

# Entrepreneurial intentions—theory and evidence from Asia, America, and Europe

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**Abstract** This paper examines the antecedents of entrepreneurial intentions and its strategic drivers with reference to country culture and proactive personality in a cross-country context. Our research is based on primary data from four distinct and strategically important countries: India, Japan, the USA, and France. We examine and compare entrepreneurial intentions of young managers within the context of the theory of planned behavior. We then postulate a theoretical framework to link entrepreneurial intention, and its drivers, to motivate further research in this area. The findings of the study indicate that a country's culture and an individual's proactive personality directly determine the degree of entrepreneurial intention and therefore contribute to competitiveness.

**Resumen** Este artículo examina los antecedentes de las intenciones empresariales y sus ejecutores estratégicos con referencia a la cultura del país y a la personalidad proactiva en un contexto transnacional. Nuestra investigación está basada en datos primarios de cuatro países distintos y estratégicamente importantes: India, Japón, Estados Unidos y Francia.

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Examinamos y comparamos las intenciones empresariales de los jóvenes administradores dentro del contexto de la Teoría del Comportamiento Planificado. Luego, postulamos un marco teórico para vincular la intensión emprendedora, y sus ejecutores, para motivar una mayor investigación en esta área. Los resultados de este estudio indican que la cultura de un país y la personalidad proactiva de un individuo determinarían directamente el grado de intensión empresarial y por lo tanto, contribuyen a la competitividad.

**Keywords** Country culture · Entrepreneurial intention · Proactive personality · Theory of planned behavior

## Summary highlights

*Contributions:* The study is useful in understanding the effect of different cultures and values on the entrepreneurial intention. Based on the literature review and measures of proactive personality among young managers in four culturally different countries sampled, we establish a relationship model

Entrepreneurial Intention (EI) =  $f$ (CC, PP), where CC stands for country culture and PP stands for proactive personality.

*Research questions/purpose:* The purpose of the study is to analyze the linkage between entrepreneurial intentions, business acumen, and country culture with insights from managers.

*Theoretical or conceptual framework:* On the basis of the literature review and results of the analysis, we have constructed a theoretical framework to highlight the antecedents of entrepreneurial behavior.

*Basic methods and information/data:* The present study is based on interview-based, primary data. We have used multilevel techniques such as reliability test using Cronbach's alpha, validity test methods such as principle component analysis and factor analysis, ANOVA, and post hoc tests for empirical analysis. We have measured proactive behavior using Bateman and Crant scale.

*Results/findings:* The findings of the study indicate that a country's culture and an individual's proactive personality directly determine the degree of entrepreneurial intention and therefore contribute to competitiveness.

*Limitations (if there is any):* We studied France from Europe. However, we use French data as a representative of Europe for comparison with the USA and Asia (Japan and India). For generalization purpose, we use Europe in the title despite the fact that we study only France from Europe.

However, we did not measure the cultural differences for the countries selected.

*Theoretical implications and recommendations:* We build and illustrate a theoretical framework for antecedents of Entrepreneurial Intention and Activity.

*Practical implications and recommendations:* In order to encourage entrepreneurship, the countries can work on institutional framework conducive to entrepreneurship development.

*Suggestions for future research:* Future researchers can measure cultural differences of different countries and compare and contrast it with proactive personality and entrepreneurial intentions. Similar studies can also be carried out in more European and Asian countries with larger sample size. Researchers can test our model/equation using samples from different countries.

## Introduction

The nature of entrepreneurship is heterogeneous across countries. It explains outcomes at both firm and country levels through firm performance and such indicators as a country's economic growth. Entrepreneurial intention can be defined as intention to start up and engage in entrepreneurial behaviors and carrying out entrepreneurial activities, which can be affected by several factors such as needs, values, wants, and beliefs (Liñán and Chen 2009; Fayolle et al. 2006). The antecedents such as culture at the country level explain the entrepreneurial intention (Terjesen et al. 2013). National culture reflects the underlying system of values, beliefs, and preferences that are common among residents of a country (Hofstede 2010). The effect of national culture on entrepreneurship is a well-researched topic (Beugelsdijk 2007; Stephan and Uhlaner 2010, Autio et al. 2013, etc.), as cultural differences between countries are able to explain a substantial part of the difference in levels of entrepreneurship between countries (Okamuro et al. 2011; Saeed et al. 2014). The study of entrepreneurship, within the context of culture and institutional framework within the countries, has relevance today not only because it helps entrepreneurs better fulfill their personal needs but also because of the economic contribution of the new ventures. More than increasing national income by creating new jobs, entrepreneurship acts as a positive force in a firm's growth plan by serving as a bridge between innovation and market place. Entrepreneurship also serves as a catalyst for internationalization (Paul and Shrivastava 2015).

According to McClelland (1961) and Say (1963), an entrepreneur is one who brings together the factors of production, provisions of continuing management, and bears risk to create a new enterprise. Schumpeter (1950) envisioned that an entrepreneur is the agent who provides an economic leadership that changes the initial conditions of the economy and causes a discontinuous dynamic change. Entrepreneurial effort and determination are the key factors that get the economy back on track after economic slump (Kuratako 2006) An entrepreneur is often considered an innovator. Through innovation, hard work, and willingness to accept financial and opportunity cost and risk, the entrepreneur tries to leverage previously undiscovered opportunities for arbitrage and profit (Kirzner 1997). This quest for profit and the possibility of personal and financial failure aid in ensuring that an economy's resources are utilized efficiently. It is worth noting that successful entrepreneurs create job opportunities for others, which in turn contributes to a country's government in the form of tax revenue and economic growth.

Entrepreneurship research has emerged as one of the most widely cited subjects in the management discipline (Bruton et al. 2008). Scholars and those concerned with its practical application have shown interest in researching entrepreneurship (Ma and Tan 2006). The field of comparative international entrepreneurship across different countries is badly in need of theoretical development (Keupp and Gassmann 2009; Terjesen et al. 2013; Paul and Shrivatava 2016). Following prior research, we identify research gaps to develop theoretical linkages to advance the development of theory and context in this area. It is important to recognize that entrepreneurs need proactiveness, confidence, capability, and competence to meet unforeseen and difficult conditions. Can these traits be linked to country culture and proactive personality? To answer this question, we compare entrepreneurial intention of young managers from a spectrum of four completely different countries, with respect to the personality and cultural factors. For the measurement of these personality and cultural factors, we employ Bateman and Crant's (1993) questionnaire, consisting of 17 traits.

This study follows the holistic approach through the application of an entrepreneurial intention model. A number of works have been published lately about this issue. However, a lot of research is still needed to better comprehend what are the factors that affect entrepreneurial intentions in different country contexts. First and foremost, cross-cultural studies comparing entrepreneurs in different continents/countries in America, Europe, and Asia are very useful for the effect of different cultures and values on the entrepreneurial intention to be better understood. In order to fill this research gap, we analyze the linkage between entrepreneurial intentions, business acumen, and country culture that could be imbibed through an institutional framework and answer the abovementioned pertinent question. Our goal is, by use of primary data, to contribute to the comparative cross-country entrepreneurship literature with insights from managers from four different regions and cultures in the world. The scope of the study not only includes data analysis, but following Doh (2000), we construct a model and provide illustrations to support a theoretical framework development and make suggestions for future research.

## Literature review, theory, and hypothesis

According to the theory of planned behavior (TPB), entrepreneurial intention refers to the effort that the person will make to carry out an entrepreneurial activity. And so, it captures the three motivational factors, or antecedents, influencing behavior (Ajzen 1991; Liñán and Chen 2009) as given below.

- *Attitude toward entrepreneurship (personal attitude, PA)*: This indicates the degree to which the individual holds a positive or negative personal valuation about being an entrepreneur (Ajzen 2001; Autio et al. 2001).
- *Subjective norm (SN)* measures the perceived social pressure to carry out—or not to carry out—entrepreneurial behaviors (Ajzen 2001).
- *Perceived behavioral control (PBC)* is defined as the perception of the ease or difficulty of becoming an entrepreneur.

Attitude is defined as a mental and neural state of exerting readiness, a directive or dynamic influence upon an individual, with regard to all objectives and situations (Allport 1935). Entrepreneurial attitude consists of broad dimensions such as

achievement, self-esteem, personal control, and innovation (Tamizharasi and Panchanatham 2010). Creativity and innovative mindsets are the two basic preconditions that can change an organization's mission and solve problems (Durand and Shea 1974). Harris and Gibson (2008) examine the entrepreneurial attitudes of students enrolled in multiple universities in the USA and found that the majority of the students studied possess entrepreneurial attitudes. Furthermore, both student characteristics and entrepreneurial experience were found to be associated with certain entrepreneurial attitudes. Rauch et al. (2013) test the cross-cultural validity of the relationship between innovation and growth in a sample of 857 business owners from five different countries: China, Germany, the Netherlands, Peru, and Russia. They find that innovation is effective in each country, therefore suggesting universal relationships. Additionally, cultural variables moderated the innovation–growth relationship. Finally, their cross-level operator analysis reveals that both cultural orientations of owners and national culture explain variance in innovation–growth relationships (Paul and Kapoor 2008).

Entrepreneurship has emerged as an increasingly prominent characteristic of developed nations. As a natural outcome, research in the field of entrepreneurship has traditionally focused on resource formation and opportunity recognition that foster and nurture new ventures (Hoskisson et al. 2011). Global Leadership and Organizational Behavior Effectiveness (GLOBE) researchers have made efforts to understand the relationship between cultures and implicit leadership theories across the countries (House et al. 2002; Gupta et al. 2002). Estay (2004) provides a cross-cultural analysis of the entrepreneurial environment in France and the USA. He notes that the USA has experienced a greater level of entrepreneurship than France. His argument is that the relative sluggishness in France is mainly due to two reasons: (i) financial difficulties faced by small firms and (ii) differing perceptions of the entrepreneurial environment. Context impacts entrepreneurship and is significant for understanding when, how, and why entrepreneurship occurs and who gets involved (Welter 2011). We identify the research gap in this area of comparative international entrepreneurship and problematize this gap following established ways for arriving at research questions (spotting or constructing gaps in existing theories), as highlighted in the widely cited article of Alvesson and Sandberg (2011).

People do not engage in entrepreneurship by accident; they do it intentionally as a result of choice (Krueger 2007). Noorkartina et al. (2014) found out that factors such as economic and education influence choice of entrepreneurship. Accordingly, *entrepreneurial intentions* (defined as the conscious state of mind that directs personal attention, experience, and behavior toward planned entrepreneurial behavior) (Bird 1988) are seen as the strongest proximal predictor of entrepreneurial activity and serve as a central and widely studied outcome variable in contemporary entrepreneurship research (Krueger et al. 2000).

### **Country culture, theory of planned behavior, and entrepreneurship**

Culture has emerged as an important concept within the entrepreneurship literature to help explain differences in the entrepreneurship process observed between regions, industries, and socio-cultural groups. Culture is defined as the set of learned behaviors and beliefs that characterize a society or a people group. It includes the tangible and intangible institutions, beliefs, and attitudes that make them a people group. Included in a culture are norms, standards, or rules about acceptable behavior. An individual's attitude varies with time and shaped from exogenous factors like culture (Crant 1995;

Crant and Bateman 2000) Cultural difference affects the new firm formation rates (Davidsson and Wiklund 1997). Despite voluminous research on the topic, theories about how culture affects the entrepreneurship process remain underdeveloped (Spigel 2013). Although national culture has great influence on entrepreneurship, there is a paucity of studies that explore the effects of national cultural practices on entrepreneurial behaviors by individuals (Autio et al. 2013).

Institutional changes emanating from evolving political landscapes within individual countries and pressures from supranational bodies have been instrumental in the liberalization of the economies of developing countries and their integration into the global economy (Aulakh and Kotabe 2008). The works of both Baumol (1990, 1993, 2005) and North (1990, 1994, 1997, 2005) have highlighted the relationship between the institutional environment and entrepreneurship development. Aidis et al. (2008) explore this relationship empirically in Russia relative to developed, other transition, and emerging economies. They utilize Global Entrepreneurship Monitor (GEM) data to study the effects the weak institutional environment in Russia has on entrepreneurship; comparing it first with all available GEM country samples and second, in more detail, with Brazil and Poland. Their results suggest that Russia's weak institutional environment explains its relatively low levels of entrepreneurship development, where the latter is measured in terms of both number of start-ups and of existing business owners. These institutional changes result in more freedom for entrepreneurs in those countries. However, this is a debatable topic. For instance, Stuetzer et al. (2014) examined the link between regional characteristics and individual entrepreneurship combining the individual-level Global Entrepreneurship Monitor data for Western Germany with regional-level data, using multilevel analysis. They found no direct link between regional knowledge creation, the economic context, and an entrepreneurial culture on the one side and entrepreneurial intentions and start-up activity on the other side.

Based on Lumpkin and Dess' conceptualization of entrepreneurial orientation (EO), Lee and Peterson (2001) proposed a cultural model of entrepreneurship. They found that a society's propensity to generate risk-taking, innovative, and proactive entrepreneurs and firms will depend on its cultural foundation. The role of economic, political, legal, and social factors as moderators of the relationship between culture and EO are also considered. Overall, it is proposed that only those countries with specific cultural tendencies will engender a strong EO, hence experiencing more entrepreneurship and global competitiveness. Gabrielsson et al. (2014) found that various international entrepreneurial cultural dimensions affect the growth of International New Ventures (INV). They show that although international motivation, innovation propensity, risk attitude, market orientation, and proactiveness positively affect the early INV growth phases, their effect is negative in the later phases. Besides, international learning and networking positively affect INV growth throughout.

Similarly, some researchers (e.g., Krueger and Carsrud 1993; Paul and Shrivastava 2016) have argued that Ajzen's (1991) TPB serves as a suitable theoretical framework for understanding the impact of distal variables (e.g., personality) on entrepreneurial intentions. The TPB assumes that attitudes (personality factor), social norms, and perceived control (together constitutes culture) are the most significant predictors of behavioral intentions. Based on these predictors, we decided to examine the antecedents of entrepreneurship, by linking the culture, personality, and entrepreneurial intentions for three reasons. First, they represent a key cause-effect relationship in entrepreneurship research, in terms of both

predictors and mediators (Zhao et al. 2005). Second, the TPB has received strong empirical support (Armitage and Conner 2001) and was earlier utilized as the theoretical model for the prediction of entrepreneurial intentions (Krueger et al. 2000). Third, the extended theory of planned behavior also assumes that the entrepreneurial intention of people in developing countries is stronger than that of people from developed countries. For instance, Liñán and Chen (2009) redefined Ajzen's theory of planned behavior to introduce an Entrepreneurial Intention Questionnaire (EIQ) and analyzed its psychometric properties. The entrepreneurial intention model was then tested on a 519-individual sample from two countries: Spain and Taiwan. Engle et al. (2010) suggest that Ajzen's (1991) model of planned behavior does successfully predict entrepreneurial intent in different countries. Their study, which used primary data from business students and covered 12 countries representing all ten of the global regional clusters as identified in the GLOBE project, found one element, i.e., "social norms," to be a significant predictor of entrepreneurial intent in each country. Similarly, Lakovleva et al. (2011) used the theory of planned behavior to predict entrepreneurial intentions among students in developing and developed countries. The findings indicate that respondents from developing countries have stronger entrepreneurial intentions than those from developed countries. Moreover, the respondents from developing countries also score higher on the theory's antecedents of entrepreneurial intentions—attitudes, subjective norms, and perceived behavioral control—than respondents from developed countries. Their findings support the theory of planned behavior in developing and developed countries. There are recent attempts to study and model the link between country culture, entrepreneurial activity, economic outcome, and growth (Guiso et al. 2009; Doepke and Zilibotti 2013; Zapkau et al. 2015). Zapkau et al. (2015) draw on the theory of planned behavior to examine whether attitude, norm, and perceived behavioral control in fact mediate the influence on entrepreneurial intention. This was accomplished using data from 374 individuals and offered an understanding of how prior entrepreneurial exposure influences entrepreneurial intention. Through its influence on beliefs, motives, and behaviors, culture can magnify or mitigate the impact of institutional and economic conditions upon entrepreneurial activity. Understanding the impact of national culture, alone and in interaction with other contextual factors, is important for refining our knowledge of how entrepreneurs think and act (Hayton and Cacciotti 2013).

Countries are grouped by the three stages of economic development as defined by the World Economic Forum's Global Competitiveness Report: factor-driven, efficiency-driven, and innovation-driven. This classification in phases of economic development is based on the level of GDP per capita and other related variables. All the innovation-driven economies are characterized by production of new and unique goods and services that are created via sophisticated and unique methods. As countries grow economically, they tend to shift from one economic stage to the next. India is still a factor-driven economy, whereas countries such as Japan, the USA, and France are categorized as innovation-driven economies. The economic reforms in 1991 and the information technology boom during the second half of the 1990s have been significant factors leading to a wave of entrepreneurship in the Indian sub-continent (Paul and Gupta 2014). On the other hand, "entrepreneurship" has been nurtured for many years in countries such as the USA, Japan, and France with the support of Venture Capitalists (VC) and various forms of government interaction. The institutional framework in Japan is more favorable to entrepreneurship when compared to European countries such as the Netherlands (Okamuro et al. 2011). Stuetzer et al. (2014) noted that



regional characteristics might operate as background factors and affect entrepreneurial behavior. They further emphasized that background factor may not determine entrepreneurial behavior if not valued by an individual.

India, a developing country with 1.2 billion people, has emerged as the second fastest growing economy in the world (Paul and Gupta 2014). With the GDP growing at an average of 8% during the last 15 years, the Indian economy has recorded remarkable growth in exports and foreign direct investment (FDI) as compared to developed countries, despite severe restrictions on FDI. According to the GEM 2006, one in every ten Indians is engaged in some type of entrepreneurial activity. India is listed ninth in the GEM survey of entrepreneurial countries. The country is ranked as the highest among 28 countries in necessity-based entrepreneurship and fifth from the lowest in opportunity-based entrepreneurship. On the other hand, Japan, France, and the USA are ranked relatively high in opportunity-based entrepreneurship.

Many entrepreneurship activities are centered on information technology (IT) and IT-enabled service industries in India (Kedia and Lahiri 2007). However, there are a few globally successful firms in other industries as well. This new breed of entrepreneurs seems to revolutionize the way business is done. They used a winning combination of customer insight, industry knowledge, and out-of-the-box thinking to create innovations. To a large extent, the society appears to be risk averse in India. People in India, compared to Japan and the USA, usually seek secure and long-term employment such as government jobs, since they do not receive substantial social security benefits from the government. Social attitudes, lack of capital, inadequate physical infrastructure, and lack of government support, among other influences, appear to be major hindrances to entrepreneurship (Paul and Gupta 2014).

There are country-specific factors that can influence the entrepreneurial intention and behavior, for instance, the drive for wealth that may prevail in a society (Hessels et al. 2008). Entrepreneurial waves date back to the eighteenth and nineteenth century in France and the 1950s and 1960s in Japan. In Japan, society and government undertook efforts for growth with slogans such as “Sell to the strangers” and “Double income,” from the 1960s to 1980s (Kanno and Alfaro 2008). On the other hand, India, with its abundant supply of talent in IT and management, has in the last few decades emerged as the global hub of outsourcing of services from developed countries such as the USA and Denmark (Jensen 2009; Lahiri and Kedia 2009). Indian entrepreneurs have continually gone global in recent years, whereas many Japanese, US, and French firms had gone or grown global in the 1970s and 1980s. The policy changes enabled a scalable and sustainable model for creating a new breed of entrepreneurs in the years to come. Despite the widespread assumptions of the positive relationship between start-up rates and innovation, the empirical support for this conjecture in the cross-country context is largely lacking. Anokhin and Wincent (2012) draw upon recent advances in the entrepreneurship literature to propose that the relationship between start-up rates and innovation is not uniformly positive, as expected by the early scholars of entrepreneurship, but instead depends on the country’s stage of development. The relationship is positive in the developed countries but negative in countries in early developmental stages.

Rauch et al. (2009, 2013) conducted the first meta-analysis on the EO-Performance relationship and found that firm size and industry adherence were the major drivers of EO. The strength of this relationship varies across different studies and country contexts (Wales et al. 2013). Taking into account considerable variance in the meta-analysis across studies,



Saeed et al. (2014) show how national cultural and macro-economic drivers impact the entrepreneurial orientation, building upon 177 studies with data from 41 countries. Similarly, Stenholm et al. (2013) establish the relationship between country level institutional arrangements and type of entrepreneurial activity. However, based on the limited available literature, we agree with the argument that the field of international entrepreneurship is in desperate need for further theory development (Keupp and Gassmann 2009).

Most research about the influence of culture on entrepreneurship has followed Hofstede's (1980) work on cultural dimensions (Hayton et al. 2002; Mitchell et al. 2000; Mueller and Thomas 2001). However, Hofstede et al. (2004) found two alternative forms in which this influence may be analyzed: (i) a positive aggregate effect when culture shapes economic and social institutions, making them more favorable toward entrepreneurial activity. Thus, “integrated” individuals may find it easier to become entrepreneurs. (ii) Where culture is relatively unfavorable toward entrepreneurship, “dissatisfied” individuals would seek personal realization through self-employment.

Hayton et al. (2002) and Busenitz et al. (2000) point out that the cultural dimensions would influence the relationship between economic situation and entrepreneurial activity. Thus, the relative presence of integrated and dissatisfied entrepreneurs in any given culture may change substantially depending on its economic situation. In this sense, support found by Hofstede et al. (2004) for the “dissatisfaction” theory might partly be due to their measure of entrepreneurship. Thus, a culture unfavorable to entrepreneurship might lead to a higher proportion of self-employed individuals. On the other hand, it may be argued that a supportive culture would lead to higher entrepreneurial intentions among the population and, therefore, more new ventures being attempted.

Values shared within a culture, according to the TPB approach, would affect the motivational intention antecedents. In this sense, a supportive culture would help in the legitimating entrepreneurship (Etzioni 1987). As SN reflects the perceived social pressure to start a firm, the influence of cultural values might be stronger on this motivational antecedent (Ajzen 2001; Begley and Tan 2001). Kristiansen and Indarti (2004) argue that SN tends to play a stronger role in explaining intention in collectivist cultures and weaker in individualistic societies.

Therefore, following the previous studies grounded in institutional theory (Baumol 1990; Begley and Tan 2001; Kristiansen and Indarti 2004; North 2005; Aidis et al. 2008; Liñán and Chen 2009; Engle et al. 2010; Autio et al. 2013; Okamuro et al. 2011; Stenholm et al. 2013; Saeed et al. 2014) and rooted in the cultural models of entrepreneurship (Busenitz et al. 2000; Mitchell et al. 2000; Lee and Peterson 2001, Mueller and Thomas 2001; Hayton et al. 2002; Hofstede et al. 2004), we propose our first hypothesis:

*Hypothesis 1:* Country culture (which has its roots in institutional and cultural theoretical schools) is an antecedent of entrepreneurial behavior and activity.

## **Proactive personality and entrepreneurial behavior**

Proactive personality can be defined as taking initiative for improving current circumstances or creating new ones. Bateman and Crant (1993) developed the proactive personality index, defining it as a relatively stable measure to effect environmental change that differentiates people based on the extent to which they take action to influence their environments (Prieto 2011). As work becomes more dynamic and decentralized, proactive

personality and initiative become even more critical determinants of organizational success. For example, companies will increasingly rely upon employees' personal initiatives to identify and solve problems if new forms of management are implemented that minimize the surveillance function (Frese et al. 1997). McCrae and Terracciano (2005a, b) study personality profiles of cultures and demonstrate that Europeans and Americans generally score higher in extraversion than Asians and Africans. Persinger et al. (2011) report that an individual's entrepreneurial orientation is composed of personality traits (the internal environment), perception of the external environment (cognition), and actions or behaviors (manifestation of the internal into the external environment). They posit that the more proactive the entrepreneur, the more perseverance the entrepreneur will exhibit in overcoming the business environmental constraints of an emerging market.

The proactive personality scale measures a personal disposition toward proactive behavior, an idea that intuitively appears to be related to entrepreneurship. Proactive persons tend to identify opportunities and take initiative. Crant (1996) reports that there is a positive relationship between proactive personality and entrepreneurial intentions. This may be the case because proactive people may have a greater desire to become business leaders in order to create value for their firms. In recent times, organizations have been keen on hiring employees who have entrepreneurial traits because they believe that such people can bring changes by providing innovative solutions and new practices (Claar et al. 2009).

Individuals with a proactive personality identify opportunities, take initiatives, and are action-oriented. On the contrary, less proactive individuals might be passive and reactive, preferring to adapt to circumstances rather than change them (Crant 2000). Proactivity has emerged as a principle topic of interest among organizational researchers and practitioners in recent years (Van Dyne et al. 2003; Fuller and Marler 2009; Thomas et al. 2010). Thomas et al. (2010) conduct a meta-analysis of 103 independent samples to provide a comparative evaluation of the relationships associated with four emergent proactive constructs including proactive personality, personal initiative, voice, and taking charge. Results reveal significant correlations between proactivity and performance, satisfaction, affective organizational commitment, and social networking.

Fuller and Marler (2009) provided a comprehensive review of literature examining proactive personalities. The authors use career success as a broad organizing framework, meta-analyzing 313 correlations from 107 studies. Results indicate that a proactive personality is positively related to one's objective and subjective career success. Furthermore, results also indicate that this personality relates to variables consistent with contest mobility (e.g., job performance) and sponsored mobility (e.g., taking charge or voice behavior) avenues to career success.

Following Miller (1986), Crant (1996, 2000), and McCrae and Terracciano (2005a, b), we posit our second hypothesis:

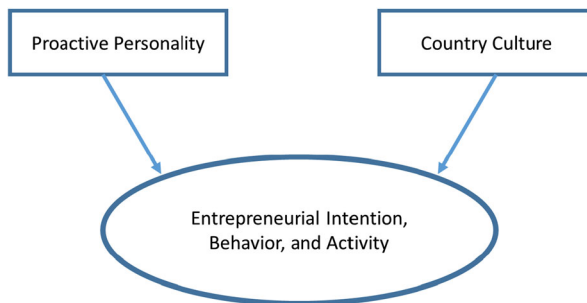
*Hypothesis 2:* Proactive personality is an antecedent of entrepreneurial intention and behavior.

## Method

It is worth noting that, although government agencies and others use the concepts of comparative entrepreneurial competencies widely in their drive for success, the subject

area is in need of further rigorous research and development in practice (Engelen et al. 2009; Mitchelmore and Rowley 2010; Jones et al. 2011; Terjesen et al. 2013). Following those studies, we compare entrepreneurial intention and the resultant activity of young managers in different countries including India, Japan, France, and the USA and examine their antecedents to test the theory, derive new insights, and analyze the implications. The main hypothesis is that entrepreneurial intention is greatly influenced by country culture and personality factors. On the basis of the literature review and results of the analysis, we put forward a theoretical framework (see Fig. 1) to highlight the antecedents of entrepreneurial behavior. We use multilevel techniques such as reliability test using Cronbach's alpha, validity test methods such as principle component analysis and factor analysis, ANOVA, and post hoc tests for empirical analysis.

As primary data is considered to be more robust than secondary data, instead of relying upon the secondary data from the sources such as the GEM, we carried out the present study using interview-based, primary data, collected in the year 2014. We also followed the guidelines suggested by Hult et al. (2008) in terms of measurement equivalence. We administered a survey containing 17 questions (Bateman and Crant 1993) to over 500 managers from different industries between the ages of 22 to 30. These managers were based in India, Japan, France, and the USA. We selected young managers from four culturally diverse countries located in different regions because young managers are considered to be the most appropriate people for studying entrepreneurial intentions and resultant behavior (Engelen et al. 2009; Liñán and Chen 2009; Jones et al. 2011; Autio et al. 2013). Bateman and Crant (1993) developed their scale as a measure of proactive behavior and it is used widely as an index to examine a person's disposition as a general construct that predicts behaviors intended to effect change. The prior literature (for instance, Crant 1996, 2000; Paul and Shrivastava 2016) shows that proactive personality can be used as a proxy variable to predict entrepreneurial intentions. Crant (1996) presented the Bateman and Crant's proactive personality scale as a predictor of entrepreneurial intentions in a widely cited article in *Journal of Small Business Management*. Thus, we use proactive personality as proxy for measuring entrepreneurial intention and resultant behavior. An individual's total score range is between 17 and 119 on this instrument. A higher the score indicates stronger entrepreneurial intention. Previous work by Bateman and Crant (1993) has determined that scores above 85 indicate fairly high proactivity and the resultant entrepreneurial intention.



**Fig. 1** Antecedents of entrepreneurial intention and activity. Source: Theoretical Framework developed by the authors

We selected four culturally different countries located in different regions in the world. To test hypothesis 1, we assume that country culture is a significant predictor of entrepreneurial intention and behavior if the scores on the Bateman and Crant instrument vary from country to country. It is also well known that Japanese culture is completely different from American culture, which has nothing to do with either Indian or French culture (Hofstede 1984). The choice of four distinct countries with unique culture and diverse features in this study is done with the intention of avoiding countries with similar culture, in order to establish the link between culture and entrepreneurship. As the questions in the survey instrument are directly related to proactive personality, we relied upon those answers and the mean score to test the second hypothesis.

All of the managers who participated in our survey hold MBA degrees. Most of the respondents are recent MBAs from premier schools in those relevant countries, such as the University of Washington (USA), Universite De Versailles (France), Nagoya University of Commerce and Business (Japan), and the Indian Institute of Management (India). Participants were contacted in person, as each of the researchers undertook the responsibility of collecting the data from their respective countries of employment or birth. We had approximately 60% males and 40% females in our sample from the USA, Japan, and India, while French data consisted of 65% females. The response rate was over 70%. Based on the responses received, we conducted our analysis with a sample that consisted of 104 managers from France, 106 from India, 95 from Japan, and 95 from the USA. Additionally, we verified the reliability of the scale measuring Cronbach's alpha and conducted principle component analysis to validate this scale.

After calculating the aggregate index mean scores and standard deviation for all four countries separately, we used SPSS to perform one-way ANOVA and post hoc tests on all four groups to discover if there is a statistically significant difference between each item of the Bateman and Crant personality index.

Despite recent attempts to analyze the entrepreneurial intentions using cross-country data (Liñán and Chen 2009; Engle et al. 2010; Lakovleva et al. 2011), our method and study are robust and novel because we have taken into account the following factors:

1. Our sample consists of young managers with MBA degrees, while the authors of the abovementioned papers relied upon data from university students.
2. We collected data from four different countries of strategic importance, with very different cultural and social structures. Nevertheless, all of the sample countries are creditworthy economies when we take into consideration their population (India 1.237 billion, Japan 127.6 million, France 65.70 million, and the USA 313.9 million) or total GDP in terms of current US dollars (India 1.859 trillion, Japan 5.961 trillion, France 2.613 trillion, USA 16.24 trillion; according to the World Bank data for 2012<sup>1</sup>).
3. We put forward a theoretical model (equation) to stimulate further research.
4. We take into account both culture and proactive personality simultaneously unlike other studies that consider either culture or personality, in isolation.

<sup>1</sup> Source: [www.data.worldbank.org](http://www.data.worldbank.org). Accessed on 17 April 2014

## Results and discussion

The results of the statistical analysis and tests conducted are reported in this section under separate sub-sections, as follows: mean scores, reliability and validity tests, ANOVA, and post hoc tests.

### Mean scores

The overall average score on the Bateman and Crant index is 85.06 for young managers in India. According to Bateman and Crant, this score is close to a fairly high proactive score, i.e., 85. The young managers in Japan scored 88.66 on the same index, which is significantly higher than the young Indian managers. The same index score is 89.49 and 80.26 in the case of the young managers from the USA and France, respectively. The young managers in the USA have a relatively higher proactive score than the young managers from France and India, though it is very close to the Japanese score. The empirical findings reported in Table 1 show the scores of each country.

As reported in Table 1, there is only one individual question with particularly high ratings (mean scores of 5.5 or higher on a 7-point Likert-type scale) for young Indian managers:

1. I enjoy facing and overcoming obstacles to my ideas. (5.68)

Individual questions with particularly high ratings (mean scores of 5.5 or higher on a 7-point Likert-type scale) of young Japanese managers are:

1. I feel motivated to make a difference in my community and, maybe, the world. (5.63)
2. Nothing is more exciting than seeing my ideas turn into reality. (5.56)
3. I love being a champion of my ideas, even against others' opposition. (5.76)
4. I am always looking for better ways to do things. (5.68)

Individual questions with particularly high ratings (mean scores of 5.5 or higher on a 7-point Likert-type scale) of young US managers are:

1. I feel motivated to make a difference in my community and, maybe, the world. (5.53)
2. I enjoy facing and overcoming obstacles to my ideas. (5.69)
3. No matter what the odds, if I believe in something, I will make it happen. (5.59)
4. I love being a champion of my ideas, even against others' opposition. (5.56)
5. When I have a problem, I tackle it head-on. (5.62)
6. If I see someone in trouble, I help out in any way I can. (5.98)

Individual questions with particularly high ratings (mean score of 5.5 or higher) of young French managers are:

1. Nothing is more exciting than seeing my ideas turn into reality (6.29)
2. If I see someone in trouble, I help out in any way I can (5.90)

**Table 1** Average score of different countries—indicator of strong/weak entrepreneurial intention and activity

Item	Bateman and Crant instrument	India average score	Japan average score	France average score	USA average score
1	A. I am constantly on the lookout for new ways to improve my life	5.38	5.29	5.04	5.33
2	B. I feel driven to make a difference in my community and maybe the world	4.83	5.63	4.44	5.53
3	C. I tend to let others take the initiative to start new projects	3.85	4.43	3.20	4.22
4	D. Wherever I have been, I have been a powerful force for constructive change	4.73	5.02	3.77	5.22
5	E. I enjoy facing and overcoming obstacles to my ideas	5.68	5.28	5.18	5.69
6	F. Nothing is more exciting than seeing my ideas turn into reality	5.16	5.56	6.29	5.36
7	G. If I see something I don't like, I fix it	4.6	4.92	5.13	5.02
8	H. No matter what the odds, if I believe in something, I will make it happen	5.37	5.44	5.18	5.59
9	I. I love being a champion for my ideas, even against others'. I love I opposition	5.2	5.76	4.35	5.56
10	J. I excel at identifying opportunities	4.92	5.04	4.58	5.17
11	K. I am always looking for better ways to do things	5.2	5.68	5.34	5.17
12	L. If I believe in an idea, no obstacle will prevent me from making it happen	5.04	5.24	4.72	5.28
13	M. I love to challenge the status quo	4.72	4.88	4.36	5.41
14	N. When I have a problem, I tackle it head-on	5.04	5.30	4.77	5.62
15	O. I am great at turning problems into opportunities	4.92	4.88	4.03	4.23
16	P. I can spot a good opportunity long before others can	4.96	5.04	3.97	5.11
17	Q. If I see someone in trouble, I help out in any way I can	5.44	5.25	5.90	5.98
	<b>Sum</b>	<b>85.06</b>	<b>88.66</b>	<b>80.27</b>	<b>89.49</b>

Data rendered in bold text indicates overall score on the Bateman and Crant index for each country

### Reliability and validity tests

Next, we verified the reliability of the scale by measuring Cronbach's alpha. Reliability concerns the extent to which a measurement of a phenomenon provides stable and consistent results. The reliability score was found to be well above the acceptable criterion of .50. Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items is as a group. A "high" value of alpha .842 for France, .793 for India, .847 for the USA, and .797 for Japan is evidence that all 17 items measure an underlying proactive behavior construct (see Table 2). Thus, the results of the study as shown in Table 2 establish the reliability of a total of 17 items for the four countries taken from the proactive personality index developed by Bateman and Crant (1993).

We conducted principle component analysis to validate the scale. The ratio of cases to variables in a principle component analysis should be at least 5 to 1. With 17 variables and 104 cases from France, 106 from India, 95 from the USA, and 95 from Japan, the ratio of cases to variables for all the four countries exceeds the requirement

**Table 2** Reliability test results

Reliability statistics			
Country	Cronbach's alpha	Cronbach's alpha based on standardized items	No. of items
France	.842	.845	17
India	.793	.795	17
USA	.847	.869	17
Japan	.797	.813	17

for the ratio of cases to variables. Kaiser-Meyer-Olkin (KMO) and Bartlett's test establishes that the sample is adequate as the value of KMO is .59 for India, .811 for France, .771 for the USA, and .600 for Japan which is greater than the required measure of .5 for all the four countries (see Tables 3, 4, 5, and 6). Principle Component Analysis requires that the probability associated with Bartlett's test of sphericity be less than the level of significance. The probability associated with the Bartlett test for all the four countries is <.001, which satisfies this requirement.

Factor analysis indicates that there are six groups of variables among the 17 items of the scale used for India and five groups of variables for France, the USA, and Japan. The cumulative proportion of variance criterion can be met with five groups to satisfy the criteria of explaining 60% or more of the total variance. A five-component solution for France and Japan would explain 63.340 and 64.791% of the total variance. A four-component solution for the USA would explain 63.241% of the total variance. A six-component solution would explain 75.61% of the total variance for India, as shown in Tables 7, 8, 9, and 10.

Communalities represent the proportion of the variance in the original variables that is accounted for, by the factor solution. The factor solution should explain at least half of each original variable's variance, so the communality value for each variable should be .50 or higher. Table 11 shows that communality variable is more than .50 for all the four countries.

The rotated component matrix (Tables 12, 13, 14, and 15) indicates factor loading for each variable. As shown in the tables, a score greater than .4 establishes the validity of the scale as it meets the criteria of having more than 17 items (the total number of variables) that have factor loading greater than .4. We have used Varimax with Kaiser Normalization Rotation Method.

**Table 3** KMO and Bartlett's test results for India

Kaiser-Meyer-Olkin measure of sampling adequacy		.595
Bartlett's test of sphericity	Approx. chi-square	659.359
	<i>df</i>	136
	Sig.	.000



**Table 4** KMO and Bartlett's test results for France

Kaiser-Meyer-Olkin measure of sampling adequacy		.811
Bartlett's test of sphericity	555.065	659.359
	136	136
	.000	.000

## ANOVA and post hoc tests

We have performed the one-way ANOVA test at a 95% confidence interval to confirm whether or not there are any statistically significant differences between the scores on each item between the four groups from the sampled countries. For ease of accommodating large data on a single page, instead of writing the complete items of Bateman and Crant Scale, we have used letters to represent the 17 items of Bateman and Crant personality index. The 17 items correspond to letters A through Q, respectively. For example, letter A corresponds to item 1, i.e., "I am constantly on the lookout for new ways to improve my life", and letter B corresponds to "I feel driven to make a difference in my community, and maybe the world" and so on. All 17 items corresponding to each letter are reported in Table 1.

Since the results from the one-way ANOVA do not indicate which of the four groups differ from one another, we ran a post hoc test to perform multiple comparisons of entrepreneurial attitudes among countries. The results of the ANOVA and post hoc tests are summarized in Table 16.

## Discussion

The insights from our study can be discussed point by point as follows:

1. Based on the scores of respondents from India (a developing country), it was found that respondents from developing countries do not always have stronger entrepreneurial intentions than those from developed countries. This is contrary to the findings of Lakovleva et al. (2011). However, our findings corroborate with the results of Estay (2004) in regards to France and the USA.
2. The average index score of the USA is higher than other countries. This corroborates with the widespread perception that entrepreneurial intention would be

**Table 5** KMO and Bartlett's test results for the USA

Kaiser-Meyer-Olkin measure of sampling adequacy		.771
Bartlett's test of sphericity	694.720	659.359
	136	136
	.000	.000

**Table 6** KMO and Bartlett’s test results for Japan

Kaiser-Meyer-Olkin measure of sampling adequacy		.600
Bartlett’s test of sphericity	595.764	659.359
	136	136
	.000	.000

- relatively stronger in countries with low job security (USA) and weaker in countries with higher job security (France, India, and Japan).
- In a recent study, Okamuro et al. (2011) show that the institutional framework in the Netherlands is considerably less favorable to entrepreneurship as compared to Japan. Similarly, our findings indicate that countries such as France and India have a long way to go compared to developed countries, such as Japan and the USA, where entrepreneurship is widespread. It can be interpreted that institutional frameworks in France and India are not yet fully developed for entrepreneurs, compared to Japan and the USA. Therefore, countries such as France and India need to create better institutional framework to encourage entrepreneurs.

**Table 7** Total variance explained for India

Item	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	4.601	27.066	27.066	4.601	27.066	27.066	3.508	20.634	20.634
2	2.462	14.481	41.547	2.462	14.481	41.547	2.167	12.745	33.379
3	1.815	10.679	52.226	1.815	10.679	52.226	2.018	11.873	45.253
4	1.536	9.035	61.261	1.536	9.035	61.261	1.935	11.385	56.638
5	1.326	7.801	69.062	1.326	7.801	69.062	1.680	9.882	66.520
6	1.114	6.551	75.613	1.114	6.551	75.613	1.546	9.093	75.613
7	.759	4.466	80.079						
8	.637	3.746	83.826						
9	.585	3.443	87.269						
10	.547	3.220	90.489						
11	.418	2.457	92.946						
12	.306	1.798	94.744						
13	.286	1.681	96.425						
14	.214	1.258	97.683						
15	.176	1.037	98.720						
16	.132	.777	99.497						
17	.085	.503	100.000						

Extraction method: principal component analysis

**Table 8** Total variance explained for France

Item	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.446	32.035	32.035	5.446	32.035	32.035	2.406	14.150	14.150
2	1.537	9.041	41.075	1.537	9.041	41.075	2.217	13.039	27.190
3	1.450	8.528	49.603	1.450	8.528	49.603	2.168	12.755	39.945
4	1.274	7.496	57.099	1.274	7.496	57.099	1.996	11.742	51.687
5	1.061	6.241	63.340	1.061	6.241	63.340	1.981	11.653	63.340
6	.897	5.278	68.617						
7	.847	4.984	73.601						
8	.731	4.301	77.902						
9	.616	3.625	81.528						
10	.564	3.317	84.845						
11	.489	2.876	87.721						
12	.477	2.806	90.527						
13	.436	2.562	93.089						
14	.390	2.295	95.384						
15	.304	1.786	97.170						
16	.272	1.599	98.769						
17	.209	1.231	100.000						

Extraction method: principal component analysis

**Table 9** Total variance explained for the USA

Item	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.165	36.262	36.262	6.165	36.262	36.262	4.001	23.535	23.535
2	2.074	12.197	48.460	2.074	12.197	48.460	3.144	18.495	42.030
3	1.306	7.681	56.141	1.306	7.681	56.141	2.142	12.599	54.629
4	1.207	7.100	63.241	1.207	7.100	63.241	1.464	8.612	63.241
6	.850	5.001	73.987						
7	.764	4.491	78.479						
8	.686	4.037	82.515						
9	.561	3.300	85.815						
10	.531	3.125	88.940						
11	.498	2.928	91.867						
12	.332	1.954	93.821						
13	.323	1.899	95.720						
14	.239	1.408	97.128						
15	.227	1.338	98.466						
16	.142	.838	99.304						
17	.118	.696	100.000						
1	6.165	36.262	36.262	6.165	36.262	36.262	4.001	23.535	23.535

Extraction method: principal component analysis

**Table 10** Total variance explained for Japan

Item	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.826	28.390	28.390	4.826	28.390	28.390	2.725	16.027	16.027
2	2.243	13.193	41.583	2.243	13.193	41.583	2.433	14.313	30.340
3	1.444	8.495	50.079	1.444	8.495	50.079	2.430	14.297	44.637
4	1.297	7.627	57.706	1.297	7.627	57.706	2.014	11.845	56.481
5	1.205	7.086	64.791	1.205	7.086	64.791	1.413	8.310	64.791
6	.869	5.112	69.903						
7	.839	4.935	74.838						
8	.764	4.495	79.332						
9	.706	4.151	83.484						
10	.654	3.849	87.332						
11	.598	3.519	90.851						
12	.510	3.002	93.853						
13	.360	2.119	95.972						
14	.252	1.480	97.451						
15	.165	.973	98.424						
16	.152	.895	99.319						
17	.116	.681	100.000						

Extraction method: principal component analysis

**Table 11** Communalities

Item	Initial	Extraction France	Extraction India	Extraction USA	Extraction Japan
1	1.000	.634	.663	.537	.599
2	1.000	.581	.769	.698	.813
3	1.000	.468	.881	.743	.715
4	1.000	.601	.640	.568	.621
5	1.000	.670	.843	.521	.679
6	1.000	.569	.704	.739	.545
7	1.000	.612	.717	.569	.596
8	1.000	.742	.703	.703	.698
9	1.000	.708	.679	.580	.623
10	1.000	.607	.674	.554	.725
11	1.000	.664	.806	.687	.794
12	1.000	.612	.884	.681	.574
13	1.000	.712	.682	.701	.596
14	1.000	.611	.847	.756	.621
15	1.000	.646	.824	.645	.780
16	1.000	.688	.841	.689	.510
17	1.000	.644	.696	.679	.524

**Table 12** Rotated component matrix for India

Item	Component					
	1	2	3	4	5	6
1	.680	-.176	.216	.302	-.015	.177
2	.434	.314	.318	.495	.206	.305
3	-.015	.074	.167	.909	-.137	-.040
4	.737	.135	.226	.088	.132	.046
5	.143	-.141	-.151	.030	.883	-.021
6	.296	.688	-.266	.099	.017	.250
7	.772	.165	-.105	.161	-.099	-.218
8	.727	-.161	.166	.060	.340	.041
9	.188	-.697	.021	.250	.192	.241
10	.170	.754	-.031	.014	.174	.213
11	.222	.104	.005	.053	-.064	.860
12	.283	-.371	-.081	.785	.210	.029
13	.756	.213	.169	-.109	-.043	.152
14	-.059	.420	.296	-.021	.748	-.138
15	.227	-.006	.861	.163	-.065	.040
16	.215	-.195	.847	.014	.084	-.180
17	.464	-.071	.280	.063	.087	-.621

The overall average scores on the Bateman and Crant index are 85.06 in the case of young managers from India, 88.66 for Japan, 80.27 for France, and 89.49 for the USA. Our findings do not go hand in hand with the results of Lakovleva et al. (2011). Thus, we find that the theory of planned behavior does not hold true in the case of people from all developing and developed countries. However, there could be exceptions. The index score of India, being a developing country, should have been higher than that of other three developed countries in our study in order to corroborate with the theory of planned behavior. This is not the case, as it is higher than that of just one country, France. On the other hand, our findings are in accordance with the results of Engle et al. (2010), who show that social norms (for which we use the term country culture) are a significant predictor of entrepreneurship in each country.

The differences in the scores also indicate that entrepreneurial intention is greatly influenced by the culture of a country. However, as three groups (countries) out of four are above the threshold of a score of 85 on the index, it is possible to state that the findings indicate the role of both country culture and proactive personality. Accordingly, we postulate a theoretical framework as depicted in Fig. 1.

### Limitations and suggestions for future research

Based on the literature review and measures of proactive personality among young managers in all four of the countries sampled, we established that country culture and proactive personality are the most important antecedents of entrepreneurial activity.

**Table 13** Rotated component matrix for France

Item	Component				
	1	2	3	4	5
1	.160	-.067	.758	.128	.114
2	-.109	.333	.656	.124	-.110
3	.011	.137	-.008	.094	-.664
4	.167	.211	.706	.040	.168
5	.280	.151	.312	.544	.419
6	.184	.383	-.040	.594	.183
7	.601	-.368	.287	.167	.078
8	.807	.163	-.065	.227	.090
9	.728	.374	.187	-.031	.038
10	.176	.728	.117	.177	-.025
11	.182	.120	.473	.626	-.007
12	.657	.317	.119	.160	.201
13	.258	.417	.096	.277	.621
14	.114	.153	.045	.266	.708
15	.193	.516	.238	-.029	.535
16	.265	.670	.346	-.035	.220
17	.051	-.100	.071	.791	.010

**Table 14** Rotated component matrix for the USA

Item	Component			
	1	2	3	4
1	-.016	-.218	.613	.119
2	.009	-.204	.406	.701
3	-.066	.843	-.006	-.169
4	.552	-.014	.483	-.173
5	.112	.120	-.022	.627
6	.785	.290	.193	-.035
7	.182	.549	.471	.112
8	.476	.217	.528	-.389
9	.488	.233	.016	.433
10	.377	.626	.118	.081
11	.237	.403	.670	.141
12	.437	.679	.077	.151
13	.222	.792	-.140	.067
14	.644	.199	.498	.231
15	.795	.068	-.060	.072
16	.724	.379	.016	.141
17	.746	.105	.301	.145

**Table 15** Rotated component matrix for Japan

Item	Component				
	1	2	3	4	5
1	.160	-.067	.758	.128	.114
2	-.109	.333	.656	.124	-.110
3	.011	.137	-.008	.094	-.664
4	.167	.211	.706	.040	.168
5	.280	.151	.312	.544	.419
6	.184	.383	-.040	.594	.183
7	.601	-.368	.287	.167	.078
8	.807	.163	-.065	.227	.090
9	.728	.374	.187	-.031	.038
10	.176	.728	.117	.177	-.025
11	.182	.120	.473	.626	-.007
12	.657	.317	.119	.160	.201
13	.258	.417	.096	.277	.621
14	.114	.153	.045	.266	.708
15	.193	.516	.238	-.029	.535
16	.265	.670	.346	-.035	.220
17	.051	-.100	.071	.791	.010

However, we did not measure the cultural differences for the countries selected. Our interpretation of the results is based on five main points:

1. The notion that we received different scores for the chosen countries
2. The usage of a standardized questionnaire in English, in India, Japan, and the USA, while the questionnaire was translated to French for data collection in France. This was done based on the assumption that all the managers in Japan were comfortable to answer questions in English. Language was not a constraint in India, as English is the medium of instruction in most universities and educational institutions
3. The selection of a relatively small sample size within each country
4. The use of proactive personality as proxy variable for entrepreneurial intention
5. The analysis is cross-sectional in nature, and thus the results could be subject to common method bias, as suggested by Podsakoff et al. (2012)
6. We studied France from Europe. However, we use French data as a representative of Europe for comparison with the USA and Asia (Japan and India). For generalization purpose, we use Europe in title despite the fact that we study only France from Europe. As it may be biased to generalize the French data for all the European countries (managers from other European countries may have different personalities), we consider this as a limitation of this study

We recommend that future studies incorporate these aspects while developing their research methodologies. There is a wide scope for integrating measures of culture and modeling it within the mathematical model framework. Based on the literature review



**Table 16** Results of ANOVA and post hoc tests

---

Item A

ANOVA test shows that respondents are significantly different from each other. The post hoc test for item A shows that if we compare France with India, the USA, and Japan, then respondents from France are significantly different from the USA. If we compare respondents of India from rest of the countries, then respondents from India are significantly different from the USA. Similarly respondents of Japan are significantly different from the USA.

Item B

ANOVA test shows that respondents are significantly different from each other. Post hoc test for item B shows that the respondents of France significantly differ from the USA and Japan. Respondents from India are significantly different from the USA and Japan. Respondents from Japan are different from the rest of the three countries. Similarly, respondents of the USA are different from other three countries.

Item C

ANOVA test shows that respondents are significantly different from each other. Post hoc test for item C shows that respondents from India are marginally different from Japan. Rest of the countries is significantly different from each other.

Item D

ANOVA test shows that respondents are significantly different from each other. Respondents of France are significantly different from rest of the three countries. Respondents of India are significantly different from France and the USA. Respondents of the USA are significantly different from France and India. Respondents of Japan are significantly different from France.

Item E

ANOVA test shows that respondents are significantly different from each other. Post hoc for item E shows that respondents of France are significantly different from the USA. Respondents of India and the USA are significantly different from rest of the three countries, respectively. Respondents of Japan are significantly different from that of India and the USA.

Item F

ANOVA test shows that respondents are significantly different from each other. Post hoc for item F shows that respondents of France are significantly different from rest of the three countries. Respondent of India are different from Japan.

Item G

ANOVA test shows that respondents are significantly different from each other. Post hoc for item G shows that respondents of France and Japan are significantly different from India and the USA. Respondents of India are significantly different from rest of the three countries. Respondents of the USA are significantly different from rest of the three countries.

Item H

ANOVA test shows that respondents are significantly different from each other. Post hoc for item H shows that respondents of France, Japan, and India are significantly different from the USA. One possible explanation for the difference could be because the USA has more favorable business environment that encourages the young managers to venture as entrepreneurs. Indians and Japanese scored almost the same on this item.

Item I

ANOVA test shows that respondents are significantly different from each other. Post hoc for item I shows that respondents of France and India are significantly different from the USA and Japan. Respondents of the USA are significantly different from that of Japan.

Item J

ANOVA test shows that respondents are significantly different from each other. Post hoc for item J shows that respondents of France, Japan, and India are significantly different from that of the USA.

Item K

ANOVA shows that respondents are significantly different from each other. Post hoc test shows that Indians are significantly different from rest of the three.

**Table 16** (continued)

## Item L

ANOVA and post hoc show that respondents are not significantly different from each other.

## Item M

ANOVA test shows that respondents are significantly different from each other. Post hoc test shows that respondents of France, Japan, and India are significantly different from that of the USA

## Item N

ANOVA test shows that respondents are significantly different from each other. Post hoc test shows that respondents from France and Japan are different from the USA.

## Item O

Post hoc test shows that respondents of France are significantly different from rest of the three countries. Respondents of the USA are significantly different from France and Japan.

## Item P

ANOVA test shows that respondents are significantly different from each other. Post hoc test shows that respondents of France are significantly different from rest of the three countries.

## Item Q

ANOVA test shows that respondents are significantly different from each other. Post hoc test shows that French managers are significantly different from managers from the USA and Japan.

and our study, we outline the need to develop new theories in this area which could serve as a benchmark tool for future research. Following prior research (Keupp and Gassmann 2009; Terjesen et al. 2013), we also suggest that the field of Comparative International Entrepreneurship is in desperate need of further theory development. There are also possibilities for comparing entrepreneurial intentions based on genders, which can be executed from a single or multiple country perspective, as was done in the current study.

Methodological suggestions include theory-based rationale for selection of countries. We also agree with McMullen and Dimov (2013), who propose an entrepreneurial journey to distinguish the field horizontally from research on creativity and strategy and vertically from research on real life management functions.

## Conclusions

Our sample has data from three different continents and four countries. The limitation of the study is that we could collect data from two countries of Asia and only France of Europe. The scores generated in our statistical analysis vary from country to country (India, Japan, the USA, and France). Since the scores are different for the four countries, the influence of country culture on entrepreneurship cannot be ignored.

Regardless of their differences, managers in three countries out of the four studied—the USA, Japan, and India—exhibit a relatively higher threshold limit for entrepreneurial intention, based on the criteria score 85 on the Bateman and Crant instrument. Therefore, we accept hypotheses 1 and 2 and conclude that the young managers from those countries have stronger entrepreneurial intentions, particularly the respondents from the USA and Japan. However, how those attributes are then demonstrated or

pursued may be driven by cultural realities. Thus, we conclude with the following mathematical equation:

$$\text{Entrepreneurial Intention (EI)} = f(\text{CC, PP})$$

where CC stands for country culture and PP stands for proactive personality.

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## References

- Aidis R, Estrin S, Mickiewicz T (2008) Institutions and entrepreneurship development in Russia: a comparative perspective. *J Bus Ventur* 23(6):656–672
- Armitage CJ, Conner M (2001) Efficacy of the theory of planned behavior: a meta analytic review. *Br J Soc Psychol* 40(4):471–499
- Ajzen I (1991) The theory of planned behavior. *Organ Behav Hum Decis Process* 50(2):179–211
- Ajzen I (2001) Nature and operation of attitudes. *Annu Rev Psychol* 52:27–58
- Allport GW (1935) Attitude. In: Murchison C (ed) *Handbook of MA*. Clark University, Worcester, pp 798–884
- Alvesson M, Sandberg J (2011) Generating research questions through problematization. *Acad Manag Rev* 36(2):247–271
- Anokhin S, Wincent J (2012) Start-up rates and innovation: a cross-country examination. *J Int Bus Stud* 43: 41–60. doi:10.1057/jibs.2011.47
- Aulakh PS, Kotabe M (2008) Institutional changes and organizational transformation in developing economies. *J Int Manag* 14(3):209–216
- Autio E, Keeley RH, Klofsten M, Parker GC, Hay M (2001). Entrepreneurial intent among students in Scandinavia and in the USA. *Enterp Innov Manag Stud* 2(2):145–160
- Autio E, Pathak S, Wennberg K (2013) Consequences of cultural practices for entrepreneurial behaviors. *J Int Bus Stud* 44:334–362
- Baumol W (1990) Entrepreneurship: productive, unproductive and destructive. *J Polit Econ* 98(5):893–921
- Baumol W (1993) *Entrepreneurship, management and the structure of payoffs*. The MIT Press, London
- Baumol W (2005) *The free-market innovation machine: analyzing the growth miracle of capitalism*. Princeton University Press, Princeton
- Bateman T, Crant MJ (1993). The proactive component of organizational behaviour: a measure and correlates. *J Organ Behav* 16(2):103–118
- Begley TM, Tan WL (2001) The socio-cultural environment for entrepreneurship: a comparison between East-Asia and Anglo-Saxon countries. *J Int Bus Stud* 32(3):537–553
- Beugelsdijk S (2007) Enterprising culture, regional innovativeness and economic growth. *J Evol Econ* 17(2): 187–210
- Bruton GD, Ahlstrom D, Obloj K (2008) Entrepreneurship in emerging economies: where are we today and where should the research go in the future. *Enterp Theory Pract* 32:1–14
- Bird B (1988) Implementing entrepreneurial ideas: the case for intention. *Acad Manag Rev* 13(3):442–453

- Busenitz LW, Gomez C, Spencer JW (2000). Country institutional profiles: unlocking entrepreneurial phenomena. *Acad Manag J* 43(5):994–1003
- Claar VV, TenHaken VR, Frey R (2009) Entrepreneurial attitudes of MBA students in the United States relative to the CIS: the case of Armenia. *Int Bus Econ Res J* 8(2):67–75
- Crant JM (1995) The proactive personality scale and objective among real estate agents. *J Appl Psychol* 80: 532–537
- Crant JM (1996) The proactive personality scale as a predictor of entrepreneurial intentions. *J Small Bus Manag* 34:42–49
- Crant JM (2000) The proactive personality scale in organizations. *J Manag* 80:435–462
- Crant JM, Bateman TS (2000) Charismatic leadership viewed from above: the impact of proactive personality. *J Organ Behav* 21:63–75
- Davidsson P, Wiklund J (1997) Values, beliefs and regional variations in new firm formation rates. *J Econ Psychol* 18(2):179–199
- Doepke M, Zilibotti F (2013) Culture, entrepreneurship, and growth (no. w19141). National Bureau of Economic Research
- Doh J (2000) Entrepreneurial privatization strategies: order of entry and local partner collaboration as sources of competitive advantage. *Acad Manag Rev* 25(3):551–571
- Durand D, Shea D (1974) Entrepreneurial activity as a formation of achievement motivation 7 reinforcement control. *J Psychol* 88(a):57–63
- Etzioni A (1987) Entrepreneurship, adaptation and legitimation: a macro-behavioral perspective. *J Econ Behav Organ* 8:175–189
- Engle RL, Dimitriadi N, Gavidia JV, Schlaegel C, Delanoe S, Alvarado I, Wolff B (2010) Entrepreneurial intent: a twelve-country evaluation of Ajzen's model of planned behavior. *Int J Entrep Behav Res* 16(1): 35–57
- Engelen A, Heinemann F, Brettel M (2009) Cross-cultural entrepreneurship research: current status and framework for future studies. *J Int Entrep* 7(3):163–189
- Estay C (2004) Setting up businesses in France and the USA: a cross cultural analysis. *Eur Manag J* 22(4): 452–463
- Fayolle A, Gally B, Lassas-Clerc N (2006) Assessing the impact of entrepreneurship education programmes: a new methodology. *J Eur Ind Train* 30(9):701–20
- Frese M, Fay D, Hilburger T, Leng K, Tag A (1997) The concept of personal initiative: operationalization, reliability and validity in two German samples. *J Occup Organ Psychol* 70(2):139–161
- Fuller B Jr, Marler LE (2009) Change driven by nature: a meta-analytic review of the proactive personality literature. *J Vocat Behav* 75(3):329–345
- Gabrielsson M, Gabrielsson P, Dimitratos P (2014) International entrepreneurial culture and growth of international new ventures. *Manag Int Rev* 54(4):445–471
- Gupta V, Hanges PJ, Dorfman P (2002) Cultural clusters: methodology and findings. *J World Bus* 37(1):11–15
- Guiso L, Sapienza P, Zingales L (2009) Cultural biases in economic exchange? *Q J Econ* 124(3):1095–1131
- Harris M, Gibson S (2008) Examining the entrepreneurial attitudes of US business students. *Educ Train* 50(7): 568–581
- Hayton JC, George G, Zahra SA (2002) National culture and entrepreneurship: a review of behavioral research. *Entrep Theory Pract* 26(4):33–52
- Hayton JC, Cacciotti G (2013) Is there an entrepreneurial culture? A review of empirical research. *Entrep Reg Dev Int J* 25(9–10):708–731
- Hessels J, Van Gelderen M, Thurik R (2008) Entrepreneurial aspirations, motivations, and their drivers. *Small Bus Econ* 31(3):323–339
- Hofstede G (1980) *Culture's consequences: international differences in work-related values*. Sage Publications, Beverly Hills
- Hofstede G, Noorderhaven N, Thurik AR, Uhlaner LM, Wennekers ARM, Wildeman RE (2004) Culture's role in entrepreneurship: self-employment out of dissatisfaction. In: Brown TE, Ulijn JM (eds) *Innovation, entrepreneurship and culture*. Edward Elgar, Cheltenham, pp 162–203
- Hofstede G (1984) *Culture's consequences: international differences in work-related values* (vol. 5). Sage
- Hofstede G (2010) Globe debate, back to relevance. *J Int Bus Stud* 41(8):1331–1346
- Hoskisson RE, Kovin J, Volberda HW, Johnson RA (2011) Revitalising entrepreneurship: search for new research opportunities. *J Manag Stud* 48(6):1141–1168
- House R, Javidan M, Hanges P, Dorfman P (2002) Understanding cultures and implicit leadership theories across the globe: an introduction to project GLOBE. *J World Bus* 37(1):3–10

- Hult GTM, Ketchen DJ, Griffith DA, Finnegan CA, Gonzalez-Padron T, Harmancioglu N, Cavusgil ST (2008) Data equivalence in cross-cultural international business research: assessment and guidelines. *J Int Bus Stud* 39(6):1027–1044
- Jensen PD (2009) A learning perspective of offshoring of advanced services. *J Int Manag* 15(2):181–193
- Jones MV, Coviello N, Tang YK (2011) International entrepreneurship research (1989–2009): a domain ontology and thematic analysis. *J Bus Ventur* 26(6):632–659
- Kanno A, Alfaro L (2008) Kinyuseisaku: monetary policy in Japan. Harvard Business School Case. Prod. #: 708017-PDF-ENG
- Kedia LB, Lahiri S (2007) International outsourcing of services: a partnership model. *J Int Manag* 13(1):22–37
- Keupp MM, Gassmann O (2009) The past and the future of international entrepreneurship: a review and suggestions for developing the field. *J Manag* 35(3):600–633
- Kirzner MI (1997) Entrepreneurial discovery and competitive market process: an Austrian approach. *J Econ Lit* 35:60–85
- Kristiansen S, Indarti N (2004) Entrepreneurial intention among Indonesian and Norwegian students. *J Enterpr Cult* 12:55
- Krueger Jr NF (2007) The cognitive infrastructure of opportunity emergence\*. In *Entrepreneurship* (pp. 185–206). Springer Berlin Heidelberg
- Krueger NF, Reilly MD, Carsrud AL (2000) Competing models of entrepreneurial intentions. *J Bus Ventur* 15(5–6):411–432
- Krueger NF, Carsrud AL (1993) Entrepreneurial intentions: applying the theory of planned behaviour. *Entrepreneurship & Regional Development* 5(4):315–330
- Kuratako D (2006). A Tribute to 50 years of Excellence in Entrepreneurship and Small Business. *J Small Bus Manag* 44(3):483–492
- Lahiri S, Kedia BL (2009) The effects of internal resources and partnership quality on firm performance: an examination of Indian BPO providers. *J Int Manag* 15(2):209–224
- Lakovleva T, Kolvereid L, Stephan P (2011) Entrepreneurial intentions in developing and developed countries. *Educ Train* 53(5):353–370
- Liñán F, Chen YW (2009) Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice* 33(3):593–617
- Lee SM, Peterson SJ (2001) Culture, entrepreneurial orientation, and global competitiveness. *J World Bus* 35(4):401–416
- Ma H, Tan T (2006) Key components and implications of entrepreneurship: a 4-P framework. *J Bus Ventur* 21(5):704–725
- McClelland DC (1961) *The achieving society*: 210–215. D. Van Nostrand Co., New York
- McCrae RR, Terracciano A (2005a) Universal features of personality traits from the observer's perspective: data from 50 cultures. *J Pers Soc Psychol* 88(3):547
- McCrae RR, Terracciano A (2005b) Personality profiles of cultures: aggregate personality traits. *J Pers Soc Psychol* 89(3):407
- McMullen JS, Dimov D (2013) Time and the entrepreneurial journey, problems and promise of studying entrepreneurship as a process. *J Manag Stud* 50(8):1481–1512
- Miller D (1986) Configurations of strategy and structure: towards a synthesis. *Strateg Manag J* 7(3):233–249
- Mitchelmore S, Rowley J (2010) Entrepreneurial competencies: a literature review and development agenda. *Int J Entrep Behav Res* 16(2):92–111
- Mitchell RK, Smith B, Seawright KW, Morse EA (2000) Cross cultural cognition and venture creation decision. *Acad Manag Rev* 43(5):974–993
- Mueller SL, Thomas AS (2001) Culture and entrepreneurial potential: a nine country study of locus of control and innovativeness. *J Bus Ventur* 16(1):51–75
- Noorkartina M et al (2014) Estimating the choice of entrepreneurship as a career: the case of Universiti Utara Malaysia. *Int J Bus Soc* 15(1):65–80
- North D (1990) *Institutions, institutional change and economic performance*. Cambridge University Press, Cambridge
- North D (1994) Economic performance over time. *Am Econ Rev* 84:359–368
- North D (1997) The contribution of the new institutional economics to an understanding of the transitional problem. United Nations University World Institute for Development Economics Research, Helsinki
- North D (2005) *Understanding the process of economic change*. Princeton University Press, Princeton
- Okamuro H, Van Stel A, Verheul I (2011) Understanding the drivers of an 'entrepreneurial' economy: lessons from Japan and the Netherlands (no. 36). Center for Research on Contemporary Economic Systems, Graduate School of Economics, Hitotsubashi University, Tokyo
- Paul J, Kapoor R (2008) *International marketing: text and cases*. McGraw-Hill

- Paul J, Gupta P (2014) Process and intensity of internationalization of IT firms—evidence from India. *Int Bus Rev*:594–603
- Paul J, Shrivastava A (2015) Comparing entrepreneurial communities: theory and evidence from a cross-country study in Asia. *Journal of Enterprising Communities: People and Places in the Global Economy* 9(3):206–220
- Paul J, Shrivastava A (2016) Do young managers in a developing country have stronger entrepreneurial intentions? Theory and debate. *Int Bus Rev* 25(6):1197–1210
- Persinger E S, Civi E, Vostina S W (2011) The born global entrepreneur in emerging economies. *Int Bus Econ Res J*, 6(3)
- Podsakoff PM, MacKenzie SB, Podsakoff NP (2012) Sources of method bias in social science research and recommendations on how to control it. *Annu Rev Psychol* 63:539–569
- Prieto L (2011) The influence of proactive personality on social entrepreneurial intentions among African-American and Hispanic undergraduate students: the moderating role of hope. *Academy of Entrepreneurship Journal* 17(2):77–96
- Rauch A, Wiklund J, Lumpkin GT, Frese M (2009) Entrepreneurial orientation and business performance: an assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice* 33(3): 761–787
- Rauch A, Frese M, Wang ZM, Unger J, Lozada M, Kupcha V, Spirina T (2013) National culture and cultural orientations of owners affecting the innovation–growth relationship in five countries. *Entrepreneurship & Regional Development* 25(9–10):732–755
- Saeed S, Yousafzai SY, Engelen A (2014) On cultural and macroeconomic contingencies of the entrepreneurial orientation–performance relationship. *Entrepreneurship Theory and Practice* 38(2):255–290
- Say JB (1963) *Treatise on political economy or the production, distribution and consumption of wealth*. Translated from French by C.R. Prenerp. Boston: Harvard University
- Schumpeter J (1950) *The theory of economic development*. Harvard University Press, Cambridge
- Spigel B (2013) Bourdieuan approaches to the geography of entrepreneurial cultures. *Entrepreneurship & Regional Development: An International Journal* 25(9–10):804–818
- Stephan U, Uhlaner L (2010) Performance based vs. social supportive culture: a cross national study of descriptive norms and entrepreneurship. *J Int Bus Stud* 41:1347–1364
- Stenholm P, Acs ZJ, Wuebker R (2013) Exploring country-level institutional arrangements on the rate and type of entrepreneurial activity. *J Bus Ventur* 28(1):176–193
- Stuetzer M, Obschonka M, Brixy U, Sternberg R, Cantner U (2014) Regional characteristics, opportunity perception and entrepreneurial activities. *Small Bus Econ* 42(2):221–244
- Tamizharasi G, Panchanatham N (2010) Entrepreneurial attitudes among entrepreneurs in small and medium enterprises. *Int J Innov Manag Tech* 1(4):354–356
- Terjesen S, Hessels J, Li D (2013) Comparative international entrepreneurship: a review and research agenda. *J Manag* 20(10):1–46
- Thomas JP, Whitman DS, Viswesvaran C (2010) Employee proactivity in organizations: a comparative meta-analysis of emergent proactive constructs. *J Occup Organ Psychol* 83:275–300
- Van Dyne L, Ang S, Botero IC (2003) Conceptualizing employee silence and employee voice as multidimensional constructs. *J Manag Stud* 40(6):1359–1392
- Wales WJ, Gupta VK, Mousa FT (2013) Empirical research on entrepreneurial orientation: an assessment and suggestions for future research. *International Small Business Journal* 31(4):357–383
- Welter F (2011) Contextualizing entrepreneurship—conceptual challenges and ways forward. *Entrepreneurship Theory and Practice* 35(1):165–184
- Zapkau FB, Schwens C, Steinmetz H, Kabst R (2015) Disentangling the effect of prior entrepreneurial exposure on entrepreneurial intention. *J Bus Res* 68(3):639–653
- Zhao H, Seibert SE, Hills GE (2005) The mediating role of self-efficacy in the development of entrepreneurial intentions. *J Appl Psychol* 90(6):1265