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Cultural norms & business start-ups: the impact of national values on opportunity and necessity entrepreneurs

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Abstract It has long been known that the level of entrepreneurship, indicated as the percentage of incorporated and unincorporated nascent businesses relative to the labor force differs strongly across countries. This variance is related to differences in levels of economic development (Wennekers et al. 2005), but also to diverging demographic, cultural, and institutional characteristics (Acs and Armington 2004; Busenitiz et al. 2000; Fusari 1996; Karlsson and Duhlberg 2003; Rocha 2004; Thurik et al. 2006; Wong et al. 2005). Incorporating an institutional perspective, the aim of this research is to test if culture, operationalized through the World Values Survey (WVS) data, is a significant factor in predicting opportunity and necessity entrepreneurship rates at the country level. Opportunity and necessity entrepreneurship rates will be averaged from the 2001 to 2003 Global Entrepreneurship Monitor (GEM) and aggregated for 38 countries in this cross-sectional analysis.

Keywords Nascent entrepreneurship · Opportunity · Necessity · Cultural values · Global Entrepreneurship Monitor · World Values Survey

Introduction

The forces that stimulate people to become entrepreneurs are widely deemed important, but poorly understood, at least in part due to competing definitions of entrepreneurship. For example, the economic sociologist Schumpter coined entrepreneurship as innovative and change-oriented behavior (1934). In contrast, alertness to opportunity recognition was the economist Kirzner's definition (1979). "Although there seems to be no generally accepted definition of entrepreneurship,

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many assessments are unified by the notion that entrepreneurship is about creating something new" (Reynolds et al. 2005). A key focus for modern academic researchers is *nascent* entrepreneurship.

Nascent entrepreneurship is the initiation of activities that are intended to culminate in a viable new firm. As start up processes is the subject of the current project, all references to entrepreneurship henceforth will refer to nascent entrepreneurship. Since entrepreneurship is motivated by different life circumstances, Reynolds et al. (2002) make an explicit conceptual distinction between "opportunity-based" and "necessity-based" entrepreneurship as contextual motivations. Contextual motivation is the influence of social, economic, and political environments that shape individual behaviors, and thus may impact the likelihood of new firm founding among nascent entrepreneurs. Recent empirical and conceptual evidence, suggests that it is the entrepreneur's perception of the environment which plays a key role in the firm's chances of success (Bruno and Tyebjee 1982).

Necessity-based entrepreneurship involves people who start a business because other employment options are either absent or unsatisfactory. In contrast, *opportunity-based* entrepreneurship involves those who choose to start their own business by taking advantage of a perceived entrepreneurial opportunity. Global assessments indicate that two-thirds of entrepreneurs self classify as opportunity motivated while one-third self classify as necessity motivated (Reynolds et al. 2002). Opportunity entrepreneurship has a strong correlation with high technology oriented, high growth firms. On the other hand, necessity entrepreneurship is significantly correlated to subsequent increases in economic growth. Therefore, it is of interest to understand how macro social frameworks influence these differences in opportunity and necessity entrepreneurship rates at the national level.

Research illustrates that the level of entrepreneurship, reflected in the prevalence of incorporated and unincorporated nascent business relative to the labor force (or populations), differs strongly across countries (Wennekers et al. 2005). This variance is related to differences in levels of economic development and to diverging demographic, cultural, and institutional characteristics (Acs and Armington 2004; Busenitiz et al. 2000; Fusari 1996; Karlsson and Duhlberg 2003; Rocha 2004; Thurik et al. 2006; Wong et al. 2005). What motivates people, however, to start a new business? Existing research indicates that there are micro level factors, and macro level factors (Davidsson and Wiklund 2001); this analysis will focus on the latter because there are limited research endeavors attempting to explore macro–micro linkages on an international scope in regards to entrepreneurial intentionality. Consequently, this assessment contributes to the understanding entrepreneurial phenomena by specifically identifying cultural aspects of the environment that influence the context motivation for firm creation.

The conceptual model behind this analysis incorporates a new institutional perspective. In that culture is an institution that shapes the structures and mechanisms of social order that in turn impact new firm creation (Fig. 1). According to new institutional economic sociology, individuals operate in a context-bounded rationality, shaped by customs, networks, norms, cultural beliefs and institutional arrangements. New institutionalism defines institutions as a dominant system of interrelated informal and formal elements, which actors orient their actions to when they peruse their interests (Scully 1988; Nee 2005).

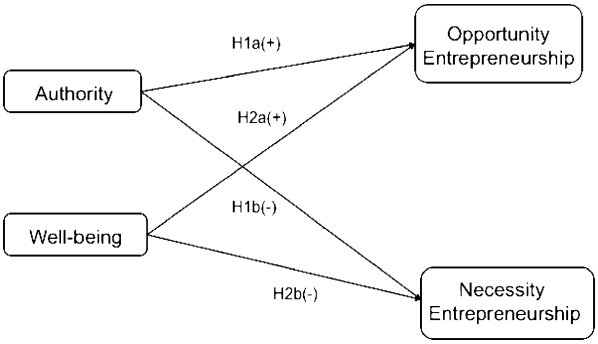

Fig. 1 Culture and the contextual motivation for entrepreneurship

Environments facilitate new ventures by providing the resources for new firms and their survival. However, how these environments impact entrepreneurs and create new businesses is not well understood. Thus, by integrating culture as a key feature, we will better understand the variation of *opportunity* versus *necessity* entrepreneurship at the aggregate level, and not just determinants of *nascent* entrepreneurship. Thus leading to more accurate predictions of nascent rates, and a better understanding of contextual motivation. There are important implications for understanding how macro factors direct contextual motivation for entrepreneurship if policy makers want to spur specific types of new business.

Conceptual background

Academic fields like psychology, sociology, management, and economics all use different definitions of the entrepreneurial process in attempts to explain this phenomenon (Aldrich 2005; Becker and Knudsen 2002; Brouwer 2002; McDaniel 2005; Thorton 1999). In general, most fields of study have shifted from the occupational perspective of entrepreneurship to the behavioral perspective (Gartner 1985, 1988). Focusing on the actual activity led researchers to look closely for those in the start-up processes, nascent entrepreneurs.

"The concept of the nascent entrepreneur captures the flavor of the chaotic and disorderly founding process" (Acs and Audretsch 2003:3). A nascent entrepreneur is defined as someone who initiates activities that are intended to culminate in a viable new firm (Reynolds 1991). Thus, a nascent entrepreneur is an individual characterized as actively engaging in the very early stages of organizational creation. Stinchcombe (1965) argued that people construct organizations that are culturally embedded and historically specific, reflecting societal conditions at a particular historical conjuncture. Since Stinchcombe (1965) published his analysis of social structure and organizations, organizational theorists have found evidence for the ongoing influence of social context on strategy and structure at the time the organization was founded. Thus, it is of relevance to investigate what prominent social institutions influence the structures of opportunity that shape interest and strategic action aimed at organizational creation. For instance, state policies influence decisions on whether or not to start a business, however, state policy

itself reflects the broader national culture. Therefore, *culture* is a dominant force at the institutional level. Furthermore, a fundamental issue yet to be addressed is that few nascent studies have investigated how individuals are motivated by different cultural values in order to understand variation in rates of entrepreneurial activity at the country level.

As noted, all entrepreneurial activity is NOT caused by the same motives. Opportunity entrepreneurship represents the voluntary nature of participation and necessity entrepreneurship reflects the individual's perception that such actions presented the best option available for employment (Acs 2006). Opportunity entrepreneurs expect their ventures to produce more high-growth firms and provide more new jobs. On the other hand, necessity motivated entrepreneurs generally found smaller businesses. However, *necessity* and *opportunity* motivated entrepreneurs are equally likely to succeed, although they establish somewhat different kinds of businesses.

Davidsson and Wiklund found that only 11% at of entrepreneurial research is at the aggregate (country) level (2001). Moreover, only a few empirical studies have examined the association between culture and entrepreneurship at the aggregate level (Davidsson 2002). There is broad evidence that suggests cultural characteristics are associated with national firm formation rates, and innovation, but these relationships are not consistent (Shane 1993). As a result, the present study focuses mainly on the country level of analysis, but attempts to explicitly link the country level to the individual level by examining the affect of culture on rates of nascent entrepreneurial engagement by contextual motivation. The macro perspective aggregates proposed arguments at the micro and meso level and concentrates on a range of environmental factors. This project will focus on aggregations of opportunity and necessity motivations for entrepreneurial activity. Employing this methodology will generate meaningful insights from a new institutional perspective to understand how a specific cultural ideology influences national values, and in turn economic action.

Culture, from a new institutional perspective, is defined as a set of shared values, beliefs, and expected behaviors (Hayton et al. 2002). Cultural values reflect the degree to which a society considers entrepreneurial behaviors to be desirable. A culture that promotes entrepreneurial behaviors has a propensity to develop innovation. On the other hand, a culture that promotes conformity is less likely to promote such behaviors (Herbig and Miller 1992). But, the codification of culture is a tedious endeavor that is often difficult to articulate. The proceeding section will overview operalizations of culture, and their application to entrepreneurial scholarship.

Culture and entrepreneurial motivation

Normative theory for comprehending contextual motives at the aggregate level is often looked over by scholars as adding little to the understanding of entrepreneurial motives and activity. However, certain cultural values may be conducive to new firm formation and economic dynamism, and their role in impacting opportunity and necessity entrepreneurial activity has yet to be investigated. There are a few key endeavors that this research will draw upon to understand the variation of entrepreneurial activity at the country level.

According to social psychology, intentions toward pursuing an entrepreneurial opportunity are best predicted by three critical perceptions: that the entrepreneurial activity is (a) perceived as personally desirable, (b) perceived as supported by social norms, and (c) perceived as feasible (Krueger 2000; Carsurd and Krueger 1995; Krueger and Carsurd 1993). However, it could be expected that social norms vary across cultures in regards to values towards entrepreneurship. For example, in some countries social norms are more supportive of entrepreneurial activity than in others (Carsurd et al 2006). Respect for entrepreneurs is a fundamental social norm that can influence rates of firm formation. Thus, social norms impact cognitive style and behavior. Accordingly, it is important to identify how countries weave the propensity of business creation through the social fabric of cultural characteristics.

There are three major cross-cultural research endeavors aimed at understating variations in national culture that often are applied to understanding various organizational facets and phenomena. First, there is the pioneering work of Greet Hofstead among IBM employees in fifty countries. Secondly, there is the Survey of Values, designed and orchestrated by the Israeli psychologist Shalom H. Schwartz. Finally there is the World Values Survey, expanded from a European Values Survey in the 1980s and now coordinated by US political scientist Ronald Inglehart. The following discussion overviews research findings in regards to entrepreneurial activity.

Hofstede's (1984) research aimed to comprehend motivation at the national level through the framework of entrepreneurial psychology. Hofstede's research has been extremely valuable because it presents a concise taxonomy of significant cultural dimensions for explaining behavioral preferences of people in business organizations (Davidsson 2002). Hofstede identified individualism–collectivism, uncertainty avoidance, power distance, and masculinity–femininity as the key dimensions to analyze national culture. Hofstede's Power distance Index measures the extent to which the less powerful members of organizations and institutions (like the family) accept and expect the unequal distribution of power. Individualism is the one side versus its opposite, collectivism, is the degree to which individuals are integrated into groups. Masculinity versus its opposite, femininity refers to the distribution of roles between the sexes. Uncertainty avoidance deals with a society's tolerance for uncertainty and ambiguity. As a result, a prominent amount of behavioral studies are skewed toward the four cultural dimensions identified by Hofstede for explaining behavioral processes. Such as, Shane (1993) who applied Hofstede's four dimensional cultural frameworks to study national differences in rates of innovation and found that culture affects a country's innovativeness. As a result, the general consensus is that cultures with high individualism, low uncertainty avoidance, low power distance, and high masculinity are ideal foundations for entrepreneurial endeavors that value innovativeness (Hayton et al. 2002).

In sum, Hofstede found that cultural factors are instrumental in directing individual motives. However, it does not adequately describe cross-country differences in forms of entrepreneurial activity. A further disadvantage of Hofstede's cultural dimensions is that these measures are based on data collected in the early 1970's and thus there may have been some adjustments in these measures and the dimensions they represent within the past 30 years. Furthermore, the studies that used Hofstede's (1984) dimensions to compute cultural distance scores have not

always found significant or expected relationships with variables of interest (Imm Ng et al. 2007).

An alternative approach to measure cultural differences has been developed Schwartz (1992, 1994). Schwartz (1994) suggested seven cultural domains based on universal human value types. Employing multidimensional scaling procedures Schwartz identified seven culture level value types, which were summarized into three dimensions, namely: (1) embededness versus autonomy (2) hierarchy versus egalitarianism; and (3) mastery versus harmony (Schwartz et al. 1999).

Thus within these three dimensions are seven cultural values: (1) conservatism: a society that emphasizes close-knit harmonious relations, the maintenance of status-quo and avoids actions that disturb traditional order; (2) intellectual autonomy: a society that recognizes individuals as autonomous entities who are entitled to pursue their own intellectual interests and desires; (3) affective autonomy: a society that recognizes individuals as autonomous entities who are entitled to pursue their stimulation and hedonism interests and desires; (4) hierarchy: a society that emphasizes the legitimacy of hierarchical roles and resource allocation; (5) mastery: a society that emphasizes active mastery of the social environment and individual's rights to get ahead of other people; (6) egalitarian commitment: a society that emphasizes the transcendence of selfless interests; and finally, (7) harmony: a society that emphasizes harmony with nature.

Schwartz's value dimensions, which he argues include Hofstede's dimensions (Schwartz 1994), offer an alternative way to compute cultural distance that may be more appropriate in some contexts. There have been mixed results among scholars regarding construct congruence for both operalizations of culture. For example, Steenkamp (2001) applied factor analysis to assess possible overlap between the dimensions included in the two cultural frameworks (n=24). Steenkamp (2001) found four dimensions, which he termed autonomy versus collectivism, egalitarian versus hierarchy, mastery versus nurturance, and uncertainty avoidance. The first dimension (autonomy versus collectivism) was positively related to Schwartz's intellectual autonomy, affective autonomy and negatively to his conservatism dimensions. In turn, this dimension was related positively to Hofstede's individualism and negatively to power distance dimensions. The second factor (egalitarian versus hierarchy) was related to positively to Schwartz's egalitarian, harmony and negatively to hierarchy dimensions. The third factor, (mastery versus nurturance) was related to positively to Schwartz's mastery dimension as well as Hofstede's masculinity dimension. The fourth factor (uncertainty avoidance) was related to positively to Schwartz's harmony dimension and Hofstede's uncertainty avoidance dimension. In sum, three of the four factors were related to dimensions from both frameworks. Steenkamp's work provides evidence there is some overlap, but alos demonstrates that there are indeed differences among the measures. Imm Ng et al. (2007) demonstrate further the significant differences exist among international trade patterns based of Shwartz's dimensions, yet none are apparent along Hofstead's.

Noseleit (2008) applied Schwartz dimensions to understand differences between the self-employed and the non self-employees using the European Social Survey. Exploring differences in the value system of self-employed and non-self-employed people for Western European countries, Noseleit observed that self-employed people

differ significantly. Self-direction, stimulation, and achievement are rated as more important, while security, conformity, and tradition are rated as less important. These differences indicate that observed differences in the value system of the self-employed are in line with values that are generally attributed to entrepreneurs according to Licht and Siegel (2006). Self-regarding preferences, such as hedonism, that would be closest to a traditional neo-classical argument, do not differ significantly for entrepreneurs in nearly all countries. The higher importance of value items that are related to openness to change illustrate that there is a motivational background for the entrepreneur being a jack-of-all-trades. In sum, he self- employed rate values higher that aim toward openness to change and self-enhancement. In turn, values related to conservation are considered less important.

Although Schwartz's value dimensions have the advantage of being more comprehensive and tested more recently with two matched samples between 1988 and 1992, objections have been raised in that the samples were obtained from student and teacher populations. Therefore, scholars should cautiously interpret findings when employing either measure. Moreover, researchers should carefully consider which cultural base is most appropriate for use in their study.

Likewise, Ingelhart has had great success in operationlizing the dynamic construct of culture through the World Values Survey (WVS). This endeavor aims at understanding values and cultural changes in societies all over the world. The WVS is designed to provide a comprehensive measurement of all major areas of human concern, from religion to politics to economic and social life and two dimensions dominate the picture: (1) *Authority*: the polarization between traditional and secular-rational and (2) *Well-being*: the polarization of survival and self-expression values (Inglehart 2006).

The traditional and secular-rational (*authority*) values dimension reflects the contrast between societies in which religion is very important and those in which it is not. A negative factor score on this dimension reflects a traditional culture, where a positive score reflects a secular culture. The second major dimension of cross-cultural variation is linked with the transition from industrial society to post-industrial societies-which brings a polarization between survival and self-expression values (*well-being*) (Inglehart 2006).

According to Inglehart, the process of industrialization has led to a substitution of "traditional values" by "rational-secular values" in regards to *authority*. In so-called postindustrial or late capitalist societies, there is, in turn, a substitution of "values centering on survival" by "values linked to self-expression" in regards to *well-being*. This in turn is attributed to increasingly high levels of wealth and emergence of welfare states, particularly in certain countries and regions of the world, such as northern European protestant nations. Inglehart (2006) characterizes traditional values in terms of the emphasis on religion, obedience, patriotism, the desire to make one's parents proud, non-justification of divorce, rejection of abortion and economic protectionism, and defined rational-secular values as the opposite. Values of survival would be characterized by an emphasis on economic security, male chauvinism, homophobia, rejection of foreigners, existential discontent, low political participation and few environmental concerns. Self-expression and individualist values would be characterized by an emphasis on the opposite. Applying instruments developed by the WVS in regards to contextual motivation for entrepreneurial activity will

bolster our understanding of how embedded social values foster or hinder the entrepreneurial environment.

Most recently, Suddle et al. (forthcoming) studied the relationship between a country's rate of nascent entrepreneurship, its level of economic development and entrepreneurial culture with the WVS. Findings from their research confirm a positive relationship between culture and economic development. However, as a proxy for culture, this analysis uses the prevalence of incumbent business owners, and the form of economic system. Thus, they recognize that their measure of culture is "rough". Building on micro insights regarding value orientations of entrepreneurs, they aggregate measures from the WVS to create indicators related specifically to an entrepreneurial culture versus general culture in another research attempt (Suddle et al. forthcoming). These measures are: (1) initiative (2) achieving (3) personal influence. Initiative focuses on the actual definition of entrepreneurship, taking action. Achieving is related to the need of achievement as identified by McClelland (1961). And personal influence refers to personal locus of control identified by Rotter (1966). Consequently, in developing a specific measure of entrepreneurial culture based on insights on entrepreneurial trait research, Suddle et al. (forthcoming) conclude that entrepreneurial culture and the rate of nascent entrepreneurship shows a significant positive relationship, in addition to a linear one.

Suddle et al. (forthcoming) model of entrepreneurial culture proves insightful but, it can be misleading. Culture generally refers to patterns of human activity and the capacity to classify experiences and to communicate them symbolically. By aggregating individual's measures from the WVS to create the index of entrepreneurial culture, there is an inherent assumption that a country's culture in its entirety is fundamentally entrepreneurial by nature! Culture is a large dynamic concept, which must be considered as a whole (Ogburn 1937). This issue is exemplified in their analysis. Compiling all three measures together (initiative, achieving, personal influence), they find no significant relationship in their regression model. Only each factor implemented alone in the regression models shows significance. Accordingly, entrepreneurial culture, as operationalized by Suddle et al. (forthcoming) , alone cannot explain variation across national contexts.

Moreover, Levie and Hunt (2004) applied both Hofstead's and Ingelhart's models to investigate the role of culture with Global Entrepreneurship Monitor data for both opportunity and necessity entrepreneurship rates, in addition to total entrepreneurial index. They found only partial support for the cultural dimensions of both Hofstead and Ingelhart, when controlling for population growth. They conclude that a greater proportion of necessity based entrepreneurship occurs in the developing world and such countries tend to record lower individualism ratings than countries in the developed world, to the extent that there exists a significant negative correlation between the two measures (Levie and Hunt 2004). There is, however, no correlation between individualism and total entrepreneurial activity or opportunity based activity. These results suggest the pressures of local social and economic conditions engender entrepreneurial activity despite any cultural constraints. A possible reason for these findings is that they control for population growth over a six year period, yet only analyze a cross section of data for 2002. Thus, this analysis may over estimate the importance of population change in regards to rates of engagement, since engagement rate is only measured in 2002, and suppress the affects of cultural values.

In sum, previous research has shown that culture, albeit differently measured, impacts perception as well as behavior. Since the presence of specific cultural characteristics matter for entrepreneurship, there is sufficient evidence to support the modeling of entrepreneurial culture in regards to entrepreneurial motivation. Since it has been shown that perceived congruence with cultural norms is a crucial predictor of intentions and motives (Ajzen 1991; Krueger and Carsrud 1993), it can be argued that there is a link between cultural norms and subsequent entrepreneurial activity. Therefore, it is imperative to investigate what aspects of culture may promote individuals to engage in opportunity or necessity entrepreneurship. As a result, this project will employ the World Values Survey developed by Inglehart to assess the role of culture. The WVS was chosen because the two dimensions of *well-being* and *authority* are particularly powerful since they both account for 70% of the total cross-national variation in the ten items used to create their factor scores (Inglehart and Baker 2000). Furthermore, the WVS has had limited application in entrepreneurial research, and it has proven itself a powerful resource that should be exploited by scholars to investigate cultural dimensions.

Previous findings suggest that cultural characteristics should be related to different entrepreneurial motivations. Specifically, retuning to arguments postulated by Inglehart (2006), when a culture is dominated by secular-rational values, it will likely develop as a welfare state, therefore, it is hypothesized that:

H1. Authority is related to both (a) opportunity and (b) necessity entrepreneurship; such that, traditional countries have higher rates of entrepreneurship than secular countries.

Conversely, it would be expected that within a culture that values survival due to pre-industrialization there would be a positive influence on necessity entrepreneurship rates due to no better options for work as a result of a weak economy. Therefore it is hypothesized that:

H2. Well-being is related to both (a) opportunity and (b) necessity entrepreneurship; such that, self-expressive countries have higher rates of entrepreneurship than survival countries.

In order to test these hypotheses data from the Global Entrepreneurship Monitor will be utilized over the course of 2000–2003, as well as data from the World Values Survey during this time frame. The proceeding section will discuss in detail the sample and methodological procedures for testing these arguments.

Cultural differences and entrepreneurial activity

The Global Entrepreneurship Monitor (GEM), was designed as a comprehensive assessment of the role of entrepreneurship in varying economic environments. The objective of GEM was to (1) identify how variance in entrepreneurial activity vary over time; (2) why are some countries more entrepreneurial than others; (3) what kind of policies enhance national entrepreneurial rates; and (4) identifying the relationship between entrepreneurship and economic growth (Reynolds et. al 2005:195). GEM data illustrates differences among countries in rates of nascent

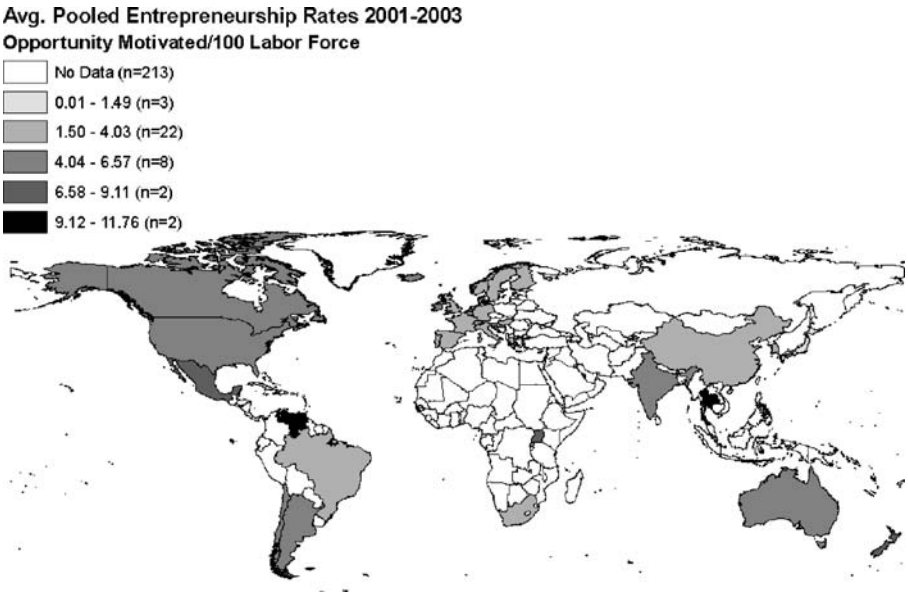

Fig. 2 Nascent opportunity entrepreneurship rates: average 2001–2003

opportunity and nascent necessity entrepreneurship (see Figs. 2 and 3), thus providing preliminary evidence to suggest that significant differences in motivational nascent rates may be attributed to cultural differences.

The GEM project utilized various national market research organizations to collect individual level data and country level framework conditions from two questionnaires[1]. One questionnaire representatively sampled individuals within the countries of participation to estimate engagement of entrepreneurial activity, business ownership, and angle investment. Secondly, a connivance sample of experts were surveyed to identify the framework and environmental conditions for the respective countries of participation. In addition, GEM took significant measures to assure the accuracy of the data collected to demonstrate a representative sample of that country's population. Weighted adjustments were made according to national estimates on age, gender, region, household size, income, educational attainment, and religious affiliation. In this analysis all cases the weights were adjusted so that the sum of the weights equaled the sum of the cases (Reynolds et al. 2001; 25).

Synthesizing key theoretical findings, this research will apply an integrated theoretical structure based on the reviewed literature in order to analyze GEM (Reynolds 2006) data in regards to entrepreneurial motivations. Employing ordinary least squares regression, we will test if nascent entrepreneurial rates for *opportunity* and *necessity* motivations at the country level can be understood by culture, operationalized by authority and degree of well-being according to WVS factor scores.

[1] Reynolds et al. (2001). GLOBAL ENTREPRENEURSHIP MONITOR: 2001 Volume II:A - Adult Population Surveys Data Collection-Operations Manual.

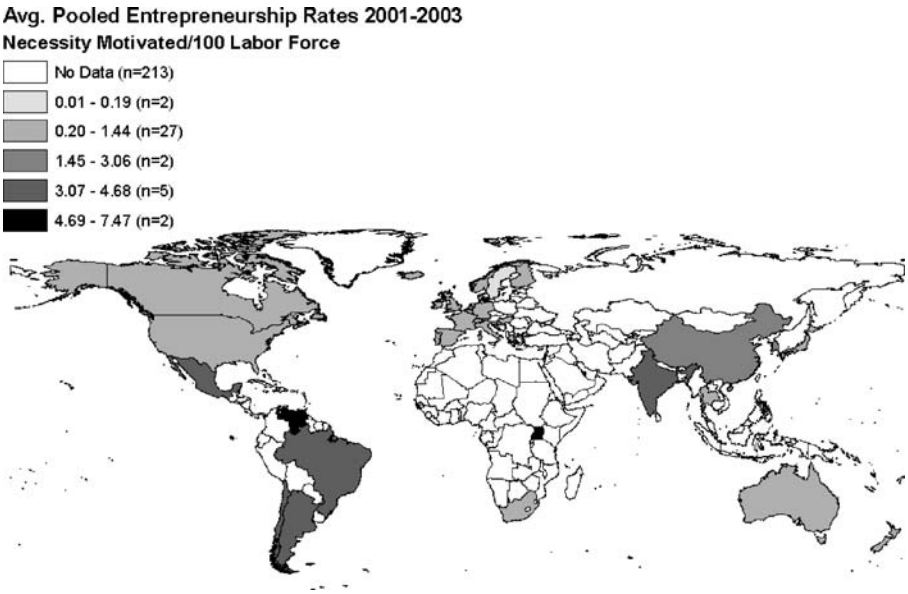

Fig. 3 Nascent necessity entrepreneurship rates: average 2001–2003

Methods

Dependent variable

Operationally, a nascent entrepreneur is an individual who has been active in the past 12 months in trying to start a new business, expected to own part of the business, and had not paid salaries and wages to anybody, including the owner/managers, for more than 3 months.[2] The GEM interview schedule utilized a series of ten dichotomous items to identify nascent entrepreneurs. The answers to the first four items allowed the identification of individuals that (1) claim they are starting a new firm for themselves or their employer; (2) expect to own all or part of the new firm; (3) currently own and manage a firm, and; (4) have, in the past three years, personally provided funds for a new business start up. "If any of these criteria applied participants were asked follow-on questions to determine whether they were actively involved in the business, business type, first year receiving wages or profits, and others" (Reynolds et al. 2002). Consequently, the above criteria are a necessary requirement to identify nascent entrepreneurs, and subsequently classify them into a category for contextual motivation (necessity versus opportunity) based on the respondents perception of the entrepreneurial initiative.

Specifically, the GEM program inquired if the action undertaken around the start-up initiative was voluntary, reflecting a desire to pursue a new business opportunity, or a reaction to the absence of suitable work options, reflecting a

[2] This measure is used over the TEA index in the GEM data because the TEA measure includes owner managers, and thus SUBOAN (the variable from which SUOPP and SUNEC are derived) is a more accurate measure of current nascent entrepreneurs.

necessity to participate in the economy (Reynolds and Curtin 2008). The item, "Are you involved in this new business to take advantage of a business opportunity or because you had no better choices for work?" has been widely used in international surveys of nascent entrepreneurs as an objective measure of contextual influence (Reynolds 2007). Therefore, if a respondent stated they had no better options for work, they are categorized as necessity entrepreneurs. Conversely, if a respondent indicated they were involved in the start-up initiative to take advantage of an opportunity they are categorized as opportunity entrepreneurs. Finally, the dependent variables in this analysis will be the rate of nascent opportunity entrepreneurship per 100 in population and the rate of nascent necessity entrepreneurship per 100 in population, which reflect only those actively involved in start-ups.

Independent variables

In order to incorporate culture into in this model data will be taken from the WVS. The WVS sampling technique included, interviews conducted with a representative sample of 1,200 adults, ages 18 and older in each country[3] The factor scores for the dimensions of *authority* and *well-being* in the WVS will be incorporated as the predictor variables in this analysis to identify the universal underlying dimensions of culture. These two variables reflect cross-national polarization between traditional versus secular-rational orientations toward *authority*, and survival versus self-expression values toward *well-being*. As a result, each society can be located on a global map of cross-cultural variation based on these two dimensions (Inglehart 1997:81–98). These factor scores are based on respondent responses to ten items in the WVS. When aggregated to the country level it measures the degree of *authority* and *well-being* valued within the fabric that country's society. These two dimensions are particularly powerful because the account for 70% of the total cross-national variation in the ten items used to create the factor scores (Inglehart and Baker 2000).

Furthermore, the variables used to measure *authority* and *well-being* are interval in nature that is each country can have a score that ranges from −1 to 1. Countries with negative values on the dimension of *authority* are considered traditional, whereas positive values on this measure would classify a country as secular-rational. Subsequently, negative values on the measure of *well-being* would classify a country as one that values survival; conversely, a positive score on this measure would categorize a country as one that values self-expression. Plotting aggregated factor scores for secular vs. rational values on the y axis and survival vs. self expression on the x axis results in the Inglehart-Welzel Cultural Map (Inglehart 2006). Consequently, there are four possible combinations for the range of factor values that can describe the social norms within a country, they are: (1) survival & traditional; (2) survival & secular-rational; (3) self-expressive & traditional; and (4) self-expressive & secular-rational.

[3] For a complete account of the construction of indexes used please visit the WVS website: http://www.worldvaluessurvey.org/ and download the integrated questionnaire.

Control variables

Since previous research has found gross domestic product per capita (Wennekers et al. 2005) and the percent of males in the labor force (Verheul et al. 2005) to be significantly related to nascent entrepreneurship rates at the country level, we will control for these factors in our subsequent analysis. Data for these measures were taken from the United Nations Statistical Database. The data was averaged for the period from 2001 to 2003 for both constructs. Moreover, a dummy variable for development status was created for descriptive purposes to describe the sample. Countries were classified as into a dichotomous variable to differentiate development status (e.g.—developed or developing) based on the United Nations' classification of their development stage.

Sample

The total sample is comprised of 38 countries with data averaged from 2001 to 2003. Of the total sample 68.4% are from developed countries, and 31.6% from developing countries. Furthermore, 13.2% of countries are from survival & secular-rational cultures and 50% from self-expressive & secular-rational cultures, 15.8% from self-expressive & traditional and cultures, and finally, 21.1% are from survival & traditional cultures. Overall for the sample the mean opportunity entrepreneurship rate was 4.02%; and the mean necessity entrepreneurship rate was 1.44%. Furthermore, the rate of opportunity entrepreneurship is 2.3 times higher than the rate of necessity entrepreneurship among secular-rational countries. Additionally, for countries that are self-expressive & secular-rational, the rate of opportunity entrepreneurship is 5.4 times higher than the rate of necessity entrepreneurship. Among self-expressive & traditional countries, the opportunity entrepreneurship rate is 2.3 times higher than necessity entrepreneurship. And finally, the rate of opportunity entrepreneurship is two times higher than necessity entrepreneurship among survival & traditional countries. A detailed outline of classifications of countries into the predictors of *authority* and *well-being* are presented in Table 1. Table 1 also shows the classification of each country into the dummy variable for development status. Additionally, Table 2 shows the mean rates of opportunity and necessity per 100 in population is for all the group of countries that fall into the four possible combinations of values for a country based on the constructs of *authority* and *well-being* which were just discussed. Preliminary inspection of these tables shows that differences do exist among rates of entrepreneurial activity based on the opportunity necessity distinction. Subsequently, we will apply multivariate analysis to explore the character of these relationships and our hypotheses.

Results

Table 3 presents the correlations for the measures utilized in this study. It confirms that multicollinearirty does not exist among the measures, and that the constructs are conceptually distinct, in turn it is appropriate to proceed with the assessment of our thesis. Since, both necessity and opportunity entrepreneurship are the summation of

Table 1 Categorical classification of countries by tradition and development

Country	Development status	Cultural category	Years
US	Developed	Tradition & Self-Expression	2001–2003
SOUTH AFRICA	Developing	Tradition & Survival	2001–2003
GREECE	Developed	Secular-Rational & Self-Expression	2003
NETHERLANDS	Developed	Secular-Rational& Self-Expression	2001–2003
BELGIUM	Developed	Secular-Rational & Self-Expression	2001–2003
FRANCE	Developed	Secular-Rational & Self-Expression	2001–2002
SPAIN	Developed	Secular-Rational & Self-Expression	2001–2003
HUNGARY	Developing	Secular-Rational & Survival	2001–2002
ITALY	Developed	Secular-Rational & Self-Expression	2001–2003
SWIZTERLAND	Developed	Secular-Rational & Self-Expression	2002–2003
UK	Developed	Secular-Rational & Self-Expression	2001–2003
DENMARK	Developed	Secular-Rational & Self-Expression	2001–2003
SWEDEN	Developed	Secular-Rational & Self-Expression	2001–2003
NORWAY	Developed	Secular-Rational & Self-Expression	2001–2003
GERMANY	Developed	Secular-Rational & Self-Expression	2001–2003
MEXICO	Developing	Tradition & Self-Expression	2001–2002
ARGENTINA	Developing	Tradition & Self-Expression	2001–2003
BRAZIL	Developing	Tradition & Survival	2001–2003
CHILE	Developing	Tradition & Survival	2002–2003
AUSTRALIA	Developed	Secular-Rational & Self-Expression	2001–2003
NEW ZELAND	Developed	Secular-Rational & Self-Expression	2001–2003
SINGAPORE	Developed	Tradition & Survival	2001–2003
THAILAND	Developing	Tradition & Survival	2002
JAPAN	Developed	Secular-Rational & Self-Expression	2001–2002
KOREA	Developed	Secular-Rational & Survival	2001–2002
CHINA	Developing	Secular-Rational & Survival	2002–2003
INDIA	Developing	Tradition & Survival	2001–2002
CANADA	Developed	Tradition & Self-Expression	2001–2003
UGANDA	Developing	Tradition & Survival	2003
PORTUGAL	Developed	Tradition & Survival	2001
IRELAND	Developed	Tradition & Self-Expression	2001–2003
ICELAND	Developed	Secular-Rational & Self-Expression	2002–2003
FINLAND	Developed	Secular-Rational & Self-Expression	2001–2003
CROATIA	Developing	Secular-Rational & Survival	2002–2003
SLOVENIA	Developed	Secular-Rational & Survival	2002–2003
VENEZUELA	Developing	Tradition & Self-Expression	2003
HONG KONG	Developed	Secular-Rational & Self-Expression	2002–2003
ISRAEL	Developed	Secular-Rational & Self-Expression	2001–2002

Table 2 Mean of opportunity & necessity rates/100 cultural category

Cultural category	Frequency	Percent	Mean		Standard deviation	
			Opportunity entrepreneurship/ 100	Necessity entrepreneurship/ 100	Opportunity entrepreneurship/ 100	Necessity entrepreneurship/ 100
Secular Rational & Survival	5	13.20	2.94	1.27	0.95	0.54
Secular Rational & Self-Expression	19	50.00	2.89	0.53	1.64	0.31
Tradition & Self-Expression	6	15.80	6.66	2.92	2.80	2.54
Tradition & Survival	8	21.10	2.92	1.79	2.92	1.79
Total	38	100.00	4.03	1.44	2.54	1.62

nascent entrepreneurial rates. Thus, one can infer they are positively correlated to one another, although they try to capture different motivational contexts.

Additionally, we see that there is a significant relationship between the construct of *authority* and opportunity (ρ=−.685; p<.0001) and necessity (ρ=−.596; p<.0001) entrepreneurship rates, such that a traditional cultures are positively linearly related to entrepreneurship rates for each motivational context. This is because traditional countries have negative factor scores on the dimension of *authority*, while secular-rational countries have a positive factor score on this measure. As a result, secular-rational countries are negatively linearly related to both opportunity and necessity entrepreneurship rates. As well, we see that *authority* is significantly related to GDP per capita (ρ=.473; p=.003), such that secular-rational countries linearly related to higher levels of GDP per capita.

Moreover, Table 3 shows that there is a significant relationship between the construct of *well-being* and necessity entrepreneurship rates (ρ=−.351; p=.031), such that survival values are positively linearly associated to necessity entrepreneurship rates because survival values have negative factor scores. And in turn, self-expressive values at the national level have a negative linear relationship to necessity entrepreneurship rates. Similarly, *well-being* is also positively significantly related to GDP per capita (ρ=.733; p<.0001). Therefore, there is evidence that cultural values are linearly related to opportunity and necessity entrepreneurship rates.

In order to test the hypotheses, a hierarchical ordinary least square regression was employed to both rates of opportunity and necessity. Model 1 and Model 3 in Table 4 present the effects of the control variables alone on the dependents. Subsequently, model 2 and Model 4 present the effects of the predictor variables when controlling for the average percentage of males in the labor force and average GDP per capita (2001–2003). First, let us examine results for the opportunity entrepreneurship regression for *authority* and *well-being* after controlling for the

Table 3 Correlations for variables in study

	1	2	3	4	5	6
1. Authority	1					
2. Well-Being	0.258	1				
3. Opportunity Entrepreneurship/100	−.685([a])	−0.021	1			
4. Necessity Entrepreneurship/100	−.596([a])	−.351([b])	.741([a])	1		
5. %Labor Force Male (15–64 years old)	−0.190	−0.040	.457([a])	.393([b])	1	
6. Average GDP per capita (2001=2003)	.473([a])	.733([a])	−.387([b])	−.664([a])	−0.194	1

[a] Correlation is significant at the 0.01 level (2-tailed)

[b] Correlation is significant at the 0.05 level (2-tailed)

average of percent males participating in the labor force and average GDP per capita from 2001 to 2003. This equation accounts for 60% of all variation in opportunity rates, with an error of the estimate 1.16. Furthermore the model is statistically significant (F=15.26; p<.0005). The independent variable for *authority* has a significant impact on opportunity rates (t=−4.75; p<.0001). Note, that traditional cultures have negative factors scores, thus having a positive linear impact on opportunity rates. And in turn, secular-rational cultures have a positive factor score and in turn a negative impact on opportunity rates. Additionally *well-being* has significant relationship to opportunity rates (t=2.54; p=.016). Again, a negative score in the *well-being* measure reflects a survival culture, and in turn a negative impact on opportunity rates. Conversely, a positive score on well-being measure

Table 4 Regression results: standardized beta coefficients

	Opportunity entrepreneurship		Necessity entrepreneurship	
	Model 1	Model 2	Model 3	Model 4
Controls				
GDP per Capita	−0.31*	−.351*	−.610***	−.607**
%Labor Force Male	0.4*	.297*	.274*	.233*
Predictors				
Authority		−.564***		−.314*
Well-Being		.393*		0.184
F	7.54***	15.26***	18.42***	13.04***
Adjusted R^2	0.26	0.6	0.49	0.57

*p<.05; **p<.005; ***p<.0005

reflects a self-expressive culture, and consequently, a positive impact on opportunity entrepreneurship rates at the country level.

Similarly, the necessity model has significant results ($F=13.043$; $p<.0005$) and accounts for 56% of all variation in necessity rates. Furthermore, the standard error of the estimate is 1.07. Similarly, *authority* has a significant relationship to necessity entrepreneurship rates ($t=-2.51$; $p=.017$). Again, a negative score on the measure of authority reflects a traditional culture and in turn has a positive linear association with necessity rates. Conversely, there is no association between *well-being* and necessity entrepreneurship rates.

In sum, two hierarchical ordinary least squares linear regressions was applied on measures of *authority* and *well-being* controlling for GDP per capita and the percent of males active in the labor force to predict rates of necessity and opportunity entrepreneurial per 100 in the population for a sample of 38 countries. Findings suggest that tradition is linearly related to both necessity and opportunity rates, such that as a country emphasizes traditional values their rates in both motivational contexts will increase significantly; as it moves to emphasize secular-rational values, rates of both motivational contexts will decrease. Consequently, these findings provide support for H1a and H1b.

Additionally, there is evidence to conclude that as a country approaches higher self-expressive values, there is a positive impact on opportunity rates. Conversely, there is no support that survival values have any impact what so ever on necessity rates. Thus, support is found for H2a, but no support is found for H2b.

Discussion

Our thesis implies that economic development is linked with a broad system of distinctive value orientations. What aspects of authority are accounting for increased nascent rates of both necessity and opportunity entrepreneurship? It may be a consequence of socialization generating a propensity to create a new firm to challenge the social order (Reynolds 1999). Since the traditional group in this study has a diverse group of countries with high economic to low economic power, one can defiantly argue it is not just that traditional countries have more economic power, but maybe the social system creates the motivation through traditional values to encourage nascent opportunity and necessity entrepreneurship. If a traditional culture has a very rigid status or prestige rank order, it may be difficult for an individuals to pursue upward mobility in the accepted system, going outside the system to create business ventures, wealth, influence and then higher status may be the only option for those that are ambitious. Moreover, Reynolds (2007) contends that entrepreneurship is significant route for social integration and mobility, and thus lends support to these assertions. Additionally, a more in-depth analysis should be conducted on the value systems of these traditional cultures to further understand the causal link between the construct of authority and contextual motivation for entrepreneurship. Similarly, as predicted, self-expressive values demonstrated a positive relationship to opportunity entrepreneurship. Therefore, countries with self-expressive values may encourage individuals to engage in entrepreneurial activity as a means for personal fulfillment.

Moreover, it would appear that countries with both self-expressive and traditional values would be the most fertile environment for opportunity entrepreneurship and necessity entrepreneurship.

A limitation of this assessment is that it analyzes only a window of time, which is an inherent limitation of any cross-sectional analysis. Therefore, subsequent analysis should investigate how measures of culture and rates of opportunity and necessity entrepreneurship vary over time. Additionally, future research should address this by implementing multilevel analysis were both micro, meso, and macro level predictors, such as tradition, can be modeled in a more effective and absolute manner. Furthermore, studies should continue to estimate rates of both opportunity and necessity separately since they are conceptually distinct, and can together more accurately predict overall nascent rates. It is important to separate the opportunity and necessity assessments because they seem to respond to different independent variables, as this study has shown. Different causal mechanisms affect each, and research should continue to focus on differentiating their antecedents.

Conclusion

Low and MacMillan (1988) called for a greater understanding of the actual role of culture in regards to entrepreneurial activity. Our objective was to examine in greater depth the different dimensions of culture and their impact on type of entrepreneurial activity. Our findings provide the foundation to further investigate the intricate and dynamic nature of culture (as operationalized by the WVS). The implications from these findings have a significant bearing on our understanding of firm creation. Macro level predictors of entrepreneurship are often overlooked as fruitless endeavors. Many research programs are aimed at the meso and micro level of entrepreneurial research. Yet this project has found that almost half of all explained variance in contextual motivation rates for entrepreneurship can be predicted cultural values, illustrating that contextual forces play a strong role in dictating human action. Moreover, applying what has been learned by this analysis, we can successfully and relatively accurately predict rates of opportunity and necessity entrepreneurship for countries where no data is available based on their WVS factor score. This provides policy makers a tool to better make assessments and recommendations for government programs regarding new firm creation. In sum, the nascent entrepreneurs' perception of the distinctive environment in which he/she attempts to create a new firm is foundational to developing a framework for understanding the different environmental backgrounds and motivations for entry into the entrepreneurial process.

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