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AN ANALYSIS OF BUSINESS MODELS: FIRM CHARACTERISTICS, INNOVATION AND PERFORMANCE

David L. Brannon, Towson University
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ABSTRACT

This article empirically examines the business models of small, entrepreneurial firms. We use configuration analysis to classify common business models and to identify innovative business models. Data for 124 firms is used in our analysis with a 55.4% response rate. Several implications are apparent from the research.First,weidentify firm characteristics, such as the understanding a firm develops of their customers and firm's willing to experiment, associated with business model innovation. Second, the methodology employed in this research provides a means to objectively identify standard industry business models and innovation. Third, we highlight the importance of evaluating an appropriate level of activities/routines to assess business models. Fourth, the work is theoretically based using evolutionary theory as a guide. Finally, the research shows that business model innovation is important for improving performance in a small business environment.

INTRODUCTION

As industries mature, firms tend to converge on a small number of dominant logics for conducting their activities, as reflected in industry-wide dominant business models. As global competition increases and profits dissipate, however, competitive advantage is increasingly sought for through breaking established industry recipes and engaging in business model innovation (henceforth BMI). Companies such as Dell, IKEA, Starbucks, and AutoNation are famous examples of companies in traditional industries that have risen to industry leadership primarily through their introduction of BMIs. The academic interest in the business model concept has increased sharply in recent years (George & Bock, 2011), including the study of BMI (cf. Zott & Amit, 2008). Most of this work has remained conceptual, drawn from well-known examples, or based on case studies. Researching business models is empirically challenging; the business model concept is very complex making it difficult to measure and evaluate. To the extent that innovation in business models has been subjected to systematic empirical testing, we are only aware of one single study that identifies BMI (Zott & Amit, 2007). This paucity of systematic scholarly enquiry seems at odds with the extensive anecdotal evidence and popular viewpoints.

Another common feature of business model research is the focus on high technology industries (Andries, Van Loog, Lecocq, & Debackere, 2007; Bonaccorsi, Giannangeli, & Rossi, 2006. Amit & Zott, 2001). For example, business model innovation has been acknowledged in eBusiness (Amit & Zott, 2001). In these industries, managers have a wide repertoire of strategic

responses available to them in response to environmental changes, including innovation of products, processes and/or the business model. Thus, from a research viewpoint it is difficult parse out the extent to which they engage in BMI specifically and the performance implications of BMI. We suggest that scholars have generally overlooked the potential impact of innovative business models in more typical, less technology intensive, industries. For our research, we take a different tack and examine an industry where products and processes are homogeneous and remain quite stable over time. For this industry, innovation has mainly been related to the business model. By doing so, we are able to systematically examine the business model and work to identify models that are more innovative. We focus on the winery industry. In this industry, the core product has remained relatively unchanged for hundreds if not thousands of years. It would be difficult to identify any industry that is devoid of technological changes. However, the basic process for making wine remains largely the same. Business models, however, have changed substantially.

This research provides a number of important contributions to our understanding of business models. Prior research has noted the importance of BMI, but these assertions have rarely been subjected to systematic empirical assessment. We further develop this research stream by identifying firm characteristics that were associated with innovative business models, by linking BMI with performance and by testing these relationships empirically. Additionally, rather than subjectively assessing business model novelty (cf. Zott & Amit, 2007), we identify several dominant business models in the industry and only consider those business models that significantly deviate from these as BMIs. It is important to identify the firms that break from the normal path, as these firms may be the source of the next industry marketplace revolution (Christensen & Raynor, 2003). For theory, there has been a noted literature gap to address why firms may perform the same functions but have differing results (Murmann, Aldrich, Levinthal, & Winter, 2003). Our research confirms this and an important contribution we noted is that individual activities need to be considered in terms of how they were structured together to form a business model. This is consistent with calls to evaluate bundles of routines rather than a myopic singular view (Aldrich, 1999). This highlights that the structure of activities that a firm creates can have differing results and may be the basis of innovation.

The article unfurls as follows: Next, we explore the definition utilized for business models and for innovation. We then develop hypotheses regarding antecedents and performance outcomes of BMI. This is followed by our methodology, sample, measures and analyses. Fourth, we present the results of our research. The final section discusses the implications of our results, a summary of our contributions, and concludes with limitations and future work.

THEORETICAL FRAMEWORK

Several definitions, frameworks, and theoretical underpinnings exist for the business model concept (George and Bock, 2011; Zott, Amit & Massa, 2011). This has complicated progress on the topic. As noted by Teece (2010: 21): "business models are frequently mentioned but rarely analyzed: therefore, they are often poorly understood". In this paper, we follow the lead of Amit and Zott (2001: 494) to propose that the business model "depicts the design of transaction content, structure, and governance so as to create value through the exploitation of business opportunities". Our goal was to increase the understanding of the business model concept, empirically analyze models and investigate innovative models in Small to Medium-

sized Enterprises (SMEs). Consistent with McKinley, Latham & Braun (2014), we define BMI in terms of a significant departure from the main product, service, or production process architectures in an industry. Thus, the extent to which a firm departs from established depictions of design provides information as to the level of uniqueness of its business model and the extent of BMI. Identifying BMI by using comparisons to established norms for the industry has been used in prior research (Christensen and Raynor, 2003) and is also consistent with Amit & Zott's elaboration of business models (2001). The authors discuss novelty in terms of Schumpeterian innovation (1934) describing BMI as innovative ways to structure transactions. The firm's that attain a BMI provide value in a unique, novel way. To empirically assess novelty, Zott and Amit (2007) have also adopted a comparison method.

Business model innovation has been a focus of several research articles. The work by Zott and Amit (2007) was an empirical examination of the novel business model typology developed in their prior work (Amit & Zott, 2001). A number of conceptual articles have been published including those addressing business model innovation and a framework for types of models (Chesbrough, 2007); as a moderator of the effect of reconfiguration on strategic flexibility (Bock, Opsahl, George & Gann, 2012); links with strategy and technological innovation (Teece, 2010); and different types of organizational learning including trial and error experimentation (Sosna, Trevinyo-Rodriguez & Velamuri, 2010).

Evolutionary theory was used as our guide to propose hypotheses relating firm characteristics associated with innovative business models. A main reason evolutionary theory was chosen was the assistance the theory provided in regards to innovation, or lack thereof, within a population. Aldrich provides guidance on four processes in evolutionary theory: variation, selection, retention and struggle (1999). Variation speaks to innovations that are brought into a population. Small, entrepreneurial firms often introduce these innovations. Successful variations may be selected, retained and spread into the population. New, innovative business models can be a new variation that is introduced into the population. The firms, which develop BMI, have the potential to grow to be significant competitors within an industry. The businesses that utilize common business models are spreading existing evolutionary selections. Utilizing an evolutionary theory view, an innovative business model can be defined as unique compared to the models used by most firms in their industry. The use of 'innovative business model' is intentional as this is intended to convey a continuum with differing levels of innovation. This is consistent with the view of innovation expressed by Damanpour (1991).

We proposed three hypotheses. Two hypotheses associate firm characteristics with innovation and the third hypothesis evaluates the relationship between business model innovations and performance. The literature has suggested that business model innovations are a source of variations, which can lead to changes in the industry (Teece, 2010). We utilize Nelson and Winter's (1982) work on organizational evolutionary theory of the firm as a basis for our hypotheses. Organizational evolutionary theorists focus on purposeful changes that are introduced in a firm, and that can potentially be selected and spread throughout an industry (Nelson & Winter, 1982). Additionally, organizational routines are used to examine the transaction structure of the business model. We now will turn to causes identified in the literature that instigate these changes and our hypotheses.

A major reason why only a few dominating business models arise in an industry is that institutional pressures lead businesses to adopt the accepted routines and structures of routines within an industry in order to appear legitimate (Aldrich, 1999). The imitation of business

models already in existence in an industry reduces risk and the probability of failure (Aldrich and Fiol, 1994). Entrepreneurs entering an industry often copy a substantial share of their routines from established firms (Agarwal, Echambadi, Franco, and Sarkar, 2004). Once such routines are established they are difficult to change because they are 'familiar' and organizations are much better at honing their existing routines and capabilities rather than developing new ones (Nelson & Winter, 1982).

However, despite these internal and external pressures for conformity, variations occur. Two primary sources of variation are new combinations of existing routines and the inaccurate replication of routines (Becker, Knudsen, and March, 2006). Routines, which may be familiar individually, have a different result when they are combined in new ways and this can lead to a new variation (Winter, 2006). The variation, which is new for the firm may also be innovative for the industry. Another variation source deals with the inaccurate replication of existing routines (Becker et al., 2006). Variations can occur because of the difficulty to accurately copy routines, in particular from other organizations. The inability to correctly copy routines results from a lack of understanding of the routines and how another firm's routines work together (Kraatz, and Moore, 2002). Variations arise because unique routines or structures of routines are created by trying to copy another firm's routines into a different context (Gong, Baker & Miner, 2005). For example, an entrepreneur founding a new venture within the same industry in which they have work experience would copy a number of the routines and activities she/he was familiar with from her/his prior job. However, the new venture context will cause variations due to differences between the firms, such as the resources available in the new business. The entrepreneur may not be able to afford the same equipment used in their prior work environment or hire employees to specialize in specific tasks that form the routine. As a result, the routine is different in the new venture than what was used by the entrepreneur in her/his prior workplace.

Firm Characteristics and Business Model Innovation

There are several frameworks available to analyze business models (e.g. Osterwalder, and Pigneur, 2010; Afuah, 2004; Morris, Schindehutte, Richardson, and Allen, 2006). Amit and Zott (2001) describe the business model as content, structure and governance of transactions within a firm. Transaction content refers to the goods/information/services that are exchanged or sold. Transaction structure deals with the linkages of the parties involved in the exchange. The third section, transaction governance captures the flows of information, resources and goods by the parties involved in the exchange.

We identified the customer interface portion as the vital means for differentiation utilized by the firms in our study. The other transaction aspects of the business model were fairly similar across the sample. All firms had similar products, production processes and had the same position within the value chain. This focused attention on the most influential portion of the business model for analysis. Additionally, the importance of the customer interface transactions has been discussed by a number of business model researchers in terms of: customer relationship (Markides, 1999), market segments and value interface (Gordijn & Akkermans, 2001), target markets (Chesbrough & Rosenbloom, 2002), customer relationship S(Dubosson-Torbay, Osterwalder, & Pigneur, 2001), and customer value (Afuah & Tucci, 2000).

Marketing researchers have examined customer information processes that capture, access and use customer information (Jayachandran, Sharma, Kaufman, and Raman, 2005).

Information capture refers to routines for the actual collection of information about the customers. Next, there are activities to organize and access this customer information. Lastly, the information is used to learn about customers (Menon and Varadarajan, 1992). Firms differ significantly in how they collect, access and use customer information. This is influential for small, entrepreneurial firms that often lack resources for expensive point-of-sale systems or employees dedicated to doing customer research. As the aggregate of customer information routines increases, this allows the firm to gain additional knowledge about customers. Customer information is critical to create innovative business models. Teece (2010: 17) describes this as how a firm develops "an understanding of some 'deep truth' about the fundamental needs of the customer". Firms that put forth extensive effort to capture, access and use customer information are able to develop novel insights about value (Slater and Narver, 1998). These firms may then exploit these novel insights, create value in a unique way and, in so doing develop an innovative business model through novel transaction designs.

Evolutionary theory proposed two mechanisms that promote adding more extensive customer information processes. These mechanisms were puzzles and intentional search (Nelson and Winter, 1982). Puzzles may arise from a dramatic shift in product sales (in either direction). To answer why this change has occurred, the firm could seek to increase the amount of customer information it gathers. This increase would allow the firm to gain information to answer the puzzle. The firm may then decide a pivot is needed for their business model and the pivot may lead to an innovative business model. The second evolutionary theory driver of intentional search indicated the firm consciously pursues change. The search could be driven by a desire to increase firm performance, referred to as a problemistic search (Cyert and March, 1992). This is similar to the logic for resolving puzzles. The firms rely on customer information to provide guidance to implement changes to their existing routines and create transactions to attain new sources of value (Knudsen, 2008; Zollo and Winter, 2002). The quest to answer puzzles or intentional search can create a situation for the firm's to discover new value propositions including an opportunity to form an innovative business model. Here, we are specifically referring to customer information processes. Knowledge of the customer allows the firm to understand what the customer values and build a business model that captures that value.

In summary, a firm could add routines and activities for customer information processes to help understand what customer's value. As a firm increases the amount of customer information it obtains, it increases the knowledge it has to resolve problems or pursue opportunities. The knowledge gained from the customer information can lead to developing 'new combinations of' or 'imitating competitors' transactions, which were two of the main causes linked to new variations in evolutionary theory (Becker et al., 2006). This leads to the following hypothesis:

Hypothesis 1: The more extensive a firm's customer information processes, the more innovative the business model.

Prior research has noted that firm routines and activities are often developed by trial and error as to what works best for the firm to accomplish tasks (Cyert & March, 1992). This would include how to create value for customers by introducing new practices and incorporating new routines to pivot the business model. Pivoting a business model could have unknown consequences and these significant changes could be very expensive (Nelson and Winter, 1982).

Experimentation would allow an evaluation of how pivots impact the overall business model. Experimenting with existing routines has been noted as an effective means to implement change (Zollo and Winter, 2002).

Experimentation can be driven both internally and externally. Drivers for SMEs would include processes such as informal experimentation, institutional pressures to conform to industry standards, and influential customers (Davidsson, Hunter, and Klofsten, 2006). Prior research suggests that firms thrive based on successful adaptation (Ventresca and Kaghan, 2008). This intentional experimentation would result in a range of outcomes from incremental improvements to unique innovations (Miner, Ciuchta, and Gong, 2008). Researchers have recognized the impact of adapting businesses models, and noted that adaptation has been used by new ventures to create a sustainable business model (Andries and Debackere, 2007). The emphasis placed on pivoting in the business model canvas can be linked to the need for experimentation in terms of the business model (Osterwalder and Pigneur. 2010).

Firms vary from resisting experimentation to embracing it. The firms that utilized experimentation have planned for the integration of changes into their business model. Developing an innovative business model could require numerous changes to multiple transaction areas in the firm (a time consuming and costly process). Prior research has noted that a high level of experimentation provides knowledge in integrating new routines into the firm (DeTienne and Koberg, 2002) and this would apply to how individual activities fit into the complex structure of transactions in the business model. Experimentation would help to overcome barriers in implementing change and creating an innovative model (Chesbrough, 2010). Business models are complex. Firms that utilize experimentation would evaluate the impact of changes in this complex design. The experimentation with change could be directly linked to creating new combinations in the business model transaction structure, which would be a source of new variations and innovation.

Hypothesis 2: The more extensive the level of experimentation in the firm, the more innovative the business model.

Performance Implications

Firms wish to create a competitive advantage (Dosi, 1982). Business model innovation could provide this advantage. There are important firm level differences in the ability to innovate (Argote and Ingram, 2000). The competitiveness of a firm could be linked to prior innovative activity, adoption of other's innovations and an ability to create a new combination of routines from this mixture (Roberts and Amit, 2003). These new combinations would form innovative business models, which could disrupt the competitive environment and introduce a new variation in the industry. Business leaders have recognized the potential of BMI and the impact unique models can have on performance (IBM, 2006). Prior research has found the relationship with innovation and performance to be affected by industry context (Miller & Friesen, 1983). Performance metrics often vary by industry and this research examined one industry eliminating a potential source of unobserved heterogeneity (McGahan and Porter, 2002). Impacts may be seen through dynamic environments (Sorenson and Stuart, 2000) and environmental competitiveness (Jansen, Van Den Bosch, and Volberda, 2006).

Research linking innovative business models and performance included: new models created for e-commerce (Zott and Amit, 2007), radical disruption of an industry (Christensen and Raynor, 2003), expansion of markets (Markides, 1999), and competitive advantages for innovation (Hamel, 2000). Even though the potential benefits may be considerable, there are a number of difficulties associated with creating innovative business models. There are risks associated with implementing an unproven value proposition and this likely keeps many firms from adopting an innovative business model.

Hypothesis 3: The more innovative the firm's business model, the higher the performance of the firm.

METHODOLOGY

Research Design and Sample

The identification of innovative business models required information on the business models utilized by the businesses in the industry. The New York wine industry was selected. We focused on one industry to obtain detailed information on the nature of value creation by the firms. Evolutionary theory researchers have noted that the evolutionary processes likely vary by industry (Teece, Rumelt, Dosi, and Winter, 2000). The New York wine industry is characterized by a number of small firms (over 200 wineries). The businesses in this industry used very similar production processes and differentiation was achieved through the customer interface transactions in the business model.

The current research utilized organizational routines to examine business models. Routines may be studied through the use of records or by direct observation. Data was collected on numerous variables to depict the transactions in each winery that creates value for customers (Amit & Zott, 2001). This research used a combination of methods to collect data as recommended in the literature (Gittell, 2002). Data was obtained through surveys (paper and online), direct observation and secondary data sources. The data source will be indicated as we describe each of the variables. A comparison of the direct observation data between the firms that completed the survey versus the non-respondents was used to assess sample bias. No bias was found.

A list of all New York wineries was obtained from the New York Wine and Grape Foundation (NYWGF) - a total of 224 wineries. Surveys, observations and secondary data were obtained from 124 wineries resulting in a 55.4% response rate. Only wineries in which complete data was available were used in our analysis. Secondary data was obtained from the NYWGF and the websites for individual firms. We argue that the state's wine industry forms a separate population. Laws and regulations that govern wine transactions vary significantly by state (Wine Institute, 2012). This included regulations on if, how much, and where customers could buy wine. For example, consider a comparison of Texas, which allowed wineries to ship 9 gallons/month with a maximum of 36 gallons/year to Utah where shipping wine to anyone in the state was a felony. New York has an international border with Canada. Canada allowed two bottles of wine duty free and purchases exceeding this amount incurred fees of approximately 100% of the purchase price. This effectively prohibited a Canadian market for New York wines. The average, for the wineries in our sample, showed that less than 5% of their products were

shipped out of state. The New York wineries were mainly focused on tourism and were in direct competition with each other. This was confirmed through observation and discussions with winery owners.

Variables and Measures

As noted, operationalizing the business model is difficult. We worked to balance an in-depth depiction of the firm's transaction structure, relevant information and to reduce unobserved heterogeneity. The customer interface transactions for the wineries were captured using eleven variables, which were a combination of existing scales, observation data and survey data. Cluster analysis was used to determine commonality between firms within the sample. Three clusters were found that indicated common structures of transactions and these were labeled as the three common business models for the industry.

The variable for *innovativeness* of the business model was calculated using a differential similar to methods used in prior configuration research (Payne, 2006). The differential refers to a comparison of individual wineries in the sample with the clusters generated from the data. The three clusters had different means or 'spatial centers' for the eleven business model transaction variables used to form the clusters. Each winery was compared to the cluster mean for the cluster in which it was most closely related. The distance for the winery to the mean of each variable was calculated and the overall Euclidean distance calculated. Results very close to zero indicated the business model for the winery was very typical to a cluster and a high result indicated that the business model differed significantly. This provides a level of innovativeness for each firm in the sample.

The goal was to identify unique structuring of transactions for the business model compared to the norms used in the firm's industry. Configurations are a depiction of a multi-dimensional structure. As Payne (2007) describes, this method is empirically based and a taxonomy rather than a conceptually based typology. A potential complication is that a winery may have been a laggard and had a unique business model due to not keeping pace with changes in the industry. We were able to confirm this was not an issue as the data collection method involved direct observation of all of the firms in the sample. The firms that scored with high levels of innovativeness were indeed novel in comparison to the majority of the firms in the industry. This was not due to a situation were they lagged behind but were unique and had introduced significantly new types of business models.

The eleven variables used to determine the clusters were congruent with deductive procedures where the variables were selected based on prior conceptual work (Ketchen, Combs, Russell, et al., 1997). Our innovativeness measure focuses on a defined portion of the business model and comprehensively assesses these value-creating transactions. This helps to distinguish BMI from product, service or process innovation. For example, a new product innovation would be difficult to identify using our methodology. However, if this new product required a significant change to parts of the business model and these changes led to a unique configuration, this would show up as a higher score for innovativeness in the business model.

There were no survey scales provided by Amit & Zott (2001) that could be used to describe specific business models. We focus on measuring structure, governance and content transactions in the wineries that create value. These firms are small, tourism-oriented businesses that create value through their interactions with the customers. The first of the eleven variables

was a direct survey question that assesses the transactional or relational nature of customer interactions (*RelTrans*). Two additional variables were associated with a winery trade association. The variables assessed whether the winery participated in events sponsored by the trade association (*CollabEvents)* and if the winery was an active participant within a wine trail, which is a group of wineries in a region that advertise together as a tourist destination (*CollabTrail).* The two collaboration variables were direct questions on the survey. The fourth variable captured business model transactions for flows of information resources and goods (Amit & Zott, 2001). This variable dealt with interactions between the firm and customers in sharing information and knowledge (*InfoRecip; alpha=.79*) and was an existing, three-item scale (Jayachandran et al., 2005). The manner in which the firm competently interacted with customers was captured by the fifth variable - managerial competence (*MgrCI; alpha=.75*); an existing five item scale (Sirdeshmukh, Singh, and Sabol, 2002). The sixth variable was a diversity index of the firm's distribution outlets calculated using the Simpson's Diversity Index, where a value of one represents no diversity (Simpson, 1949) (*Diversity Index*). Distribution choices were: direct sales, wholesale, internet, out of state distributor, restaurants and other. The 'other' category had no responses. Variables seven through nine deal with employee interactions with customers. The wineries create an 'experience' for customers in their tasting rooms. This is linked with the tourism aspects of the industry. Existing scales were used to capture employee interactions with customers (Sirdeshmukh et al., 2002). Variable seven dealt with employee problem solving (three items, *EEProbSolv*; *alpha=.82*). The eighth variable involved employee competence (two items, *EEComp*; *alpha=.78*). The final employee variable captured employee benevolence (three items, *EEBene; alpha=.64*). The final two variables are product related. The tenth variable was for the average wine price for all of the products (*AvgPrice*). This data was collected through direct observation. The final, eleventh variable was for product selection was measured with direct observation by the number of wines sold (*NumWines*).

The variable for the first hypothesis dealt with customer information processes. These processes assess the knowledge gained by collecting customer information and by the purposeful use of the information (Jayachandran et al., 2005). This data was collected in three parts using survey responses from existing scales. Information capture (five items, *alpha = .74*) assessed items such as frequency of collection, methods of collection and procedures for updating the information. Information integration (three items, *alpha=.73*) dealt with combining information from multiple functions in the business, styles of communication (i.e. emails, personal contacts) into a merged source to maintain customer information. The third was information use (seven items, *alpha=.82*), which addresses the use of customer information. Examples include use for market segmentation, customizing communication with customers, and creating customer profiles. Following the practice used by Jayachandran et al. (2005), these were factored into the *customer information* processes variable (*alpha=.85*).

The second hypothesis variable, experimentation, was assessed using direct survey questions as to the extent of changes in the transaction structure over the prior three years. This is consistent with prior literature assessing experimentation (Miller and Shamsie, 2001). Experimentation level was assessed for the key areas including customer information collection, use of the information and how the winery interacted with customers. Factor analysis was used to create *experimentation* from the highly correlated items (*alpha=.87*). Control variables included *firm revenue, number of employees, number of Full Time Employees (FTE), age of the firm, and*

respondent's position (owner/general manager/other - tasting room manager) and this data were collected on the survey.

The wineries examined in this study were comprised of privately held firms and common measures used to assess performance of large, public companies (for example, ROI) were not available. Revenue growth over the prior year was determined to be an appropriate measure for a small firm's performance and was captured using survey questions. The revenue growth data was highly skewed and was transformed by adding a constant and taking the logarithm (Basu and Goswami, 1999).

Data Analysis

The data successfully meet standards for normality; linearity between the independent and dependent variables; multicollinearity - tested using variance inflation factor (Belsley, Kuh, & Welsch, 1980); common method bias tested using Harmon's single factor (Podsakoff & Organ, 1986); and heteroscedasticity using White's test (White, 1980). In many cases, the owner was the only employee that fully understood the business model for their small business. To aid in reducing the potential for common method bias, the confidentially of all responses was carefully explained to each respondent; no rewards were given as an incentive; both positive and negative oriented scale questions were used; direct observation from the researcher was used for several variables; survey question ambiguity was reduced using multiple pre-tests; and varying scale formats appeared on the survey (Podsakoff, MacKenzie, & Podsakoff, 2012).

Following procedures used in prior research, a combination of clustering techniques was used on our data (Delmar, Davidsson, and Gartner, 2003). Hierarchical clustering (Ward's technique) was used to determine that three clusters provided the optimal solution. The three clusters were then specified for k-means cluster analysis. The k-means analysis resulted in cluster one with 32 wineries, cluster two with 38 and cluster three with 54. We have named the clusters: Agritourists, Petit Wineries, and Chateaus based on the results for the eleven variables used to form the clusters and we shall elaborate on this in the next few paragraphs. Bonferroni post-hoc analysis indicated a statistically significant difference between clusters.

The Agritourists (cluster one) name was selected because these wineries incorporated both a farming and commercial tourism aspect. Tourism was a part of the vast majority of the winery's business models, but the Agritourists focused on this aspect. The tourism emphasis showed in the importance of wine trail events, promoting the winery as a tourist destination, high product variety, lower average prices, lower levels of customer information obtained and lower relationship establishment with customers. The last two items were consistent with the impact of serving large tourist groups, which limited the ability to interact with customers.

The Petite Wineries (cluster two) was comprised of smaller wineries both in terms of number of employees and revenue. The selection of this name was based on differences in distribution diversity, collaborations with wine trails, collection of customer information and product selection. This cluster sold wine only through their tasting room. The Petit Wineries were less likely to be in a wine trail due to the expense or distance from the trails. These small businesses often lacked any means in which to capture customer data other than an informal guest book. This cluster carried a lower variety of wines and held prices at a medium level.

The Chateaus (cluster three) showed differences for variables involving collaborations with wine trails, collection of customer information, customer service and customer

relationships. Chateau wineries focused on promoting the quality of their wine. The Chateaus were members of wine trails but events were less important to their revenue. These firms had worked to develop a well-known brand and entered into product competitions. The Chateau wineries were the mostly likely to have 'wine clubs' with a greater emphasis on customer information and were the highest in developing relationships with customers. The Chateaus charged the highest average prices for their wines.

The data was clustered using different algorithms to assess the reliability and validity of the clusters (Ketchen and Shook, 1996). A significant difference (judged by number of clusters and case placement) did not result from using different algorithms. Predictive or criterion validity may be assessed by using external variables that were not used to define the clusters but were in some way related or theoretically justified (Ketchen and Shook, 1996). This validity check was especially important because it indicated the clusters were useful in predicting variables beyond the ones used to create the clusters (Arthur, 1994). Variables for number of employees, wine sales, age and customer information were used to confirm criterion validity. Significant differences between the clusters for the variables indicated acceptable validity.

RESULTS

The bivariate correlations are presented in table 1. Items that are significantly correlated are marked with an asterisk and are significant at the 0.01 level. Dummy variables are present for respondent and cluster. The Agritourists (cluster 1) was used as the reference variable and data displayed for the dummy variables of clusters 2 and 3 were in comparison to this cluster.

Table 1
BIVARIATE CORRELATIONS

Variable	Mean	Std Dev	1	2	3	4	5	6	7	8	9
1 Age	14.98	16.00	1								
2 Number of employees	8.36	7.75	.61**	1							
3 Sales	11134	28652	.40**	.70**	1						
4 Owner	0.59	0.49	-0.11	-.30**	-.22*	1					
5 Other Respondent	0.17	0.38	0.05	0.15	0.14	-.54**	1				
6 Cluster 2	0.31	0.46	-.24**	-.40**	-0.22	.38**	-0.21	1			
7 Cluster 3	0.44	0.50	0.21	0.23	0.01	-0.16	-0.01	-.58**	1		
8 Customer Info. Processes	0.00	1.00	0.21	.46**	.25**	-0.22	0.08	-.51**	.48**	1	
9 Experimentation	0.00	1.00	-0.02	0.16	0.18	-0.22	0.03	-0.16	0.08	.48**	1

** 95% significance

The results of the cluster analysis are provided in table 2. The table columns present the 3 clusters with the rows showing the variables that were used for forming the clusters. Bonferroni analysis was performed on the cluster data and indicated a statistically significant difference between the clusters. A line for the Bonferroni analysis is included in the table that provides information on the statistically significant differences between clusters for each cluster variable.

The regression results for the relationship between obtaining customer information and experimentation with innovativeness in business model design are provided in table 3. The first column contains the control variables and the statistically significant variables included the age of the winery (β = -.20, $p<.05$) and the Chateaus dummy variable (β = .54, $p<.001$). The base model was statistically significant (*adjusted* R^2 = .32, $p<.001$).

Table 2
CLUSTER RESULTS

Transaction Variable		**Cluster 1**	**Cluster 2**	**Cluster 3**	***F = Value***
		Agritourists	***Petit Wineries***	***Chateaus***	***p = probab.***
RelTrans	M	-0.3	-0.55	0.55	*F =20.3*
	SE	0.16	0.15	0.11	*p = .000*
	B	3	3	1 & 2	
CollabEvents	M	0.47	-0.06	-0.22	*F =5.2*
	SE	0.14	0.18	0.13	*p = .007*
	B	3		1	
CollabTrail	M	0.5	-0.43	0.02	*F =8.4*
	SE	0.12	0.17	0.14	*p = .000*
	B	2	1		
InfoRecip	M	-0.12	-0.8	0.62	*F =36.2*
	SE	0.13	0.17	0.09	*p = .000*
	B	2 & 3	1 & 3	1 & 2	
MgrCI	M	-0.01	-0.93	0.65	*F =51.2*
	SE	0.15	0.11	0.1	*p = .000*
	B	2 & 3	1 & 3	1 & 2	
DivIndex	M	-0.09	0.77	-0.48	*F =24.6*
	SE	0.17	0.11	0.12	*p = .000*
	B	2	1 & 3	2	
EEProbSolv	M	-1.18	0.49	0.33	*F =53.9*
	SE	0.2	0.08	0.07	*p = .000*
	B	2 & 3	1	1	
EEComp	M	-1.13	0.36	0.38	*F =44.9*
	SE	0.2	0.1	0.08	*p = .000*
	B	2 & 3	1	1	
EEBene	M	-0.44	-0.49	0.59	*F =23.8*
	SE	0.16	0.14	0.11	*p = .000*
	B	3	3	1 & 2	
AvgPrice	M	-0.52	-0.35	0.54	*F =18.9*
	SE	0.12	0.14	0.13	*p = .000*
	B	3	3	1 & 2	
NumWines	M	0.63	-0.6	0.06	*F =16.3*

	SE	0.24	0.09	0.1	*p = .000*
	B	2 & 3	1 & 3	1 & 2	
Number		31	38	55	

M = Mean, SE = Standard Error
Note: significant differences between clusters as indicated by a Bonferrroni test are shown in the row labeled B (.05 significance level).

Table 3
HIERARCHICAL REGRESSION RESULTS: INNOVATIVE BUSINESS MODELS RELATIONSHIP WITH CUSTOMER INFORMATION PROCESSES AND EXPERIMENTATION

	Variables	**Model 1**	**Model 2**	**Model 3**
Controls				
	Age of Winery	-.20*	-.14	-.16†
	Number of Employees	.13	-.04	.11
	Owner	.15	.15†	.21*
	Other Respondent	-.02	-.01	.02
	Sales	.14	.15	.10
	Cluster 2 *Petit Wineries*	-.07	.02	-.06
	Cluster 3 *Chateaus*	.54***	.42***	.53***
Main Effects	Customer Information		.41***	
	Experimentation			.24**
	R^2	.35	.46	.41
	Adjusted R^2	.32***	.42***	.36***
	Change in R^2		.10***	.05**

Standardized regression coefficients are shown;
**=p<.05; **=p<.01, ***= p<.001*

The second model shown in Table 3 included the customer information processes variable to test hypothesis 1, which stated that the more extensive a firm's customer information processes, the more innovative the business model. There was a significant improvement over the base model ($\Delta R^2 = .10, p < .001$) and the variable was significant ($\beta = .41, p<.001$) This provided support for hypothesis 1. The last model included the experimentation variable from hypothesis 2, which stated the more extensive the level of experimentation in the firm, the more innovative the business model. The experimentation variable was positive and significant ($\beta = .24, p<.05$). There was a significant improvement over the base model ($\Delta R^2 = .05, p<.05$) which provided support for hypothesis 2.

The third hypothesis related innovative business models with performance, which stated that the more innovative the firm's business model, the higher the performance of the firm. This was assessed using firm revenue growth. Table 4 shows the results for this hypothesis. Model 1 contains the control variables. The statistically significant variables were the age of the winery ($\beta = -.42; p < .001$), wine cases sold ($\beta = .40; p < .01$) and Chateau cluster ($\beta = .28; p < .01$). The second model included the innovativeness of the business model variable to test Hypothesis 3. There was a significant improvement over the base model ($\Delta R^2 = 04; p< .05$) and the

innovativeness variable was positive and significant ($\beta = .25; p < .05$) providing support for hypothesis 3.

Table 4
HIERARCHICAL REGRESSION RESULTS: REVENUE GROWTH PERFORMANCE AND INNOVATIVENESS OF THE BUSINESS MODEL

Variable	Controls	Revenue Growth
Age of Winery	-.42***	-.38***
# of Employees	.13	.11
Cases sold	.40**	.36**
Owner	.14	.11
Other Respondent	.10	.10
Cluster 2 *Petit Wineries*	.13	.16
Cluster 3 *Chateaus*	.28**	.14
Independent Variable		
Innovativeness		.25*
R^2	.24***	.28***
Adj. R^2	.19	.23
Change in R^2		.04*
Standardized regression coefficients are shown; **=p<.05; **=p<.01, ***= p<.001*		

DISCUSSION AND CONCLUSIONS

In this research, we have proposed two, theoretically based, firm characteristics that could be associated with innovative business models in SMEs, argued that there was a significant relationship between business model innovativeness with performance and introduced a methodology to empirically assess business models. Important aspects that contribute to the literature were the findings for the performance relationship in SMEs with low product innovation and the identification of firm characteristics that were associated with innovation.

Firm Characteristics and Innovative Business Models

Our results indicated that the more emphasis a firm places on customer information capture and use, the more innovative the firm's business model. The more extensive customer information allowed these small, entrepreneurial firms to understand their customers more thoroughly, which lead some to develop innovative business models that offered a unique value proposition. The relationship between customer information processes and innovation was developed based on evolutionary theory subjects such as puzzles that confront the firm and undertaking an intentional search for information. This led the firms to create or enhance transactions that gathered and used customer information. As a result, the businesses had a better understanding of their customer's needs and what they valued. There was considerable variation

in the extent customer information processes firms in our samples utilized. The average number of employees at the wineries was 8.4 full time equivalents (*standard deviation = 7.8*) to handle all aspects of the business including customer interface, agriculture needs and wine making. The range was from the largest wineries with less than 75 employees to a few which had no one working full time at the winery. These small businesses varied in employee customer relationship skills and budgets. The entrepreneur's time constraints often played a role in the extent customer information was collected and used. The most common information collected was email addresses used simply to notify customers of upcoming events. There was a high adoption of social media, such as Facebook and Twitter, as a fairly inexpensive means to connect with customers. This was consistent with the tourism focus of the wineries as it provided a link to the social life of the customers.

The current research adds to our understanding of evolutionary theory. Prior evolutionary theory research has called for work to understand how routines can have similar functions but vary in significant ways from firm to firm (Murmann, et al., 2003). Firms may accomplish the same task in very different ways. Many wineries in our research had basic routines to collect customer information but varied significantly in how (and if) the information was utilized to generate knowledge. The firms that emphasized the customer information processes had a higher level of innovativeness in their business model. To identify the varying outcomes between the wineries using similar functions, the integration of the function into the business model transaction structure must be assessed.

Prior research regarding product innovation has proposed that a close tie to customers hinders innovation processes in a firm (Christensen and Raynor, 2003). Firms want to provide value to their existing customers and do so through the routines in their current business model. This would impede trying a radically different value proposition. Our results showed that greater knowledge and awareness of the customer was associated with innovation in the business model. It could be argued that the firms in our sample were not creating 'disruptive innovation' (Christensen and Raynor, 2003). Our research showed that firms, which have extensive customer information processes and a deep understanding of how they provide value to customers, had an opportunity to create novel transaction structures and business models.

The second firm characteristic we investigated dealt with experimentation in the firm. Evolutionary theory provided guidance that experimentation could be used as a means to evaluate changes to determine their impact (Nelson and Winter, 1982). Experimentation provided useful information as to the impact of changes to a complex business model. Prior research has proposed that developing an innovative business model may require experimentation (Teece, 2010). Our results provide empirical support for this proposal. Very innovative business models were identified as potential new variations in terms of evolutionary theory (Winter, 2006) and were associated with more extensive experimentation in the firm. The firm's desire to experiment could be opportunity driven or to replicate successes seen in other firms (Knudsen, 2008). The firms in our research did not have multimillion-dollar research budgets. These firms were innovative but did so through their business models. Experimentation within the firms we studied was associated with achieving higher levels of innovation.

Innovative Business Models and Performance

Prior research has linked innovative business models with performance advantages (Zott and Amit, 2007; Kim and Mauborgne, 2005). We argued that wineries that provide a unique value proposition to customers should see higher revenue growth compared to others. Our research indicated the relationship between innovativeness in the business models and performance was significant. This relationship was robust even though our sample may have differences from the companies that comprised prior research. Prior research focused on large, technology-based companies working to satisfy shareholders and to grow exponentially. In these types of industries, it is difficult to separate product innovation from business model innovation due to the emphasis on product development and the rapid pace of change. The owners of the wineries had varied goals for their businesses. While some were focused on growth and maximizing profits, a portion of these SME owners saw the winery as a lifestyle operation. Some owners emphasized their passion for the business with a lower regard to maximize profits. Our results for the performance relationship provided support as to the vital role of innovation with firm sustainability and success even with these different objectives.

Implications for Business Model Research

Business model research has been hampered by an inability to operationalize the complex business model concept. A methodological contribution of this research included the measurement of the business model using configuration analysis. Business model research has been limited to conceptual articles proposing typologies and detailed case studies due to the complexity of collecting data on the business models of a large number of firms. As a result, there are limited examples of empirical work on the subject. Our research attempts to move forward to examine specific characteristics associated with business models. The idea of identifying innovative business models by their uniqueness from competitors has been used in prior research (Zott and Amit, 2007). However, we feel the process used in this research was more fine-grained as it empirically identified common business models and those that were novel. Also, our data was captured using direct observations and information from the firm's owner. This provided more detail than would be possible than relying solely on secondary data collection methods. Future work examining business models can benefit from utilizing this process of operationalizing the business model transactions and creating configurations to observe the structure of business models. An additional benefit of the current research dealt with the limited impact of product innovation, which could potentially confound results for BMI. Prior research has indicated that processes for business model and product innovation were similar in how they emerge and grow, but that treating them equally would be a mistake (Markides, 2006).

Evolutionary Theory Implications

We feel the current research adds to our understanding of evolutionary theory. Authors have recommended research to evaluate bundles of routines rather than examining them individually (Aldrich, 1999). Our research utilized cluster analysis to evaluate the firm's routines and activities as a bundle/structure and found significant relationships. To emphasize this point,

if we had limited our study to the collection of customer information, then we would not have been able to distinguish the fact that the overall customer information processes had a relationship with innovation. Simply the *collection* of customer information was not enough. The combination of customer information collection, access and use formed the structure that was associated with innovation. This acknowledges that significant detail was needed to accurately identify relationships and variations in the industry. Too low or too high of firm analysis may miss the variations. These transaction structures comprise the firm's business model and highlight patterns of common business models and those that are innovative.

Evolutionary theory can help to motivate future research into business models. Our sampling context fits with the need to research industries that are new or in a state of renewal, which are filled with opportunities to study evolutionary variations (Murmann et al., 2003). The New York wine industry fit this description well. Variations in these types of industries would be more frequent and provide a means to examine the evolutionary process.

Limitations and Directions For Future Research

A potential limitation involved the selection of Amit & Zott's (2001) business model framework for our research, as there were several alternatives in the literature (Afuah, 2004; George and Bock, 2011; Morris, et al., 2006; Osterwalder and Pigneur, 2010). Fortunately, these business model frameworks all focus on value creation. The theoretical logic we used for hypothesis development would be relevant for various frameworks. Additionally, another potential limitation was that the entire business model was not captured. Prior research has cautioned that using an inappropriate level of analysis could result in identifying aspects that had limited real impact (George and Bock, 2011). We believe this view provides support for our focus on the customer interface transactions in the business model of our sample. If we had examined all of the business model aspects, then the results may have been confounded. Including all activities would impact the clustering process and the ability to identify innovation. The other business model transactions were less pertinent to distinguishing innovative models for wineries and by including them the real impact could have been obscured.

The cross-sectional nature the current research was a limitation. Longitudinal research of innovative business models would be especially interesting in terms of evolutionary theory. Future research could track the highly innovative business models identified to determine survival rates, and potential diffusion into the industry. Later stages of the evolutionary process could be empirically examined rather than with the traditional use of case analysis, which suffers from the contextual nature of events (Aldrich, 1999). Evolutionary theory has a rich literature and future business model research could utilize this to examine stability, interdependency, adaptation and capabilities.

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OPPORTUNITY AND NECESSITY ENTREPRENEURSHIP: A COMPARATIVE STUDY OF INDIA AND CHINA

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ABSTRACT

Prior research on opportunity and necessity based entrepreneurship has largely been confined to contexts prevailing in either high or low-income countries. Our study examines individual level antecedents of entrepreneurial activity in two rapidly growing mid-income economies- India and China. Drawing on country level data from the Global Entrepreneurship Monitor adult population survey we find that in both nations, factors like gender, age, fear of failure, and an individual's human/financial/social capital impact both opportunity and necessity entrepreneurship. Results for the two countries however differ significantly. We further observe that contrary to theorization in the extant literature, in these contexts individuals who are currently employed are also inclined towards necessity entrepreneurship.

This research identifies specific pull and push factors that facilitate both opportunity and necessity based entrepreneurship. Further, it offers a basis for comparing the institutional environment in these contexts with those prevailing in other nations where similar research has been undertaken. With many governments emphasizing entrepreneurship as a key element of state policy, this study has lessons for policy makers seeking to replicate the rapid growth rates in India and China. This study is especially relevant as factors responsible for furthering opportunity entrepreneurship do not necessarily facilitate necessity entrepreneurship. This research will hence help advance theory development in the entrepreneurship field.

Key words: *Opportunity entrepreneurship, Necessity entrepreneurship, Global Entrepreneurship Monitor, India, China, Logistic regression*

INTRODUCTION

Entrepreneurship has been widely recognized as an engine of economic growth (van Stel, Carree, & Thurik, 2005; Wong, Ho, & Autio, 2005). Widely cited definitions of entrepreneurship include the discovery, evaluation and exploitation of opportunities (Venkataraman, 1997) and as the process by which individuals pursue opportunities without regard to resources currently under control (Stevenson & Jarillo, 1990). It is only more recently that another variation of entrepreneurship has emerged- that of individuals who seek entrepreneurship due to a paucity of other options to earn a living. This facet of entrepreneurial behaviour emerged from the Global Entrepreneurship Monitor (GEM) investigation that revealed high entrepreneurship rates in low-income countries. Since then, multiple studies have explored the characteristics of necessity and opportunity entrepreneurship in both high and low-income countries (Bergmann & Sternberg, 2007; Block, Sandner, & Spiegel, 2015; Block & Wagner, 2010; Brünjes & Diez, 2013; Naudé,

Gries, Wood, & Meintjies, 2008). However, the characteristics of these forms of entrepreneurship in middle-income countries, specifically in terms of individual-level antecedents, is noticeably absent in the extant literature.

In an attempt to explore and fill this research gap, we have investigated the individual level antecedents of necessity and opportunity entrepreneurship in India and China. These middle-income nations are two of the most rapidly growing large economies worldwide (World Bank, 2015a, 2015b). Hence the role of entrepreneurship in these contexts needs to be understood across each nation's phase of development. This, in turn, will enable both more nuanced theory development as well as enhanced policy making. A brief overview of the institutional context in these nations, and how entrepreneurship has evolved, is elaborated in the next section.

India

The post-independence phase (1947-1990) in India has been described as the 'license-raj' (Majumdar, 2004). It was marked by strict government controls on all aspects of manufacturing. During this period the industrial development paradigm envisaged the government as the prime force behind setting up and running core capital-intensive infrastructure industries while encouraging the private sector into relatively smaller scale labor intensive manufacturing (Majumdar, 2004). In the 1980's the government, in a significant departure from the earlier socialistic orientation, began introducing key economic reforms. For the first time the need for competition was realized, there was acceptance of the key role that market forces could play accompanied by an underlying emphasis on entrepreneurship both at the corporate and individual level. This was an era of the 'hidden hand', wherein profit generation, using firm capabilities, was the dominant paradigm (Marathe, 1989). In 1991 an acute foreign exchange crisis led to the opening of markets and the growth of the private sector, which in turn contributed to the national economy. Over the past two and a half decades this liberalized policy direction has continued with some modifications and course corrections. This has in part been a result of the country's decentralized system of governance where in states and the center are often ruled by parties with vastly differing political orientation.

During this period small scale industry (SSI) has continued to play a vital role in the Indian economy. By 2004, SSI's accounted for 40% of gross value (as measured by manufacturing sector output) and 34% of total exports while continuing to provide the highest employment after agriculture (De & Nagaraj, 2014). The post-1991 phase also witnessed the emergence of a new class of information technology (IT) entrepreneurs. This included firms like Infosys, Tata Consultancy Services (TCS), Wipro and Cognizant Technology Solutions (CTS). Over the past decade, observing the success of the IT sector, progressive policies have been implemented with government confining itself to a facilitating role.

In 2006, Indian Parliament passed the Micro, Small and Medium Enterprises Development Act to promote this sector (Ministry of Law and Justice, 2006). Despite this, measures like the 'ease of doing business' continue to be a challenge with surveys ranking India at 142 out of 189 countries (World Bank Group, 2015). During the recent 2014 elections, the right wing Bharatiya Janata Party (BJP) has, on the plank of facilitating industrial growth and entrepreneurship, won a clear majority in parliament. This is the first time, after over 30 years of coalition governments, that a single party will be running the Center. Post these election results, and pro-business policy measures, growth prospects have improved with Moody's upgrading the

country's outlook to 'positive' (Choudhary & Dasgupta, 2015). According to the Economic Survey 2014-15, India has emerged as the world's fourth largest hub for start-ups. The budget presented in 2015 contained multiple proposals aimed at facilitating entrepreneurship and innovation, e.g. the setting up of the Micro Units Development Refinance Agency (MUDRA) bank to fund start-ups, and the establishment of Atal Innovation Mission (AIM) to focus on modernization (ET Bureau, 2015; Reuters, 2015).

China

During the initial three decades (1959-1978) under the People's Republic of China (PRC) the private sector was virtually non-existent. Private businesses were either nationalized by the state or reorganized under collective ownership. Deep rooted communist doctrines sought to delegitimize private ownership. Yang (2007) perceived two intellectual justifications for this status quo. Private business was considered morally reprehensible because it depended on the surplus value generated by workers, and the state desired to eliminate this surplus value creation. Further, private enterprise was regarded as economically inefficient and inferior to public ownership as a means to coordinate and achieve large-scale production. During the 1990's, the central government enforced policies aimed at safeguarding large state-owned enterprises. As a result private firms, legally registered as township and village enterprises, were shut down. This policy of containing private enterprise and confining it to a peripheral role in the economy continued through the 90's decade (Huang, 2008).

It is only more recently that the government has taken direct proactive steps at promoting entrepreneurship. These steps were taken because the government realised its importance for propelling the country's national economy and innovation system (Eesley, 2009). The term 'start-up' appeared in a government work report in 1997 (Zhao, 2012). Since then, support for private businesses have become a stable part of government policy. In order to channel the growing demand for community-based services (as a solution for large-scale urban unemployment) the Ministry of Labour and Social Security in 2001 issued a new policy paper titled "Opinions on Promoting Community-based Employment" (Zhao, 2012). In 2003, Law on the Promotion of Small- and Medium-Sized Enterprises was promulgated. In 2004, the government amended the constitution to protect the legal rights and interests of the private sector. Following this, regulations on the creation, transfer and ownership of property were enacted culminating in 2007 with China's Property Rights Law (Nee & Opper, 2012). The number of registered private businesses meanwhile grew by more than 30% a year between 2000 and 2009 (The Economist, 2011). This has resulted in celebrated success stories like that of Jack Ma of Alibaba, who started the online Chinese B2B company that currently serves over 79 million members from 240 countries (Gore, 2014). Ma's personal net worth is estimated at $36.4 billion (Wu & Wong, 2015).

LITERATURE REVIEW

> *Necessity is the most important motivation for entrepreneurs in Angola. In total 42.3% of early stage entrepreneurs are mainly driven by necessity to start their entrepreneurial activities.*-Global Entrepreneurship Monitor, Angola Country Report (Global Entrepreneurship Monitor, 2010)

The focus of entrepreneurship research has largely been on examining opportunity seeking behavior. Entrepreneurial opportunities exist because of varying perceptions of the

relative value of resources and in particular the price at which markets will stabilize (Kirzner, 1997). Scholars observe that since individuals differ in their perception of possible payoffs, the propensity to exploit opportunities will vary (Amit, Muller, & Cockburn, 1995).

More recently there has been an acknowledgement of the transformative nature of entrepreneurship especially in helping the poor get out of poverty (Collier, 2007; Tobias, Mair, & Barbosa-Leiker, 2013). Scholars have also suggested that entrepreneurship research needs to move from a focus on wealth creation to examining its emancipatory aspects (Rindova, Barry, & Ketchen, 2009). The study by Tobias et al. (2013) on Rwanda's coffee sector responds to that call as it illustrates that entrepreneurship may catalyze prosperity as well as peace in places where poverty and conflict are entrenched.

A popular example that highlights the transformative nature of entrepreneurship is in the work of Muhammad Yunus and the bank he founded. Grameen Bank has helped over 7.5 million people come out of poverty by providing small loans sufficient to finance income-generating businesses (Yunus, Moingeon, & Lehmann-Ortega, 2010). As of October 2011, Grameen Bank had 8.349 million borrowers, 97% of whom were women. With 2,565 branches, Grameen Bank provides services in 81,379 villages, covering more than 97% of rural Bangladesh (Grameen Bank, 2011). As of March 2015, Grameen Bank has extended microfinance of over 16,800 million USD (Grameen Bank, 2015). Drawing from his Grameen experience, Yunus has suggested that entrepreneurship was not a rare quality among poor people (Yunus et al., 2010).

In 1999, the Kauffman Foundation, in conjunction with a world-wide consortium, launched the Global Entrepreneurship Monitor (GEM), an annual assessment of national levels of entrepreneurial activity. Initially conducted in 10 countries the most recent data set includes 70 nations covering nearly 70% of the global population (Amorós & Bosma, 2013). As a result of these longitudinal studies, researchers found another type of entrepreneurial intention. This arose as a result of a specific question in the survey enquiring whether individuals were involved in start-up activity as a result of (1) a perceived business opportunity or (2) lack of any other choice. With substantial numbers responding to the latter, GEM labelled them 'entrepreneurs out of necessity' resulting in a new stream of research within entrepreneurship.

Besides examining entrepreneurship as being opportunity or necessity based, another widespread facet of entrepreneurial behaviour is that prevailing in the informal economy. Differing rates of entrepreneurship have been reported by GEM and the World Bank Group Entrepreneurship Survey (WBGES). Acs, Desai, & Klapper (2008) noted that WBGES data contained higher rates of entrepreneurial activity in developed economies as compared to GEM that found increased entrepreneurial activity in developing economies. This difference was due to the existence of an informal economy in developing countries that GEM data captured**.** This has been attributed to entrepreneurs having greater ease and incentive to incorporate their firms in developed nations as compared to developing nations (Acs et al., 2008).

The informal economy encompasses those economic activities that occur outside of formal institutional boundaries (laws and regulations), but remain within informal institutional boundaries (values, norms and beliefs) of large societal groups (Castells & Portes, 1989; Webb, Tihanyi, Ireland, & Sirmon, 2009). Though many of these activities are technically illegal, they are not "antisocial in intent" (De Soto, 1989, p. 11). Also referred to as a 'shadow' or 'unregistered' economy they are a common feature in many nations (Castells & Portes, 1989; Williams & Nadin, 2011) accounting for between 20% and as high as 70% of GDP in developed and developing economies respectively (Schneider & Enste, 2002).

Earlier studies portrayed that entrepreneurs operating in the informal sector are driven by necessity (Castells & Portes, 1989; Portes & Walton, 1981; Sassen, 1997). Some recent work however adopts the opposite stance. Gërxhani (2004, p. 274) concluded that these entrepreneurs "chose to participate in the informal economy because they find more autonomy, flexibility and freedom in this sector than in the formal one". Similarly, Cross (1997, 2000), in a study of street vendors, reported many of them were entrepreneurial out of choice. This has resulted in several researchers questioning the differing motives for opportunity and necessity entrepreneurial action (Aidis, Welter, Smallbone, & Isakova, 2006). Examining 503 entrepreneurs who had started their ventures in England, Ukraine and Russia, Williams (2008) observed the presence of both necessity and opportunity motivations along with a shift from necessity to opportunity drivers as ventures became established. It hence appears that informal entrepreneurs operate along a continuum of necessity-based and opportunity-driven entrepreneurship depending on socio-spatial variations (Gibbs, Mahone, & Crump, 2014). Further, motivational, institutional and resource allocation effects of entrepreneurship in the informal economy differ from that in the formal economy (Webb, Bruton, Tihanyi, & Ireland, 2013). This study found that elements like distrust of government, institutional polycentricism, and weak enforcement encourage informal entrepreneurship.

From another perspective the motives to pursue entrepreneurship have been broadly classified as either opportunity ("pull") or necessity ("push") based (Reynolds et al., 2005). Galid & Levine (1986) were amongst the earliest to propound the push-pull theory of entrepreneurship. They argued that individuals are often propelled into entrepreneurship by negative situational factors such as dissatisfaction with existing employment, loss of employment, or after experiencing a career setback. Conversely they noted that attractive, potentially profitable business opportunities serves as a pull factor to draw individuals into considering entrepreneurship. Amit & Muller (1996) also suggest that 'push' entrepreneurship reflects a dissatisfaction with the current situation.

This demarcation between opportunity and necessity entrepreneurship gained prominence after the GEM study attributed the presence of high levels of entrepreneurship in both low and high-income countries to the push-pull theory (Reynolds, Camp, Bygrave, Autio, & Hay, 2001). Since then multiple studies have corroborated this phenomenon in both high-income (Bergmann & Sternberg, 2007; Block, Kohn, Miller, & Ullrich, 2015; Block & Wagner, 2010; Thurik, Carree, Van Stel, & Audretsch, 2008), and low-income countries (Brünjes & Diez, 2013; Chu, Benzing, & McGee, 2007; Mitchell, 2004; Naudé et al., 2008). At the individual level, necessity and opportunity entrepreneurs differ significantly in terms of socio-economic characteristics (Amit & Muller, 1995; Block & Wagner, 2010; Reynolds et al., 2001).

According to data (World Bank, 2015c), middle-income countries are diverse in their size, population and income level. About 73% of the world's poor live in these countries. These countries are important as they represent about one-third of global GDP and are major engines of global growth (World Bank, 2015c). Two middle-income countries which are exhibiting high growth rates are India and China. Hence, in this research we aim to explore the individual level antecedents to necessity and opportunity entrepreneurship in these two middle-income countries. Towards this end we first engage with the existing literature.

Individual-Level Antecedents to Entrepreneurial Entry

Utilizing GEM data, researchers have investigated the antecedents of entrepreneurial entry both at aggregate and individual levels. The study by Bygrave, Hay, Ng, & Reynolds (2003) found that at an aggregate level, the prevalence of opportunity entrepreneurship was correlated with informal investment, entrepreneurial capacity, and perception of start-up opportunities,while necessity entrepreneurship had no significant correlation with these variables. McMullen, Bagby, & Palich (2008) explored the effect of economic freedom on opportunity and necessity entrepreneurship at a country level. Their study found that opportunity and necessity entrepreneurship are negatively associated with GDP per capita and positively associated with labor freedom. Further, they observed that opportunity entrepreneurship is positively associated with property rights, while necessity entrepreneurship is positively related with fiscal and monetary freedom. We now elaborate on the individual-level antecedents to entrepreneurial entry.

Gender

Entrepreneurship rates differ extensively across both gender and country. Studies utilizing GEM data report that female participation in entrepreneurship varies from 5% in the European Union to 25% in Africa (Singer, Amoros, & Arreola, 2014). Similarly male-female participation ratios extend from 3.79 in Croatia, 3.11 in Norway and the Netherlands to insignificant differences in Brazil, Italy, Venezuela and Thailand (Bosma & Harding, 2006; Reynolds, Bygrave, & Autio, 2004). Extant research suggests that the ability to recognize and evaluate opportunities may be responsible for the differing rates of entrepreneurship among men and women (Bruin, Brush, & Welter, 2007; Langowitz & Minniti, 2007) with men generally more favorably inclined towards entrepreneurship than women (Blanchflower, Oswald, & Stutzer, 2001; Grilo & Irigoyen, 2006). At the same time, men are more likely to succeed when they start a new business (Boden & Nucci, 2000; Carter, Williams, & Reynolds, 1997; Robb, 2002).

Literature investigating the effect of gender on the form of entrepreneurship offers mixed results. Orhan & Scott (2001) identified several attributes closely associated with necessity entrepreneurship that were particularly common among female entrepreneurs. These were insufficient family income, dissatisfaction with the salary offered for employment, difficulty finding a job and lack of flexibility in their schedule to accommodate household responsibilities. GEM (2014) also reports that women start a business venture more often out of necessity than men. Poschke (2013) points out that female entrepreneurs in OECD countries are actually less likely to be necessity entrepreneurs. Studies by Wagner (2005) and Bergmann & Sternberg (2007) observe significant influence of gender on the probability of engaging in opportunity entrepreneurship versus being unemployed or in paid employment. However, there are other studies that fail to find a significant effect of gender on opportunity versus necessity entrepreneurship (Block & Sandner, 2009; Block & Wagner, 2007).

Age

Age is accepted as a triggering factor for entrepreneurship (Lévesque & Minniti, 2006, 2011). We note however the contrasting arguments in the literature when it comes to effect of age on entrepreneurial entry. Expertise, professional experience, self-confidence and the

increased availability of capital with age makes entrepreneurial activity more probable (Bates, 1995). Conversely, the level of professional and family embeddedness increases with age while the planning horizon for the remainder of an individuals' working life decreases, both of which would tend to weigh against entrepreneurial activity (Bates, 1995). Lévesque & Minniti (2006) examined the effect of age on entrepreneurship based on the opportunity cost of time. They argued that with age, people are less willing to invest time in activities that have a long and uncertain payback period, such as starting a venture. Further, with age, income from waged labor increases as the individual gains experience. This is likely to further increase the opportunity cost associated with starting a new venture.

Considering these arguments some studies have suggested an inverted U-shaped relationship between age and entrepreneurial propensity (Bates, 1995; Bergmann & Sternberg, 2007). Bergmann & Sternberg (2007) did not find a significant effect of age on necessity entrepreneurship, while observing that age has an inverse U-shaped relationship with opportunity entrepreneurship. Wagner (2005) found these relationships to be in reverse. He observed that while there was no effect of age on opportunity entrepreneurship, an inverse U-shaped relationship existed in the case of necessity entrepreneurship. Further, opportunity entrepreneurs tend to be older than necessity entrepreneurs (Block & Sandner, 2009; Wagner, 2005).

Occupational status

Prior employment, either in the form of paid or self-employment, is expected to impact entrepreneurial preference. Entrepreneurs tend to improve their abilities over time through employment. Prior self-employment helps individuals gain business skills resulting in a lower likelihood of failure in their entrepreneurial venture (Georgellis, Sessions, & Tsitsianis, 2007; Holmes & Schmitz, 1996; Taylor, 1999). It also helps individuals gain necessary skills related to management of people that in turn further helps in entrepreneurship (Boden & Nucci, 2000; Shane, 2000). Some researchers have taken a contrary view of the impact on entrepreneurship of prior paid-employment. Millán, Congregado, & Román (2010) suggest that with greater labor experience, better options opens up for individuals that are likely to discourage entrepreneurial intent.

Entrepreneurs who while being employed visualize an opportunity to increase their earnings are expected to behave differently from those who venture out with limited opportunities (Hessels, van Gelderen, Thurik, & Gelderen, 2008). Individuals with work experience who have performed managerial duties are more likely to identity opportunities and raise capital (Colombo & Grilli, 2005). Similarly those with greater managerial experience are also more likely to have developed skills to organize new businesses (Shane, 2000). It has been observed that prior professional experience has a positive impact on opportunity entrepreneurship (Giacomin, Guyot, Janssen, & Lohest, 2007). Therefore, it is expected that individuals with prior employment experience are more likely to recognize opportunities and become entrepreneurs than those who do so out of necessity.

Fear of failure

Entrepreneurship has been associated with risk as a result of variable and less certain wages than regular employment (Cramer, Hartog, Jonker, & Van Praag, 2002; Van Praag & Cramer, 2001). Hence an individual's risk propensity is believed to influence entrepreneurial

entry. Prior research notes a lower degree of risk aversion among entrepreneurs (Blanchflower & Oswald, 1998; Van Praag & Cramer, 2001). However, a recent study suggests that the effect of risk aversion on employment differs depending on an individual's socio-economic status (Caliendo, Fossen, & Kritikos, 2009). These researchers discern that unemployed individual's risk attitudes do not seem to play a significant role in deciding entrepreneurial entry. However, for those with regular employment a low degree of risk aversion encourages entrepreneurial entry decision making.

Scholarship on the effect of fear of failure on opportunity and necessity entrepreneurship provides mixed results. In a German context, it was found that opportunity entrepreneurs are willing to accept more risks when compared to necessity entrepreneurs (Block, Sandner, et al., 2015). Brünjes & Diez (2013), had similar results in their investigation around a rural developing context in Vietnam. Wagner (2005), however, found that the fear of failure is lower among opportunity entrepreneurs. Wagner (2005) and Morales-Gualdrón & Roig (2005) concluded that fear of failure hinders both opportunity and necessity entrepreneurs.

Human, social & financial capital

As discussed earlier, starting a new venture requires the mobilization of resources. Significant amongst them are human, social and financial capital (Autio & Acs, 2010; Bhagavatula, Elfring, van Tilburg, & van de Bunt, 2010; Davidsson & Honig, 2003; De Clercq, Lim, & Oh, 2013). Individuals who have access to them are more likely to overcome the challenges associated with pursuing an opportunity and starting a new business (Shane & Venkataraman, 2000).

Human capital refers to education and skills that individuals possess (Becker, 1994). Higher education levels improve the perception of opportunities (Autio & Acs, 2010). With formal education, individuals are better equipped to learn about markets and technology, and recognize opportunities in the surrounding environment (Shane, 2000). Formal education also allows individuals to develop learning aptitudes and enables skills to exploit those opportunities (Grant, 1996). Hence individuals who stay within the education system for a longer period are more likely to be opportunity entrepreneurs (Baptista, Karaöz, & Mendonça, 2014). Poschke (2013) found that necessity entrepreneurs tend to have lower levels of education, run smaller firms, expect their firms to grow less, but are likely to stay in the market for longer periods. Studies also find that necessity entrepreneurs are likely to have sparse human capital, in the form of knowledge and skills, required to start a venture (Block, Kohn, et al., 2015). Block & Sandner (2009) concluded that necessity entrepreneurs are less likely to be educated in the field in which they start and run a business. Research highlights that higher education is more directly correlated to opportunity entrepreneurship than it is for necessity-based entrepreneurship (Bergmann & Sternberg, 2007).

Social capital refers to individual's exposure to entrepreneurial role models (Arenius & Minniti, 2005). This increases awareness about new business creation (Minniti & Nardone, 2007) while reducing the uncertainty surrounding it (Davidsson & Honig, 2003). Social capital serves as a source of advice and also emotional support (Klyver, Hindle, & Meyer, 2007; Manolova, Carter, Manev, & Gyoshev, 2007). Individuals with richer social networks find them useful for the development of their businesses (Ucbasaran, Wright, & Westhead, 2008). Wagner (2005) discovered that opportunity entrepreneurs are more likely to have a role model in the family than necessity entrepreneurs. Further, his study highlighted that family role models matter

for opportunity-driven individuals but not for their necessity-driven counterparts. Morales-Gualdrón & Roig (2005), on the other hand, find an equally significant positive influence of "knowing an entrepreneur" on opportunity and necessity entrepreneurship.

A new business needs financial capital to manage the initial cash flow requirements. During the initial phase, entrepreneurs find it difficult to raise finance from external sources like banks or venture capitalists as they lack collateral and/or legitimacy (Wright, Lockett, Clarysse, & Binks, 2006). Hence, they need to resort to internal sources of financing or bootstrapping (Bhide, 1991; Starr & MacMillan, 1990) or depend on their personal financial assets or those of their households (Arenius & Minniti, 2005). Extant literature argues that opportunity entrepreneurs are willing to invest more in a business opportunity related to their venture when compared to necessity entrepreneurs (Block, Sandner, et al., 2015).

METHODOLOGY

To identify the individual-level antecedents of opportunity and necessity entrepreneurship, we use data from India and China available from the GEM Adult Population Survey (APS). The GEM database has been developed through surveys by private market survey firms with a representative weighted sample of at least 2000 adults (aged 18–64 years) through telephone or face-to-face interviews in each country. As mentioned earlier, GEM was started in 1999 and since then data collection has been carried out on an annual basis. The number of countries in the survey has increased to 70 which represents about 70% of global population (Amorós & Bosma, 2013). Scholars consider GEM a rich, reliable and valid survey (Reynolds et al., 2005). Recent entrepreneurship and international business researchers have relied on this data (Autio & Acs, 2010; Autio, Pathak, & Wennberg, 2013; Bowen & De Clercq, 2008; De Clercq, Danis, & Dakhli, 2010). Details of GEM's research methods have been analyzed by Reynolds et al. (2005) and are available on the GEM Web site (www.gemconsortium.org).

The APS captures the attitudes, activities and aspirations of respondents towards entrepreneurship. Conducted in each participating country the comprehensive survey enables harmonized estimates on the level of entrepreneurial activity. Based on this and other data, GEM reports are prepared both at global and national levels (Bosma et al., 2010; Reynolds et al., 2001, 2004). APS has two advantages over government statistics. Besides capturing data on entrepreneurship at the individual level, the survey also includes aspiring entrepreneurs in its gamut. Secondly, it provides an in-depth view into motivations and aspirations of individuals engaging in or who expect to engage in entrepreneurial activity. This rich micro-level data helps in the analysis of individual characteristics and antecedents of entrepreneurship.

In addition to APS, GEM administers a National Expert Survey (NES). This involves interviews with groups of business and academic experts across a range of disciplines to understand the institutional factors that contribute to or need to be strengthened to promote entrepreneurial activity. These personal interviews are in two parts- an open ended review of the expert's judgments on their country's strengths and weaknesses in the entrepreneurship domain, followed by a fixed response questionnaire (Reynolds et al., 2005). The entrepreneurial framework conditions on which data is sought are finance, government policies, government programs, entrepreneurial education and training, R&D transfer, commercial and professional infrastructure, internal market openness, physical infrastructure and services, and cultural and social norms.

In this study, we have utilized the GEM APS dataset. Through this, GEM captures the total entrepreneurial activity (TEA) in the country. TEA has been the major focus of publications based on GEM data and is defined as the "percentage of the adult population (18–64 years) that is either actively involved in starting a new venture or is the owner/manager of a business that is less than 42 months old" (Reynolds, Bygrave, Autio, Cox, & Hay, 2002, pp. 5–6). In addition to TEA, GEM also captures the rate of opportunity and necessity entrepreneurship. As discussed earlier, the classification of entrepreneurship into opportunity and necessity based was a result of uncovering the presence of high entrepreneurial rates in both developing and developed economies. In short, opportunity entrepreneurship focuses on current start-up attempts based on perceived business opportunities, while necessity entrepreneurs start a business in order to make a living when confronted with a lack of other alternatives.

We have used a pooled sample of 10,751 data points from India and 10,835 from China covering the period 2001-2008 in order to investigate the individual level antecedents of opportunity and necessity entrepreneurship. Data on India is available for 2001, 2002, 2006, 2007 and 2008, while the Chinese data covers 2002, 2003, 2005, 2006 and 2007. GEM data however has certain constraints. The GEM partnership with academic institutions involves a substantial financial commitment by them or a sponsor. There are hence periods when countries could not join the survey resulting in gaps wherein data is not available. For instance, in the case of India, institutional partnerships existed for the years 2001-2002, 2006-2008 and 2012-present. Further, there is usually a lag of around 3-4 years from the data collection till it is publicly available on the GEM website. As of April 2015, only data till 2011 is accessible. We were restricted by these factors and have hence utilized data available for the specified years.

The degree of opportunity and necessity entrepreneurship along with total entrepreneurship rates are provided in Tables 1 and 2. We observe that there have been changes in the extent of entrepreneurial activity. In Table 1, rates of opportunity entrepreneurship in India shows a non-uniform trend, whereas necessity entrepreneurship is on a decline. However, in the case of China (Table 2) we observe that opportunity entrepreneurship is rising while necessity entrepreneurship displays a steady trend. The positive trend in China could be due to supportive government policies towards private sector (Nee & Opper, 2012) which we highlighted in earlier sections. The decline in necessity entrepreneurship in India could be attributed to economic growth resulting in job creation or a result of social schemes providing employment in rural areas. These variations in the respective rates of opportunity and necessity entrepreneurship makes the study of the individual antecedents influencing them interesting.

Table 1
OPPORTUNITY AND NECESSITY ENTREPRENEURSHIP RATES IN INDIA

Year	Opportunity entrepreneurship (%)	Necessity entrepreneurship (%)	Total entrepreneurship activity (%)
2001	3.70	7.50	11.20
2002	12.42	5.04	17.88
2006	6.71	2.86	10.42
2007	5.51	1.67	8.53
2008	8.02	2.47	11.49

Table 2
OPPORTUNITY AND NECESSITY ENTREPRENEURSHIP RATES IN CHINA

Year	Opportunity entrepreneurship (%)	Necessity entrepreneurship (%)	Total entrepreneurship activity (%)
2002	6.97	5.61	12.34
2003	5.45	6.11	11.59
2005	7.30	6.22	13.72
2006	9.59	6.27	16.19
2007	9.84	6.21	16.43

Measures

In this section, we explain how we have operationalized the independent and dependent variables.

Dependent variable

To classify opportunity and necessity entrepreneurs, participants in the GEM survey were asked to indicate whether they were starting and growing their business to take advantage of a perceived unique market opportunity (opportunity entrepreneurship) or because they felt it was the best option available for them (necessity entrepreneurship). This is in line with Reynolds et al. (2005).

Independent variables

We operationalized *gender* (Elam & Terjesen, 2010; Minniti & Nardone, 2007; Verheul, Stel, & Thurik, 2006) as a dummy variable (0 = female; 1 = male). We also considered *age* (Autio & Acs, 2010) and its squared term. The squared value of age (in years) is included as a separate variable in the model in order to be able to identify non-linear relationships between age and start-up activity (Bergmann & Sternberg, 2007). We operationalized *occupation status* as a dummy variable to indicate whether the respondent was not working, was retired, or was a student (=0) or worked full- or part-time (=1) (Arenius & Minniti, 2005; Minniti & Nardone, 2007). The *fear of failure* was operationalized as a dummy variable equal to 1 in case an individual indicated that the fear of failure would prevent them from starting a business, and 0 otherwise (Hessels, Grilo, Thurik, van der Zwan, & Zwan, 2010). We also used a dummy variable (=1) for *social capital* if the respondent personally knew someone who had started a business in the past two years (Klyver et al., 2007; Minniti & Nardone, 2007). *Human capital* was also operationalized as a dummy variable, with 1 indicating that "they had the knowledge, skills and experience required to start a new business" (De Clercq & Arenius, 2006; Minniti & Nardone, 2007). This captured respondents' perceptions of their capabilities to launch a business. *Financial capital* was also measured using a dummy variable, with 1 indicating that "they belonged to the middle or higher income group of the country". This approach is consistent with prior studies (Arenius & Minniti, 2005; Autio & Acs, 2010).

RESULTS

The overall sample size of data from India was 10,751 and China 10,835. Summary statistics are provided in Table 3. The following are a few key observations from the results. First, we find that the fear of failing is greater among Indians as compared to Chinese. Second, in

China, individuals tend to have greater social capital in the form of entrepreneurial role models than India. Third, we note that Indians tend to have high human capital in the form of knowledge, skills and expertise needed to start a new business.

Table 3
SUMMARY STATISTICS

Variables	India		China	
	Mean	s.d.	Mean	s.d.
Necessity entrepreneurship (NE) choice	0.03	0.18	0.05	0.23
Opportunity entrepreneurship (OE) choice	0.07	0.26	0.08	0.27
Gender	0.58	0.49	0.49	0.50
Occupation	0.65	0.47	0.67	0.46
Age	37.79	12.75	38.72	12.25
Fear of failure	0.32	0.46	0.22	0.42
Individual social capital	0.45	0.49	0.58	0.49
Individual human capital	0.55	0.49	0.38	0.48
Individual financial capital	0.49	0.50	0.58	0.49

We checked for multicollinearity and the correlation matrix for India and China are provided in Table 4 and 5. There are no significant correlations above 0.5. We also found that the variance inflation factors were below 2, and thus multicollinearity was not a concern in our analysis (Neter, Kutner, Nachtsheim, & Wasserman, 1996).

Table 4
CORRELATION MATRIX FOR INDIA

Variable	1	2	3	4	5	6	7	8	9
1. NE choice	1								
2. OE choice	-0.05*	1							
3. Gender	0.02*	0.07*	1						
4. Occupation	0.07*	0.13*	0.47*	1					
5. Age	-0.05*	-0.06*	0.01	-0.00	1				
6. Fear of failure	-0.00	-0.04*	0.02	-0.03*	-0.01	1			
7. Individual social capital	0.01	0.08*	0.18*	0.20*	-0.05*	0.11*	1		
8. Individual human capital	0.08*	0.16*	0.21*	0.26*	-0.07*	0.03*	0.34*	1	
9. Individual financial capital	-0.01	0.08*	0.10*	0.14*	0.03*	-0.05*	0.04*	0.08*	1

*p < 0.05

Table 5
CORRELATION MATRIX FOR CHINA

Variable	1	2	3	4	5	6	7	8	9
1. NE choice	1								
2. OE choice	-0.07*	1							
3. Gender	0.02*	0.08*	1						
4. Occupation	0.13*	0.17*	0.22*	1					
5. Age	-0.03*	-0.12*	-0.01	-0.22*	1				
6. Fear of failure	0.03*	-0.00	-0.00	0.04*	0.00	1			
7. Individual social capital	0.07*	0.17*	0.10*	0.19*	-0.14*	0.09*	1		

8. Individual human capital	0.12*	0.24*	0.16*	0.21*	-0.15*	0.04*	0.31*	1	
9. Individual financial capital	-0.03*	0.13*	0.13*	0.20*	-0.16*	-0.02	0.16*	0.14*	1

*p < 0.05

Since our dependent variables are dummies (opportunity entrepreneurship (1/0); necessity entrepreneurship (1/0)), we conducted logistic regression analysis using STATA. We calculated separate logistic regression models for opportunity and necessity entrepreneurship in India and China, and the results are in Table 6.

From Table 6, we find that the effect of individual-level antecedents to opportunity and necessity entrepreneurship differ for India and China. In India, gender is not an influencing factor, while in the Chinese context men are more like to be opportunity entrepreneurs. Contrary to extant research, we find that in both nations, individuals who are currently employed are likely to consider both opportunity and necessity entrepreneurship, with the likelihood for opportunity entrepreneurship higher in India and for necessity entrepreneurship higher in China. To an extent the choice for necessity entrepreneurship among individuals who are employed challenges the very basis of why necessity entrepreneurship occurs. However, in the context of rapidly growing, but still middle-income economies, it is possible that individuals, despite having a job are either not satisfied with their existing wages from employment or perhaps aspire to do better. This aspect differs from prior literature and is further elaborated in the discussion section. The likelihood of individuals having occupation becoming opportunity entrepreneurs is higher in India, while in China the proclivity for necessity entrepreneurship is greater among individual who are working.

Age of the individual has a negative effect on opportunity entrepreneurship in both countries. However, age has an inverted-U shaped relationship on necessity entrepreneurship in India, while this factor is not significant in China. The fear of failure has a negative effect on becoming an opportunity entrepreneur in China. An individual's social capital has a positive effect on the likelihood of opportunity entrepreneurship in both countries. However, this factor has a negative effect on necessity entrepreneurship in India and a positive effect in the case of China. Individual human capital has a positive effect on both forms of entrepreneurship in both countries, though the magnitude of the positive effect is higher for opportunity entrepreneurship. Finally, individual financial capital has a positive effect on the likelihood of opportunity entrepreneurship in both countries, while the effect is negative in case of necessity entrepreneurship in China.

Table 6
LOGISTIC REGRESSION RESULTS

Variables	**India**		**China**	
	Necessity entrepreneurship	Opportunity entrepreneurship	Necessity entrepreneurship	Opportunity entrepreneurship
Gender	-0.01	-0.09	-0.14	0.21*
Occupation	0.78***	1.16***	1.76***	1.4***
Age	-0.04***	-0.01**	-0.005	-0.03**
Age squared	0.001**	0.0002	-0.0005	0.0001
Fear of failure	-0.10	-0.19	0.04	-0.19†
Individual's social capital	-0.37*	0.47***	0.44**	0.88***
Individual's human capital	0.86***	1.59***	0.65**	1.25***

Individual's financial capital	-0.21	0.489***	-0.78**	0.58***
Constant	-2.69***	-4.57***	-3.89***	-4.21***
Number of observations	4426	4426	5780	5780
Log-likelihood	-775.24	-1128.15	-1422.97	-1671.07

***p < 0.001, **p < 0.01, *p < 0.05, †p < 0.1

DISCUSSION AND IMPLICATIONS

Since GEM 2001 (Reynolds et al., 2001), substantial academic interest has developed around opportunity and necessity entrepreneurship. Our study has investigated this phenomenon in the context of two rapidly growing middle-income economies - India and China. We have explored the individual-level antecedents of opportunity and necessity entrepreneurship in these two nations.

Prior research indicates that both in high-income (Germany) and low-income (Vietnam) countries, men are more likely to be opportunity rather than necessity entrepreneurs (Bergmann & Sternberg, 2007; Brünjes & Diez, 2013). While this result holds well in China, gender does not appear to influence the form of entrepreneurship in India. This indicates that gender biases related to entrepreneurship do not appear to be present in the Indian context. Recent studies corroborate this finding with research by Das (2014) indicating that one-third of early stage entrepreneurs in India are women.

In our study, we found that both in India and China individuals who are currently employed, favorably consider necessity entrepreneurship. This may initially appear as a contradiction given the definition of necessity entrepreneurship as arising from a lack of alternate forms of employment. However, closer scrutiny reveals multiple possible reasons for this phenomenon. Firstly, a high level of dissatisfaction with employment could be driving individuals to consider necessity entrepreneurship (Amit & Muller, 1995; Gilad & Levine, 1986). Secondly, this could arise when perceived earnings from organization employment have fallen (Dawson & Henley, 2012). Thirdly, as Deli (2011) suggested it could arise when prior firm employment is impacted by macroeconomic fluctuations, forcing individuals to embrace necessity entrepreneurship. These aspects need to be investigated further in terms of location (rural vs. urban areas); income stratification (high vs. low) or other factors.

Research in a high-income country illustrates that necessity entrepreneurship is largely independent of age, while opportunity entrepreneurship has an inverted-U shaped relationship (Bergmann & Sternberg, 2007). In a low-income country, it was seen that the likelihood for opportunity and necessity entrepreneurship increases with age (Brünjes & Diez, 2013). Our findings in middle-income countries, suggests that as individuals become older they are less likely to become opportunity entrepreneurs. This could be due to the greater risk associated with opportunity entrepreneurship, coupled with family pressures and job security needs. Interestingly in the Indian context we also find a U-shaped effect of age on necessity entrepreneurship. This suggests that older people in India, as well as the young, favourably consider necessity entrepreneurship. This could be due to the lack of alternate income sources early in their life and once again post retirement from their regular job. A similar trend is however not observed in China.

The fear of failure discourages individual from becoming opportunity entrepreneurs in China but not so in India. This suggests that Indian entrepreneurs are more willing to take risks as compared to those in China. However, fear of failure does not seem to influence necessity

entrepreneurs in both countries. The results for China are consistent with extant research in high and low-income countries (Block, Sandner, et al., 2015; Brünjes & Diez, 2013). As suggested by these scholars, this could be because of inherently lower risk associated with necessity entrepreneurship in comparison to opportunity entrepreneurship. However, the effect in India is different with the fear of failure not having a significant impact on either form of entrepreneurship.

An individual's social capital, in terms of their connections, has a positive effect on both necessity and opportunity entrepreneurship in China. This is reflective of the inherently strong social capital structure (*guanxi*) in China. However, in India, higher social capital encourages opportunity entrepreneurship while discouraging necessity entrepreneurship. The result for India is consistent with extant literature (Wagner, 2005), while China offers a different outcome.

An individuals' human and financial capital also encourages opportunity entrepreneurship more than its impact on necessity entrepreneurship. This corresponds to the existing literature, which argues that individuals identify greater opportunities with higher levels of education and connections build through the educational system (Baptista et al., 2014; Ucbasaran et al., 2008). The effect of financial capital is also supported by results from previous studies carried out in a high-income country context (Block, Sandner, et al., 2015).

We acknowledge limitations in our study. Firstly, as mentioned earlier, we were restricted by the database in conducting the study for certain periods where data was available, and hence made use of a pooled dataset. However, since our aim was primarily to understand the phenomena of opportunity and necessity entrepreneurship in middle-income countries, and study their individual antecedents, we believe that utilizing data from the selected years is justified. Future research using longitudinal research designs that span a longer time period could explain the dynamic relationships between individual-level resources and entrepreneurial choice. Secondly, we are restricted by the database to use single item constructs for operationalizing individual-level resources like human capital, social capital and financial capital. This restricted us from exploring possible differences in the effect of different forms of capital like bridging and bonding social capital on entrepreneurship (Davidsson & Honig, 2003; Lee & Tuselmann, 2013). Future research could explore the effect of these forms of social capital on entrepreneurship in middle-income countries.

In conclusion, this study is among the earliest to investigate individual-level antecedents to opportunity and necessity entrepreneurship in the context of middle-income countries. We find differences in the effect that individual-level antecedents have on the two forms of entrepreneurship from those highlighted in prior research on high and low-income countries. We further observe variations between the two middle-income countries selected for our project, opening up the need for future research to either collaborate or refute these findings. One interesting result, that challenges extant literature, is that individuals who are currently employed are also likely to be inclined towards necessity entrepreneurship. Future research, adopting both qualitative and quantitative techniques, could further elaborate on the reasons behind this effect. Additional investigation is also needed to understand the effect of the informal economy, which constitutes a significant part of low and middle-income countries, on both opportunity and necessity entrepreneurship.

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THE EFFECT OF SOCIAL SUPPORT ON JOB STRESS OF ENTREPRENEURS

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ABSTRACT

Work domain is the important area in individuals' lives that they spend almost their all day at work. In today's socio-economic structure women and men take part in business life much more than in the past. In this direction, the evaluation of variables that affect their stress level and the predictors of that stress carry the great importance.

Many studies have showed that entrepreneurship, due to the features such as flexible work hours, being the boss of your own job and having autonomy, helps individuals to have more control and less stress on work. However, considering the diversity of individual and environmental sources of stress, investigating the role of perceived social support and the difference for women and men will provide more comprehensive understanding on the issue of stress.The research model of this study is established in the light of conservation of resource theory. The effects of perceived social support on job stress will be tested by multi group structural equation modeling. The sample of the research consists men and women (N= 1353) who are entrepreneurs. According to the obtained results, social support has reducing effect on job stress for both men and women. However, the effect of social support on job stress of women entrepreneurs is significantly higher than of men entrepreneurs. The results were interpreted in the light of related past studies and theories.

INTRODUCTION

Today, entrepreneurship is emphasized in all economies, as an important concept that is thought to contribute to the social and economical developments. The changing economic conditions not only increased the participation of women and men in labor force but also in entrepreneurial activity. The supporting activities of the national economies, providing incentives, increased need to change and diversity, developing technology, the easy access to information through the internet and social and individual factors increased the willingness of individuals to become an entrepreneur. In macro level, engaging in entrepreneurial activities contribute to the countries' economies by providing employment opportunities for others, creating new businesses, generating new wealth and adding to national income and creating social change with innovative actions. In individual level, it also provides benefits such as individual autonomy, control and particularly financial freedom and freedom on adjusting work schedule.

All these positive features are the one side of the coin, challenging work conditions, taken risks that are based on the motive of making profit and critical decisions in order to ensure the sustainability of business present the other side of coin. All these difficulties which are related

with work life create a physical and psychological response that is called job stress. Today's work life consists of rapidly changing technology, globalization and many economic crises that causes the individuals to perceive higher level of job stress than before. The relation between job stress and employee well-being and health has been the subject of many studies. Nurses, doctors, emergency workers, firefighters and policemen have formed the sample of the many studies on job stress due to stressful working conditions and job quality (Çevik, 2011; Göçeri, 2014). The results revealed that job stress affects employees' physical and mental health directly and negatively, and is positively related to their job dissatisfaction, burnout, absenteeism, loss of production and performance, and high turnover rates (Bolino & Turnley, 2005; Flanagan, 2006; Kazmi, Amjad & Khan, 2008; Rothmann, Jackson & Krueger, 2003).

Social support is the other important variable associated with the job stress. La Rocco, House & French (1980), in their study on 636 male employees revealed that employees perceived social support from their colleagues and managers affect negatively their job stress. Blau (1981), reported that social support reduces the level of job stress and negative judgments of business through which individuals may have. Daniels and Guppy (1994), indicated that, in the light of data obtained from 244 accountants, social support decreases the job stress of accountants and have a positive impact on well-being of individuals.Despite the individual, social and economical advantages of entrepreneurship, it also considered as stressful and difficult work activities due to nature of business environment. Therefore, identification of the possible effect of social support on job stress of entrepreneurs provides necessary information about correctional entrepreneurs' work environment and rendering support. The absence of empirical research about the association of social support and job stress, especially on entrepreneurs creates the incentives to do the present study. This study aims at assessing the effect of perceived social support on job stress for entrepreneurs in Australia. The examination of reducing factor of stress such as support would help to deal with stress' costly negative outcomes that affect individuals and organizations alike. In addition, it intends to find out whether there is any difference between women and men entrepreneurs on perception of this effect or not by multi-group structural equation modeling.

THEORETICAL FRAMEWORK AND HYPOTHESIS

Conservation of resource theory, which is a stress theory developed by Stevan Hobfoll (1989), examine the demands in the environment and the individuals' resources to deal with these demands in order to identify stress process. According to theory, stress occurs when the environment demands has caused or may cause the loss of resources or prevent the possible gain of resources. In other words, people try to both preserve resources and accumulate resources in order to better response to the environmental demands and perceive less stress. Although the theory emphasizes on both resource loss and resource gains, a key feature of it is focusing on the resource loss. Hobfoll (2001) suggested that resource gains carry its importance in reducing the adverse effects of resource loss, whereas resource loss creates more immediate and negative impacts on individuals. Dewe, O'Driscoll and Cooper (2012) defined resource as "anything that is important to the person, contributes positively to their well-being and enables them to adjust". The resources play critical roles in the process of perceived stress. For example, while

individuals who have high self-esteem and self-competence would be less affected by the loss of resources, others with negative self-evaluation may have more adverse effects of resource loss (Grandey & Cropanzano, 1999; Di Clemente, Crosby, Kegler, 2009). According to theory social support is also considered as a major resource that can reduce stress, increase well-being and protect individuals from the adverse effects of stress and burnout (Halbesleben, 2006).

The concept of social support is a concept frequently encountered in the field of psychology, medicine, management, and organizational behavior. Shumaker and Brownell (1984) defined social support as the exchange of help and support between at least one receiver and one transmitter. Braham (1998) stated as the satisfaction of social needs as a result of interaction with other individuals. In another definition it is specified as the individual willingness to receive advice and assistance in the event of problems (Morgeson & Humphrey, 2006). Based on all of these definitions, social support can be defined as the perceived support that helps to meet social needs due to the presence and accessibility of people he or she can trust. The types of social support is multi-dimensional and individuals may be needed that support at any time during their life (Baltas & Baltas, 2000). Bhanthumnavi (2000) have pointed out that social support can be emotional, informational or instrumental support. Emotional support includes trust, acceptance, love, respect, understanding and empathy. Informational social support is related to acquiring general and technical information, taking advice and learning the experiences of others on a subject. The instrumental social support includes more concrete assistance such as tools, money or care services (Kaner, 2004).

The provider of social support may also be various. Family, spouse, friends, relatives, colleagues, managers or neighbors can provide any types of social support. There are two types of approaches in the measurement of social support. The quantitative approach is related with the assessments of "received" social support whereas the qualitative approach deals with the evaluation of "perceived" social support. Perceived social support associated with how individuals perceive the level and quality of his or her social networks. The evaluation of individuals' perceptions about the existence and availability of people from whom he or she can obtain support means the measure of support qualitatively. Even if the number of individuals or the frequency of meetings with friends is high enough, the person may not perceive support from his/her social network. Many studies has shown that the perceived social support better explain the stress and psychological health (Rudolph, Michel, Harari & Stout, 2014). Therefore in present study, social support will be considered as the participants' perceived social support regardless of support type and from whom it is provided.

Hobfoll (2001) stated that social support is both an important main resource alone and preventative resource that helps to protect other resources. Much has been written in recent years about the direct reducing and buffering effects of social support on general stress level and job stress specifically. Walen and Lanchman (2000) stated that both men' and women's psychological well-being positively affected by the social support. Jordan-Marsh and Harden (2005) emphasized that social support, social sharing and social networks are quite related to each other and they adversely affect mortality. The study which is conducted with the 707 adults also indicated that the individuals with high perception of social support have high rate of recovery from depression (Hay et al., 2001). Bradley and Cartwright (2002) reported that the increased organizational support reduces the job stress and increases the satisfaction of nurses.

Moreover, Kippling (1998) emphasized that nurses perceived the social support as an important variable in order to cope with the job stress. In sum, social support acts as a reducing factor that protects entrepreneurs from the high level of job stress. Thus,

H1: The social support will be negatively related to job stress of entrepreneurs.

Social support perception is also sensitive to individual differences variables. Matthews, Stansfeld and Power (1999) revealed that the gender led to major differences in the perception of social support and women have perceived higher social support than men. The study that is conducted by Fuhrer and Stansfeld (2002) also indicated that women have more social support resources than men. Likewise, Liebler and Sandefur (2002), in a study conducted with 6875 adults, stated that women have a higher perception of support, especially for emotional support, than men. All these findings have lead to the assumption that the effect of social support on job stress may differentiate by gender. According to this,

H2: The effect of social support on job stress will be significantly different between women and men entrepreneurs.

H2a: The effect of social support on job stress will be higher for women entrepreneurs than men entrepreneurs.

METHODOLOGY

Sample

This study draws on data from the Household, Income and Labor Dynamics in Australia (HILDA) survey. HILDA is a nationally representative, household-based panel study, which began in 2001. It collects information about economic and subjective well-being, labor market dynamics and family dynamics of all adult members of each household annually. The HILDA Survey was initiated, and the funding has been guaranteed for sixteen waves, by the Australian Government through the Department of Social Services. University of Melbourne has the responsibility for the design and management of survey. Academicians, researchers or institutions can access the dataset by applying to the Department of Social Services to use datasets in their research.

This paper relies on wave 1, 5, 8 and 11of the HILDA survey and includes self-employed men and women (N = 1353). Also, we considered all types of entrepreneurs, regardless of whether they had incorporated their business or not.

Table 1
THE DESCRIPTIVE STATISTICS OF SAMPLE

	ALL SAMPLE	WOMEN	MEN
Sample size	1353	673	680
Age	45.7	44.1	47.3
Education level (%)			
Master or doctorate	10	12.4	9
Bachelor	15.6	17.9	14.4
High school	53.6	46.3	57
Primary or secondary	20.8	23.4	19.6
Marital Status (%)			
Married or De facto	92.5	92.6	92.4
Single	7.5	7.4	7.6

The descriptive of sample revealed that the average age of participants is 45.7, a majority (92.5 %) is married or de facto. 10 % of our sample has master or doctorate degree, 15.6 % has bachelor degree and the majority (53.6 %) has high school or equivalent degree and % 20.8 has primary or secondary education level. When we look at men (N= 680) and women (N= 673) entrepreneurs, the number of each group are eligible to make comparisons. In terms of average age, women entrepreneurs' age is found 44.1 while male entrepreneurs were found to be 47.3. The 92.4 % of men and 92.6% of women entrepreneurs are married or de facto. 30.3% of women and 23.4% of men entrepreneurs have bachelor or graduate (master or doctorate) degree.

Measures and Analysis

The measurement of social support was an index of perceived personal support and friendship (Flood, 2005). The survey included ten statements on perceptions of personal support such as "I seem to have a lot of friends". Respondents were asked to rate their agreement on whether each statement applies to them, on a Likert scale from 1 (strongly disagree) to 7 (strongly agree) and a higher score indicates the perception of a higher degree of support.

The measurement of job stress includes three statements such as "My job is more stressful than I had ever imagined". These are related to perceived stress, complexity and unrest associated with the job. Respondents were asked to rate their agreement on whether each statement applies to them, on a Likert scale from 1 (strongly disagree) to 7 (strongly agree) and a higher score indicates the perception of a higher job stress.

One of the aims of this study was to reveal whether is there any difference in terms of our model between women and men entrepreneurs. In order to make a meaningful comparison between groups, the measurement of variables must be similar across the groups, which is called "measurement invariance" (Başusta, 2010). The assessment of the measurement invariance of these variables across gender is done through the multi-group confirmatory factor analysis. The multi-group confirmatory factor analysis tests the possible differences between groups in terms of factors or structures by creating models with some assumptions. The models are tested in four-

stages, logical and sequential process. The first stage model is called "configural model" or "unconstrained model" in which factor loadings, correlations and error terms are set free. In second model which is called "metric model", the factor loadings of items assumed to be equal or constant intergroup. The third stage model is called "scalar model" in which both factor loadings of items and correlations between factors are assumed to be equal/constant across the groups. The fourth and last model called as "residual model" and assumed factor loadings, correlations and error terms to be equal/constant between groups. Since the models are formed with the logical sequence, one model is compared with the previous one. The comparisons are made with the help of the model fit indices and the significance of change on $\chi 2$.

If the measurement model results revealed that there were no invariance problems across gender, then the structural model tests can be done. The structural model tests the differences between gender groups in terms of effects of social support on job stress. Following the same procedure as in the measurement model, the unconstrained model was set without any restriction, whereas the constrained model was set to have equal regression coefficients. Likewise the measurement invariance tests, the unconstrained and constrained model were compared in terms of model fit indices and the significance of change on $\chi 2$.

RESULTS

Results on the Testing of Measurement Model

The multi-group confirmatory factor analysis was conducted to test the adequacy of the one-factor model of social support and of job stress. In order to examine the model fit such goodness of fit indexes, the goodness of fit index (GFI), incremental fit index(IFI) and comparative fit index (CFI) were used. These indexes range from .00 to 1.00, with larger values indicating better model fit. In general, values of .90 or greater are interpreted as evidence of good model fit (Bentler & Bonett, 1980). Contrary to these indexes, a smaller root-mean-square error of approximation (RMSEA) indicates better model fit. In addition to RMSEA, researchers suggest using standardized root mean square residual SRMR (Bentler, 1995), which should be between 0 and .05 for a good fit and between .05 and .10 for an acceptable fit (Schermelleh-Engel, Moosbrugger & Müller, 2003). Moreover, in order to compare models the change of χ^2 ($\Delta \chi^2$) is used and the significance $\Delta \chi^2$ reveals the differences between models.

Table 2
THE FIT INDICES OF MEASUREMENT MODELS

MODELS	χ^2	df	GFI	IFI	CFI	SRMR	RMSEA	$\Delta \chi 2$
Configural Model	232.47	89	.95	.95	.95	.04	.03	
Metric Model	247.88	91	.95	.94	.94	.04	.03	15.41
Scalar Model	257.33	94	.95	.94	.94	.04	.03	9.45
Residual Model	293.52	107	.95	.94	.94	.04	.02	36.19

According to the results obtained from measurement models (Table 2), the model fit indices of first configural (unconstrained) model presented adequate fit $\chi 2$ (df =89) = 232.47, GFI= .95, IFI= .95, CFI= .95, SRMR= .04, RMSEA= .03) and all factor loadings were significant. The metric model in which the factor loadings of items were set equal for two gender groups did not result in a significant; $\Delta \chi^2$ (Δ df = 2) = 15.41, p = .269 (ΔGFI = .001, ΔIFI = .003, ΔCFI = .001, ΔSRMR = .000, ΔRMSEA = -.001).The scalar model in which the factor loadings and factor correlations were set equal for two gender groups did not result in a significant; $\Delta \chi^2$ (Δ df = 3) = 9.45, p = .189 (ΔIFI = -.003, ΔTLI = .000, ΔCFI = -.002, ΔSRMR = .000, ΔRMSEA =.000). The residual model in which the factor loadings, factor correlations and error terms were set equal for two gender groups did not result in a significant; $\Delta \chi^2$ (Δ df = 13) = 36.19, p = .089 (ΔIFI = .001, ΔTLI = .002, ΔCFI = .000, ΔSRMR = .002, ΔRMSEA = -.001).

The obtained results revealed the measurement invariance between women and men entrepreneurs which means that they understand and interpret the items of variables in the same way. Moreover, for both women and men entrepreneurs the social support items formed one factor, and the job stress items formed one factor, too. The items' factor loadings were also above the 0.4 which is adequate to keep them. The internal reliability of the social support and job stress measure were Cronbach's α = .81 and Cronbach's α = .82 respectively.

Results on the Testing of Structural Model

After the obtained measurement invariance between gender groups, the structural models were tested similar to measurement models. The unconstrained model was set without any restriction, whereas the constrained model was set to have equal regression coefficient between social support and job stress.

Table 3
THE FIT INDICES OF STRUCTURAL MODELS

MODELS	χ^2	df	GFI	IFI	CFI	SRMR	RMSEA	$\Delta \chi 2$
Unconstrained Model	232.47	82	.95	.95	.95	.04	.04	
Constrained Model	239.45	83	.95	.94	.94	.04	.04	6.98

The results in Table 3 indicated that the model in which the regression coefficient was set equal for two gender groups did result in a significant $\Delta \chi^2$ (Δ df = 1) = 6.98, p = .031 (ΔIFI = -.006, ΔTLI = -.002, ΔCFI = -.005, ΔSRMR = .002, ΔRMSEA = .001).This means in terms of the effect of social support on job stress, women and men entrepreneurs differ significantly from each other. Although for both women (β = -.45, p = .000) and men entrepreneurs (β = -.38, p = .000) social support is negatively related to job stress, women entrepreneurs' perceived negative relatedness of social support and job stress is significantly higher than the men entrepreneurs' perceived negative relatedness of social support and job stress. Therefore, H_1, H_2 and H_{2a} are accepted.

CONCLUSION

This study aimed to determine the effect of perceived social support on the job stress of entrepreneurs, and showing the differences between women and men on a single structural model. The determination of that research model is done under the light of conservation resource theory, which is developed by Hobfoll (1989). According to conservation of resource theory, individuals have many resources that can be titles as objects, personal characteristics, conditions and energies. These resources loss, threat of loss or any preventing situation to gain of resources leads to stress. Social support is one of the main and preventive resources that protect individuals from perceiving stress. Therefore, in present study it was assumed that social support will have reducing effect on job stress.

The second assumption was about the gender differences on the present model. Since the social support and stress are the perceptional concepts, it is important not to ignore the gender variable's impact. De Klerk and Mostert (2010) demonstrated that the social support is a critical factor for particularly women. Torres, Padilla ve Simo also (2013) revealed that the social support provided from spouse, family, friends or managers would be more valuable and more effective for women. In the light of all these researches it was assumed that the effect of social support on job stress will be different between women and men entrepreneurs. It is also expecting the effect of social support on job stress will be higher for women than men. In order to analyze the present model the Household, Income and Labor Dynamics in Australia (HILDA) panel dataset was used. The sample size is N = 1353, which includes N= 673 women and N = 680 men. The data was analyzed by using multi-group structural equation modeling. The analysis consists of two phases. First phase was about to test measurement invariance between gender groups and the second one was about the structural tests of models between groups.

The obtained results indicated the measurement invariance between groups, which is the primary step to go further with structural analysis. The structural model also revealed that social support is negatively related to job stress for both women (β = -.45, p = .000) and men (β = -.38, p = .000) entrepreneurs. Moreover, this effect is significantly higher for women entrepreneurs than men entrepreneurs. These results show the consistency with the research of Sanne et al. (2005) and previous researches that mentioned before. The result that related with gender can be interpreted with many aspects. In the male-dominated business world, women work and try harder to prove themselves. Therefore, any supports from any providers become more valuable for them. Also, women in particular face significant challenge in balancing work and family demands with both professional and family responsibilities and that's why the reducing effect of perceived social support can be seen higher on women than men. Lastly, women are considered as more emotional and sensitive than men and it is also demonstrated that women may be better providers of social support (Thoits, 1995) and so their support perceptions and its effects could be higher than men.

The present study reveals several practical applications worthy of future study. First, it would be valuable to examine the effects of social support with different employee or employer groups in further studies. This study demonstrated that social support is a reducing variable on job stress for both men and women. Any other demographic characteristics such as age, education level or marital status and personality characteristics such as locus of control, self-

efficacy or self-competence could be considered as a moderator in social support and job stress relationship. Secondly, identification of the negative relatedness of social support and job stress helps both individuals and managers in order to provide less stressful working environment. In this context, providing emotional, informational and instrumental supports, rendering social networks by formal or informal teams and educate people in support seeking and providing process would help to diminish negative effects of job stress in organizations.

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A SOCIOEMOTIONAL WEALTH PERSPECTIVE IN SMALL FAMILY FIRMS

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ABSTRACT

The use of socioemotional wealth (SEW) as a key means of distinguishing family firms from other businesses has received increasing interest in the academic community. It is an important acknowledgement of the non-financial aspects that enter into the decision processes within family firms. In this research article, we support the adoption of SEW to study micro and small sized family businesses, which are frequently ignored in academic management journals. We use real world examples from family farms in a southeastern US state to illustrate the germaneness of the SEW construct, discuss the influence of the SEW dimensions, and discuss how the SEW dimensions may have a stronger significance for micro-sized firms compared to large family businesses. We propose that the inclusion of socio-emotional wealth (SEW) is vital in examining micro and small sized family businesses.

INTRODUCTION

Socioemotional wealth is a fairly new concept utilized in family business research and is proposed to be a key means of distinguishing family firms from other businesses (Gomez-Mejia, Haynes, Nunez-Nickel, Jacobson, and Moyano-Fuentes, 2007). The socioemotional wealth (SEW) concept acknowledges the non-financial aspects that enter into the management decision processes within family businesses. This research expands the SEW links with family business by focusing on micro and small family businesses. Our research proposes that the inclusion of socioemotional wealth (SEW) is vital in examining family businesses and especially those businesses of a micro or small-size. Real world examples are utilized to illustrate the influence of the SEW dimensions and how this influence is stronger for the micro-sized firm compared to large family businesses.

Family business research has been housed within several areas including entrepreneurship, general management and family business specific journals. The vast majority of published work in family business research utilizes publicly traded corporations and large data sets. A review of the family business literature found that the most researched area was corporate governance concerns within family businesses (Debicki, Matherne, Kellermanns & Chrisman, 2009). The work on corporate governance would exclude micro and small-sized firms. Other popular areas dealt with corporate strategy and management decisions based on the resourced based view; both of these topics are consistent with analysis of large-sized family firms. Debicki et al. (2009) noted the scarcity of research into non-economic goals of the family firms as a research gap. The analysis of SEW is consistent with addressing this gap in the literature. Other work that has analyzed family business research also found that corporate governance was the main focus on scholarly work and other significant family business research areas were: defining the field; competitive advantages; leadership and management; and succession (Xi, Kraus, Filser & Kellermanns, 2013). The authors

specifically state "the advancement of SEW research and the need for taking a micro perspective into account have been identified as offering vast potential for future research." (Xi et al, 2013, pg. 128).

The examination of small and micro-sized family businesses is inadequately addressed in academic management journals. The pursuit of statistical rigor needed to publish in peer-reviewed journals has resulted in a shift towards research on large, publicly traded companies, and has resulted in an inadequate examination of small and micro-sized businesses. The validity and robustness is often questioned for self-report data from micro or small-sized private companies. There seems to be a tendency to apply the findings to all businesses even though significant differences exist between the research sample and many businesses. In addition, the existing research is mainly from private firms outside of the U.S., where is it more common for large companies to be family owned and privately held. The volume and economic impact of the small and micro-sized family firms within the U.S., however, make it an important category of business and one that is underserved by the research community. Interestingly, it has been proposed that small to micro-sized businesses account for well over 90% of all firms in developed countries, such as the US and EU (Schaper, 2006). Micro to small-sized businesses have little in common with the large family firms such as Ford Motor Company. In this research article, we examine micro-sized family firms and demonstrate the importance of the SEW concept for research into these types of family firms.

For this research, we suggest that micro-sized family firms demonstrate far higher levels of influence for the SEW dimensions and that the dimensions of identity and emotional attachment play a major role in the business management processes of the family firm. The SEW literature acknowledges the potential for unequal influence of the five dimensions proposed for the construct. To illustrate this influence, we shall describe the SEW dimensions in terms of small family farms in a US industry undergoing major structural changes. We focus on tobacco farmers in North Carolina. Historically, the US government provided subsidies that influenced farm production and established crop prices. The elimination of subsidies and government controls has resulted in the need for a number of management decisions for the business including crop selection; product pricing and negotiation; potential exiting the business; and the management of significantly increased risk.

The article progresses as follows: Next, we explore the extant research on SEW and family business. We then discuss the research design and sample used for the article. This is followed by our review of the SEW dimensions with a focus on aspects germane to micro-sized family firms with examples from our farm sample. The next section includes our discussion, limitations and future work, and we conclude with a summary of our contributions.

THEORETICAL BACKGROUND

Family Business Literature

Researchers have worked to delineate the domain of family business and to establish that this research area is distinct from non-family firms. A family business is defined as ownership by the largest single-family group related by blood or marriage, and self-perceptions of whether the business is a family business (Westhead & Cowling, 1998). Percentage ownership of family businesses varies, sometimes with ownership percentages in the single digits. A literature stream within family business research addresses the differences in management decisions between family

and non-family firms. At the heart of the recent work in this area is Socio-Emotional Wealth (SEW). Socio-emotional wealth was modeled by Gomez-Mejia et al., (2007) based on behavioral agency theory (Wiseman & Gomez-Mejia, 1998), which integrates views from the behavioral theory of the firm (Cyert & March, 1963), agency theory (Jenson & Meckling, 1976), and prospect theory (Kahneman & Tversky, 1979). In comparison, decisions in the non-family business are described as driven by financial objectives. Family business researchers have suggested that in addition to financial objectives, the controlling family also considers aspects that enhance or preserve SEW (Gomez-Mejia et al., 2007). The conceptualization of SEW has been further developed to contain five dimensions: family control and influence; family members' identification with the firm; binding social ties; emotional attachment; and the renewal of family bonds to the firm through succession (Berrone, Cruz & Gomez-Mejia, 2012). Our research, utilizing these five SEW dimensions, examines the varying influence of the dimensions and if SEW provides a means of distinguishing family businesses from non-family businesses.

Prior Socio-Emotional Wealth Literature

The literature utilizing SEW is growing and has made advances both conceptually and empirically. The conceptual articles have utilized SEW to highlight this perspectives applicability in family business research. SEW insights are used to explain why family firms would pursue projects that benefit non-family (and non-business) stakeholders to enhance the family/business reputation (Zellweger, Nason, Nordqvist & Brush, 2011). Researchers have developed frameworks to explain differences for family firms in stakeholder management to achieve non-financial goals (Cennamo, Berrone, Cruz & Gomez-Mejia, 2012). DeTienne and Chirico (2013) propose a model for exit from both successful and unsuccessful family businesses using SEW and threshold theory. Based on an evolutionary view of the family firm, Le Breton-Miller and Miller (2013) show how SEW priorities may change over the life of a family firm. This integrates SEW, family business and entrepreneurship into a discussion on how the SEW view within the firm could change as the business transitions from a new venture through succession.

Empirical research has examined family firm performance. Deephouse and Jaskiewicz (2013) investigate a logical link between SEW and Social Identity Theory. Businesses, which share the controlling family name with the business name, are shown to have more motivation to keep a positive reputation for the firm. While SEW is believed to be influential in decision-making, financial concerns are not irrelevant. Chrisman and Patel (2012) propose that financial and family goals associated with SEW converge when firm performance is below desired levels. An important point, made by these authors, is that the heterogeneous nature of family firms should be addressed. Researchers have used SEW to explain why family firms could differ from non-family firms regarding decisions that promote environmental sustainability (Berrone, Cruz, Gomez-Mejia & Larraza-Kintana, 2010). Cruz, Justo and DeCastro (2012) provide one of the few studies that examine firms similar in size to those in the current study. They examine the impact of hiring family members in the business. This was proposed to enhance SEW. However, the financial performance impact was mixed with increased sales but decreased profitability.

The interest in SEW is clear based on the volume of recent scholarly work. Additionally, the newness of the concept is evident based on the large number of conceptual articles examining the concept's usefulness and boundaries. Firm size may be one of these boundaries with micro to small-sized firms displaying differences in SEW influence. This influence may lessen or dissipate as size increases and ownership diminishes.

RESEARCH DESIGN AND SAMPLE

We utilize the dimensionality proposed for SEW by Berrone, Cruz and Gomez-Mejia (2012). The dimensions form the acronym *FIBER* and stand for: *F*amily control and influence; family members' *I*dentification with the firm; *B*inding social ties; *E*motional attachment; and the *R*enewal of family bonds to the firm through succession. A description of each dimension is provided in the next section. Data collected from the discussions with our sample's micro-sized family firm owners were compared to the description of the dimensions to determine if the dimensions were applicable and the strength/significance of each dimension.

The family farm was chosen for illustration in this research because of the large number of these family businesses; the long history associated with being a family business; and the ability to assess the links with SEW dimensions. For the family, the farm represents their livelihood, their home, their identity, and their place within the community. The agriculture industry has many long-standing traditions and has evolved over the past several decades with influences from technology and political interventions such as regulations and subsidies. Farming has an ever-present economic impact on our society. The foundations of economic and business research from Cantillion, Walras and Say included discussions of landowners, farmers and the business owner's engagement in market pursuits.

The sample of farmers was identified through a statewide advocacy agency for small farmers located in a southeastern state (North Carolina) in the U.S. Guidelines for selection indicated that all respondents should have ownership in and currently work on a farm. A staff member of the organization provided a list of 27 farmers. Attempts were made to contact via telephone all 27 farmers; sixteen were reached and consented to the interview.

Data was collected through in-depth interviews. Questions for the interviews were developed prior to contacting the participants and consisted of a series of open-ended questions. Questions were designed to stimulate a discussion on the respondent's overall experiences as a farmer, including discussions on decision-making, task distribution, relationships with the community, and future plans. Telephone interviews were held instead of face-to-face interactions due to the difficulty in scheduling interviews based on the long hours that the farmers worked. All preferred to talk at night once all outdoor farming activities were done. Participants were informed of the purpose of the interview and were assured of the confidentiality of responses. Interviews were recorded for later transcription.

All farms in the sample were historically tobacco farms. Some continue to farm tobacco but most have transitioned away from the crop. The US government had, for decades, used a subsidy system for tobacco crops. In 2005, the government ended the subsidy payments for tobacco farming in the US. However, the government provided transitional, or buyout, payments to the tobacco farmers to transition from the subsidy system. The availability of the transitional payments ended in 2014. The discussion with the farmers focused on actions and management decisions for the farms during this period of change.

RESULTS OF SOCIOEMOTIONAL WEALTH IN MICRO-SIZED FAMILY FIRMS

To review our results, we shall step through each of the five dimensions (FIBER) of SEW. We briefly explain the dimension characteristics, and then proceed to compare the dimension for varying firm sizes. A focus is on implications for the micro-sized family firm and how this size

influences the impact of the dimension and thus SEW. To conclude each dimension discussion, we relate a specific real world example from our sample of farmers to the dimension.

Family Influence and Control – [F] IBER Dimension

The first dimension discussed for SEW deals with the extent of control of the firm by a family. Family control of decisions within a firm is seen as a defining characteristic that distinguishes family businesses (Westhead & Cowley, 1998). A variety of means may be used to achieve this control including the level of direct ownership, CEO/Chairperson positions, appointment of board members, and firm top management team (TMT) positions. The Ford family of Ford Motor Company shall be used as an example. The Ford family owns less than 2% of company stock. However, the family retains 40% of voting rights, a family member is Executive Chairman and another is a board of director's member. For large corporations, the involvement of a family coalition can vary significantly leading to differences in defining what is, and is not, a family firm. For these large firms, there may be significant variance as to the influence of the family, non-family stakeholder influence, corporate strategy, and the goals of the dominant family.

Acknowledgement that the influence of the five dimensions may differ is quite evident for the 'F' dimension when firm size is considered. The majority of family businesses are not publicly traded companies. This topic has received considerable interest in the family business literature. For small to medium-sized family firms, research has indicated that board composition is based heavily on family characteristics and objectives (Voordeckers, Van Gils, Van den Heuvel, 2007). Family business theorists have called for the inclusion of people outside of the family to participate in the management of family businesses. For example, Johannisson & Huse (2010) argue that the family business will be more competitive if outside board members are allowed to bring professionalism to the firm.

The very small businesses, our focus for this article, often do not have management teams or a board of directors. Each farm described in our examples has their business set-up as a sole proprietorship and the family has 100% ownership of the business. It can be logically argued that control is absolute. A discussion of the influence on leadership actions by the desire for the family to maintain influence over the business (Gomez-Mejia, Haynes, Nunez-Nickel, Jacobson, Moyano-Fuentes, 2007) may be relevant for large family firms but not for the majority of the micro-sized family firms such as those described in this research. For large firms the outside board members and corporate leaders can create additional legitimacy and the potential to improve professionalism. In micro-sized family firms, the investment, labor, and risk taking are borne by the family. It is logical that the controlling family has the majority, if not absolute, influence and control of the business.

To illustrate this in a real world business situation, we shall review a discussion with the owner of a tobacco farm in a southeastern state in the U.S. Please see the prior section on research design and sample for additional information on the data collection. The example selected for each dimension is labeled in terms of the associated FIBER dimension (i.e. Farm F is used in the Family Influence and Control dimension discussion).

Farm F was chosen as it provided an example that would address the control/influence question that often arises with family businesses that have undergone succession and existed for multiple generations. Farm F is 100% owned by family members. There is complete influence and control over the business by the one family. In some family business situations, the control and ownership pass from one individual to one child. However, it is also likely that diffusion of

ownership occurs through inheritance by multiple children. For Farm F, there were multiple children. Farm F is an example that has found success in transitioning from tobacco crops and subsidies. The farm has traded tobacco for tilapia. This is a significant change of course for a farm and the move has worked due to the efforts of the controlling family. There are three siblings associated with control of Farm F and each has focused on different areas. One sibling is the main person in charge of Farm F; runs the day-to-day operations; and the farm is this person's livelihood. A second sibling (who works in another industry) has lower involvement with the farm, and provided guidance/support for financial aspects associated with the transition from tobacco. The third sibling had a business education background; works in a separate industry; and has helped guide Farm F in terms of business strategy. This sibling was key in the selection of the new tilapia market for the farm.

Farm F is a successful example and not all of the farms have the benefit of family members with diverse resources. Many of the farms have struggled to determine the best path forward for the business including whether or not to transition from the tobacco crop. Farm F does show the strong influence of the one controlling family and this is typical even if the ownership is spread among several siblings. The micro-sized farms from the sample did not share influence and control with members outside of the family.

Family Identification with the Firm – F[I]BER Dimension

Family business scholars have recognized that the business may be seen both internally and externally as an extension of the family itself (Berrone et al., 2012). This dimension describes how the image and identity of the people who own the business, the family, is shared with the business. For the majority of the family business research studies that focus on medium to large-sized firms, the level of family identification with the business can vary. For Koch Industries, the family shares their name with the business. In contrast, Wal-Mart does not carry the family name, but the Walton family has become famous and closely linked with the business. For other family firms, the name may not be shared and the fact that it is a family business may not be readily apparent. Uhlaner, van Goor-Balk, & Masurel, (2004) examine social responsibility and noted the significance of considering whether the business shares the family name and the impact of smaller firm size (less than 50 employees).

Interestingly, the dimension also does vary for the very small-sized family business. Small firms may have an issue with the perception of legitimacy (Aldrich & Fiol, 1994). This is also acknowledged in the family business literature. A family business may be perceived as less legitimate than a non-family firm due to nepotism and other aspects exclusive to family firms. This family business owner may chose to have a generic name or one associated with the business products or services (e.g. AAA Plumbing, Superior Renovations). These types of names do not convey information about family business status, size, ownership etc., which can decrease links of family identification with the firm.

The small family farm, in most cases, does have the family name associated with the business. The level of identity associating the business with the family was unqualified. This is the case with many small family businesses and a very typical feature for family farms. For the family farm, it is not simply a business. The farm is the source of livelihood and is the owner's home. In most cases, not only is it the current owner's home but also the homestead that has been in the family for generations. The identification linking the business with the family is strong within the family and externally in the community. As an illustration, when asked for directions, a community

member would use the farm's identity (keep going south past the Johnson farm and turn right just before the Taylor farm). The farm, family and business are one identity.

The example from our research sample is labeled Farm I. Farm I was named after the family, as were all of the farms in the sample. The farmer for Farm I lived on the farm, and thus, the farmer's identity was completely linked with the farm business and farm itself. Farm I had transitioned from tobacco to a mixture of small grains and prawns. The farm has been in the family for multiple generations and the farm name has been the family name the entire time. After the buyout, there was no interest in changing the business name even though the products changed. The prawn products resulted in a new business area but the owners chose to adopt the family name for this business line. This micro-sized family business has a history of linking the family identity to the business identity. The family of Farm I proudly maintained this link during the transition to additional crops and the new business line.

Binding Social Ties – FI[B]ER Dimension

The linkages a family firm owner has with her/his business extends past the immediate family members employed by the firm. This has been acknowledged by several family business researchers and is an important dimension for SEW. The social bonds for the family business extend to a wide set of people including family and non-family members both within and outside of the business (Miller, Jangwoo, Sooduck & Le Breton-Miller, 2009).

In large family firms, the owning family members may be seen as successful and role models for the community. The family members that reside in the area in which the family business is located are often a source of community philanthropy or sponsorships of community events (e.g. the influence of Milton Hersey on Hersey, PA). The social ties can grow as the firm goes through successions. There is a larger extended family, opportunities for family members to enter local politics and potential diversification of the business into other industries.

For family bonds within micro and small-sized firms, the impact of extended family members plays a role. Family sizes were larger until the end of the baby boom following World War II. This created significant extended families of cousins, uncles, nieces etc. In small rural communities, the family bonds with these extended relatives are likely quite strong. The extended family members may not be part of the business but play a role in creating social ties within the community as many share the same surname of the business. The family name has a history and connotations mainly associated with the place and prominence of the family business as a significant economic presence in the community.

Also, non-family bonds are evident in both the long-standing relationships the family has with suppliers and the community (Uhlaner, 2006). As agrarian rural communities grew, new businesses formed to support farms (e.g.: feed/seed stores, farming equipment, hardware stores, and general retail) as the community grew. Relationships between the farming family with the vendors may extend for decades not months or years. This creates strong binding social ties. Research has shown that family businesses may be deeply implanted into the community and are a source of sponsorship within the community (Berrone, Cruz, Gomez-Mejia, Larraza-Kintana, 2010). There are numerous examples of links between the family farm and the social life of the community. The farm may have hosted events prior to the development of community infrastructure. Community events were often associated with the business such as harvest festivals. The agrarian farm was a main employer and driver of the rural economy. While this has changed drastically, the place of the farm owning family in the community has a long history, and strong social ties.

The binding social ties are discussed in terms of Farm B. The farms in our sample are micro-sized and the rural communities are comprised of multiple small farms. The farms, while separate businesses, did share a common bond formed by the community. These social ties were evident from the cooperative behavior described by the farmers. Farmer B would share equipment, barns, supplies, and tools with other farms and, likewise, borrow from other farmers. This was not done for profit, but as a show of community spirit and support. This was a standard practice for farmers throughout the sample. The farmers, while technically competitors for generations, had respect for their fellow business owners and wanted all in the community to succeed.

Emotional Attachment – FIB [E] R Dimension

Emotions have been recognized to be influential in the workplace and the additional aspects to integrating family emotional situations with the business are unique to family business research (Eddleston & Kellermanns, 2007). The emotions can vary significantly including excitement, anxiety, boredom, and stress (Morris, Allen, Kuratko, & Brannon 2010); these emotions influence the decision making process in the family business (Baron, 2008). In large family businesses, the impact of emotions will be reduced by the diffusion of control and decision-making across multiple people including non-family business leaders. Non-family influential stakeholders in the firm will expect logical, professional actions and strategies, which will create a context for the family members that promotes a lower level of emotions.

Small family businesses under complete control of the family have little separation between family emotional situations and the business. The emotional situations that are prevalent in a family can spill over and have an impact on the operation of a family business. The owners of a small or micro-sized family business may have to deal with situations such as divorce or a poor evaluation for a family member's work performance. On the positive side, there are high levels of trust (Steier, 2001), benevolence (Cruz et al., 2010) and altruism (Schulze, Lubatkin, & Dino, 2003).

For the small family farm, emotions are as evident as in other small family businesses. There are a few aspects that the farm helps to explicate. Emotions can be influenced by a history of shared events. Farming has a long history of shared events. There are distinct repeated patterns that occur with farming that reinforce this history. For example, tilling, planting, harvesting and transportation to the market all occur in an order and within specific seasons. There are certain times to plant corn, harvest cotton or dry tobacco, which entail high labor demands creating a salient event for the farmer. Some events span several months such as allowing a crop to mature but others are daily routines (cows must be milked a couple of times each day). The fruits of farming labor (sometimes literally) are evident. An important point is the strong emotional bond that is formed from the hard labor from the owner, permanence of the real estate, and the business financial gain that results. Farms have been noted to be a wonderful place to raise a family and some refer to a joy in growing things. This speaks to the fact that many farmers develop a 'love of the land', which is a strong emotional attachment. The following quote illustrates this aspect of family farming.

"My family has spent 400 years farming on the banks of the Rio Grande. We know the value of hard work, love of the community, love for water and land" - Ken Salazar

Farm E will represent the emotional attachment to the business dimension. As described in the last paragraph, owners of farms often develop a love of their business. Farmer E was one of the

older people interviewed in the sample. Farmer E stated that farming was the reason he got up in the morning; that he enjoyed being in touch with the land and loved being able to watch something grow from what was once an empty field. While the farmer was in his 70s, he said he would continue to farm as long as he is able to do anything. His emotional attachment to the business/farm is clearly evident. The people in the sample clearly love what they do. The emotional attachment to the farm was unmistakable due to the intense passion in which they spoke.

Renewal of Family Bonds through Dynastic Succession – FIBE[R] Dimension

This dimension is a source of considerable heterogeneity. We shall discuss large family firms, new family businesses and the family farm. In large family businesses (especially publicly traded firms), there are few detriments to leaving shares to the next generation. The potential for dilution of ownership is a concern but this issue is captured in the SEW 'influence and control' dimension. Strategic decisions and leadership choices that promote the ability to maintain a successful business for future generations is a unique aspect of family businesses (Zellweger, Kellermanns, et al., 2011). For these large family businesses, interesting areas for investigation could be to examine if the renewal and 'influence and control' dimensions are consistently distinct or if there is a mediation type of relationship.

For a significant portion of new ventures, teams are comprised of either family (couples/inter-generational family members) or non-family teams (Brannon, Wiklund & Haynie, 2011). These firms may not meet the criteria some use to define family businesses, as the family owners may not have considered their intentions for succession. The SEW influence in the new venture will likely be strong for the dimensions of control, emotional attachment and linkages with identification with the business. Many entrepreneurs do not address exit strategies early in the business' life and this renewal dimension would be critical to assess.

For the small family farm, the dimension also has significant heterogeneity. Renewal with the small to micro-sized family business can vary depending on a number of aspects including performance, interest from offspring, or the potential lack of children. This may be readily seen in the decline in the number of small farms and the exodus of farming as a choice for a career. Over the history of the US, the economy has transitioned from agriculture, to manufacturing, to services, to a knowledge economy. Few farmers see a future to suggest that their profession will return to prominence. Many family farm owners are at odds as to succession. They have the emotional desire for dynastic succession that keeps the farm in the family pitted against the desire for their children have a prosperous, sustainable career. Farming is labor intensive, time consuming and has inherent risks (market and environmental). The inclination for the farm family to promoted dynastic succession may be driven more by their individual experiences and personal success, which may be unique compared to medium or large family businesses.

The farm from our sample we shall use for this dimension is referred to as Farm R. The farmer has transitioned from tobacco crops, and is exploring additional opportunities. Farmer R openly discussed his struggles during the transition. Farmer R has six siblings and he is the only one who farms as a profession; the other siblings have moved into other professions. Farmer R discussed how future generations interested in farming could follow the path of succession that his son is pursuing. His son is employed in a profession outside of farming but located close to the family farm. Farmer R's son has income and benefits from his job and hires employees to run his portion of the family farm. The farm stays in the family; the son maintains links with the farm; but

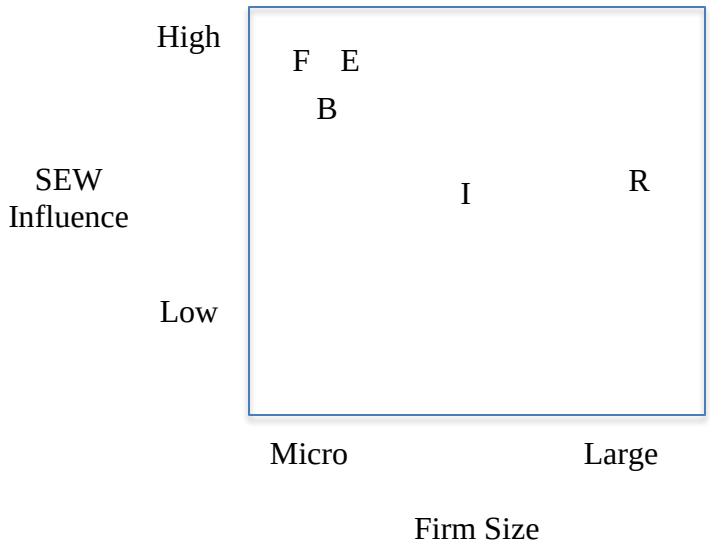
does not rely solely on the farm for livelihood. This maintains the renewal of bonds and succession for the business.

SEW Dimensions and Firm Size

A conceptualization of the relationship between the influence of the SEW dimensions and firm size is graphically shown in Figure 1.

We have classified the dimensions of family influence and control (F), emotional attachment (E) and binding social ties (B) as having high significance for the micro-sized family firm. The family identification with the firm (I) can have high significance. As we noted in the results section, there are qualifiers that impact this particular dimension, such as including the family name in the firm's name. The renewal of family bonds through dynastic succession (R) dimension was relevant but had more direct links with larger firms. It is worth noting that the SEW dimensions are all rated medium to high in significance. Additionally, we do not wish to imply that the F, E and B dimensions are only relevant to micro-sized firms. The intention is to show where the dimensions are most influential and, thus, critical to measure in family business research.

Figure 1
SEW DIMENSION: INFLUENCE AND FIRM SIZE



Dimensions shown in figure:
F = Family Influence and Control
I = Family Identification with the Firm
B = Binding Social Ties
E = Emotional Attachment
R = Renewal of Family Bonds Through Dynastic Succession

DISCUSSION AND CONCLUSIONS

Implications

Conceptual research has suggested that SEW has the potential to distinguish family business research from other disciplines. The research presented here was motivated by the belief that family businesses do differ from non-family firms in significant ways. Our review into processes for micro-sized firms, and the findings from our southeastern US family farms, suggest that indeed SEW has a role in influencing business management unique to family firms. In this study, we argue that the differences are observable and measureable by utilizing the SEW concept. To address the issue of conflicting performance results in the past family business literature (Chua, et. al., 2012), we highlight the heterogeneity of the family firm. We focus on firm size as an important metric of heterogeneity. The scarcity of research, which utilizes micro to small-sized firms, is a contribution as it points to an important firm measure for consideration. Thus, future research that employs SEW with a sample of micro-sized firms should provide robust distinctiveness from non-family business management practices.

We examined SEW processes and noted the implications of each dimension. For family influence and control, we described how the micro-sized family business often has 100% ownership by the founding family with complete control over firm management. The binding social ties dimension was related to our research by describing how family farms had a long tradition within their community and the extended relationships the family would often develop with suppliers and customers. We then turned to the strong emotional attachment often formed between the family and the business. The farm provided an excellent example of emotional attachment as it was also the family home, location of long standing work traditions and explained the emotional 'love of the land' in which farmers are often associated. The final SEW dimension of renewal of family bond through dynastic succession was described by acknowledging the potential conflict between the desire for the success for your children in light of the hard work and potentially low prosperity for the farming profession.

This research article provides a number of contributions to the literature. Academics have noted the importance of distinguishing family business research as a distinct area within management research. Our research contributes to this area by advocating the adoption of SEW as an important means to delineate processes unique to family businesses. Further, we show the potential for the varying strengths and relevance of components of the SEW concept. Additionally, the research on family business has seen conflicting results as to firm performance (Sharma, Chrisman & Chua, 1997), and the contributions of family business research have been questioned. Further, it has been proposed that sources of heterogeneity must be successfully addressed in research to tackle this issue (Chua, Chrisman, Steir & Rau, 2012). We emphasize the need to acknowledge the heterogeneity created by small and micro-sized family firms compared to larger family businesses. This addresses an identified research need as most existing studies examine publicly traded firms (Berrone, Cruz & Gomez-Mejia, 2012).

Although we focus on the family farm, we believe that this research has implications for other types of family businesses as well. This is especially true for micro-sized family businesses as the arguments we make for the farms translate easily to other industries. An argument that the micro-sized firm lacks relevance can be countered by examining the volume of the firms in question. Independently owned restaurants are an example. In the US, independently owned firms in the restaurant sector alone are estimated to be over 38,000 pizza (PMQ, 2013) restaurants and

41,000 Chinese (Huffington Post, 2013) restaurants. Combining these two types of restaurants and assuming they employee 3 full-time equivalent employees would make them the 20th largest employer in the country (List of Largest Employers in the United States, 2015). If 4 full-time equivalents were assumed, the total would be in the top 10 for employment. We believe the micro-sized firms warrant a larger acknowledgement in the academic literature.

Limitations and Directions for Future Research

This research utilized in-depth discussions with several micro-sized firm owners to examine SEW in family firms. This research has limitations due to the focus on very small size of firms. We identified several areas for future research and provided illustrative examples to show the influence of SEW on the micro-sized family businesses. Our study does not provide the statistically rigorous validity of large sample analysis. The next step in the research process would involve a large sample of these micro-sized family firms utilizing the scales proposed for SEW. To take this line of interest further, it would be optimal to examine an industry that contained a significant number of large and micro-sized firms, determine the influence of SEW, and compare the results of the firms based on size.

An additional area of potential research involves small and micro-sized non-family firms. The SEW concept is built specifically to address family firms. Several of the discussions we have linked with family firms based on SEW could have relevance to small or micro-sized non-family firms. Emotional attachment, identification with the firm, and need for control are examples. A significantly revised version of SEW may be useful in research and understanding these non-family, micro-sized businesses.

We hope that this research sparks interest in examining the dimensions of SEW and the small and micro-sized family businesses. The academic community is focused on novelty - new theory or new insights. Journals often question the contribution of replication and validation. Research into small and micro-sized businesses may be an option for the replication as this research may show conflicting results or boundary conditions for current theories within management.

Conclusions

In this paper, we employ a socioemotional wealth lens to examine family businesses and utilize micro-sized firms to convey the relevance of SEW. Real world examples of micro-sized family farms from the southeastern U.S were used to illustrate the importance of SEW to these family firms. These conclusions have substantial implications for family business research to show the unique distinctions between family and non-family businesses.

We are optimistic our research may motivate family business scholars to examine a broader set of firms for future research. The micro to small-sized firms, in which SEW is so apparent, form the majority of family businesses and warrant a large presence in the academic literature.

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THE CHOICE OF NEW VENTURE PARTNER: THE ROLE OF TRUST AND FAMILIARITY

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ABSTRACT

This study investigates the relative importance of the factors of trustworthiness (i.e. ability, benevolence and integrity) and familiarity in the choice of new venture partner. Using conjoint analysis and hierarchical linear modeling techniques, we capture and decompose more than 3700 new venture partner choice evaluations which are nested in a sample of 116 CPAs. The results show that among this study's sample, the factors of trustworthiness are more important than familiarity, and that there is a hierarchy of importance among the attributes of trustworthiness. Moreover, results reveal several factors that provide varying moderating effects on the choice of new venture partner.

INTRODUCTION

Ever since Reich (1987) shifted attention from the individual entrepreneur to entrepreneurial teams, research on entrepreneurial teams has received growing interest, and studies have clearly provided evidence of entrepreneurial team significance (e.g. Kamm, Shuman, Seeger, & Nurick, 1990; Cooper & Bruno, 1977; Obermayer, 1980; Teach, Tarpley & Swartz, 1986; Chandler, Honig & Wiklund, 2005). Notably, two seminal works have provided explanations for new venture team formation. A decision making process for stages of team formation was outlined in the work of Kamm and Nurick (1993) which suggested that team additions are made to fill resource gaps within the organization. This argument was challenged by Ruef, Aldrich, & Carter (2003), who suggested that sometimes the resource needs of the founder are neglected when choosing team members, and that ascribed or achieved similarities of a potential team member drive the process. But while the explanations of these scholars for team formation appear to conflict, both explanations converge on one point - that trust and familiarity are important in forming new venture teams. For example, Kamm and Nurick (1993) mentioned that founding teams are built on familiarity and trust. Ruef et al. (2003) noted that trust and familiarity appear to be major concerns for founders in the early stages of firm organizing. However, although these studies suggest an important role for trust and familiarity in the process of new venture organizing, this theory has not yet been empirically tested. The current study fills this gap by examining the decision policies of new venture founders.

We make a number of contributions to the literature. First, this research delves into the under-researched area of new venture formation and provides support for the importance of trust and familiarity in a new venture partner choice, and offers a unique context in which to understand trust. Second, this study also reveals the relative importance of the factors of trustworthiness (i.e. ability, benevolence, integrity) in the decision policies of firm founders. In particular, this study demonstrates that in new venture partner decisions, the ability of the potential partner is not always of primary salience. This finding challenges the theory that founders are primarily interested in the abilities of new venture partners and provides a basis

for future research in this area. Third, this research shows that a founder's propensity to trust and gender can have moderating influences on the founder's decision policies. Finally, this study makes a methodological contribution. It is one of the first in the entrepreneurship domain to capture trust related decision policies of new venture founders using conjoint analysis. Using this methodology, we were able to capture respondents "in use policies" rather than retrospective accounts of decision policies which could be distorted with recall bias. Also, the use of CPAs makes it possible to design away much of the noise that would otherwise confound empirical research because: (1) the research respondents will have similar types of education and work experience and (2) respondents are all faced with the same decision, within the same industry, and within the same profession.

This paper proceeds as follows: in the next section we discuss the relevant literature on trust and team formation, and we develop our hypotheses. Next, we present the research methodology for this study, followed by a discussion of the results of our data analysis. Finally, we summarize the findings and outline the limitations, future research, and the theoretical and practical implications of our study.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Trust

While research on trust has garnered significant interest in organizational studies as a topic of empirical research, this area of inquiry has been characterized as challenging, primarily due to the lack of agreement on the definition of the trust concept. For example, trust has been defined as a psychological state (i.e. a belief or attitude toward another person) and not a dispositional construct (i.e. a stable, within-individual factor that determines if one will become vulnerable to another's actions) (Rousseau, Sitkin, Burt, & Camerer, 1998; Dirks & Ferrin, 2001); a secure willingness to depend on someone in spite of potential negative consequences (Josang and Presti, 2004); an expectancy of positive outcomes in an environment of uncertainty while depending on the actions of others (Bhattacharya et al., 1998; Rotter, 1971); and the intention to be vulnerable to another based on positive expectation (Rousseau et al., 1998).

At first glance, the definitional ambiguity related to trust may appear very problematic to the researcher. Part of the issue with the definition appears to be that there is no one characterization that can adequately capture the highly complex and multi-faceted nature of this concept. Another reason for the vagueness related to the term stems from the multiple disciplinary contexts in which trust has been studied (e.g. economics, sociology, psychology) (Hosmer, 1995). Despite the differences, however, there are areas of agreement among the various conceptualizations of trust which include the following: (1) trust involves individual expectations regarding the behaviors of an individual or the outcome of a situation; (2) trust involves voluntary or non-enforced behavior (willingness); and (3) a reasonable expectation is that those involved in trusting relationships will be helpful, or at least 'do no harm', to the other party.

Consistent with the above conceptualizations, we define trust as the "willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer et al., 1995). This definition of trust acknowledges the dyadic nature of trust by specifying the necessary presence of two parties-the trustor (or the trusting

party), and the trustee (the party to be trusted). According to this model, three attributes – ability, benevolence and integrity – are characteristics of the trustee that allows an individual to assess the trustworthiness of the trustee. These factors are discussed below.

Trustworthiness

Research suggests that ability, benevolence and integrity have been consistently named as the most salient attributes of trustworthiness. Trustworthiness defines for the trustor whether the trustee is worthy of risking vulnerability and the potential negative consequences that may result from the decision to be vulnerable. These dimensions are theorized to be related but separable, suggesting that they may vary independently of each other (Mayer et al.., 1995).

Ability, a cognitive dimension of trustworthiness (Erdem & Ozen, 2003), refers to task and situation specific skills and competencies that an individual possesses (Mayer et al.., 1995). Special emphasis is placed on 'task and situation specific skills' since an individual may have superior skills and competencies in one domain, but not another. For instance, an intellectual property attorney may have high task related ability in assisting a new venture founder in obtaining a patent for an innovative process that she has developed, but may have low task related ability in assisting with setting up the firm's accounting information system.

Benevolence is the inclination of the trustee to act with concern, kindness and support toward the trustor (Mayer et al.., 1995). This factor focuses on the interpersonal relationship between the trustor and trustee and is an affective dimension of trustworthiness (Erdem & Ozen, 2003). The trustor evaluates the trustee's benevolence toward her, not anyone else. Scholars have found that perceptions of benevolence can have effects on organizational relationships. For example, Cruz, Gomez-Mejia and Becerra (2005) found that CEOs perceptions of a firm's top management team's benevolence influenced agency contract features. It has also been found that benevolence among family firm members fosters loyalty and commitment and reduces opportunistic behaviors (Morris, Williams, Allen, & Avila, R. A. 1997; Tagiuri & Davis, 1996).

The evaluation of an individual's integrity, a cognitive dimension of trustworthiness (Erdem & Ozen, 2003), requires a broader focus than the evaluation of benevolence. To assess integrity, the trustor seeks to determine if the trustee has over time adhered to a set of moral and ethical principles in dealings with people that the trustor finds as acceptable (Mayer et al.., 1995). Prior research has suggested that information on a trustee's integrity and ability may be more readily available than information on benevolence, as integrity and ability information can be obtained through networks and the established reputation of the trustee (Mayer et al., 1995). Also, integrity tends to be most important in early phases of trusting relationships, whereas, benevolence tends to develop over the life of the trusting relationship (Ristig, 2009; Schoorman, Mayer & Davis, 2007).

To summarize, ability, benevolence and integrity have been identified as salient components of trustworthiness. It is therefore hypothesized that:

H1a: The higher the perceived ability of the individual, the higher the likelihood that the individual will be chosen as a partner in a new venture team.

H1b: The higher the perceived benevolence of the individual, the higher the likelihood that the individual will be chosen as a partner in a new venture team.

H1c: The higher the perceived integrity of the individual, the higher the likelihood that the individual will be chosen as a partner in a new venture team.

Studies on trustworthiness have also suggested that research on ability, benevolence and integrity should be context sensitive as the importance of these factors may differ depending on the circumstance (Gill, Boies, Finegan & McNally, 2005; Mayer et al., 1995). Thus, both the type of organizational context, and the nature of the trusting relationships within the organizational context, can make a difference in determining which dimensions of trustworthiness are most important.

Familiarity

Familiarity, or prior knowledge regarding a potential partner (He, Butler & King, 2007), has been shown to be a salient consideration when choosing whom to work with (Harrison, Mohammed, McGrath, Florey & Vanderstoep, 2003). Individuals prefer to work with those who are familiar because: (1) coordination efforts are enhanced since team members have prior information about the others' working styles, skills, beliefs and perceptions (Gruenfeld, Mannix, Williams & Neale, 1996); (2) conforming to group norms is less likely to be an issue. Unlike unfamiliar members, familiar team members may be less concerned about conforming to the perspectives and actions of the others in the group. This degree of comfort among group members facilitates a more open environment – one in which members are more willing to share information with others (Gruenfeld et al., 1996) and; (3)there is a greater degree of interpersonal attraction and cohesiveness (Harrison et al., 2003).

In addition to the effects on coordination, conformity and cohesion as outlined above, familiarity has another very important effect on teams – it reduces uncertainty (Hinds, Carley, Krachardt, & Wholey, 2000). Familiarity allows group members to predict the behaviors of others on the team. Since the levels of economic and behavioral uncertainty are high for new ventures, familiarity is a mechanism through which some of this uncertainty can be mitigated. Thus,

H2: The more familiar the founder is with the potential partner of a new venture, the higher the likelihood that the individual will be chosen as a new venture partner.

Team Formation

What drives the formation of teams? The process of team formation was the focus of a recent study (Forbes, Borchert, Zellmer-Bruhn, & Sapienza, 2006); based on a thorough review of team literature and interviews conducted with members of three entrepreneurial teams, this study suggested that there are two primary explanations for team formation, namely resource seeking and interpersonal attraction. The first, resource seeking, suggests that teams are built through a rational, instrumental process. This view purports that multiple members are sought in order to fill resource needs within a venture (Forbes et al., 2006), and focuses on the competencies of potential team members (Aldrich, 2009). Several studies have echoed this same perspective. For example, Kamm and Nurick (1993) devised a model of team venture formation in which sole entrepreneurs seek partners when the scarcity of resources reasonably indicates a likelihood of failure. Sandberg (1992) speculated that entrepreneurial teams are formed in order to "fill the competency gaps" in ventures. Similarly, Ucbasaran, Lockett,

Wright and Westhead (2003) proposed that new venture teams may form because the venture does not have the "necessary human capital to carry out its productive activities" (p. 111).
The second explanation for team creation, interpersonal attraction, proposes that teams are formed based on interpersonal attraction. Central to this perspective are the theories of similarity/attraction and homophily (Jackson, Brett, Sessa, Cooper, Julin & Peyronnin, 1991; McPherson, Smith-Lovin & Cook, 2001). Similarity/attraction theory, a social psychological perspective, asserts that individuals tend to be attracted to those who are more like themselves in areas such as values, background, education, and personality (Forbes et al., 2006). In the context of new venture team building, choosing partners who are similar often neglects the resource needs of the venture (Forbes et al., 2006).

Homophily, a sociological viewpoint, suggests that network connections between individuals with similar characteristics (e. g. race, gender, age, or education) will be greater than connections between persons with dissimilar characteristics – in other words, people tend to navigate towards those who are more like themselves. According to McPherson et al., (2001), this pervasive pattern of 'similarity breeding connection', is very strong in relationship building. It has also been suggested that this phenomenon of 'birds of a feather flocking together' is fueled by individuals' desire to interact with those who have a common knowledge and who 'speak the same language' (Hinds et al., 2000).

In an extensive study of new venture founding teams, homophily was determined to be the primary mechanism underlying team formation (Ruef et al., 2003). In fact, homophily based on gender, ethnicity and occupation was found to be most prevalent among those firms studied. To address the argument that teams are formed primarily to fill competency gaps, Ruef et al. (2003) found no support for this. They concluded that "…During team composition, entrepreneurs seek *trusted* alters, as well as those with whom they already have strong interpersonal relationships, while avoiding strangers who could bring in fresh perspectives and ideas to the organizational process" (p. 213). Moreover, these scholars found that founders chose team members based on *familiarity* and *trust* rather than an economic, resource seeking rationale, suggesting that founder choices routinely lead to a 'competency discount' in new ventures (Ruef et al., 2003). In other words, these findings indicate that competency, or ability, is not the most salient factor in a new venture partner choice. Based on the above assertions regarding the importance of trust and familiarity, the following hypotheses are offered regarding a trust-based partner choice:

H3a: In assessing the likelihood that the founder will select an individual as a new venture partner, the founder will place more emphasis on integrity than ability.

H3b: In assessing the likelihood that the founder will select an individual as a new venture partner, the founder will place more emphasis on benevolence than ability.

H3c: In assessing the likelihood that the founder will select an individual as a new venture partner, the founder will place more emphasis on familiarity than ability.

Propensity to Trust

The trustor characteristic, or propensity to trust, is generally described as a willingness or inclination to trust another. Some consider this characteristic to be situation specific, arguing that an individual's propensity to trust will vary across situations (Sitkin & Pablo, 1992). Others argue that propensity to trust is a trait that remains stable across all situations

(Mayer et al., 1995). This position however, recognizes that various factors can have an influence on propensity to trust. Among these factors are education, cultural background, and lifetime experiences (Mayer et al., 1995). This study adopts a position on propensity to trust that is consistent with Mayer et al. (1995) perspective which views propensity to trust as a stable trait within individuals.

Although rarely empirically tested in the entrepreneurship domain, Mayer et al.'s (1995) conceptualization of propensity to trust has been studied in organizational literature and it has been found to influence several processes. For example, a recent study (Bernerth & Walker, 2009) found that managers' propensity to trust had a direct effect on their perceptions of the quality of social exchanges between themselves and employees. Another study (Yang, 2006) found that public administrators' propensity to trust positively influenced the administrators' trust in the general public. Additionally, a meta-analysis conducted by Colquitt, Scott and LePine (2007) indicated that propensity to trust had a significant relationship with trusting behavior (e.g. delegation, the sharing of information, and avoidance of monitoring). It is proposed in this study that propensity to trust also has effects on the likelihood of choice of new venture partner.

H4a: As propensity to trust increases, the positive relationship between a potential partner's ability and the likelihood that a founder will select the individual as a new venture partner becomes less positive.

H4b: As propensity to trust increases, the positive relationship between a potential partner's benevolence and the likelihood that a founder will select the individual as a new venture partner becomes less positive.

H4c: As propensity to trust increases, the positive relationship between a potential partner's integrity and the likelihood that a founder will select the individual as a new venture partner becomes less positive.

H4d: As propensity to trust increases, the positive relationship between the founder's familiarity with the potential partner's ability and the likelihood that a founder will select the individual as a new venture partner becomes less positive.

Propensity to Trust and Race

The role of race on individuals' propensity to trust has been documented in recent studies. Results of these investigations indicate that minorities in the U. S. may have a lower propensity to trust than the general population. Explanations for this have typically been embedded in a historical context, citing patterns of social inequity and injustice as reasons for these findings. For example, in an investigation of the relationship between social capital and citizen psychological involvement, Brehm and Rahn (1997) suggested that being a minority contributes to a tendency in individuals to view others with suspicion. This propensity was theorized as being the product of prejudicial and discriminatory practices rooted in the life experiences of minorities. Alesina and Ferrara (2002) echoed this thought when suggesting that being treated fairly by fellow citizens leads individuals to trust others, and found that minorities tended to find others less worthy of trust. Glaeser, Laibson, Scheinkman and Soutter (1999) suggested that minorities tend to trust others less because of the social distance between themselves and others or because of the inability of minorities to punish those who take advantage of them. Thus,

H5a: The positive relationship between a potential partner's ability and the likelihood that the founder will choose the individual as a new venture partner is more positive for non-minorities than for minorities.

H5b: The positive relationship between a potential partner's benevolence and the likelihood that the founder will choose the individual as a new venture partner is more positive for non-minorities than for minorities.

H5c: The positive relationship between a potential partner's integrity and the likelihood that the founder will choose the individual as a new venture partner is more positive for non-minorities than for minorities.

Gender

Significant research has been conducted on the gender differences in trust and trustworthiness, suggesting that differences do exist. An investigation of initial trust levels for team members within organizations found that males' initial trust levels were higher for new male members than for new female members (Spector & Jones, 2004). Another study of trust formation found that males are more trusting of previously unknown work partners than were females (Buchan, Croson, & Solnick, 2008; Wang & Yamagishi, 2005). Other results indicate that both male and female genders believe females to be more trustworthy (Buchan et al., 2008; Garbarino & Slonim, 2009; Wang & Yamagishi, 2005).

Recent studies suggest that gender differences in trust and trustworthiness can be attributable to the ways in which men and women find meaning for themselves in relationships, or in their self-construals (Maddux & Brewer, 2005). It is suggested that men are more independent regarding their self-construals, whereas women tend to be more interdependent. The importance of this difference is reflected in the way individuals allow others to influence them. The independently construed individual envisions himself as separate from others and tends to focus more on task outcomes in relationships with others (Oetzel & Bolton-Oetzel, 1997). The interdependently construed person views herself in terms of relationships with others (Cross & Madson, 1997) and focuses on relational outcomes (Oetzel & Bolton-Oetzel, 1997). Additionally, the study by Maddux and Brewer, (2005) extends prior research on independent and interdependent construals and relates these to gender differences in trust. These scholars suggest that women's self-construal is relationally interdependent, which refers to the tendency of an individual to describe herself in terms of relationships with individual others. In contrast, Maddux and Brewer (2005) indicated that men are collectively interdependent, which refers to an inclination to describe oneself in term of group memberships. The results of this study showed that women trusted more those individuals with whom they shared some direct or indirect relationship connection. Men, however, were found to trust more those individuals with whom they shared group memberships.

The results of these studies suggest that women tend to place more emphasis on the interpersonal nature of relationships with others while men place more emphasis on more depersonalized or group relationships. This is consistent with findings of other research conducted on gender differences (Baumeister & Sommer, 1997; Brewer & Gardner, 1996; Seeley, Gardner, Pennington, & Gabriel, 2003).

Based on the documented differences in male and female self-construals, it is reasonable to expect that these differences will manifest themselves in decisions involving trust. In assessing the trustworthiness of a potential new venture partner, a trustor will

consider that individual's ability, benevolence and integrity. Of these dimensions, benevolence is the factor that focuses on the interpersonal relationship between the trustor and trustee (Erdem & Ozen, 2003). This is consistent with women's self-construal emphasis on the interpersonal nature of relationships, thus:

H6: The positive relationship between a potential partner's benevolence and the likelihood that the founder will choose the individual as new venture partner will be more positive for women than for men.

The ability dimension of trustworthiness refers to task and situation specific skills and competencies that an individual possesses (Mayer et al., 1995). The self-construals favored by men support the notion that they tend to focus on the utilitarian and task aspects of relationships. Therefore,

H7: The positive relationship between a potential partner's ability and the likelihood that the founder will choose the individual as a new venture partner will be more positive for men than for women.

RESEARCH METHOD

Sample

We tested our hypotheses based on a sample of Certified Public Accountants (CPAs) in a southeastern state in the U. S. This sample is appropriate for this study for two major reasons: (1) a significant number of CPA firms have multiple person ownership, and (2) the need to control for industry, geographical region and educational level is reduced due to the homogeneity of the sample (i.e. single industry, same geographical region, standardized education and training for the profession). Respondents were identified through their membership in a statewide professional association and data was hand-collected during a three-day statewide educational conference for CPAs. Respondents were selected using non-probability quota sampling techniques. We consider this sampling technique suitable for this study since our main concern is not to have a sample representative of the general population, but rather to have a sample that representative of those who routinely have multiple person ownership for their ventures and that adequately represents individuals of differing races and genders (Trochim & Donnelly, 2007). Our sample size of 116 exceeds many other conjoint studies, for example, in studies of the decision policies of venture capitalists, with sample sizes of 85 (Hsu, Haynie, Simmons, and McKelvie, 2014), 53 (Zacharakis & Shepherd, 2005), and 66 (Shepherd, 1999).

Of the 116 in our sample, 53% are female; 69% are Caucasian, and 34% of the respondents are between the ages of 45 and 54; 63% are married; and 59% have a bachelor's degree. Additionally, 57% of the respondents have never started a business before and 65% have never selected a new venture partner before.

Research Design

We used conjoint analysis to decompose the decision policies of our sample. Conjoint analysis is a statistical technique which is useful in determining preferred attribute combinations and the relative importance of attributes in decision making. This technique facilitates a more realistic modeling of individual judgment and perceptions than other research designs, and is

often preferred over other approaches. For example, self-explicated approaches query respondents directly regarding their preferences, but conjoint analysis determines preferences by asking respondents to rate or rank several 'real-life' scenarios. Using this approach, socially acceptable responses have a lower likelihood of occurring. In addition, conjoint analysis does not rely on individuals' introspection, which is often biased and unreliable (Sattler & Hensel-Borner, 2007; American Marketing Association, 2002).

To determine the choice policies of our sample, each participant was asked to evaluate a series of hypothetical profiles and to indicate the likelihood that each hypothetical individual would be chosen as a new venture partner. Each profile described a potential new venture partner that differed on four key attributes, namely, ability, benevolence, integrity, and familiarity. These attributes were operationalized at two levels (high/low), providing 16 unique profiles (2^4). The participant's evaluation consisted of indicating on a scale of 1 – 7 the likelihood of choosing a person as a new venture partner. In order to measure the reliability of the respondents' responses, each profile was fully replicated, producing a total 32 profiles. This replication of profiles allows the researcher to test the respondents' consistency in their responses by comparing the two sets of profiles (test-retest reliability). A practice (or dummy) profile was included as the first profile in order to familiarize the respondents with the required task. The respondents were not made aware of the dummy profile; however, the addition of this task required each respondent to assess 33 scenarios. Additionally, two different versions of the research instrument were created, each with a different ordering of the profiles. This was done in an attempt to avoid order effects.

Variables and Measures

Dependent Variable

The dependent variable for this study is the likelihood that the respondent will choose a potential founding team member. After evaluating a profile, the respondents were asked to indicate their likelihood that the potential team member would be chosen. The response, ranging from "not very likely" to "very likely" was provided on a 7-point Likert-type scale.

Decision Attributes and Attribute Levels

The primary objective for this study is to determine the roles of trustworthiness and familiarity in the choice of new venture team member. This research addresses this objective from the perspective of the venture founder in choosing the first team member. To assess the likelihood of choosing a founding member, the respondent was asked to evaluate hypothetical profiles of potential team members. Table 1 outlines the decision attributes and attribute levels, and attribute operationalizations included in this study. Each attribute is operationalized at two levels – high and low. The trustworthiness variables (ability, benevolence and integrity) were operationalized in a manner consistent with prior operationalizations of each as developed by Mayer and Davis (1999).Familiarity was operationalized according to the prior conceptualizations and studies (Hinds et al., 2000; Komiak & Benbasat, 2006; Lott & Lott, 1965).

RESULTS AND DISCUSSION

The decision attributes (i.e. ability, benevolence, integrity, familiarity) were relevant in the decision of new venture partner choice. One hundred percent (100%) of the individual models explained a significant portion of variance ($p < .001$) with a mean adjusted R^2 of 0.78. This is consistent with Choi and Shepherd's (2004) 95 percent of significant models and a mean adjusted R^2 of 0.78. Further, the mean test-retest correlation for the sample was .90 which is also consistent with Choi and Shepherd (2004) who reported a mean test-retest correlation of 0.82. These results are indicative of a high degree of judgmental consistency. The results also give assurance that the conjoint task was performed consistently by the respondents. We also tested for differences in the in-use versus espoused decision policies of the respondents by comparing the actual policies obtained in the conjoint experiment with the self-reported data obtained in the post-survey instrument. The results of this analysis indicated that the in-use and espoused decision policies do not differ. Specifically, in both cases, attributes were ranked in the following order of importance: integrity, ability, benevolence and familiarity.

Table 1
DECISION ATTRIBUTES AND OPERATIONALIZATIONS

Attribute	Level	Operationalization
Ability	High	This individual possesses a superior level of knowledge and skills required to perform the duties of the new venture partner.
	Low	This individual possesses an average level of knowledge and skills required to perform the duties of the new venture partner.
Benevolence	High	This individual displays a high level of concern about my welfare, needs and desires; this person would not knowingly do anything to hurt me; this individual almost always looks out for what is important to me.
	Low	This individual does not display a high level of concern about my welfare, needs and desires; this person may not knowingly do anything to hurt me; this person sometimes looks out for what is important to me.
Integrity	High	This individual is clearly guided by a sound set of principles that I find acceptable; his/her actions and behaviors are almost always consistent with those principles.
	Low	This individual seems to be guided by a sound set of principles that I find acceptable; however, his/her actions and behaviors are not always consistent with those principles
Familiarity	High	I have had prior interactions with this individual and am likely to possess first-hand knowledge about this person's skills, perspectives and interpersonal styles.
	Low	I have not had prior interactions with this individual. Knowledge about this person's skills, perspectives and interpersonal styles come from secondary sources.

This study provides a total of 3,712 observations (thirty-two observations per respondent excluding the practice profile). Because each of the 3,712 observations is nested within individuals, autocorrelation could be an issue. Hierarchical linear modeling (HLM) accounts for the possible impact of autocorrelation and is therefore used to analyze the results of the experiment. These results are displayed in Tables 2 to 4, which presents the respondents' assessments of the likelihood of new venture partner choice. The likelihood of choice is represented by unstandardized coefficients for each decision criterion and their corresponding standard error, t-ratio and level of significance.

Results are reported for a main effects model (Level-1) and a moderated model (Level-2). The main effects model includes the independent variables ability, benevolence, integrity and familiarity. The moderated model includes the variables propensity to trust, gender and race. It has been noted that interaction effects can have small effect sizes and their tests of significance frequently suffer from low power. Because of this, some authors have recommended that significance levels be relaxed to $p < 0.10$ for interaction terms (McClelland & Judd, 1993; Sauley & Bedeian, 1989). Accordingly, this study reports significance levels at $p < .10$ as marginal findings.

As hypothesized, all of the independent variables at Level-1 (i.e., ability, benevolence, integrity and familiarity) were found to be positive and statistically significant, suggesting that they were used by respondents in their decisions on the likelihood of choosing an individual as a new venture partner. Specifically, the positive coefficient for: (1) ability indicates that the higher the perceived ability of a potential partner, the greater the likelihood of choosing that individual as a new venture partner ($\beta = 1.609$, SE =.063, t-ratio = 25.385, $p < .001$); (2) benevolence indicates that the higher the perceived benevolence of a potential partner, the greater the likelihood of choosing that individual as a new venture partner ($\beta = 1.042$, SE =.048, t-ratio = 21.743, $p < .001$); (3) integrity indicates that the higher the perceived integrity of a potential partner, the greater the likelihood of choosing that individual as a new venture partner ($\beta = 2.44$, SE =.068, t-ratio = 35.822, $p < .001$); (4) familiarity indicates that the higher the perceived familiarity of a potential partner, the greater the likelihood of choosing that individual as a new venture partner ($\beta = .686$, SE =.038, t-ratio = 17.960, $p < .001$). These results provide support for Hypotheses 1a, 1b, 1c and 2.

Table 2
REGRESSION RESULTS FOR HYPOTHESES1 AND 2 (LEVEL 1)

	Beta	St. Error	t-ratio
Ability	1.609***	.063	25.385
Benevolence	1.042***	.048	21.743
Integrity	2.441***	.068	35.822
Familiarity	0.686***	.038	17.960

*$p < .05$ **$p < .01$ ***$p < .001$ n = 3712

Hypotheses 3a, 3b and 3c argue that more emphasis will be placed on benevolence, integrity and familiarity than on ability. An evaluation of each of the variables in the model (Table 3) shows how each variable contributed to the prediction. Variables with a β greater than 1.609 (the β for ability) have more importance than ability in the partner choice decision. Analysis shows that integrity is the only attribute that meets this criterion, presenting a β of 2.441 versus 1.609 for ability. In addition, results of an independent t-test between these

variables confirmed this result ($p < .001$). Thus, Hypothesis 3a is supported. Hypotheses 3b and 3c were not supported.

Table 4 reports the HLM results for the relationship between the independent variables of theoretical interest and propensity to trust, on the likelihood of the new venture partner choice. Three of the four hypothesized relationships were statistically significant ($p<.05$).

Table 3
REGRESSION RESULTS FOR HYPOTHESIS 3
(Level 1)

	Beta	St. Error	t-ratio
Ability	1.609	.063	25.385
Benevolence	1.042	.048	21.743
Integrity	2.441***	.068	35.822
Familiarity	0.686	.038	17.960

*$p < .05$ **$p < .01$ ***$p < .001$ n = 3712

Table 4
HIERARCHICAL LINEAR MODELING RESULTS FOR HYPOTHESIS 4
(Level 2)

	Beta	St. Error	t-ratio
Propensity to Trust x Ability	.027**	.009	3.109
Propensity to Trust x Benevolence	-.020**	.007	-2.819
Propensity to Trust x Integrity	.006	.009	.657
Propensity to Trust x Familiarity	-.014*	.006	-2.328

*$p < .05$ **$p < .01$ ***$p < .001$ n = 3712

In order to appropriately interpret the nature of these relationships, each significant interaction is graphed in accordance with the recommendations of Cohen and Cohen (1983). Specifically, the dependent variable (likelihood of choice) is depicted in the y-axis, and the independent variable of interest is plotted on the x-axis such that moving from left to right represents moving from a low to high condition. Employing regression coefficients to calculate values for the DV at one standard deviation above and below the mean value for propensity to trust – in each 'condition' (low and high) of the independent variable (ability, benevolence, and familiarity) – suggests the nature of the interaction.

Figure 1 depicts the relationship between ability and propensity to trust, on the likelihood of choice (H 4a). The graph suggests that when the founder's propensity to trust is high, the positive (main effect) relationship between a potential partner's ability and likelihood that the potential partner will be selected as a new venture partner becomes more positive. However, when founder's propensity to trust is low the positive (main effect) relationship between a potential partner's ability and likelihood that the potential partner will be selected as a new venture partner becomes less positive – in fact becomes negative. Taken together, the graph suggests that as propensity to trust increases, the positive relationship between ability and choice becomes more positive. As such, while the relationship is statistically significant, it is not in the direction hypothesized. Therefore, hypothesis 4a is not supported.

Figure 1
LIKEHOOD OF CHOICE

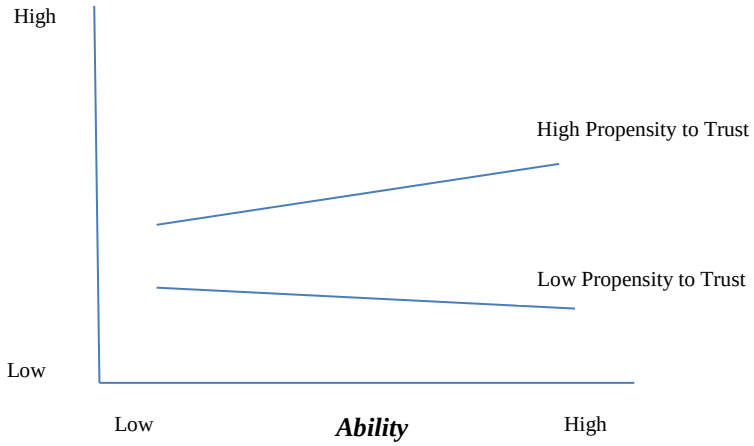
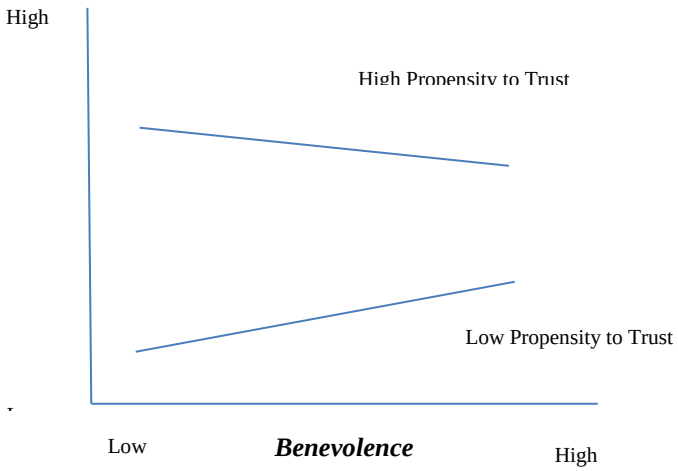


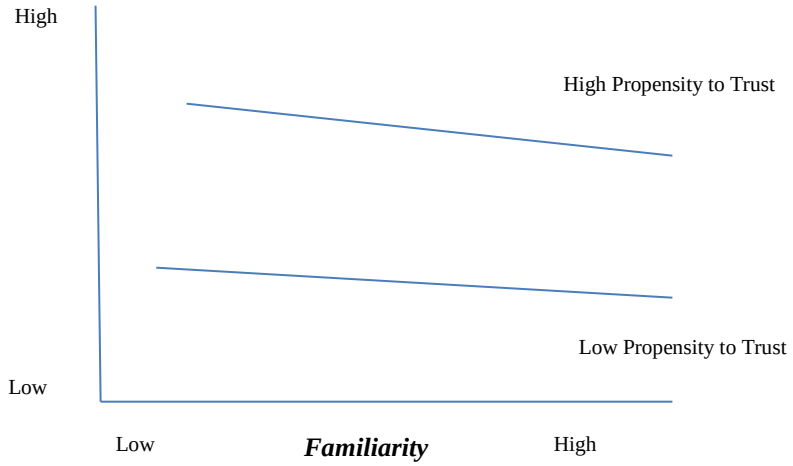
Figure 2 illustrates the relationship between benevolence and propensity to trust, on the likelihood of choice (H 4b). The graph suggests that when the founder's propensity to trust is low, the positive (main effect) relationship between a potential partner's benevolence and likelihood that the potential partner will be selected as a new venture partner becomes more positive. However, when founder's propensity to trust is high, the positive (main effect) relationship between a potential partner's ability and likelihood that the potential partner will be selected as a new venture partner becomes less positive-in fact becomes negative. Taken together, the graph suggests that as propensity to trust increases, the positive relationship between benevolence and choice becomes less positive. This relationship is statistically significant, and is in the direction hypothesized. Therefore, hypothesis 4b is supported.

Figure 2
LIKEHOOD OF CHOICE



The relationship between familiarity and propensity to trust, on the likelihood of choice (H 4d), is shown in Figure 3. The graph indicates that when the founder's propensity to trust is low, the positive (main effect) relationship between a potential partner's familiarity and likelihood that the potential partner will be selected as a new venture partner becomes less positive. However, when founder's propensity to trust is high, the positive (main effect) relationship between a potential partner's familiarity and likelihood that the potential partner will be chosen as a new venture partner also becomes less positive. Taken together, the graph suggests that as propensity to trust increases, the positive relationship between familiarity and choice becomes less positive. This relationship is statistically significant; it is in the direction hypothesized. Therefore, hypothesis 4d is supported.

Figure 3
LIKEHOOD OF CHOICE



Hypothesis 5a states that the positive relationship between a potential partner's ability and the likelihood that the founder will choose the individual as a new venture partner is more positive for non-minorities than for minorities. This hypothesis was not supported (β = -.055, SE = .135, t-ratio = -0.406, p > .10). The assertion that the positive relationship between a potential partner's benevolence and the likelihood that the founder will choose the individual as a new venture partner is more positive for non-minorities than for minorities was tested in Hypothesis 5b. The results did not support Hypothesis 5b (β = -.122, SE = .103, t-ratio = 1.192, p > .10); Hypothesis 5c states that the positive relationship between a potential partner's integrity and the likelihood that the founder will choose the individual as a new venture partner is more positive for non-minorities than for minorities. This hypothesis was also not supported (β = .063, SE = .147, t-ratio = -0.429, p > .10). In summary, the hypotheses relating to race were not supported in this study. Table 5 below shows the results of HLM testing for Hypotheses 5a, 5b, and 5c.

Table 5
HIERARCHICAL LINEAR MODELING RESULTS FOR HYPOTHESES 5 (Level 2)

	Beta	St. Error	t-ratio
Race x Ability	-.055	.135	-0.406
Race x Benevolence	.122	.103	1.192
Race x Integrity	.063	.147	-0.429
Race x Familiarity	-.018	.086	-0.213

*p < .05 **p < .01 ***p < .001 n = 3712

Hypotheses 6 and 7 change the focus of this discussion from race to gender, Hypothesis 6 proposes that the positive relationship between a potential partner's benevolence and the likelihood that the founder will choose the individual as new venture partner will be more positive for women than for men(β = .179, SE = .094, t-ratio = 1.894, p = .060). Marginal support was found for this hypothesis. Table 4.5 provides the results of this analysis

Hypothesis 7 argues that the positive relationship between a potential partner's ability and the likelihood that the founder will choose the individual as a new venture partner will be more positive for men than for women. While the finding is in the direction as hypothesized, the results are not statistically significant ((β = -0.062, SE = .127, t-ratio = -0.487, p = .627). Hypothesis 8 was not supported. Table 6 summarizes these findings.

Table 6
HIERARCHICAL LINEAR MODELING RESULTS FOR HYPOTHESES 6 AND 7 (Level 2)

	Beta	St. Error	t-ratio
Gender x Ability	-0.062	.127	-0.487
Gender x Benevolence	0.179	.094	1.894

*p < .05 **p < .01 ***p < .001 n = 3712

Supplemental Analysis

The results of this study have offered support for understanding those factors which may moderate the relationship between the perceived trustworthiness and familiarity of an individual and the likelihood of choosing that same individual as a new venture partner. Three moderating factors were considered: gender, race and propensity to trust. Of these, only propensity to trust offered statistically significant results. In an effort to discover other moderating factors, additional analysis was conducted. Hierarchical linear regression was used to test the following characteristics of the respondents as moderators: (1) the educational level (EDUB); (2) if the respondent had ever been responsible for the selection of a new partner for a current or prior venture (SELPART); (3) age range (AGRANG); (4) years employed (YRSEMP); and years employed in current field (5) (YRCURFI). The results of these tests are reported in Table 7.

Table 7
RESULTS FOR SUPPLEMENTAL ANALYSIS

Regression Results for Level 1			
	Beta	**St. Error**	**t-ratio**
Ability	1.609***	.063	25.385
Benevolence	1.042***	.048	21.743
Integrity	2.441***	.068	35.822
Familiarity	0.686***	.038	17.960
Hierarchical Linear Modeling Results Level 2			
Moderated by EDUCATIONAL BACKGROUND			
EDUB x Ability	.042	.126	.335
EDUB x Benevolence	-.209*	.094	-2.227
EDUB x Integrity	-.039	.136	-.284
	.013	.076	.168
Moderated by PREVIOUSLY SELECTED A NEW VENTURE PARTNER			
SELPART x Ability	.131	.134	.976
SELPART x Benevolence	-.200†	.108	-1.856
SELPART x Integrity	.081	.148	.545
SELPART x Familiarity	.135†	.078	1.737
Moderated by AGE RANGE			
AGRANG x Ability	.001	.064	.011
AGRANG x Benevolence	-.005	.049	-.110
AGRANG x Integrity	.010	.071	.139
AGRANG x Familiarity	-.070†	.039	-1.808
Moderated by YEARS EMPLOYED			
YRSEMP x Ability	-.005	.006	-.756
YRSEMP x Benevolence	.005	.005	.991
YRSEMP x Integrity	-.004	.007	-.529
YRSEMP x Familiarity	-.005	.004	-1.077
Moderated by YEARS EMPLOYED in CURRENT FIELD			
YRCURFI x Ability	-.004	.006	-.738
YRCURFI x Benevolence	-.001	.005	-.226
YRCURFI x Integrity	.004	.008	.536
YRCURFI x Familiarity	-.003	.004	-.932

2 = 116†$p < .10$ *$p < .05$ **$p < .01$ ***$p < .001$
n Level 1 = 3712; n Level

Educational Background (EDUB) provided the only statistically significant result in this analysis (β = -.209, SE = .094, t-ratio =- -2.227, p = .028). The negative coefficient for (EDUB) indicates that the positive relationship between perceived benevolence and the likelihood of choice is reduced as educational level increases.

Three of the variables showed marginal moderating effects in the testing. Previous selection of a new venture partner (SELPART) has a marginal moderating effect (β = -.20, SE = .108, t-ratio =- 1.856, p = .0660). Specifically, the positive relationship between the founder's assessment of an individual's benevolence and the likelihood of choosing that individual as a new venture partner is marginally reduced when the founder has previously selected a new venture partner. SELPART also has marginal effect on the positive relationship between the founder's assessment of an individual's familiarity and the likelihood of choosing that individual as a new venture partner, strengthening this positive relationship (β = .135, SE = .078, t-ratio =- 1.737, p = .0085). Age Range (AGRANG) as a moderator also provides marginal effects (β - .070, SE = .039, t-ratio =- 1.808, p = .073). Although marginal, these statistics suggest that as age increases, the positive relationship between familiarity and the likelihood of choice decreases. Neither Years Employed (YRSEMP) nor Years Employed in Current Field (YRCURFI) had any statistically significant effect in this test.

Discussion of Findings

The findings of the research provide support that ability, benevolence, integrity and familiarity are all important in the choice of new venture partner. But while each attribute was found to be important, a hierarchy of importance among these attributes emerged, showing the integrity of a potential partner to be most salient, followed by ability, benevolence and familiarity (in that order). It was hypothesized that ability would be the least important relative to the other attributes; however, familiarity was shown to be the least important, highlighting the salience of trustworthiness relative to familiarity in the choice of new venture partner. An explanation for the significance of integrity can possibly be embedded in the history and training of the sample. Over the last decade, the CPA profession in the United States has received intense scrutiny due to several accounting scandals involving large corporate fraud. These occurrences diluted the public's opinion of the integrity and competence of the CPA profession. As part of an effort to restore its credibility, the profession mandated yearly ethics training for all CPAs. This training focuses on the integrity of the individual CPA (Yuthas, Dillard & Rogers, 2004). Therefore, CPA training may account for this study's findings on the importance of integrity in new venture partner choice.

Results of this study also suggest that when considering trustworthiness and familiarity, trustworthiness is more important than familiarity when choosing a new venture partner for those in this sample, thereby providing support for the importance role of trust in new venture partner choice. The findings related to the how propensity to trust moderated the relationship between two of the study attributes (i.e., benevolence, familiarity) were as hypothesized. When propensity to trust was tested as a moderator of the positive relationship between benevolence and likelihood of choice, the relationship became less positive. The positive relationship between familiarity and the likelihood of choice also became less positive when propensity to trust was tested as a moderator. These results may be attributable to the fact that as an individual's propensity to trust increases, other decision attributes become less important.

After all, a person with a high propensity to trust has a basic inclination to trust others in the absence of any information.

Interesting, however, is the finding related to ability. The positive relationship between the perceived ability of a potential new partner and the likelihood of choice became more positive when moderated by propensity to trust. Perhaps this can be explained by exploring the nature of propensity to trust in more depth. Potentially, this factor may affect decisions related to character or relational type characteristics more than decisions related to task or performance type characteristics.

The supplemental analysis revealed that educational background also acts as a moderator in that it weakens the positive relationship between perceived benevolence and the likelihood of choice. A possible explanation for this result could possibly rest in the theory of self-efficacy which is based on a person's belief that he or she can accomplish any goals they have set for themselves (Bandura, 1977). Bandura (1977) posits that this belief is enhanced by successes of an individual. Attainment of higher educational levels, therefore, could increase an individual's self-efficacy and decrease the importance of another's benevolence when choosing a new venture partner.

Finally, we acknowledge that the sample chosen for this study may have some bearing on the findings. As mentioned previously, the training of CPAs could influence the decision making of these individuals. Thus, individuals with different training may place importance on different attributes.

Limitations and Future Research

The current research, as in all research, is subject to certain limitations. The first of these potential limitations is the conjoint methodology. As with all experiments, this study is characterized by a degree of "artificiality". Specifically, no experiment involving human decision making can fully capture all of the emotional and psychological factors involved in "real life" situations. Nonetheless, prior research suggests that conjoint analysis is useful in approximating "real life" decision policies of individuals (Brehmer, 1988; Riquelme & Rickards 1992).

A further limitation may be in the choice of attributes presented in this study. It is possible that the respondents gave importance to these factors only because they were included in the study. While careful consideration was given to the choice of attributes, (i.e., they were selected based on a review of relevant literature), we acknowledge that there may be other attributes that may be important to the choice of new venture partner which are not included in this study. Future research should identify additional factors which may be important in new venture partner choice; homophily, shared vision, level of commitment, complementary skills and resources contributed are factors which could provide further insight.

The non-probability sampling method used in this study, combined with the homogeneous nature of the sample, may limit the extent to which the results of the study can be applied to individuals, regions, or contexts different from those investigated in this research project. The homogeneity of the sample allowed us to design away many of the heterogeneity issues that otherwise confound empirical research (Davidsson, 2008), but this same sample characteristic limits the applicability of the claims supported in this study. Yet, while the sample in this study cannot be considered representative of all individuals who would choose new venture partners, generalizability was not the primary research goal. This study has provided theoretical evidence of the role of trust in partner choice. Additional studies could enhance these

findings by conducting similar studies with different sample characteristics (i.e., different professions, industries, geographical areas, etc.). Many of these studies may use samples that are more heterogeneous than the sample in this study, and therefore would employ control variables to minimize the effects the heterogeneity.

The sample size for this study exceeds the sample size of many, if not most, of the conjoint studies conducted in the entrepreneurship domain. However, similar studies in the future could increase the sample size in an effort to increase the statistical significance of some relationships that this investigation has shown to have only marginal effect.

The current study focuses only on the choice of the founder. Acknowledging the dyadic nature of new venture partner choice, future studies can extend our understanding of the role of trust in the decision policies of the individual who is not the founder (i.e., the other member of the dyad). Results of a study with this alternative focus could show if the non-founder individual places similar importance on ability, benevolence, integrity and familiarity, or if different attributes (such as those mentioned earlier in this section) are more important to the non-founder individual in the choice of new venture partner.

This investigation concentrates solely on the "choice" of partner, yet we recognize that the "choice" comes at a point in time during a "process". Longitudinal research could potentially facilitate a deeper understanding of this process since this type research addresses dynamic phenomena much better than cross-sectional research (Davidsson, 2008). For example, given that the venture formation process can be lengthy in duration, longitudinal studies could give insight into whether the importance of ability, benevolence, integrity and familiarity remains constant during this period for a new venture founder or partner, or if the importance of the attributes change over time. If there is change, longitudinal studies could help uncover those factors which might facilitate this shift. Longitudinal studies could also be used to examine whether the decision policies of founders regarding new venture partner choice change as the venture matures.

As a final suggestion, the results of this study could provide preliminary data for future exploration into the effect that trust has on the performance of entrepreneurial ventures.

Practical Implications

The practical implications of this study should not go unnoted. During data collection, respondents regularly reported that the experiment was very thought provoking, and caused them to think about the importance of the attributes (i.e. ability, benevolence, integrity, familiarity)as they relate to partner choice in a more clear and systematic manner. This feedback suggests that entrepreneurs will be equipped with a new consciousness, or awareness, of the multifactor nature of trustworthiness; an awareness that will facilitate more deliberate evaluations of new venture partners based on the perceived ability, benevolence, integrity and familiarity of the potential partner. Additionally, this research provides insight for those who provide educational or consulting assistance to entrepreneurs into the importance of trust in new venture choice.

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