

“If it has to be, it is up to me”:

A multi-level approach to social entrepreneurial efforts

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Abstract: The objective of this study is to develop a better understanding of the factors that influence the allocation of entrepreneurial efforts toward addressing societal needs. Using a social cognitive framework and a multilevel empirical research approach, we investigate the interaction between an entrepreneur’s drive to address unmet social needs, their personal characteristics, and the environment. We test our individual-level and country-level hypotheses using a dataset (the Flash Eurobarometer survey on Entrepreneurship, no. 283) with information for more than 7,000 business owners in 34 countries. It turns out that the degree to which an entrepreneur addresses unmet social needs depends on their personality and the environment in terms of the national configurations of institutions. Other aspects of the environment including the presence of a socially supportive culture and the degree of urbanization play important roles through their interactions with several aspects of an individual’s personality. Hence, without certain personality traits, the environmental aspects do not necessarily lead to a higher inclination to address unmet social needs among business owners.

Keywords: social entrepreneurship, entrepreneurship type, multilevel, institutions, varieties of capitalism, culture, Eurobarometer

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1. Introduction

The objective of this study is to develop a better understanding of the factors that influence the allocation of entrepreneurial efforts toward socially oriented initiatives. Specifically, we investigate the interaction between an entrepreneur's motivation to address unmet social needs at business start-up, their personal characteristics, and the environment. By adopting a definition of social entrepreneurship based on the opportunities pursued we identify an important channel through which entrepreneurship may contribute to overall well-being. An understanding of what drives entrepreneurs who pursue social entrepreneurial endeavors is highly relevant given a growing number of social and environmental challenges, shrinking public funds, and an increasing reliance on market forces that contribute to solutions to social and environmental problems.

This study makes several contributions. First, we contribute to an emerging stream of literature that investigates which factors influence the allocation of entrepreneurial efforts toward specific types of activities (Baumol, 1990; Bowen and De Clercq, 2008; Stenholm et al., 2011). In contrast to an emphasis on ambitious or high growth entrepreneurship (Bowen and De Clercq, 2008; Stenholm et al., 2011), we focus on social entrepreneurship. However, in response to critique that neither the intentions of the entrepreneur (Acs et al., 2013) nor the adjective "social" (Cho, 2006; Santos, 2012) add to our understanding of the impact to society, we define social entrepreneurs as business owners who take an unmet environmental or social problem as a starting point to generate business.

Second, by taking a social cognitive perspective (Bandura, 1986; 1991; 2001; Wood and Bandura, 1989; Chen et al., 1998), we provide an inclusive framework for investigating business ownership that is aimed at addressing societal challenges. That is, the effects of individual level cognitive variables and environmental variables are jointly investigated. By taking account of

dispositional, behavioral, and environmental aspects in interaction, a more thorough understanding is obtained of the behavior of business owners as compared to a situation where these aspects would be investigated independently (Luthans and Ibrayeva, 2006; Hmieleski and Baron, 2009).

Third, by combining the social cognitive perspective with a multilevel (hierarchical) empirical research approach (Peterson et al., 2012), we provide a profound understanding of the complexity of entrepreneurial decision-making. As such, we contribute to the existing literature by addressing the call for a multilevel perspective in entrepreneurship and international business research (House et al., 1996; Hitt et al., 2007; Hmieleski and Baron, 2009; Peterson et al., 2012).

Fourth, at the aggregate level, this current study includes two key environmental or institutional variables that represent indicators for dominant logics of action suggesting predictable and habitual patterns of behavior. With respect to *informal* institutions, we take a descriptive norms approach to culture as opposed to a value approach (Fischer, 2006; Shteynberg et al., 2009; Stephan and Uhlaner, 2010) and build upon Stephan and Uhlaner's (2010) higher-order dimension of a socially supportive culture (SSC). Regarding *formal* institutions, we adopt a "Varieties of Capitalism" (VoC) classification of contexts (Hall and Soskice, 2001; Amable, 2003; Jackson and Deeg, 2008a; 2008b) that takes the complementarity between institutions into account.

Using hierarchical data for more than 7,000 former and current business owners in 34 societies we find that individuals' behavior in terms of their social business orientation is influenced jointly by their cognitive aspects and by the environment in which they are active. At the aggregate level, formal institutions play a role in explaining country differences regarding the motivation of business owners to address unmet social or ecological needs. Informal institutions as measured by the presence of a socially-supportive culture (SSC) are important in terms of the interaction between SSC and an individual's personality. That is, a business owner's personality

is related to the business owner's motivation to address social and ecological needs only in countries where SSC is high.

This paper is structured as follows. Section 2 zooms in on the two theoretical frameworks that form the basis of our hypotheses to be tested: social cognitive theory and institutional theory. The hypotheses at the individual and at the country level are presented in Section 3. Section 4 is devoted to a description of the data sample and the definitions of the relevant individual level and country level variables. The results are presented in Section 5 and discussed in Section 6, whereas Section 7 concludes.

2. Theoretical background

2.1. Entrepreneurship and societal benefits

In line with what seems generally accepted in entrepreneurship research, we define entrepreneurship as an occupation that refers to individuals owning and managing a business on their own account and risk. Entrepreneurship and small businesses are widely acknowledged for making positive contributions to societies in terms of generating jobs, introducing innovations, increasing real productivity, and enabling economic growth (Carree and Thurik, 2010; Van Praag and Versloot, 2007). However, entrepreneurship literature is dominated by the assumption that entrepreneurs are motivated by economic profit and self-interest (Baumol, 1990; Van de Ven et al., 2007; Cohen et al., 2008; Dacin et al., 2010) with any social benefits as merely a fortuitous coincidence. Attention for the exploitation of opportunities intentionally aimed at creating social value is catalogued in separate strands of literature (Van de Ven et al., 2007) such as sustainable or environmental entrepreneurship (Hall et al., 2010; York and Venkataraman, 2010) and social entrepreneurship (Mair and Martí, 2006; Zahra et al., 2009; Dacin et al., 2010).

Our focus is closely related to the domain of social entrepreneurship. However, we take a more inclusive approach than other scholars in this domain such as Dacin et al. (2010). Prior

research in the domain of social entrepreneurship is increasingly criticized for claiming that the intention to generate social benefits as opposed to economic benefits is what distinguishes social and commercial entrepreneurship (Acs et al., 2013; Santos, 2012). Acs et al. (2013) suggest that founder's intentions are not necessarily a requirement for being successful in producing the intended benefits. Entrepreneurs concerned with profit generation can also have additional motives and generate both economic and social benefits. In line with this critique, we argue that a distinction based on intentions is not always useful or necessary. In this study we define social entrepreneurs as entrepreneurs who take an unmet environmental or social problem as a starting point to generate business.

2.2. Social cognitive perspective and entrepreneurship

To date, environmental and personality aspects that influence economic behavior have been studied mainly independently (House et al., 1996; Hitt et al., 2007). In the field of entrepreneurship, this approach has been criticized for ignoring the complex multilevel dynamics of entrepreneurial processes (Wright et al., 2007; Baron, 2007; Hmieleski and Ensley, 2007).

In response, we use Bandura's (1986, 1999, 2001) social cognitive theory, which features reciprocal causation among an individuals' behavior, cognition, and the environment where each factor affects and is affected by the other two factors (Bandura, 1986; 1991; 2001; Wood and Bandura, 1989; Chen et al., 1998). In an indirect way, behavior can be affected by socio-structural factors in the environment through their impact on the psychological mechanisms of self-regulation (Bandura, 1986). For example, social influences such as economic conditions, institutional characteristics and family structures affect behavior by shaping one's aspirations, sense of self-efficacy, and moral judgmental standards. The social cognitive perspective on human behavior has been applied earlier to entrepreneurship (Luthans and Ibrayeva, 2006; Hmieleski and Baron, 2009; Stephan and Uhlaner, 2010). These studies claim that a more

comprehensive understanding of economic behavior can be gained through considering dispositional and environmental variables in interaction.

In this paper, behavior refers to addressing unmet social or ecological needs at business start-up. In line with the social cognitive theory, we postulate that dispositional and environmental aspects influence individual behavior. The environment exerts its influence at the more proximate level through the living area in terms of the degree of urbanization and at the more distant level through the country where one lives.

2.3. Institutional theory and entrepreneurship

Like the social cognitive perspective (Bandura, 1986; 1991; 2001), institutional theory (Powell and DiMaggio, 1991) advocates that intentions and decision-making processes as well as actual behavior such as starting and running a business need to be evaluated given the situational context. Certain economic behaviors such as entrepreneurship (North, 1991; Baumol, 1990) are conditioned by institutional settings subject to historical factors that tend to be stable over time. Institutions can be defined as “*collections of rules and routines that define actions in terms of relations between roles and situations*” (March and Olsen, 1989, p. 160). Environmental conditions that influence entrepreneurial behavior include formal institutions such as governmental rules, laws, constitutions, welfare state arrangements and the economic environment as well as informal institutions such as norms of behavior or conventions, broadly referred to as culture (Verheul et al., 2002; Wennekers et al., 2002; Levie and Autio, 2008).

With respect to formal institutions, we adhere to a recently evolved stream of literature on distinct capitalist economies, i.e. national configurations of institutions that take complementarity between institutions into account (Albert, 1991; Hall and Soskice, 2001; Coates, 2000; Schmidt, 2002; Amable, 2003). National configurations of institutions are seen not only as constraints but also as resources for solving key problems of economic coordination (Jackson and Deeg,

2008b).¹ This typology resulted in alternative frameworks ranging from dualist typologies such as the Anglo-Saxon versus Rhenish distinction of Albert (1991) to more fine grained typologies of Coates (2000) and Amable (2003). The analytical premises that these different typologies share is the assumption that institutions across several economic domains interact based on principles of embeddedness, complementarity, and path-dependence (Jackson and Deeg, 2008a; 2008b). The resulting internal cohesion among institutions generates predictable and stable patterns of behavior by actors within the system i.e. a “dominant logic of action”. Given that different societies have developed different systems of markets, private property, welfare state arrangements, and civil society, we anticipate differences in the manner in which individuals express and pursue their drive to actively do good to society.

With respect to informal institutions, the role of national culture is widely acknowledged as being of influence on social behavior (Peng, Wang and Jiang, 2008; Leung et al., 2005) such as national levels of latent and actual entrepreneurship (Freytag and Thurik, 2007; Blanchflower, 2000; Busenitz et al., 2000; Mueller and Thomas, 2001) and on motivation (Bardi and Schwartz, 2003; Egri and Ralston, 2004; Schwartz, 2007). However, national level cultures turn out to be difficult to conceptualize and to capture in empirical research. Following Stephan and Uhlaner (2010) we depart from a dominant value-based approach to culture in international business and entrepreneurship and take a descriptive norm approach. More precisely, we build on Stephan and Uhlaner’s higher-order dimensions of culture based on data from the Global Leadership and Organizational Behavior Effectiveness project (GLOBE project). Descriptive norms reflect existing behavioral patterns and refer directly to the aggregated level whereas values reflect personal preferences or desires measured as mean aggregated individual scores not necessarily resulting in actual behavior (Stephan and Uhlaner, 2010). These cultural descriptive norms are a *socially supportive culture* (SSC) characterizing a positive societal climate in which people

¹ Jackson and Deeg (2008b) refer three alternative frameworks i.e. Varieties of Capitalism (VoC), national business systems, and a governance approach.

support each other and a *performance based culture* (PBC) characterizing a culture where individual achievement and future-orientation are considered key to achieve high performance. This paper only focuses on SSC and its relationship with the degree to which entrepreneurs address social needs.

3. Hypotheses

3.1. Hypotheses at the individual level

A wide variety of individual-level factors have been linked to the *choice* made by individuals to start a business or not (Busenitz and Barney, 1997; Cooper et al., 1988; Koellinger et al., 2007). Other studies point at the relevance of an individual's personality with regard to business creation (Zhao and Seibert, 2006; Rauch and Frese, 2007). Recent studies indicate that different *types* of entrepreneurship such as social and commercial entrepreneurship require similar individual personality traits as well (Dacin et al., 2010; Estrin et al., 2011; Acs et al., 2013). We argue that addressing unmet social or ecological needs as a motivation for business creation poses additional challenges to agents who start a business. For example, socially oriented entrepreneurs tend to be concentrated in domains where the value being created is difficult to capture (Mair and Martí, 2006; DiDomenico et al., 2010) or where markets function inadequately and governments are unwilling or unable to intervene (Zahra et al., 2008; Mair and Martí, 2009; Santos, 2012). Therefore, we expect that differences in the social orientation of business owners at start-up can be explained by differences in personality characteristics.

In this study we include four personality characteristics that have proven to be of explanatory power to the choice to become an entrepreneur in numerous studies: generalized self-efficacy, locus of control, willingness to bear risk, and proactiveness (Rauch and Frese, 2007; Zhao and Seibert, 2006; Mueller and Thomas, 2001).

Hypothesis 1: The entrepreneur's personality in terms of (i) generalized self-efficacy; (ii) locus of control; (iii) willingness to bear risk; and (iv) proactiveness is positively related to the degree to which the entrepreneur is motivated to address social and ecological needs.

The first environmental aspect that we consider relates to the degree of urbanization in the living area of an individual. We expect that socio-economic conditions of the area in which one resides can stir up an agent's motivation to address unmet social and ecological needs. First, income levels in rural areas tend to be smaller than in urban areas, especially in less developed economies (Easterlin et al., 2011).² Referring to behavioral theory Zahra et al. (2008) suggest that entrepreneurs aspiring to improve the quality of life of others are likely to identify and tackle those problems that are most salient, relevant and accessible to them (see also Levie and Hart, 2011; Dorado and Ventresca, 2012). It is expected that this increased salience and visibility is more prominent in rural areas with lower income levels than in urban and metropolitan areas with higher income levels. A second argument concerns the connectedness to relevant others. Relationships in rural areas are often thought to be embedded in networks of close personal ties (Amato, 1993; Hofferth and Iceland, 1998) strengthening the motivation of actors to engage in actions that serve the collective (Cross et al., 2002; Gelfand et al., 2006; Dorado and Ventresca, 2012). Therefore:

Hypothesis 2: Residing in a rural area (vis-à-vis an urban or metropolitan area) is positively related to the degree to which the entrepreneur is motivated to address social and ecological needs.

3.2. Hypotheses at the country level

² Indeed, the dataset used in this study reveals that self-assessed household incomes are largest in the metropolitan and urban areas as compared to the rural areas. This discrepancy in income levels between urban areas and rural areas is greatest in the least developed countries that are represented in the dataset, i.e. the (former) transition economies in the European Union.

The second and more distinct aspect of the environment refers to the country where one lives. A region's history shapes socio-economic and institutional conditions and dictates the options available for agents leading to different manifestations of economic activities including social entrepreneurial activities (Nicholls, 2006a, 2006b; Kerlin, 2009; Mair, 2010). Kerlin (2009) suggests that the strongest socio-economic factors in a country or region are reflected in that region's social enterprise model. Building on these findings, we suggest that the *complementarity* of different institutions influences the manifestations of social enterprises and the extent to which individuals choose the entrepreneurial option to address societal needs. This is where the Varieties of Capitalism approach offers an appealing perspective. Building on Mair (2010), we propose the following hypothesis:

Hypothesis 3a: Country differences regarding the motivation of entrepreneurs to address social and ecological needs are related to national configurations of institutions.

More precisely, we suggest that in liberal economies such as the United States (US) and the United Kingdom (UK), characterized by well-developed markets, high income inequality, and a small welfare state, social needs are left unattended. This leaves room for entrepreneurs in these liberal economies to address those needs as compared to social-democratic societies such as Denmark, Finland, or Sweden (Mair, 2010). The volume of unattended social needs combined with a strong entrepreneurial mindset in liberal economies makes us hypothesize the following:

Hypothesis 3b: Entrepreneurs are more motivated to address social and ecological needs in liberal economies than in socio-democratic economies.

Next, differences in culture are assumed to be of influence on entrepreneurial decision-making (McGrath and MacMillan 1992; Davidsson 1995; Busenitz et al. 2000; Mueller and Thomas 2001; Noorderhaven et al. 2004; Stephan and Uhlaner, 2010). We suggest that differences in culture are also related to the type of start-up motivation. In line with Muethel et al. (2011) who focus on prosocial values, we argue that a culture characterized by the concern for

immediate others and a climate in which individuals help each other can materialize in different behaviors, choosing the entrepreneurial option being one of them. In line with Stephan and Uhlaner (2010) we refer to such culture as a socially-supportive culture.

Hypothesis 4a: A socially-supportive culture is positively related to the degree to which entrepreneurs are motivated to address social and ecological needs.

In addition, Mueller (2006) and Wagner and Sternberg (2004) found that high prevalence rates of entrepreneurship at the regional level are positively related with the likelihood of individuals choosing the entrepreneurial option suggesting “legitimation” or “moral approval” of entrepreneurship (Etzioni, 1987; Freytag and Thurik, 2007). We expect that individuals in countries with a positive entrepreneurial climate are likely to turn to entrepreneurial practices instead of, for example, volunteering, activism, donating to charity, or philanthropy (Estrin et al., 2011) when there is an intention to address social or ecological needs.

Combining this arguments and Hypothesis 4a, we propose:

Hypothesis 4b: The entrepreneurial climate mediates the relationship between a socially-supportive culture (SSC) and the motivation of entrepreneurs to address unmet social and ecological needs.

3.3. Moderation

Next, we expect the environment to moderate the relationship between the personality characteristics and individual behavior in the following way (see also Luthans and Ibrayeva (2006) and Hmieleski and Baron (2009)).

We expect a larger positive impact of the personality characteristics – generalized self-efficacy, locus of control, willingness to bear risk, proactiveness – in environments that support the concern for immediate others. In these environments, it is more likely that the personality

traits also translate into prosocial behavior of business owners. The corresponding hypotheses are the following:

Hypothesis 5a: A socially-supportive culture moderates the relationship between the entrepreneur's personality in terms of (i) generalized self-efficacy; (ii) locus of control; (iii) willingness to bear risk; and (iv) proactiveness and the degree to which entrepreneurs are motivated to address social and ecological needs. The relationship is stronger in countries that score high on SSC.

Hypothesis 5b: Residing in a rural area moderates the relationship between the entrepreneur's personality in terms of (i) generalized self-efficacy; (ii) locus of control; (iii) willingness to bear risk; and (iv) proactiveness and the degree to which entrepreneurs are motivated to address social and ecological needs. The relationship is stronger in rural areas than in urban or metropolitan areas.

4. Data and method

4.1. Data sample

Our analysis is based on information that was collected in 36 countries in the context of the Flash Eurobarometer survey on entrepreneurship (no. 283). This survey was conducted on behalf of the European Commission and includes the 27 Member States of the European Union,³ 5 other European countries (Croatia, Iceland, Norway, Switzerland, and Turkey), the United States, and 3 Asian countries (China, Japan, and South Korea). Cyprus and Malta have been excluded from the analysis because information for the country-level variables is not available for these countries. Information on the motivations, choices, experiences, and obstacles linked to entrepreneurship was assembled by means of telephone (fixed-line and mobile phone) interviews in December

³ The Member States include the 15 "old" Member States (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, and the United Kingdom) and the 12 "new" Member States (Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, and Slovenia).

2009 and January 2010. Face-to-face interviews were also used – in 30% of the cases – in some Eastern European countries to gather information.⁴ Each national sample is representative of the nation's population of at least 15 years old, and has been re-weighted on the basis of the actual distribution of the relevant population in terms of gender, age, and region.⁵ The projected sample sizes are 500 or 1,000 respondents depending on the country.⁶ The estimation sample consists of 7,370 individuals in 34 countries.

4.2. Measures

Dependent variable. The 2009/2010 edition of the Flash Eurobarometer survey is the first Eurobarometer survey to include information on the importance of addressing unmet social and ecological needs in the decision to start a business. Individuals who had ever taken steps to start a business assessed whether addressing social or ecological needs was “very important” (value 4), “rather important” (value 3), “not very important” (value 2), or “not important” (value 1) when they made their decision to start a business. The weighted distribution across the categories of the resulting variable *social needs* is as follows: 25.9% of the respondents answer “very important”, 38.9% opt for “rather important”, 22.4% for “rather not important”, and 12.8% for “not important at all”. Table 1 presents an overview of the averages of this variable for each country.

Individual level: personality. Four personality characteristics are measured by statements⁷ with the following available responses: strongly agree (value 4), agree (value 3), disagree (value 2), and strongly disagree (value 1). Perceived self-efficacy is measured with the statement “*Generally, when facing difficult tasks, I am certain I will accomplish them*” (Chen et al., 2001). An individual's internal locus of control is measured with the statement “*My life is determined by my own action, not by others or by chance*” (Levenson, 1974). The willingness to bear risk is

⁴ Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania and Slovakia.

⁵ However, the Chinese sample was only representative of urban populations because the interviews for this country were conducted in 50 cities but no rural areas.

⁶ The target sample size is 500, with the exception of the following countries: Belgium, the Czech Republic, France, Germany, Greece, Hungary, Italy, Japan, The Netherlands, Poland, Portugal, South Korea, Spain, the UK, and the US.

⁷ See the discussion section for the rationale behind these single item measures for the personality characteristics.

measured with the item “*In general, I am willing to take risks*” (Caliendo et al., 2009; Dohmen et al., 2011). Finally, the propensity to act or desire to gain control by taking action is measured with the following statement: “*If I see something I do not like, I change it*” (Bateman and Crant, 1993).

Individual level: the environment. Regarding Hypothesis 2, each respondent reveals whether (s)he lives in a metropolitan, an urban, or rural area. Our subjective measure of urbanization takes value 1 in case of a metropolitan or urban area, and a value of 0 for a rural area. Although one may place doubts on the usefulness of such a subjective measurement, there is evidence (Easterlin et al., 2011) that such a self-classification system matches with more objective classifications, thereby “... *supporting the meaningfulness of the self-classification system*” (p. 2189).

Country level: the environment. For testing Hypothesis 3a and 3b, we draw on to what is considered the most sophisticated approach to a typology of capitalism to date (Lane and Myant, 2007) based on extensive empirical characteristics of the national economies of most OECD countries established by Amable (2003). His typology of groups of countries includes differences concerning product-market competition, wage-labor and labor-market institutions, the financial intermediation sector and corporate governance, social protection and the welfare state (Amable 2003, p.14). Extensive empirical analysis provides five types of capitalism:⁸ market-based economies (United Kingdom, United States), social democratic economies (Denmark, Finland, Sweden), Asian capitalist economies (Japan, South Korea), Continental European countries (Austria, Belgium, France, Germany, Ireland, the Netherlands, Norway, Switzerland), and Mediterranean economies (Greece, Italy, Portugal, Spain). We added Iceland to the social democratic group based on the classification of institutional systems of Esping-Andersen (1999). China was added to the Asian capitalism group, Luxembourg to the Continental European

⁸ Based on Amable (2003, Table 5.1, p. 173).

capitalism group, and Turkey to the Mediterranean capitalism group. In order to include the post-communist European countries in our analysis we draw on Lane and Myant (2006) who extend the work of Amable resulting in two additional groups of countries. Czech Republic, Estonia, Hungary, Poland, Slovenia, and Slovakia form a group of continental European countries with a strong state regime. Bulgaria, Croatia, Latvia, Lithuania, and Romania are considered to be the state or marked uncoordinated countries. Finally, Cyprus and Malta are not classified such that 34 countries are included in our analyses.

Country scores for a socially-supportive culture (Hypothesis 4a) have been retrieved from Stephan and Uhlaner (2010). This index of cultural descriptive norms is based on a re-analysis of data from the Global Leadership and Organizational Behavior Effectiveness (GLOBE) project (House et al., 2004). It must be noted that the scores are available for 22 countries. The scores range from 3.33 for Germany and 3.34 for Hungary to 4.52 for Ireland. Hypothesis 4b states that the relationship between a socially-supportive culture and our dependent variable is mediated by the presence of an entrepreneurial climate. The number of self-employed individuals as a percentage of the total population of at least 15 years old is taken as a proxy for the presence of an entrepreneurial climate.

Control variables. Based on empirical literature on entrepreneurship and social entrepreneurship we include the following control variables⁹: gender, age, quadratic age term, education, perceived household income and an individual's degree of involvement in entrepreneurial activities (Bosma and Levie, 2010; Hoogendoorn and Hartog (2010); Harding and Cowling, 2006). The logarithmic transformation of Gross Domestic Product per capita, in purchasing power parity (PPP) and international dollars, is taken as a control variable at the country level.

⁹ A more extensive version of this paper describing the control variables in more detail is available from the authors upon request.

A correlation matrix of the dependent variable, the independent variables at the individual level and the individual variables at the country level is displayed in Table 2.

4.3. Methodology

This research links an individual's behavior with the individual's personality and the country where one resides. An appropriate way of handling such a hierarchical structure is by using multi-level modeling (Raudenbush and Bryk, 2002, Peterson et al., 2012). One has to determine whether there is sufficient cross-country variation to justify the use of multi-level modeling. Indeed, an ANOVA test on the weighted country averages of our dependent variable ($F=21.26$; $p<0.001$) reveals that this is the case.

We apply ordered logistic multi-level models to test our hypotheses, because our dependent variable has four ordered outcomes (Raudenbush and Bryk, 2002, pp. 317-324). Furthermore, we use "intercepts-as-outcomes" specifications where the intercept at the individual level depends on our country-level variables and on a country-specific disturbance term.¹⁰ Robust standard errors are calculated.

It is still a debate in international business studies which sample sizes at the individual level and the country level (Peterson et al., 2012) should be maintained in multi-level models. In our case, the number of countries poses constraints to the number of country-level variables that can be included. Kreft (1996) suggests at least 30 countries and at least 30 observations per country. According to this suggestion our dataset has a sufficient number of observations at the individual level and at the country level in most cases. We should, however, be more careful in interpreting the results that correspond to Hypotheses 4a, 4b and 5a, because of the limited availability of the SSC scores.

¹⁰ The software program HLM 7.0 is used for all computations. HLM produces estimates based on the unit-specific model only (i.e., estimates are not based on the population-average model). The method of estimation is restricted PQL (penalized quasi-likelihood).

5. Results

Table 3 shows the results of the random intercept ordered logit regressions of various model specifications. To ease interpretation in the remainder of our analysis, the SSC variable has been centered around its mean.

5.1. Evidence at the individual level

Model 1 shows the estimates of the coefficients and corresponding robust standard errors of the individual-level variables only. That is, Model 1 includes the personality traits (Hypothesis 1), the environmental variable as represented by the degree of urbanization (Hypothesis 2), and the control variables at the individual level. Model 1 gives partial support for Hypothesis 1 whereas Hypothesis 2 is rejected. That is, two out of four personality characteristics have a significant coefficient. An individual's self-efficacy ($b=0.08$; $p<0.01$) and proactiveness ($b=0.17$; $p<0.001$) are positively related with the likelihood of addressing social or ecological needs at business start-up. On the other hand, an individual's locus of control ($b=0.06$; $p>0.10$) and willingness to bear risk ($b=0.04$; $p>0.10$) do not have significant coefficients. Regarding the degree of urbanization, we find that living in an urban area is indeed negatively related to the probability of addressing social or ecological needs. However, the association is not significant ($b=-0.08$; $p>0.10$). A detailed analysis reveals that the influence of the degree of urbanization runs partly via perceived household income ($b=-0.14$; $p<0.001$): a model in which the income variable is excluded leads to support for Hypothesis 2 ($b=-0.10$; $p<0.05$; result not shown).

5.2. Evidence at the country level

Model 2 of Table 3 adds the institutional variables. A test on the joint significance of the institutional variables reveals that the variation across countries can be explained by the configurations of institutional frameworks ($\chi^2=26.59$; $p<0.001$), providing support for Hypothesis 3a. Specifically, the results show that individuals in social-democratic economies are less likely

to address unmet social needs than individuals in liberal economies, although this relationship is not significant ($b=-0.32$; $p>0.10$). Therefore, Hypothesis 3b is not supported. Furthermore, we find that individuals in the Asian ($b=1.02$; $p<0.01$) and Mediterranean ($b=0.72$; $p<0.001$) capitalist countries are most likely to address unmet social needs.

The results do not support Hypothesis 4a. That is, Model 3 adds SSC to the model without finding a significant coefficient ($b=0.19$; $p>0.10$). This insignificant “total effect” of SSC implies that mediating relationships that run through other variables such as the entrepreneurial climate cannot be present. Therefore, Hypothesis 4b is rejected. Interestingly, adding the prevalence rate of self-employment to Model 3 leads to a significant direct relationship between self-employment rates and country differences in addressing social needs ($b=5.87$; $p<0.05$; Model 4).

Table 4 presents the results that correspond to Hypotheses 5a and 5b. Model 5 replicates the findings from Model 3, but adds interaction terms between the four personality characteristics and SSC. Note that SSC has been centered around its mean such that the coefficients of the personality characteristics represent the influences for a country that scores on average for SSC. Using the interaction terms, one can determine the impacts of the personality characteristics for countries that score low on SSC (average minus one standard deviation), and for countries that score high on SSC (average plus one standard deviation). Interestingly, SSC plays an important role in Model 5. That is, locus of control ($b=0.08$; $p<0.05$), willingness to bear risk ($b=0.06$; $p<0.10$), and proactiveness ($b=0.16$; $p<0.001$) have positive relationships with social orientation when SSC is average. For these three personality characteristics, the relationships remain significant ($p<0.05$) when SSC is one standard deviation above average.¹¹ For locus of control and for the willingness to bear risk, the relationship turns insignificant for countries with a below-average SSC score. We conclude that Hypothesis 5a is partially supported.

¹¹ The impact of locus of control is even statistically larger for countries that score above average for SSC as compared to countries that score on average for SSC (difference is 0.07; $p<0.10$).

Model 6 adds interaction terms between the personality characteristics and the degree of urbanization to Model 1. Indeed, the personality characteristics have a stronger relationship with social orientation in rural areas than in urban areas given the negative signs of the interaction terms. However, a pronounced difference between rural and urban areas can be detected only for the willingness to bear risk ($b=0.09$; $p<0.05$ in rural areas; $b=0.02$; $p>0.10$ in urban areas). Hypothesis 5b is partially supported.

The model formulations in Table 3 and Table 4 reveal that the findings of the individual-level variables are largely insensitive to alternative formulations at the country level or the inclusion of interaction terms.

6. Discussion

Initial results and main contributions. This study contributes to the existing literature on social entrepreneurship by taking a social cognitive perspective where the impacts of individual level cognitive variables and environmental variables are jointly investigated. We confirm the complex dynamics of entrepreneurial behavior and the need for a multilevel approach to understand fully entrepreneurial decision-making. The results show that an individual's personality is not important only for entrepreneurial engagement or entrepreneurial success (Rauch and Frese, 2007), but also for the allocation toward a specific type of entrepreneurial activity.

At the country level, we provide evidence that configurations of formal institutions influence the allocation of entrepreneurial effort toward addressing societal challenges. Hence, the findings actually confirm the wide held belief that institutional arrangements that take account of the complementarity between institutions influence the cross-country variability of social entrepreneurship (Nicholls, 2006a,b; Kerlin, 2009; Mair, 2010). We observe that entrepreneurs in socio-democratic countries are less likely to address societal challenges as compared to liberal

economies; entrepreneurs in the Southern European countries and Asian countries are most likely to address societal challenges across the institutional arrangements under investigation in this paper. However, a more in-depth analysis of the five institutional areas on which the typology of VoC is based is required (Amable, 2003; Lane and Myant, 2007).

Interestingly, where hypotheses regarding the direct impacts of SSC and the degree of urbanization are not supported, we find significant interaction effects between some personality aspects and these two environmental variables. Clearly, the environment shapes the way in which some aspects of an individual's personality are translated into social behavior in terms of running a business with a social orientation. This finding adds to the discussion whether behavior that is consistent with cultural values is more or less likely to be performed than behavior that conflicts with cultural values (Zhao and Seibert, 2006). Being embedded within one's environment does not necessarily lead to a stronger inclination to address unmet social needs among business owners; specific personality traits are needed to be able to run such a business.

Limitations and directions for future research. Regarding measurement one may place doubts on the fact that our personality characteristics are measured by single items. The single-item structure is not without a reason. The personality traits questions were not collected for psychological purposes only, but are part of a much broader questionnaire on entrepreneurial behavior in general and on the role of social motivations in particular. Therefore, the number of items had to be reduced. We are, however, aware of the fact that each statement captures a fraction of the underlying dimension of an individual's personality trait. Still, each statement originates from a relevant validated psychological scale, or has been modified to a minor extent (Chen et al. 2001; Levenson 1974; Dohmen et al. 2011; Bateman and Crant 1993). Bönnte and Piegeler (2012, Table 1) provide more information about the selection of the specific items in the Eurobarometer questionnaire.

In addition, it has been shown that single-item measures may have advantages over multiple-item measures, for example in reducing respondents' refusal rates or data collection costs (Bergkvist and Rossiter, 2007; Nagy, 2002). The refusal rates are indeed low; the percentages of respondents that refuse to provide an answer are 1.4% for generalized self-efficacy, 1.6% for locus of control, 1.3% for the willingness to bear risk, and 2.0% for proactiveness. Furthermore, the reduction of data collection costs is of particular importance for the survey that is used in this study. For several countries, the number of interviews – in some countries face-to-face – amounts to 1,000; furthermore, the questionnaires had to be translated in more than 30 languages.

Regarding the scope of our study, our sample is dominated by developed countries. A more diverse sample would enrich our knowledge especially regarding the differences across countries. This study uses data on high and medium income countries whereas a large literature exists on social entrepreneurship in less developed areas (Dorado and Ventresca, 2012). Variations in our independent variables of interest, such as in terms of socially supported cultures and the entrepreneurial climate, are expected to be much larger when lower income countries are also added to the research framework. Furthermore, integrating lower income countries would add to the current knowledge about social entrepreneurship in relationship with the institutional void perspective (Mair and Martí, 2009).

7. Conclusion

In this paper we addressed an important but under-researched topic in entrepreneurship research: which individuals pursue entrepreneurial efforts that address societal challenges? We integrated information at the individual level with country-level variables and provided a unique large-scale analysis of the determinants of socially oriented business efforts. We showed that the recent focus on the allocation of a multitude of types of entrepreneurship is not without a reason.

It turns out that national differences regarding business owners' motivations to address social needs can be explained by formal institutional frameworks. Informal institutions, as operationalized by the presence of a socially supportive culture, and the degree of urbanization of the area in which the business owner resides play important roles through their interactions with an individual's personality. Because formal institutions are more prone to policy interventions future research should focus on ways to distinguish more precisely between the various determining aspects of the national configurations of institutions. Clearly, much research is needed to validate and extend the present results in different contexts. A better understanding of the factors that influence business owners to pursue opportunities related to societal challenges opens an important channel through which entrepreneurship may contribute not only to economic growth but also to overall well-being.

Table 1. Country averages dependent variable

Japan	3.35	Latvia	2.75
Turkey	3.32	United Kingdom	2.72
Greece	3.15	Austria	2.72
South Korea	3.05	United States	2.70
Croatia	3.04	Slovenia	2.66
Ireland	3.04	Switzerland	2.64
China	3.00	Bulgaria	2.63
Belgium	2.99	Lithuania	2.57
Italy	2.96	Romania	2.53
Estonia	2.87	Netherlands	2.52
Iceland	2.84	Sweden	2.48
Luxembourg	2.83	Norway	2.46
Slovakia	2.83	Hungary	2.43
France	2.83	Germany	2.40
Portugal	2.80	Denmark	2.34
Spain	2.79	Czech Republic	2.16
Poland	2.77	Finland	2.12
Country average	2.78		

Dependent variable refers to addressing unmet social or ecological needs while starting a business. It takes 4 values: 1=not important; 2=not very important; 3=rather important; 4=very important. The numbers are weighted. Cyprus and Malta are excluded from the table. The table is based on 7,370 observations in total.

Table 2. Correlation matrix individual level and country-level variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
<i>Individual level</i>															
1 Social needs (dep. var.)	2.78	0.97	1												
2 Self-efficacy	3.19	0.65	0.03	1											
3 Locus of control	3.25	0.71	0.03	0.33	1										
4 Willingness bear risk	2.88	0.80	0.03	0.26	0.18	1									
5 Proactiveness	3.13	0.67	0.06	0.30	0.29	0.22	1								
6 Urban	0.66	0.47	0.02	-0.01	0.01	0.01	-0.04	1							
7 Male	0.57	0.50	-0.06	0.05	0.01	0.08	0.03	-0.03	1						
8 Age/10	4.73	1.53	-0.03	-0.04	0.02	-0.11	-0.02	-0.05	0.02	1					
9 Education/10	1.98	0.34	-0.03	0.03	0.03	0.07	0.01	0.15	0.04	-0.11	1				
10 Perceived income	2.83	0.91	-0.10	0.10	0.10	0.05	0.06	0.04	0.06	0.01	0.21	1			
11 Business owner [#]	0.28	0.45	-0.07	0.03	0.03	0.07	0.04	-0.00	0.10	-0.06	0.09	0.12	1		
12 Gave up	0.35	0.48	0.05	-0.06	-0.07	-0.10	-0.04	-0.03	-0.11	0.01	-0.06	-0.04	-0.44	1	
13 Taking steps	0.12	0.32	0.06	0.05	0.04	0.09	0.02	0.04	0.02	-0.24	0.06	0.00	-0.21	-0.25	1
14 Failed/sell-off	0.26	0.44	-0.03	-0.01	0.01	-0.02	-0.01	0.01	0.01	0.22	-0.06	-0.08	-0.37	-0.45	-0.21
	Mean	SD	1	15	16	17	18	19	20	21	22	23			
<i>Country level</i>															
15 Market-based [#]	0.06	0.24	-0.01*	1											
16 Social democratic	0.12	0.33	-0.39*	-0.09	1										
17 Asian	0.09	0.29	0.45*	-0.08	-0.11	1									
18 Continental Europe	0.26	0.45	-0.08*	-0.15	-0.22	-0.19	1								
19 Mediterranean	0.15	0.36	0.33*	-0.10	-0.15	-0.13	-0.25	1							
20 Cont. strong state	0.18	0.39	-0.21*	-0.12	-0.17	-0.14	-0.28	-0.19	1						
21 Market/state uncoord.	0.15	0.36	-0.00*	-0.10	-0.15	-0.13	-0.25	-0.17	-0.19	1					
22 SSC	3.85	0.34	0.11*	-0.05	0.47	0.29	-0.17	-0.23	-0.22	n.a.	1				
23 % Self-employed	0.11	0.05	0.38*	0.15	-0.03	0.60	-0.20	0.29	-0.21	-0.35	0.13	1			
24 log GDP/capita	10.24	0.47	-0.20*	0.19	0.22	-0.28	0.57	-0.07	-0.23	-0.49	-0.05	-0.17			

Spearman correlation and Pearson correlation coefficients have been calculated for the individual-level and country-level variables, respectively. The correlations between the individual-level variables are based on 7,370 observations. The correlations between the country-level variables are based on 34 observations. SSC scores are, however, available for 22 countries only.

[#] reference category in regressions.

* denote correlations between the relevant country-level variable and the country-averages of the dependent variable *social needs*.

For the state or market uncoordinated economies the SSC scores are not available.

Table 3. Results of multi-level ordered logit regressions

	Model 1		Model 2		Model 3		Model 4	
<i>Individual level</i>								
Self-efficacy	0.08**	(0.03)	0.08**	(0.03)	0.07*	(0.03)	0.07*	(0.04)
Locus of control	0.06	(0.05)	0.06	(0.05)	0.07	(0.05)	0.07	(0.05)
Willingness bear risk	0.04	(0.03)	0.04	(0.03)	0.05 [^]	(0.03)	0.05 [^]	(0.03)
Proactiveness	0.17***	(0.04)	0.17***	(0.04)	0.16***	(0.04)	0.16***	(0.04)
Urban	-0.08	(0.05)	-0.09 [^]	(0.05)	-0.04	(0.06)	-0.04	(0.06)
Male	-0.23***	(0.05)	-0.23***	(0.05)	-0.23***	(0.06)	-0.23***	(0.06)
Age/10	-0.21*	(0.08)	-0.20*	(0.08)	-0.19*	(0.08)	-0.18*	(0.08)
(Age/10) squared	0.02**	(0.01)	0.02*	(0.01)	0.02*	(0.01)	0.02*	(0.01)
Education/10	0.11	(0.07)	0.12 [^]	(0.07)	0.13 [^]	(0.08)	0.13 [^]	(0.08)
Perceived income	-0.14***	(0.04)	-0.13***	(0.04)	-0.14***	(0.04)	-0.14***	(0.04)
Gave up [#]	0.28***	(0.07)	0.29***	(0.07)	0.34***	(0.08)	0.34***	(0.08)
Taking steps [#]	0.41***	(0.08)	0.41***	(0.08)	0.46***	(0.08)	0.46***	(0.08)
Failed/sell-off [#]	0.04	(0.05)	0.04	(0.05)	0.05	(0.05)	0.05	(0.05)
<i>Country level</i>								
Social democratic [#]			-0.32	(0.23)				
Asian [#]			1.02**	(0.37)				
Continental Europe [#]			0.08	(0.16)				
Mediterranean [#]			0.72***	(0.20)				
Cont. strong state [#]			-0.01	(0.23)				
Market/state uncoord. [#]			0.31	(0.28)				
SSC					0.19	(0.43)	0.09	(0.33)
% Self-employed							5.87*	(2.45)
log GDP/capita			0.09	(0.25)	-0.46 [^]	(0.24)	-0.14	(0.29)
<i>Model information</i>								
Observations level 1	7,370		7,370		5,872		5,872	
Observations level 2	34		34		22		22	
Var. intercept level 2	0.27***		0.16***		0.33***		0.26***	
Iterations	6		7		6		6	

Dependent variable refers to addressing unmet social or ecological needs while starting a business. It takes 4 values: 1=not important; 2=not very important; 3=rather important; 4=very important. Robust standard errors are between parentheses.

[^] denotes significance at 0.10; * at 0.05, ** at 0.01, and *** at 0.001.

[#] Reference categories: “business owner” and “market-based economies”.

Estimates of the threshold parameters are not shown.

SSC has been centered around its mean.

Table 4. Results of multi-level ordered logit regressions with interactions

	Model 5		Model 6	
<i>Individual level</i>				
Self-efficacy	0.06	(0.04)	0.08	(0.07)
Locus of control	0.08*	(0.04)	0.06	(0.07)
Willingness bear risk	0.06^	(0.03)	0.09*	(0.04)
Proactiveness	0.16***	(0.04)	0.21***	(0.06)
Urban	-0.04	(0.05)	0.35	(0.28)
Male	-0.23***	(0.05)	-0.23***	(0.05)
Age/10	-0.19^	(0.10)	-0.21*	(0.08)
(Age/10) squared	0.02*	(0.01)	0.02**	(0.01)
Education/10	0.14^	(0.08)	0.11	(0.07)
Perceived income	-0.15***	(0.03)	-0.14***	(0.04)
Gave up [#]	0.33***	(0.06)	0.29***	(0.07)
Taking steps [#]	0.46***	(0.09)	0.41***	(0.08)
Failed/sell-off [#]	0.05	(0.07)	0.04	(0.05)
<i>Country level</i>				
SSC	-0.78	(0.63)		
log GDP/capita	-0.46	(0.30)		
<i>Interactions</i>				
Self-efficacy × SSC	-0.02	(0.12)		
Locus of control × SSC	0.21^	(0.11)		
Willingness bear risk × SSC	0.14	(0.10)		
Proactiveness × SSC	-0.003	0.11		
Self-efficacy × Urban			-0.01	(0.09)
Locus of control × Urban			-0.01	(0.07)
Willingness bear risk × Urban			-0.07	(0.05)
Proactiveness × Urban			-0.06	(0.07)
<i>Model information</i>				
Observations level 1	5,872		7,370	
Observations level 2	22		34	
Var. intercept level 2	0.33***		0.26***	
Iterations	7		7	

Dependent variable refers to addressing unmet social or ecological needs while starting a business. It takes 4 values: 1=not important; 2=not very important; 3=rather important; 4=very important. Standard errors are between parentheses.

^ denotes significance at 0.10; * at 0.05, ** at 0.01, and *** at 0.001.

Reference category: "business owner".

Estimates of the threshold parameters are not shown.

SSC has been centered around its mean.

References

- Acs, Z.J., Boardman, M.C., & McNeely, C.L. 2013. The social value of productive entrepreneurship. *Small Business Economics*, 40(3): 785–796.
- Albert, M. 1991. *Capitalisme contre capitalisme*. Paris: Le Seuil.
- Amable, B. 2003. *The diversity of modern capitalism*. Oxford: Oxford University Press.
- Amato, P.R. 1993. Urban-rural differences in helping friends and family members. *Social Psychology Quarterly*, 56(4): 249–262.
- Bandura, A. 1986. *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. 1991. Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, 50: 248–287.
- Bandura, A. 1999. Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, 3(3): 193–209.
- Bandura, A. 2001. Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52: 1–26.
- Bardi, A., & Schwartz, S.H. 2003. Values and behavior: Strength and structure of relations. *Personality and Social Psychological Bulletin*, 29(10): 1207–1220.
- Baron, R.A. 2007. Behavioral and cognitive factors in entrepreneurship: Entrepreneurs as the active element in new venture creation. *Strategic Entrepreneurship Journal*, 1(1–2): 167–182.
- Bateman, T.S., & Crant, J.M. 1993. The proactive component of organizational behaviour: A measure and correlates. *Journal of Organizational Behavior*, 14(2): 103–118.
- Baumol, W. 1990. Entrepreneurship: Productive, unproductive and destructive. *Journal of Political Economy*, 98(5): 893–921.
- Bergkvist, L., & Rossiter, J.R. 2007. The predictive validity of multiple-item versus single-item measures of the same constructs. *Journal of Marketing Research*, 44: 175–184.
- Blanchflower, D.G. 2000. Self-employment in OECD countries. *Labor Economics*, 7(5): 471–505.
- Block, J., Thurik, R., van der Zwan, P., & Walter, S. 2012. Business takeover or new venture? Individual and environmental determinants from a cross-country study. *Entrepreneurship Theory and Practice*. doi: 10.1111/j.1540-6520.2012.00521.x.
- Bönte, W., & Piegeler, M. 2012. Gender gap in latent and nascent entrepreneurship: Driven by competitiveness. *Small Business Economics*. doi: 10.1007/s11187-012-9459-3.
- Bosma, N., & Levie, J. 2010. *Global Entrepreneurship Monitor 2009 Executive Report*. Global Entrepreneurship Consortium.
- Bowen, H.P., & De Clercq, D. 2008. Institutional context and the allocation of entrepreneurial effort. *Journal of International Business Studies*, 39(4): 747–767.
- Busenitz, L.W., & Barney, J.B. 1997. Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making. *Journal of Business Venturing*, 12: 9–30.
- Busenitz, L.W., Gomez, C., & Spencer, J.W. 2000. Country institutional profiles: Unlocking entrepreneurial phenomena. *Academy of Management Journal*, 43(5): 994–1003.
- Caliendo, M., Fossen, F.M., & Kritikos, A.S. 2009. Risk attitudes of nascent entrepreneurs: New evidence from an experimentally validated survey. *Small Business Economics*, 32: 153–167.
- Carree, M.A., & Thurik, A.R. 2010. The impact of entrepreneurship on economic growth. In Z.J. Acs, & D. Audretsch (Eds.), *Handbook Of Entrepreneurship Research*: 557–594. Springer.
- Chen, C.C., Greene, P.G., & Crick, A. 1998. Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, 13(4): 295–316.
- Chen, G., Gully, S.M., & Dov, E. 2001. Validation of the new general self-efficacy scale. *Organizational Research Methods*, 4(1): 62–82.
- Cho, A.H. 2006. Politics, values and social entrepreneurship: A critical appraisal. In J. Mair, J.A. Robinson, & K. Hockert (Eds.), *Social entrepreneurship*: 34–56. New York: Palgrave MacMillan.
- Coates, D. 2000. *Models of capitalism: Debating strengths and weaknesses*. Cheltenham, UK: Edward Elgar.
- Cohen, B., Smith, B., & Mitchell, R. 2008. Towards a sustainable conceptualization of dependent variables in entrepreneurship research. *Business Strategy and the Environment*, 17: 107–119.
- Cooper, A.C., Woo, C.Y., & Dunkelberg, W.C. 1988. Entrepreneurs' perceived chances for success. *Journal of Business Venturing*, 3: 97–108.
- Cross S.E., Morris, M.L., & Gore, J.S. 2002. Thinking about oneself and others: The relational-interdependent self-construal and social cognition. *Journal of Personality and Social Psychology*, 82(3): 399–418.
- Dacin, P.A., Dacin, M.T., & Matear, M. 2010. Social entrepreneurship: Why we don't need a new theory and how we move forward from here. *Academy of Management Perspectives*, 24(2): 36–56.
- Davidsson, P. (1995) Culture, structure and regional levels of entrepreneurship. *Entrepreneurship Regional Development*, 7(1), 41–62.

- DiDomenico, M., Haugh, H., & Tracey, P. 2010. Social bricolage: Theorizing social value creation in social enterprises. *Entrepreneurship Theory and Practice*, 34(5): 681–703.
- DiMaggio, P. 1997. Culture and cognition. *Annual Review of Sociology*, 23: 263–287.
- Dohmen, T., Falk, A., Huffman, D., Sunde, U., Schupp, S., & Wagner, G.G. 2011. Individual risk attitudes: Measurement, determinants, and behavioral consequences. *Journal of the European Economic Association*, 9(4): 522–550.
- Dorado, S., & Ventresca, M.J. 2012. Crescive entrepreneurship in complex social problems: Institutional conditions for entrepreneurial engagement. *Journal of Business Venturing*. doi: 10.1016/j.jbusvent.2012.02.002.
- Easterlin, R.A., Angelescu, L., & Zweig, J.S. 2011. The impact of modern economic growth on urban–rural differences in subjective well-being. *World Development*, 39(12): 2187–2198.
- Egri, C.P., & Ralston, D.A. 2004. Generation cohorts and personal values: A comparison of China and the United States. *Organization Science*, 15(2): 210–220.
- Esping-Andersen, G. 1999. *Social foundation of postindustrial economies*. Oxford University Press: Oxford.
- Estrin, S., Mickiewicz, T., & Stephan, U. 2011. For benevolence and for self-interest: Social and commercial entrepreneurial activity across nations. *Discussion Paper No. 5770*. Bonn: Institute for the Study of Labor.
- Etzioni, A. 1987. Entrepreneurship, adaptation and legitimation: A macro-behavioral perspective. *Journal of Economic Behavior and Organization*, 8(2): 175–189.
- Fischer, R. 2006. Congruence and functions of personal and cultural values: Do my values reflect my culture's values? *Personality and Social Psychology Bulletin*, 32: 1419–1431.
- Freytag, A., & Thurik, A.R. 2007. Entrepreneurship and its determinants in a cross-country setting. *Journal of Evolutionary Economics*, 17(2): 117–131.
- Fukuyama, F. 2001. Social capital, civil society and development. *Third World Quarterly*, 22(1): 7–20.
- Gelfand, M.J., Smith Major, V., Raver, J.L., Nishii, L.H., & O'Brien, K. 2006. Negotiating relationally: The dynamics of the relational self in negotiations. *Academy of Management Review*, 31(2): 427–451.
- Hall, J.K., Daneke, G.A., & Lenox, M.J. 2010. Sustainable development and entrepreneurship: Past contributions and future directions. *Journal of Business Venturing*, 25(5): 439–448.
- Hall, P.A., & Soskice, D. 2001. Introduction to varieties of capitalism. In P.A. Hall, & D. Soskice (Eds.) *Varieties of Capitalism: The institutional foundations of comparative advantages*: 1–68. Oxford: Oxford University Press.
- Harding, R., & Cowling, M. 2006. *Social Entrepreneurship Monitor*. London: London Business School.
- Henley, A. 2007. Entrepreneurial aspiration and transition into self-employment: Evidence from British longitudinal data. *Entrepreneurship & Regional Development*, 19(3): 253–280.
- Hitt, M.A., Beamish, P.W., Jackson, S.E., & Mathieu, J.E. 2007. Building theoretical and empirical bridges across level: Multilevel research in management. *Academy of Management Journal*, 50: 1385–1399.
- Hmieleski, K.M., & Baron, B.A. 2009. Entrepreneurs' optimism and new venture performance: A social cognitive perspective. *Academy of Management Journal*, 52(3): 473–488.
- Hmieleski, K.M., & Ensley, M.D. (2007). A contextual examination of new venture performance: Entrepreneur leadership behavior, top management team heterogeneity, and environmental dynamism. *Journal of Organizational Behavior*, 28(7): 865–889.
- Hofferth, S.L., & Iceland, J. 1998. Social capital in rural and urban communities. *Rural Sociology*, 63(4): 574–598.
- Hollingsworth, J.R., & Boyer, R. 1997. *Contemporary capitalism: The embeddedness of institutions*. Cambridge and New York: Cambridge University Press.
- Hoogendoorn, B., & Hartog, C.M. 2010. Prevalence and determinants of social entrepreneurship at the macro-level. *Scales Report No. H201022*. Zoetermeer: Panteia/EIM.
- House, R.J., Hanges, P.J., Javidan, M., Dorfman, P. W., & Gupta, V. 2004. *Culture, leadership and organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage.
- House, R.J., Shane, S.A., & Herold, D.M. 1996. Rumors of the death of dispositional research are vastly exaggerated. *Academy of Management Review*, 21(1): 203–234.
- Jackson, G., & Deeg, R. 2008a. Comparing capitalisms: Understanding institutional diversity and its implications for international business. *Journal of International Business Studies*, (39)4: 540–561.
- Jackson, G., & Deeg, R. 2008b. From comparative capitalism to the politics of institutional change. *Review of International Political Economy*, 15(4): 680–709.
- Kerlin, J.A. 2009. *Social enterprise: A global comparison*. Medford, USA: Tufts University Press.
- Koellinger, P.D., Minniti, M., & Schade, C. 2007. I think I can, I think I can—overconfidence and entrepreneurial behavior. *Journal of Economic Psychology*, 28(4): 502–527.
- Kreft, I.G.G. 1996. *Are multilevel techniques necessary? An overview, including simulation studies*. Los Angeles, CA: California State University.
- Lane, D., & Myant, M. 2006. *Varieties of Capitalism in post-communist countries*. New York, USA: Palgrave MacMillan.
- Lepoutre, L., Justo, R., Terjesen, S., & Bosma, N. 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.

- Leung, K., Bhagat, R., Buchan, N., Erez, M., & Gibson, C. 2005. Culture and international business: Recent advances and their implications for future research. *Journal of International Business Studies*, 36(4): 357–378.
- Levenson, H. 1974. Distinctions within the concept of internal-external control. *Journal of Personality Assessment*, 38: 377–383.
- Levie, J., & Hart, M. 2011. Business and social entrepreneurs in the UK: Gender, context and commitment. *International Journal of Gender and Entrepreneurship*, 3(3): 200–217.
- Levie, J., & Autio, E. 2008. A theoretical grounding and test of the GEM model. *Small Business Economics*, 31(3): 235–263.
- Luthans, F., & Ibrayeva, E.S. 2006. Entrepreneurial self-efficacy in Central Asian transition economies: Quantitative and qualitative analyses. *Journal of International Business Studies*, 37: 92–110.
- Mair, J., & Marti, I. 2006. Social entrepreneurship research: A source of explanation, prediction, and delight. *Journal of World Business*, 41(1): 36–44.
- Mair, J. 2010. Social entrepreneurship: Taking stock and looking ahead. In A. Fayolle & H. Matlay (Eds.), *Handbook of Research on Social Entrepreneurship*: 15–28. Edward Elgar: Cheltenham.
- Mair, J., & Marti, I. 2009. Entrepreneurship in and around institutional voids: A case study from Bangladesh. *Journal of Business Venturing*, 24(5): 419–435.
- March, J., & Olsen, J. 1989. *Rediscovering institutions: The organizational basis of politics*. New York: Free Press.
- McGrath, R.G., & MacMillan, I.C. 1992. More like each other than anyone else? Cross-cultural study of entrepreneurial perceptions. *Journal of Business Venturing*, 7(5): 419–429.
- Mueller, P. 2006. Entrepreneurship in the region: Breeding ground for nascent entrepreneurs? *Small Business Economics*, 27(1): 41–58.
- Mueller, S.L., & Thomas, A.S. 2001. Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of Business Venturing*, 16(1): 51–75.
- Muethel, M., Hoegl, M., & Parboteeah, K.P. 2011. National business ideology and employees' prosocial values. *Journal of International Business Studies*, 42(2): 183–201.
- Nagy, M.S. 2002. Using a single-item approach to measure facet job satisfaction. *Journal of Occupational and Organizational Psychology*, 75(1): 77–86.
- Nicholls, A. 2006a. Social entrepreneurship. In S. Carter, & D. Jones-Evans (Eds.), *Enterprise and small business: Principles, practice and policy*: 220–242. Harlow, UK: Financial Times Prentice Hall.
- Nicholls, A. 2006b. *Social entrepreneurship: New models of sustainable social change*. USA: Oxford University Press.
- Nissan, E., Castano, M., & Carrasco, I. 2012. Drivers of non-profit activity: A cross-country analysis. *Small Business Economics*, 38(3): 303–320.
- Noorderhaven, N.G., Wennekers, A.R.M., Thurik, A.R., & van Stel, A. 2004. Self-employment across 15 European countries: The role of dissatisfaction. *Entrepreneurship Theory and Practice*, 29(1): 447–466.
- North, D.C. 1991. Institutions. *Journal of Economic Perspectives*, 5(1): 97–112.
- Parker, S.C. 2008. Social entrepreneurship: A neoclassical theory. In G.E. Shockley, P.M. Frank, & R.R. Stough (Eds.), *Non-market entrepreneurship: Interdisciplinary approaches*: 206–216. Cheltenham, UK: Edward Elgar Publishing.
- Peng, M.W., Wang, D.Y.L., & Jiang, Y. 2008. An institution-based view of international business strategy: A focus on emerging economies. *Journal of International Business Studies*, 39(5): 920–936.
- Peterson, M.F., Arregle, J.-L., & Martin, X. 2012. Multilevel models in international business research. *Journal of International Business Studies*, 43(5): 451–457.
- Powell, W.W., & DiMaggio, P.J. 1991. *The New Institutionalism in Organizational Analysis*. Chicago: University of Chicago Press.
- Rauch, A., & Frese, M. 2007. Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. *European Journal of Work and Organizational Psychology*, 16(4): 353–385.
- Raudenbush, S.W., & Bryk, A.S. 2002. *Hierarchical linear models. Applications and data analysis methods* (2nd edition). Sage Publications.
- Santos, F.M. 2012. A positive theory of social entrepreneurship. *Journal of Business Ethics*, 111(3): 35–351.
- Schmidt, V. 2002. *The future of European capitalism*. Oxford: Oxford University Press.
- Schwartz, S.H. 2007. Universalism values and the inclusiveness of our moral universe. *Journal of Cross-Cultural Psychology*, 38(6): 711–728.
- Shteynberg, G., Gelfand, M.J., & Kim, K. 2009. Peering into the “Magnum Mysterium” of culture: The explanatory power of descriptive norms. *Journal of Cross-Cultural Psychology*, 40: 46–69.
- Stenholm, P., Acs, Z.J., & Wuebker, R. 2011. Exploring country-level institutional arrangements on the rate and type of entrepreneurial activity. *Journal of Business Venturing*, 26(1): 176–192.
- Stephan, U., & Uhlaner, L. 2010. Performance-based versus socially supportive culture: A cross-national study of descriptive norms and entrepreneurship. *Journal of International Business Studies*, 41(8): 1347–1364.

- Van de Ven, A.H., Sapienza, H.J., & Villanueva, J. 2007. Entrepreneurial pursuits of self-and collective interests. *Strategic Entrepreneurship Journal*, 1(3–4): 353–370.
- Van Praag, C. M., & Versloot, P. H. (2007). What is the value of entrepreneurship? A review of recent research. *Small Business Economics*, 29(4), 351–382.
- Verheul, I., Wennekers, S., Audretsch, D.B., & Thurik, A.R. 2002. An eclectic theory of entrepreneurship: Policies, institutions and culture. In D.B. Audretsch, A.R. Thurik, I. Verheul, & S. Wennekers (Eds.), *Entrepreneurship: Determinants and policy in a European-US comparison*: 11–81. Boston/Dordrecht: Kluwer Academic Publishers.
- Wagner, J., & Sternberg, R. 2004. Start-up activities, individual characteristics, and the regional milieu: Lessons for entrepreneurship support policies from German micro data. *The Annals of Regional Science*, 38(2): 219–240.
- Wennekers, S., Uhlaner, L., & Thurik, A.R. 2002. Entrepreneurship and its conditions; a macro perspective. *International Journal of Entrepreneurship Education*, 1(1): 25–64.
- Whitley, R. 1992. *Business systems in East Asia: Firms, markets and societies*. London: Sage.
- Wood, R., & Bandura, A. 1989. Social cognitive theory of organizational management. *The Academy of Management Review*, 14(3): 361–384
- Wright, M., Hmieleski, K.M., Siegel, D., & Ensley, M.D. 2007. The role of human capital in technological entrepreneurship. *Entrepreneurship Theory & Practice*, 31(6): 791–806.
- York, J.G., & Venkataraman, S. 2010. The entrepreneur-environment nexus: Uncertainty, innovation, and allocation. *Journal of Business Venturing*, 25(5): 449–463.
- Zahra, S.A., Gedajlovic, E., Neubaum, D.O., & Shulman, J.M. 2009. A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing*, 24(5): 519–532.
- Zahra, S.A., Rawhouser, H.N., Bhawe, N., Neubaum, D.O., & Hayton, J.C. (2008). Globalization of social entrepreneurship opportunities. *Strategic Entrepreneurship Journal*, 2(2): 117–131.
- Zhao, H., & Seibert, S.E. 2006. The Big Five personality dimensions and entrepreneurial status: A meta-analytical review. *Journal of Applied Psychology*, 91: 259–271.