score on this index represents that unethical behavior is justified in a country and that a lower value indicates otherwise.

Unselfishness: We obtained the societal-level *unselfishness* scores from the World Values Survey.[1] The respondents in the survey were asked to indicate the importance they attached to *unselfishness* as a quality that they encouraged their children to learn at home. WVS reports the percentage of respondents who believed that unselfishness was an important quality that they encouraged their children to learn at home. We used this percentage as the score for this predictor in our study.

Public-sector ethics: The index for the public-sector ethics was obtained from the Global Competitiveness Report of the World Economic Forum. This index measures variables related

[1] The details provided on the nature of WVS survey and our treatment of WVS data for *unselfishness* is identical to that of *behavioral ethical standards,* and hence not repeated for brevity.

to public integrity, bribery, and favoritism in the public sector (Kaufmann, 2004) and is measured on a scale ranging from 1 (unsatisfactory) to 7 (highly satisfactory). This index is represented by the percentage of firms that gave satisfactory ratings (answers of 5, 6, or 7) to the questions on the following parameters in their country: 1) honesty of politicians; 2) extent of government favoritism in procurement; 3) extent of diversion of public funds; 4) extent of trust in the postal office; 5) average bribe frequencies for permits, utilities, and taxes.

Individual and country-level controls

We controlled for several individual-level demographic characteristics, all obtained from the GEM data set. Based on extant research, we controlled for an individual's age (Reynolds et al., 2005), gender (Hechavarria, Ingram, Justo, & Terjesen, 2012), and education level (Arenius & Minniti, 2005). Economic development of a country represented by modernization of society is expected to increase GDP and provide growth opportunities for individuals in society (Bergmann & Stephan, 2013). Abundance of opportunities would tend to reduce unethical behavior in society. At the country level, we therefore controlled for GDP (for 2015) as a proxy for the availability of growth opportunities (Bergmann & Stephan, 2013). Since the predictor variables were obtained from different sources, we z-standardized each of them.

Results

Since our data is grouped by country, resulting in a hierarchical and clustered data set, we analyzed it using random-effect logistic regression to estimate the influence of country-level factors (level-2) on the likelihood of individual-level SE. While Table 2 provides the descriptive statistics, Tables 3a and 3b show the correlation matrices for individual and country-level variables respectively.

------Insert Tables 2, 3a, 3b here------

Intra-class correlation (ICC)

In order to confirm our use of multilevel analysis, we first checked for between-group variance in our dependent variable (Hox 2010). To check this variance, we estimated a multilevel logistic regression (Null Model of Table 4) that yielded an intra-class correlation coefficient (ICC or rho) of 16.2% for the likelihood of SE across the 26 countries included in our study. Since the observed ICC values represented significantly high variance (Hox, 2010), they necessitated multilevel analyses, warranting a look into country-level factors that could explain this variance.

------Insert Table 4 here------

Main effects on social entrepreneurship

Random-effect logistic regression models are reported in Models 1–8 of Table 4. The estimates are reported as odds ratios in Models 1–8, with ratios greater than 1 representing positive association (percent increase) and those less than 1 representing negative association (percent decrease).

Model 1 includes the three individual-level controls and one country-level control. Collectively, the four controls accounted for about 4% (((0.45 – 0.43)/ (0.45)) *100) of the variance in the dependent variable across the 26 countries. Models 2, 3, and 4 of Table 4 shows the influence of *behavioral ethics*, *unselfishness, and public-sector ethics* on the individuals' probability of engaging in SE when each of these predictors was respectively introduced in the model one at a time (piece-wise). The odds ratios indicate that a unit standard deviation increase in (a) *low behavioral ethics* (unethical behavior) increased the likelihood of individual-level engagement in SE by 15% (odds ratio = 1.15; $p < 0.001$; Model 2); (b) *unselfishness* increased that likelihood by 36% (odds ratio = 1.36; $p < 0.001$; Model 3); and (c) *public-sector ethics*

increased that likelihood by 10% (odds ratio = 1.10; $p < 0.001$; Model 4). We further conducted three separate coefficient-difference Wald tests: Wald test between public-sector ethics and unselfishness (Wald t-test = 5.82; $p < 0.05$; df (1)); between unselfishness and low behavioral ethics (Wald t-test = 7.50; $p < 0.05$; df (1)); and between public-sector ethics and low behavioral ethics (Wald t-test = 1.41; n.s.; df (1)). The above tests confirm that all else being equal, unselfishness is a stronger predictor of SE than both public-sector ethics and low behavioral ethics. All three forms of ethics, however, predicted SE positively as proposed in our hypotheses H1, H2, and H3.

We then introduced two out of the three predictors of ethics (pair-wise) at a time into our model, i.e. Models 5, 6, and 7 (in Table 4) to examine whether the influence of any or all the three forms of ethics is felt indirectly through mediation mechanisms. First, we find that the odds ratio for behavioral ethics decreases from 1.15 in Model 2 to 1.10 (Model 6) in the presence of unselfishness and to 0.81 (Model 7) in the presence of public-sector ethics. Further, the odds ratio for unselfishness decreases from 1.36 (Model 3) to 1.19 (Model 5) in the presence of public-sector ethics and to 1.34 in the presence of behavioral ethics (Model 6). Finally, we observe that the odds ratio for public-sector ethics decreases from 1.10 (Model 4) to 0.94 (Model 5) in the presence of unselfishness. These observations are indications of mediation occurring among the variables. To confirm, we therefore tested for mediation using the Freedman and Schatzkin (1992) (FS) t-score as per the method suggested by Zhang, Zyphur, and Preacher (2009). Behavioral ethics is mediated by unselfishness (FS t-test 1.99; df (1); $p < 0.05$), but the reverse mediation is not observed to be statistically significant—unselfishness is not mediated by behavioral ethics (FS t-test 0.52; df (1); n.s.). Further, behavioral ethics is observed to be also mediated by public-sector ethics (FS t-test 15.67; df (1); $p < 0.001$), but the reverse mediation is

not observed to be statistically significant—public-sector ethics is not mediated by behavioral ethics (the odds ratio of public-sector ethics actually increases from 1.10 to 1.11 in this case). The variance components of random intercepts decreased from 0.43 in Model 1 of Table 4 to approximately 0.40 in Models 5, 6, and 7 of Table 4, suggesting that the pairwise inclusion of ethics accounted for 7% (((0.43 – 0.40)/0.43) * 100) of the remaining variance in the dependent variable across 26 countries after the individual-level as well as country-level controls have been accounted for.

Finally, we introduced all three forms of ethics in Model 8 (Table 4). We observe that the odds ratio of behavioral ethics decreases from 1.15 in Model 2 to 1.10 in Model 8, odds ratio of unselfishness drops from 1.36 in Model 3 to 1.35 in Model 8, and that of public-sector ethics decreases from 1.10 in Model 4 to 0.98 in Model 8 (and loses statistical significance), suggesting that public-sector ethics is mediated in the presence of both unselfishness and behavioral ethics. We observe that this mediation is statistically significant (FS t-test = 3.23; df (1); $p < 0.001$).

Finally, the variance components of random intercepts decreased from 0.43 in Model 1 of Table 4 to 0.38 in Model 8 of Table 4, suggesting that the three ethics collectively accounted for 12% (((0.43 – 0.38)/0.43) * 100) of the remaining variance in the dependent variable across 26 countries after the individual-level as well as country-level controls have been accounted for. This observation renders the three contextual ethical predictors—behavioral ethics (normative), unselfishness (cognitive), and public-sector ethics (regulatory)—as salient predictors of the individual's likelihood of engaging in SE.

Robustness checks and supplementary analyses[2]

[2] While some key results of robustness checks and supplementary analysis have been reported in this section, detailed results are available from the authors upon request.

First, in our data set, the number of observations from UK (9,145 observations) and Spain (23,968) represent close to 35% of our entire sample. Spain's number of observations is an order of magnitude greater than those from the remaining 25 countries. In order to confirm that our findings were not biased due to large sample sizes from Spain, we ran regressions with randomly selected 10%, 15%, and 20% of overall observations from Spain and 50% of overall observations from UK (making Spain's and UK's retained number of observations comparable to the average number of observations from 24 countries) using the provision for random selection of cases available in STATA 13. We present our results using each of these three samples in Tables 5a (10% retention from Spain and 50% from UK), 5b (15% retention from Spain and 50% from UK), and 5c (20% retention from Spain and 50% from UK).

------Insert Tables 5a, 5b, and 5c here------

The results from the above robustness checks suggest that the findings are generally robust and are not biased due to the large number of observations from Spain and UK. In regard to main effects, seven out of nine main effects (three main effects each of the three types of ethics across the three samples) of ethics predictors were observed to be in the hypothesized direction similar to those observed with use of the full sample, with the exception of behavioral ethics and public-sector ethics in the second sample (15% Spain and 50% UK). Eight out of the nine effects were observed to be statistically significant as well. In summary, we infer that even with a reduced sample, and using a random sample of observations from UK and Spain that are comparable to the number of observations from other countries, our results are by and large robust and, in the direction, proposed in our hypotheses. In regard to mediation effects, the three forms of ethics were observed to be generally interacting with each other—i.e., the effects of one on SE is felt to be mediated by the remaining forms of ethics—although these mediations were

weaker in comparison to those in the full sample. The causal mechanism where the effects of public-sector ethics was felt via its mediation by the other two forms of ethics (behavioral ethics and unselfishness) is observed to be true for two out of the three randomly selected samples (the effects were not observed in 15% Spain and 50% UK data only).

In addition to the above robustness checks, we conducted several supplementary analyses that seemed to be conceptually and theoretically connected to our empirical framework. First, we acknowledge that cultures have a significant role to play in shaping societal ethics (Franke & Nadler, 2008). We confirmed that our proposed ethical dimensions are not driven by national cultural influences by performing additional robustness checks. We added Schwartz's embeddedness values, Hofstede's individualism vs. collectivism, traditional values, self-expression values, and societal trust from the World Values Survey (WVS) in our regressions and find that there is no loss of generalizability of the findings of our study, in that all the predictors of ethical institutions were still in the proposed direction and statistically significant.

For social entrepreneurs, social value creation is the main objective, while creating economic value may be a means to ensure financial sustainability (Mair & Martí, 2006). In other words, SE may be created through profit activities that go beyond microfinance and self-help systems. We therefore created a second measure of SE called "revenue-generating social entrepreneur" from the GEM survey. On running our regressions using this measure as our dependent variable, we find no loss of generalizability of our findings.

Further, we acknowledge that unselfishness may theoretically be substituted with other conceptually similar prosocial constructs. To confirm that unselfishness truly is a prosocial value, we replaced it with other widely validated measures of prosocial values—such as the embeddedness values as offered by Schwartz's measures of values, and societal trust offered by

WVS. Upon substituting unselfishness with these values, we did not observe any loss of generalizability of our findings—i.e. the directionality as well as the statistical significances of public-sector ethics and behavioral ethics were retained.

As our final robustness check, we replicated and built upon the findings of a recent study (Pathak & Muralidharan, 2018) that used the same data set as ours—albeit the year used in that sample was 2009 as opposed to 2015 in this paper—and examined income inequality and income mobility as predictors of social entrepreneurship along with self-efficacy, fear of failure, ties with other entrepreneurs, GDP per capita, and government effectiveness as controls. The results generally hold true and are in line with the main findings of our current study, indicating that even with the addition of previously established predictors of social entrepreneurship, our results are still robust.

Discussion

Societies have been observed to have different ethical orientations. For example, American entrepreneurs have been observed to use "ethics of justice" while Turkish entrepreneurs use "ethics of care" (Simga-Mugan, Daly, Onkal, & Kavut, 2005). Our broad contribution is in developing an understanding of ethics as institutions at the societal level. Using insights from institutional theory (institutional void and institutional support perspectives), we establish public-sector ethics, behavioral ethics, and unselfishness as regulatory, normative, and cognitive institutions respectively. Thereafter we argue that while behavioral ethical practices (or low behavioral ethical standards) are normative institutions that provide opportunities for social entrepreneurs to bring social change in society through their agencies, unselfishness as a societal value (a cognitive institution) is a driver of the prosocial motivations of social entrepreneurs. Successful *entry in SE* would, however, require easily accessible and supportive regulatory

institutions that manifest themselves in fair and ethical public-sector institutions. These public-sector institutions lower the transaction costs associated with starting and managing social enterprises. Further, coefficient difference Wald tests confirmed that cognitive ethics (unselfishness) is a stronger enabler of SE than normative (behavioral ethics) and regulatory ethics (public-sector ethics).

Regarding public-sector ethics specifically, its effect on SE can also be argued from an institutional void perspective (thereby leading to a negative association with SE). We chose not to have a competing hypothesis in view of the findings by Stephan et al. (2014). They had two competing hypotheses using the institutional support and institutional void perspectives (for government activism and SE, although we are arguing from an ethical standpoint) and their results supported the institutional support perspective.

We also know, however, that institutions do not always operate in isolation. Ethical institutions may be interrelated such that the influence of one or the other on SE may not be that direct and straightforward, rather indirect and more *distal*. We tested for this possibility by performing FS t-tests as shown in Models 5, 6, 7, and 8 of Table 4. Our multilevel mediation tests confirmed potential interrelations between the ethical institutions. The causal mechanism that emerged out of these tests is that behavioral ethics (normative)—when interacting with one of the other form of ethics—is shaped by cognitive ethics (unselfishness) or public-sector ethics (regulatory). However, when the three ethical institutions interact simultaneously, then the influence of public-sector ethics is felt through the influence of behavioral ethics as well as unselfishness on social entrepreneurship. Put differently, public-sector ethics' influence on individual-level social entrepreneurship will be felt through a country's ethical standards and norms on ethical practices as well as through prosocial values held in that country. Thus, merely

formulating sound policies to ensure high public sector ethical standards may not be sufficient for promoting social entrepreneurial behavior as the onus to do so is on individuals in society with high prosocial values of unselfishness and those who display ethical behaviors.

Contributions and implications

We make several contributions to extant literature. First, entrepreneurship and ethics have generally been treated as separate fields of study. While the studies of entrepreneurship and business ethics have become important and rigorous as areas of research, their intersection remains relatively in early stages (Harris et al., 2009). Our study is situated at the intersection of entrepreneurship and societal ethics. Second, we suggest that not all forms of ethics are alike and that we categorize them along the three pillars of institutional theory. What emerges directly through our treatment of ethics as institutions is that it provides a benchmark for classifying societal-level ethics as either regulatory, normative, or cognitive institutions. This feeds directly into the notion of a potential national institutional framework for ethics, such that our contribution lies in professing that future research must first start by labeling the type of ethics in question as any of these three institutions. This suggestion, if followed, may lead to a well-directed development of theory on the links between ethics and entrepreneurial behaviors by eliminating the blurry boundaries that may exist among the different forms of ethics and by providing a more nuanced understanding of how ethical institutions drive SE in individuals.

Third, and as a natural outcome of our first contribution, our institutional treatment of ethics provides a more contextualized understanding of the effect of societal-level ethics on individual-level SE. SE research lags practice (Nicholls, 2008), in that the influence of context on SE stands out as an under-researched area (Estrin et al., 2013b). Since socially responsible behaviors (as indicated by rates of SE) have been observed to vary significantly by countries

(Lepoutre et al., 2013), this variance may in part be accounted for by a country's ethical orientations. Further, national ethical institutions may interact with one another and contribute to the *national entrepreneurship framework* conditions, which are resource allocation mechanisms that are driven by individual-level opportunity discovery and pursuits, the outcomes of which are regulated by nation-specific institutions (Ács, Autio, & Szerb, 2014).

Fourth, our study employs a multilevel theoretical as well as empirical design to investigate how societal ethical orientations influence individual-level SE, thus allowing us to contribute to the cross-country comparative entrepreneurship research. More broadly, our study is in line with the recent calls by scholars for greater examination of the impact of context on entrepreneurial behavior (Welter, 2011; Zahra & Wright, 2011), and for the advancement of SE research through advanced quantitative methods (Dacin, Dacin, & Tracey, 2011). Extant research has largely examined ethics as a consequence of a socio-cultural context, i.e. the extent to which context influences ethical attitudes of entrepreneurs or how entrepreneurs react to ethical dilemmas in their entrepreneurial processes. While social entrepreneurs have been defined as agents of social change in society, such activity has been examined from the point of view of individual motivation of such entrepreneurs. We have attempted to establish how societal ethical contexts can serve as opportunities for such social change agents and how such contexts can facilitate entry into social entrepreneurial activity. In doing so, we have also contributed to the much-called-for literature that examines the effect of context on entrepreneurial behavior using advanced quantitative methods.

Finally, ethical environments help determine the quality and efficiency of economic interactions (Bucar et al., 2003). There is growing acknowledgment that a good ethical context can have a positive economic impact on the performance of firms (Joyner &

Payne, 2002). Societies that have higher ethical standards are typically characterized by lower costs to monitor and regulate such operations (Bucar et al., 2003). So, if it is understood that SE is a promising way for addressing social needs, it may call for added support in the form of legislation and social policy (Peredo & McLean, 2006). In addition, successful social entrepreneurs in public (DeLeon, 1996) or nonprofit administration have the potential to bring about significant changes to the public perception, policy making, and even implementation of social change in society (Waddock & Post, 1991).

Limitations and future research

Our study has some limitations, which present avenues for future research. First, the dependent variable, i.e. likelihood of SE, publicly available from GEM, is presently available for the years 2009 and 2015 only. Existing studies, using GEM longitudinal data, through reliability-tests of indicators of entrepreneurship (such as entrepreneurial intentions, nascent entrepreneurship, etc.) suggest this data has been consistent across countries over a span of 10 years (Stephan & Pathak, 2016). We assume that SE will be no different, although we are limited in providing reliability test data. We ran our analysis using 2009 data available from GEM and found that our results are valid as hypothesized. Further, a cross-level design assumes indeed that the different elements (regulatory, normative, and cognitive institutions) are stable, whereas these institutions as reflected by extant research vary with time. For example, increased immigration across countries may modify existing societal-level ethical standards. Such changes in ethical standards, in turn, may take time to influence the actual likelihood of the general population to engage in SE. Future research could therefore examine our propositions using longitudinal data spanning multiple years that would facilitate understanding of how societal ethics lead to the *evolution* of socially responsible behaviors over a period.

Second, we are beginning to understand the culture-entrepreneurship fit through recent cross-country comparative research in entrepreneurship. Franke and Nadler (2008) establish that national cultural values of individualism-collectivism and uncertainty avoidance shape national ethical attitudes. Stephan and Pathak (2016) show that the effect of cultural values of collectivism and uncertainty avoidance on entrepreneurship is felt indirectly—through culturally endorsed leadership styles. Consistent with these studies, our study can trigger future research to examine if and how national cultures shape societal ethical orientations (not just the normative ones, but also the regulatory and cognitive) such that ethical institutions may start to share a very important position in the culture-entrepreneurship fit causal mechanism.

Third, we are limited to theorizing the effects of only three types of ethical institutions. This is not exhaustive by any means, and future research should endeavor to identify more ethical institutions and subsequently explore how they shape socially responsible behaviors. Finally, opportunities for SE are different from those for commercial entrepreneurship (Corner & Ho, 2010), in that the ways these entrepreneurs interact and react to opportunities are different. While the objective of this study is to examine the influence of the three types of societal ethics on SE only, future research may examine the comparative influences of societal-level ethics on commercial entrepreneurship and SE.

Finally, we would expect ethical concerns to be more pronounced and distinct in developing countries as compared to those in developed countries. Extant research has examined entrepreneurship in the context of developing countries (Mair & Marti, 2009). We therefore conducted separate regressions to study the role of ethics in developing economies. The sample considered consisted of 11 countries whose GDP was less than 10,000 USD. We defined this sample as representative of developing nations. Two contrasting results were observed for this

sample of developing nations relative to the full sample. One standard deviation increase in behavioral ethics (unethical behavior) was observed to decrease the likelihood of engaging in social entrepreneurship by 14% (odds ratio = 0.86) in developing nations as opposed to a positive effect (odds ratio = 1.15) observed for the full sample and that public-sector ethics was also observed to decrease this likelihood by 32% (odds ratio = 0.68) in developing nations as opposed to the positive effects (odds ratio = 1.10) observed in the full sample. Consistent with the findings in the full sample, unselfishness was observed to increase this likelihood by 54% (odds ratio = 1.54). A coefficient comparison Wald test confirms that this effect size is indeed statistically stronger for developing nations as opposed to the odds ratio of 1.36 observed in the full sample. These findings suggest that in the context of developing nations, unselfishness (that drives prosocial values of individuals and is in line with the discussions around national-level post-materialism by Stephan et al. 2014) emerges as the strongest (and stronger than in the full sample) and the most favorable predictor of SE. However, what is observed to be contrasting are the opposite effects of behavioral ethics and public-sector ethics on SE in developing nations. In the case of behavioral ethics, challenges to steer members of such societies away from unjustified ethical behaviors could be higher in developing countries (for example, addressing corruption concerns in developing countries) and therefore could be a disincentive for potential social entrepreneurs. In the case of public-sector ethics, opposite results may be argued using the institutional void perspective, where lower public-sector ethics may be seen as an opportunity for social entrepreneurial behavior. These results therefore suggest that theorizing on the effects of societal ethics on social entrepreneurial behavior may need to be refined by future research based on the specific context in which such behavior is embedded (Welter, 2011).

Conclusion

Our study establishes ethics as national-level institutions that impact individual-level likelihood to engage in SE. While normative and cognitive ethical institutions are more likely to influence desirability of SE, regulatory ethical institutions ensure the feasibility of it. Normative institutions of low behavioral ethics provide opportunities for individuals to become social entrepreneurs. Cognitive institutions manifested in the level of unselfishness act as drivers of prosocial motivation for individuals involved in social value creation. Similarly, regulatory institutions of public-sector ethics facilitate individuals to become social entrepreneurs. Our study confirms that the three forms of ethics influence engagement in SE exclusively, but that when taken together, the positive influence of public-sector ethics on SE can be felt via a country's orientation on ethical practices and its prosocial values such as unselfishness. Our cross-cultural comparative entrepreneurship study using a multilevel design establishes a deeper understanding of societal-level ethical institutions as antecedents of SE.

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Figure 1: Theoretical and empirical model

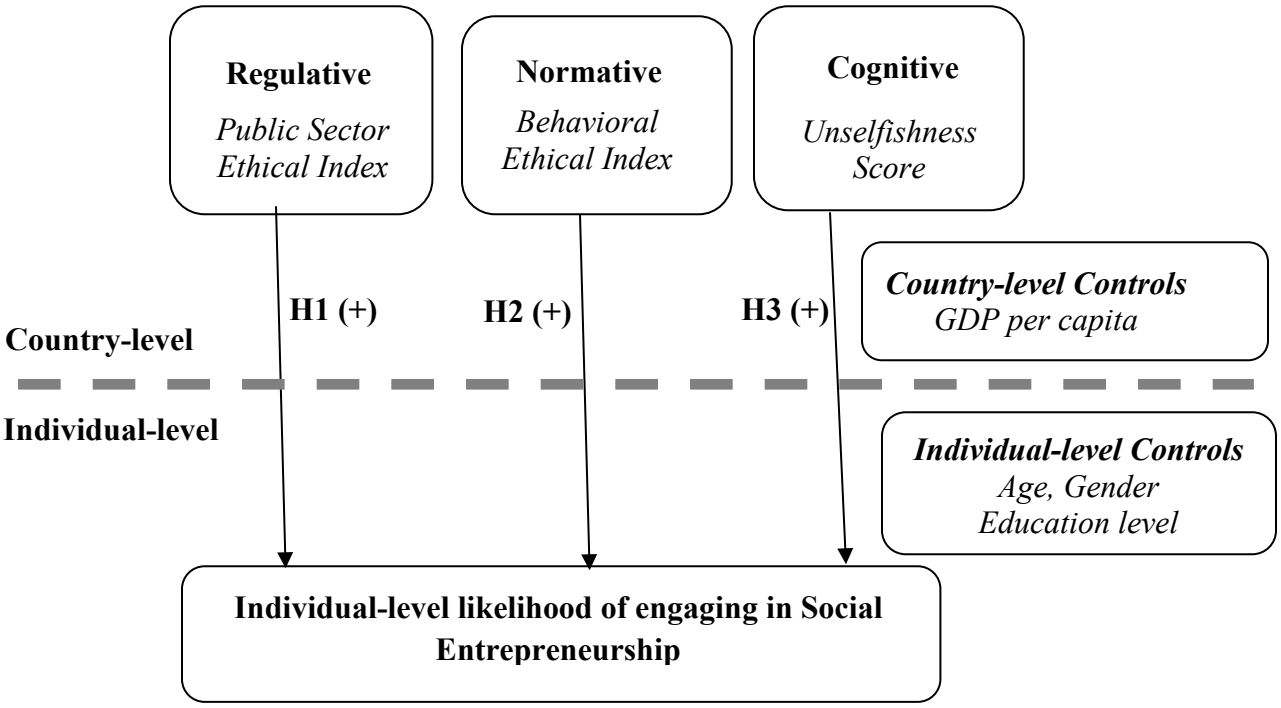

Table 1: Sample descriptives

Country	Social entrepreneurship (%)	Behavioral ethics	Unselfishness	Public sector ethics	Number of observations
Argentina	0.06	2.48	0.10	21.80	2,958
Brazil	0.03	3.04	0.34	35.20	1,992
Chile	0.13	2.32	0.24	62.90	6,187
China	0.10	2.61	0.32	42.10	3,696
Colombia	0.13	2.37	0.43	22.60	3,640
Croatia	0.11	3.48	0.29	27.70	1,986
Finland	0.07	2.01	0.24	93.80	1,990
Germany	0.03	1.94	0.06	74.30	3,745
Guatemala	0.07	2.99	0.42	16.70	2,170
Hungary	0.18	2.19	0.19	40.70	1,958
Italy	0.07	1.80	0.44	33.90	2,000
Latvia	0.03	3.13	0.20	32.30	2,002

Malaysia	0.02	2.62	0.30	58.60	1,964
Morocco	0.03	1.66	0.20	46.10	1,824
Netherlands	0.05	1.64	0.24	84.30	2,229
Norway	0.08	2.04	0.15	90.10	1,991
Peru	0.11	2.72	0.44	23.50	2,032
Romania	0.06	1.74	0.23	28.40	1,973
Slovenia	0.05	2.04	0.34	49.30	1,990
South Africa	0.04	4.21	0.26	42.20	3,113
South Korea	0.02	2.24	0.12	40.90	1,937
Spain	0.02	1.86	0.20	59.40	23,968
Switzerland	0.06	2.14	0.32	81.70	2,396
UK	0.06	2.13	0.55	79.70	9,145
Uruguay	0.08	1.87	0.58	40.90	2,143
USA	0.12	2.15	0.38	70.10	2,911

Table 2: Descriptive statistics of all variables

Variables	**N**	**Mean**	**SD**
Social entrepreneurship	93,949	0.06[a]	0.24
Age	93,949	42.43	14.71
Gender	93,949	0.51	0.50
Education level	93,949	2.02	1.00
GDP per capita, USD	26	25,572.43	18,110.13
Behavioral Ethics	26	2.24	0.54
Unselfishness	26	0.28	0.13
Public Sector Ethics	26	54.81	20.11

[a] Multiplying this number would yield percent of social entrepreneurship as mean across countries, here shown as raw mean N = 93,949; Weighted in order to give equal weights to all countries

Table 3a: Correlation matrix for individual-level variables

	1	2	3	4
1. Social entrepreneurship	1.00			
2. Age	-0.01*	1.00		
3. Gender	-0.02*	0.03*	1.00	
4. Education level	0.09*	-0.11*	-0.03*	1.00

*p < 0.05 (two-tailed); N = 93,949 Weighted in order to give equal weights to all countries

Table 3b: Correlation matrix for country-level variables

	1	2	3	4	5	VIF [a]
1. Social entrepreneurship	1.00					1.05
2. GDP per capita, USD	-0.09	1.00				1.31
3. Behavioral Ethics	0.03	-0.44*	1.00			1.35
4. Public Sector Ethics	-0.15	0.81*	-0.43*	1.00		1.18
5. Unselfishness	0.25	-0.14	0.05	-0.17	1.00	1.11

*p < 0.05 (two-tailed); N = 26; [a] VIF = Variance Inflation Factor; VIF < 10.00 suggests that the variables do not suffer from multi-collinearity (Hair, Anderson, Tatham, and Black, 1998). Social entrepreneurship converted to national percentage rates in the above matrix.

Table 4: Effect of national ethical institutions on the individual likelihood of social entrepreneurship (odds ratio)

	Null model	1	2	3	4	5	6	7	8
Fixed part estimates									
Individual-level									
Age		1.00*(0.00)	1.00*(0.00)	1.00*(0.00)	1.00(0.00)	1.00*(0.00)	1.00*(0.00)	1.00+(0.00)	1.00*(0.00)
Gender		0.82***(0.02)	0.82***(0.02)	0.82***(0.02)	0.82***(0.02)	0.82***(0.02)	0.82***(0.02)	0.82***(0.02)	0.82***(0.02)
Education level		1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)
Country-level									
GDP per capita		0.99***(0.00)	0.99***(0.00)	0.99***(0.00)	1.00*(0.00)	0.99***(0.00)	0.99***(0.00)	0.99***(0.00)	0.99***(0.00)
Behavioral ethics			**1.15*****(0.01)**				**1.10*****(0.02)**	**0.81*****(0.02)**	**1.10*****(0.02)**
Unselfishness				**1.36*****(0.02)**		**1.19*****(0.02)**	**1.34*****(0.02)**		**1.35*****(0.02)**
Public sector ethics					**1.10*****(0.03)**	**0.94****(0.02)**		**1.11*****(0.03)**	**0.98(0.02)**
Random part estimates									
Variance of intercept	0.45	0.43	0.42	0.41	0.42	0.40	0.39	0.40	0.38
% of Variance explained (Rho)	12.00	11.54	11.10	10.10	11.10	10.10	9.92	10.98	9.92
Model fit statistics									
Number of observations	93,949	93,949	93,949	93,949	93,949	93,949	93,949	93,949	93,949
Number of groups (countries)	26	26	26	26	26	26	26	26	26
Degrees of freedom (Number of variables in the model)	0	4	5	5	5	6	6	6	7
Chi-square	-	532.13	532.13	536.86	532.76	536.86	537.37	532.78	537.38
Probability > Chi-square	-	***	***	***	***	***	***	***	***
Log likelihood	-20,056	-19,769	-19,765	-19,730	-19,768	-19,738	-19,729	-19,755	-19,729
Likelihood ratio test of Rho	***	***	***	***	***	***	***	***	***

Standard errors in parentheses

Note: Columns 1 to 8 represent odds ratio (OR) in the Fixed part estimates section. 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+; 2-tailed significances for hypotheses

Table 5a: Robustness with reduced sample size of UK (with ~50 % retention) and Spain (with ~10 % retention)

	2	3	4	5	6	7	8
Fixed part estimates							
Individual-level							
Age	1.00(0.00)	1.00(0.00)	1.00(0.00)	1.00(0.00)	1.00(0.00)	1.00(0.00)	1.00(0.00)
Gender	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)
Education level	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)
Country-level							
GDP per capita	0.99***(0.00)	0.99***(0.00)	0.99***(0.00)	0.99***(0.00)	0.99***(0.00)	0.99***(0.00)	0.99***(0.00)
Behavioral ethics	**1.19***(0.02)**				**0.96*(0.02)**	**1.21***(0.02)**	**1.00(0.02)**
Unselfishness		**1.35***(0.02)**		**1.35***(0.02)**	**1.11***(0.02)**		**1.39*** (0.03)**
Public sector ethics			**1.08*** (0.02)**	**0.95* (0.02)**		**1.10***(0.02)**	**0.97 (0.02)**
Model fit statistics							
Number of observations	68280	68280	68280	68280	68280	68280	68280
Number of groups (countries)	26	26	26	26	26	26	26
Degrees of freedom (Number of variables in the model)	5	5	5	6	6	6	7
Log likelihood	-17072	-17043	-17066	-17040	-17052	-17063	-17039
Likelihood ratio test of Rho	***	***	***	***	***	***	***

p < 0.001***; p<0.01**; p<0.05*; p<0.1+; 2-tailed significances for hypotheses

Table 5b: Robustness with reduced sample size of UK (with ~50 % retention) and Spain (with ~15 % retention)

	2	3	4	5	6	7	8
Fixed part estimates							
Individual-level							
Age	1.00(0.00)	1.00(0.00)	1.00(0.00)	1.00(0.00)	1.00(0.00)	1.00(0.00)	1.00(0.00)
Gender	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)
Education level	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)
Country-level							
GDP per capita	0.99***(0.00)	0.99***(0.00)	1.00(0.00)	0.99***(0.00)	0.99***(0.00)	0.99***(0.00)	0.99***(0.00)
Behavioral ethics	**0.88***(0.02)**				**1.08***(0.02)**	**1.03(0.02)**	**1.07**(0.02)**
Unselfishness		**1.13***(0.02)**		**1.35*** (0.02)**	**1.24***(0.02)**		**1.33***(0.02)**
Public sector ethics			**0.95* (0.02)**	**0.95* (0.02)**		**1.09**(0.02)**	**1.07** (0.02)**

Model fit statistics							
Number of observations	68999	68999	68999	68999	68999	68999	68999
Number of groups (countries)	26	26	26	26	26	26	26
Degrees of freedom (Number of variables in the model)	5	5	5	6	6	6	7
Log likelihood	-17109	-17100	-17125	-17082	-17091	-17110	-17092
Likelihood ratio test of Rho	***	***	***	***	***	***	***

p < 0.001***; p<0.01**; p<0.05*; p<0.1+; 2-tailed significances for hypotheses

Table 5c: Robustness with reduced sample size of UK (with ~50 % retention) and Spain (with ~20% retention)

	2	**3**	**4**	**5**	**6**	**7**	**8**
Fixed part estimates							
Individual-level							
Age	1.00(0.00)	1.00(0.00)	1.00(0.00)	1.00(0.00)	1.00(0.00)	1.00(0.00)	1.00(0.00)
Gender	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)	0.81***(0.02)
Education level	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)	1.00***(0.00)
Country-level							
GDP per capita	0.99***(0.00)	0.99***(0.00)	0.99***(0.00)	0.99***(0.00)	0.99***(0.00)	0.99***(0.00)	0.99***(0.00)
Behavioral ethics	**1.07**(0.02)**				**0.92***(0.02)**	**1.02(0.02)**	**1.01(0.02)**
Unselfishness		**1.21***(0.02)**		**1.27***(0.02)**	**1.24***(0.02)**		**1.36*** (0.02)**
Public sector ethics			**1.02(0.02)**	**0.92**(0.02)**		**1.05*(0.02)**	**0.95* (0.02)**
Model fit statistics							
Number of observations	70198	70198	70198	70198	70198	70198	70198
Number of groups (countries)	26	26	26	26	26	26	26
Degrees of freedom (Number of variables in the model)	5	5	5	6	6	6	7
Log likelihood	-17228	-17202	-17204	-17199	-17209	-17219	-17188
Likelihood ratio test of Rho	***	***	***	***	***	***	***

Standard errors in parentheses
Note: Columns 2 to 8 represent odds ratio (OR) in the Fixed estimates section. 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+; 2-tailed significances for hypotheses