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**CAN YOUR NETWORK MAKE YOU HAPPY? ENTREPRENEURS' USE OF
BUSINESS NETWORKS AND THEIR SUBJECTIVE WELL-BEING**

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CAN YOUR NETWORK MAKE YOU HAPPY? ENTREPRENEURS' BUSINESS NETWORK UTILIZATION AND SUBJECTIVE WELL-BEING

ABSTRACT

We draw on the conservation of resources theory to examine whether self-efficacy and resilience mediate the relationship between entrepreneurs' business network utilization and their subjective well-being. Using socioemotional selectivity theory, we then examine the extent to which the mediating effects become stronger as entrepreneurs age. An analysis of data collected from 335 entrepreneurs in India reveals that business networks help entrepreneurs build resilience and self-efficacy, which contribute to subjective well-being. Furthermore, we find that the relationship between business network utilization and subjective well-being strengthens as entrepreneurs age. Our findings attest to the importance of understanding how contextual resources in entrepreneurs' work environments influence their subjective well-being by enhancing their personal psychological resources.

KEYWORDS: Networks, well-being, self-efficacy, resilience.

INTRODUCTION

Happiness, or its scholarly corollary, subjective well-being (SWB), has been described as the ultimate goal in human existence (Deiner, Sapyta and Suh, 1998; Diener, Emmons, Larson and Griffin, 1985; Erdogan, Bauer, Truxillo and Mansfield, 2012). Life satisfaction,¹ which typically derives from the presence of positive affect and the absence of negative affect, is a key indicator of SWB (Diener, Oishi and Lucas, 2003; Diener, Suh, Lucas and Smith, 1999). In their comprehensive review Erdogan et al. (2012) concluded that researchers have failed to adequately explain how the work domain contributes to life satisfaction (c.f. Georgellis and Lange, 2012). This extends to the entrepreneurship domain, where scholars have called for a broader conceptualization of 'entrepreneurial success' to include SWB as well as its antecedents (Baron, Franklin and Hmieleski, 2016). In this study, we address this research gap by investigating antecedents of entrepreneurs' SWB.

Entrepreneurship offers a rich research context for studying SWB because it can be both

¹ Although happiness and life satisfaction are not synonymous, understanding the drivers of life satisfaction is arguably crucial to understanding what makes people happy (Erdogan et al., 2012).

extremely rewarding and very challenging. On the one hand, entrepreneurship can offer freedom from restrictions and unsatisfactory work conditions (Al-Dajani, Carter, Shaw and Marlow, 2015; Rindova, Barry and Ketchen, 2009), and provide the autonomy to pursue passions and engage in meaningful work (Baron, Franklin and Hmieleski, 2016; Cardon, Wincent, Singh and Drnovsek, 2009). On the other hand, entrepreneurship can be extremely stressful due to high levels of uncertainty, change, and risk, and the vast array of responsibilities entrepreneurs must navigate whilst working long hours (Baron et al., 2016; Hahn, Frese, Binnewies and Schmitt, 2012.; Uy, Foo and Song, 2013). These challenging and stressful conditions, combined with the high attrition rate in entrepreneurship, can adversely affect entrepreneurs' SWB (Baron et al., 2016). The ability to deal with stress and maintain high SWB is, however, important for the effective functioning of entrepreneurs and can influence the performance of entrepreneurial ventures (Shepherd and Haynie, 2009). For example, recent work suggests entrepreneurs with lower SWB demonstrate less personal initiative, a central factor in the success of entrepreneurial ventures (Hahn et al., 2012.).

We argue that business networks can play an important role in helping entrepreneurs achieve and maintain high SWB. Findings show that social relationships and networks help individuals deal with stressful events (Cacioppo and Cacioppo, 2014; Cohen and Wills, 1985; Feeney and Collins, 2015; Jasinskaja-Lahti, Liebkind, Jaakkola and Reuter, 2006; Komproe, Rijken, Ros and Winnubst, 1997; Turner, 1981). To date, however, the role played by *business* networks in facilitating entrepreneurs' SWB has been largely overlooked. Indeed, while studies have highlighted the value of business networks for accessing material and informational resources (Hoang and Antoncic, 2003; Lechner and Dowling, 2003; Lechner, Dowling and Welp, 2006; Watson, 2007), benefits such as facilitating access to emotional support and advice have rarely been explored despite calls to do so (Erdogan et al., 2012; Renzulli and Aldrich, 2005). We seek to address this research gap by examining the

processes by which business networks influence entrepreneurs' SWB, and make two key contributions.

First, we contribute to understandings of entrepreneurs' SWB by taking a psycho-social perspective, which considers effects of psychological and social resources as well as their inter-relationships. This approach contrasts with prior research on entrepreneurs' SWB based predominantly on psychological approaches. Specifically, we draw on Hobfoll's (2002) conservation of resources (COR) theory to examine how entrepreneurs enhance their SWB by striving to accumulate, retain and protect work-related resources. We argue that access to social resources within business networks enhances entrepreneurs' SWB by fostering the development of psychological resources. To explore the inter-relationship between social and psychological resources, we examine the mediating effects of psychological resources on the relationship between business network utilization and SWB. Although some scholars have operationalized psychological resources as a higher-order construct (i.e., psychological capital) comprising self-efficacy, resilience, hope, and optimism (Baron et al., 2016), we focus on self-efficacy and resilience. Despite its recent rise in popularity (cf. Newman, Ucbasaran, Zhu and Hirst, 2014), a number of scholars have questioned the validity of psychological capital as a higher order construct, arguing for independent consideration of underlying constructs (Rego, Sousa, Marques and e Cunha, 2012) to reveal their relative importance (Dawkins, Martin, Scott and Sanderson, 2013). We focus on self-efficacy and resilience as mediating factors since they are the most widely researched psychological resources, especially in the entrepreneurship context, and as a result, exhibit stronger convergent validity than the dimensions of hope and optimism. By exploring these issues we respond to calls to examine the influence of social networks on individual psychological resources (Newman et al., 2014), and the relative importance of different psychological resources in predicting individual work outcomes (Dawkins et al., 2013).

Second, we make a theoretical contribution by synthesising COR theory with socioemotional selectivity theory (SST) (Carstensen, 1991; Carstensen, Isaacowitz and Charles, 1999) to examine whether the effects of business network utilization on SWB are contingent on the age of the entrepreneur. Zahra and Newey (2009) suggested that theory development can result from the creative synthesis of theoretical perspectives. Synthesising COR theory with SST enables us to test age as a boundary condition of COR theory. Building on SST and recent work in social psychology suggesting that age is critical in explaining happiness (Jeste and Oswald, 2014; Thomas et al., 2016), we argue that the effects of business network utilization on SWB through the mediating mechanisms of self-efficacy and resilience (based on COR theory) are contingent on an entrepreneur's age. From an SST perspective, each individual has a core constellation of goals, the hierarchy of which changes with age (Carstensen et al., 1999; Luong, Charles and Fingerman, 2011). In other words, as entrepreneurs age, they begin to prioritize goals such as maintaining SWB; thus, they bolster their psychological resources by strengthening relationships in their business networks. In short, SST provides a salient theoretical explanation for how entrepreneurs use their business networks for different purposes as they age.

We test our hypotheses using data from a sample of 335 entrepreneurs drawn from the four largest cities in India. The Indian context enables us to explore our ideas in a less-developed institutional environment, in which networks may play a more important role for economic actors (McMillan and Woodruff, 2002; Park and Luo, 2001). Further, since the psychological constructs used in this study were developed in the U.S. context, utilizing them in the Indian context offers a test of their universal applicability.

THEORY DEVELOPMENT

Life satisfaction—a key dimension of SWB—is an important goal for most people, and has been found to be associated with both physical and psychological health as well as work-related outcomes such as work productivity and job satisfaction (Baron et al., 2016; Erdogan et al., 2012). Developing a better understanding of the factors that influence entrepreneurs' SWB is therefore a laudable goal that entrepreneurship scholars have begun to embrace (e.g. Baron et al., 2016; Uy et al., 2013).

Although not always explicitly stated, studies which seek to explain the antecedents of entrepreneurs' well-being are theoretically grounded in resource-based theories of well-being from social psychology (see Hobfoll, 2002: for a review). Whilst numerous models exist, they generally highlight the critical role of social and psychological resources in enabling individuals to maintain high SWB in the face of work demands. We draw on Hobfoll's (2002) COR theory to explore the processes by which business networks may enhance entrepreneurs' SWB because this theory explains how access to social resources in the work environment (in our case, business networks) facilitates the development of personal psychological resources (ten Brummelhuis and Bakker, 2012). We then draw on SST to explain how such processes are likely to be contingent on an entrepreneur's age. We present the conceptual model that guides our hypotheses in Figure 1.

INSERT FIGURE 1 HERE

Business Networks and Subjective Well-Being

In the wider social psychology literature, findings suggest individuals with strong social networks have higher SWB (Cohen and Wills, 1985; Jasinskaja-Lahti et al., 2006; Turner, 1981). While some findings reveal a main effect (i.e., that network-based social support directly influences SWB), others reveal a buffering effect (i.e., that network-based social support boosts SWB by protecting individuals from the deleterious effects of negative

emotions and stress) (see: Cohen and Wills, 1985; Thoits, 2011). Collectively, these findings highlight the important role of social support in SWB (Thoits, 2011).

Much of the research examining the link between social relationships and SWB is focused on close personal relationships (e.g., spouses and family members) (Thoits, 2011). Despite evidence in the social psychology literature linking social support to SWB (Cohen and Wills, 1985; Jasinskaja-Lahti et al., 2006; Turner, 1981), few have investigated the mechanisms underlying this relationship. Furthermore, although the benefits of business networks are well documented, particularly in environments characterized by uncertainty (e.g., entrepreneurial and less-developed institutional contexts) (Park and Luo, 2001), scholars have focused primarily on how access to material and informational resources improves organizational outcomes (Hoang and Antoncic, 2003; Lechner and Dowling, 2003; Lechner et al., 2006; Watson, 2007). Few have explored how business networks provide benefits by facilitating access to emotional support and advice (Renzulli and Aldrich, 2005). For example, very few researchers have examined the relationship between work-based relationships and SWB, and then only in the context of a single organization (e.g., co-workers and supervisors) (Erdogan et al., 2012). By investigating the relationship between business network utilization and entrepreneurs' SWB, we respond to calls to develop a broader understanding of how social resources can influence SWB (Erdogan et al., 2012; Thoits, 2011).

We draw on COR theory to argue that by providing socioemotional support and vicarious learning, business networks foster the development of entrepreneurs' psychological resources, which in turn promote SWB. According to COR theory, individuals seek to accumulate, retain and protect resources. Resources are defined as functional objects, conditions, energy or personal attributes that have objective value or facilitate the attainment of valued goals (Halbesleben, Neveu, Paustian-Underdahl and Westman, 2014; Hobfoll, 1989). COR theory categorizes resources into contextual and personal resources (Hobfoll, 2002). Whereas

contextual resources are determined by an individual's immediate work environment, personal resources reflect an individual's perceived capacity to successfully control and influence the environment (Hobfoll, Johnson, Ennis and Jackson, 2003).

Guided by COR theory, we argue that business networks represent contextual resources by providing entrepreneurs with access to (among other things) socioemotional support and advice, thereby enhancing entrepreneurs' psychological resources, which in turn boosts SWB.

Mediating Roles of Self-Efficacy and Resilience

A key tenet of COR theory is that the more resources an individual possesses the better able s/he is to obtain additional resources (Hobfoll, 1989, 2002). In other words, an individual who has access to greater resources may use them to orchestrate resource gains, thereby creating a 'gain spiral' (Hobfoll, 2001, 2011; ten Brummelhuis and Bakker, 2012). Empirical work confirms that individuals with more initial resources are better equipped to accumulate additional resources (e.g. Salanova, Bakker and Llorens, 2006; Weigl et al., 2010), and that resource gains lead to future resource gains (e.g. Hanaken, Perhoniemi and Toppinen-Tanner, 2008; Xanthopoulou, Bakker, Demerouti and Schaufeli, 2009). Prior research suggests that gain spirals originate from contextual resources, which stimulate the development of personal resources, including psychological resources (Hobfoll, 1989; ten Brummelhuis and Bakker, 2012). In this study we focus on two psychological resources that are linked to SWB: self-efficacy and resilience (e.g. Au et al., 2009; Wilks and Croom, 2008).

We begin by focusing on the mediating role of self-efficacy, arguing that support from business networks provides entrepreneurs with the self-efficacy necessary to cope with personal and professional demands, thereby enabling them to maintain high SWB. Self-efficacy, derived from Bandura's (1997, 2012), social cognitive theory (SCT) refers to an individual's belief in their ability and capacity to utilize cognitive resources, motivation, and courses of action to sustain performance in daily tasks and cope with environmental demands

(Nielsen and Munir, 2009; Stajkovic and Luthans, 1998). Individuals with high (vs. low) self-efficacy typically have a stronger internal locus of control (i.e., believe that they are able to control events that affect them), and are more positive when they confront personal and professional challenges (Bandura, 1997).

From an SCT perspective, individuals can increase self-efficacy in four ways; two of these might involve social support from a business network: observing others' behaviour and performance outcomes (i.e., vicarious learning), and obtaining feedback on one's behaviour and performance outcomes (i.e., verbal persuasion). Vicarious learning occurs when individuals process subtle cues that enable them to evaluate their capabilities relative to others (Bandura, 1988). Modelling helps transfer the nuanced tacit knowledge required to correctly perform a task (Gist and Mitchell, 1992; Shalley and Perry-Smith, 2001) and can help individuals determine the relative importance of ability versus motivational effort (Kanfer and Ackerman, 1989). Verbal persuasion depends largely on the credibility, trustworthiness, and expertise of those providing the feedback, which is likely to be high in business networks with shared supply chains (Bandura, 1977; Gist and Mitchell, 1992). After learning how to effectively address challenges and receiving constructive feedback from members of their business networks, entrepreneurs might perceive a greater capacity to address personal and professional challenges (Forbes, 2005). Evidence outside the entrepreneurship field generally confirms a link between access to social support and self-efficacy (Karademas, 2006) amongst college students (Saltzman and Holahan, 2002), care workers (Au et al., 2009), and athletes (Freeman and Rees, 2009), among others.

At the same time, burgeoning evidence suggests that self-efficacy has a positive influence on SWB by helping individuals feel more positive about the future and increasing their ability to cope with stressful situations and personal and professional demands (Bullough, Renko and Myatt, 2014; Karademas, 2006). For example, employees with high self-efficacy report

lower stress (Liu, Siu and Shi, 2010; O'Leary, 1992; Schaubroeck, Lam and Xie, 2000) and higher SWB (Nielsen and Munir, 2009; Siu, Lu and Spector, 2007). High self-efficacy also limits the adverse effects of poor working conditions on employee stress and SWB (Jex and Bliese, 1999; Jex, Bliese, Buzzell and Primeau, 2001; Stetz, Stetz and Bliese, 2006).

Based on these arguments and evidence, we predict that entrepreneurs who receive social support from business networks likely feel better equipped to address the challenges associated with the entrepreneurial process, and therefore have higher SWB. Hence:

H1: The relationship between an entrepreneur's utilization of his or her business network and SWB is mediated by self-efficacy.

Turning to the mediating role of resilience, we argue that support from business networks increases entrepreneurs' resilience to setbacks, thereby increasing their SWB. Resilience is an individual's ability to bounce back from failure, adversity and uncertainty, and to adapt to dynamic and stressful life demands (Bullough et al., 2014; Masten and Reed, 2002; Tugade and Fredrickson, 2004). Similar to self-efficacy, COR theory conceptualizes resilience as a personal psychological resource (Hobfoll, 2002).

We suggest that resilience mediates the relationship between business network utilization and SWB in a similar way to self-efficacy. According to COR theory, support from business networks constitutes a contextual resource that enables individuals to remain positive about the future and deal with challenging situations in their personal and professional lives (Bullough et al., 2014). Studies of resilience in the face of economic adversity emphasize the protection provided by strong bonds, reflected in the concept of bonding social capital (Adler and Kwon, 2002). By discussing issues with members of their business networks, entrepreneurs develop appropriate coping strategies. Members of business networks share industry-specific knowledge and information, including who has dealt with particular problems and what resources might be available. For example, when entrepreneur Michelle

Mone's distributors left her facing bankruptcy, she leveraged relationships in her business network to refinance and fulfil a key order (Elnaugh, 2008). Resilience develops over time as an individual successfully copes with adversity (Wilks and Spivey, 2010); often, this is accomplished with support from a business network, which promotes SWB.

Empirical research generally supports a link between access to social support and resilience. For example, scholars have demonstrated that social support predicts resilience amongst care workers (Wilks and Croom, 2008) and undergraduate students (Wilks and Spivey, 2010). Recent evidence also suggests that individuals with high resilience report greater SWB (Karreman and Vingerhoets, 2012; Noor and Alwi, 2013) and better mental health (Peng et al., 2012; Pretsch, Flunger and Schmitt, 2012). We therefore suggest that the social support derived from business networks is likely to increase entrepreneurs' resilience when confronted with challenges, thereby increasing SWB. Hence:

H2: The relationship between an entrepreneur's utilization of his or her business network and SWB is mediated by resilience.

The Moderating Role of an Entrepreneur's Age

To date, few have investigated age-related differences in business network utilization, even though age can have an important influence on why and how individuals socially interact. Age can influence the social, emotional, and cognitive processes involved in adapting to life circumstances, partly because individuals possess greater meta-cognitive knowledge concerning their capabilities as they age (see also Kuhn, 2000; Shiu, Hassan and Parry, 2015). Recent research also suggests that age significantly affects happiness and SWB (Jeste and Oswald, 2014; Thomas et al., 2016).

We specifically draw on SST to explain the role of age in our theoretical model. In a series of ground-breaking papers, Carstensen and colleagues (Carstensen, 1991, 1992, 1995, 2006; Carstensen, Fung and Charles, 2003; Carstensen et al., 1999; English and Carstensen, 2014;

Löckenhoff and Carstensen, 2004) explained how individuals use relationships for different purposes as they grow older. It is possible therefore, that age influences the relationship between business network utilization and SWB. SST builds on three axioms: (a) social interaction is essential for survival; (b) individuals have agency, which motivates goal-directed behaviour; and (c) goal selection predicts subsequent action (Carstensen et al., 1999). From an SST perspective, each individual has a core constellation of goals—some are associated with emotional gratification (i.e., SWB) and others are more instrumental. The prioritization of goals in this constellation is influenced by an individual's perception of life as being either expansive or limited. As people age, they become increasingly aware that time is running out; thus, the salience of emotionally meaningful goals increases.

According to SST, individuals seek to achieve three primary goals through social interaction: information and knowledge acquisition, identity development and maintenance, and emotional regulation (Carstensen, 1992). In adolescence and early adulthood, individuals are more likely to hold an expansive view of time and prioritize future-oriented goals such as information and knowledge acquisition; younger individuals thus are more likely to actively develop social networks that can help them acquire information and knowledge to prepare for the future (Lansford, Sherman and Antonucci, 1998). As individuals age, they typically prioritize relationships that help them regulate their emotions (Carstensen et al., 1999; Luong et al., 2011). Over time, they increasingly concentrate on network relationships that help them maximize positive emotions and minimize negative ones, thereby enhancing SWB (Carstensen, 1995, 2006; English and Carstensen, 2014). As such, we predict that as they age, entrepreneurs become more likely to utilize business networks to broaden their psychological resources (in this case, self-efficacy and resilience) to regulate their emotions, enhancing their SWB. Evidence suggests that over time, individuals increasingly seek to shape their networks and concentrate on relationships that maximize their SWB; this process begins in early

adulthood (i.e., late 20s and early 30s) and is a gradual lifelong phenomenon (Carstensen, 1992, 1995). More recently, English and Carstensen (2014) found that as individuals age, the network-based positive effects of positive emotions and the negative effects of negative emotions on SWB become stronger; moreover, they confirmed that this process begins in early adulthood. Hence:

H3: Age moderates the relationship between an entrepreneur's utilization of his or her business network and SWB through self-efficacy such that the relationship becomes stronger as entrepreneurs age.

H4: Age moderates the relationship between an entrepreneur's utilization of his or her business network and SWB through resilience such that the relationship becomes stronger as entrepreneurs age.

DATA AND METHOD

Research Setting

We tested our model using data from a sample of entrepreneurs in India because evidence suggests that in less-developed institutional contexts, entrepreneurs rely heavily on their networks to compensate for a lack of institutional support (McMillan and Woodruff, 2002; Story, Boso and Cadogan, 2015). In such contexts, entrepreneurs are more likely to use networks than contracts to enforce business agreements (Johnson, McMillan and Woodruff, 1999); they are more likely to obtain trade credit from others in their networks to finance their businesses (McMillan and Woodruff, 2002; Welter and Smallbone, 2011). Furthermore, research indicates that business networks (in the form of business groups) play an enhanced role in India (Gaur and Kumar, 2009; Khanna and Palepu, 2000), making India a useful setting for research into the relationship between business network utilization and SWB. Finally, applying psychological constructs developed in a Western context (i.e., the United States) to the Indian context offers an opportunity to test their universal applicability.

Data and Sample

We collected survey data from business founders in the four largest Indian metropolitan cities of Delhi, Mumbai, Kolkata, and Chennai, where entrepreneurship is more concentrated due to greater access to early stage financing and human capital (NKC, 2008). We invited a sample of 1,600 participants (400 from each city) listed in the IndiaMART directory (<http://www.indiamart.com/>) to participate in the research if they met several criteria. First, in line with recent work (Yang and Aldrich, 2012), to capture nascent entrepreneurial activity most likely to be associated with the greatest uncertainty, we included entrepreneurs who had established their ventures during the previous 6 years. Moreover, we limited our sample to entrepreneurs running enterprises with fewer than 250 employees.² Second, we included entrepreneurs from the service and manufacturing sectors in roughly equal proportion to test the generalizability of our findings across different industrial sectors.

From this sample of 1,600, 407 entrepreneurs agreed to participate in the study, yielding a response rate of 25.5 percent, comparable to the response rates in previous examinations of well-being amongst entrepreneurs (Uy et al., 2013). A member of our research team administered the survey in the respondents' offices. To test for non-response bias, we looked for significant differences across key demographic variables (e.g., age, entrepreneurial experience, and venture size) between early and late respondents consistent with Armstrong and Overton's (1977) recommendations. We found no significant differences, alleviating concerns about non-response bias. Some respondents avoided questions on business performance including sales turnover and number of employees. Our analysis was therefore conducted on a sample of 335 valid responses (20.9 percent response). To check for any systematic bias that might be caused by differences between the main sample and sub-sample, Table 1 presents non-parametric equality of medians tests showing no significant differences

² Although some enterprises with less than 250 employees might be considered large in some industries, the European Union uses this criterion to distinguish between SMEs and large enterprises.

between those who failed to report some data and the full sample for SWB, self-efficacy, resilience, business networks and the entrepreneur's age.

INSERT TABLE 1 HERE

On average, respondents employed 15.33 people and reported 31.47 percent sales growth during the previous year. In terms of industry, 49 percent operated in the service sector and 51 percent operated in manufacturing. Demographically, only 8 percent of respondents were female; on average, the respondents were over 36 years old and had almost 4 years of entrepreneurial experience, see table 2. Given the relatively youthful demographic of our sample, one may question the suitability of exploring the moderating role of age in our focal relationships. However, evidence suggests that individuals begin to shift toward emphasizing emotional goals during early adulthood (i.e., late 20s and early 30s), marking the beginning of a gradual lifelong phenomenon (English and Carstensen, 2014). Further, the empirical setting for most studies using SST is the United States, where life expectancy is 79.3 years. Since life expectancy for Indians is much lower, at 68.3 years (World Health Organization, 2016), the age at which emotional goals become more salient is likely to be relatively younger than in more economically-developed settings.

Measures

Dependent variable: SWB. We assessed entrepreneurs' SWB using the five-item Satisfaction with Life Scale (SWLS) developed by Diener, Emmons, Larson and Griffin (1985); entrepreneurs responded to items using a scale ranging from 1 (strongly disagree) to 7 (strongly agree) (see Appendix for the list of items). The SWLS has undergone extensive validation procedures and is widely considered the soundest instrument currently available to measure life satisfaction (Erdogan et al., 2012). Cronbach's alpha for this scale was 0.823.

Independent variable: Business networks. We measured the extent to which entrepreneurs had utilized business connections with buyers, suppliers, and competitors using

three items from Park and Luo (2001); entrepreneurs responded to these items using a scale ranging from 1 (very little) to 7 (very much) (see Appendix for the list of items). Cronbach's Alpha for this scale was 0.756.

Mediating variable: Self-efficacy. We measured self-efficacy using the 8-item general self-efficacy scale developed by Chen, Gully and Eden (2001). Entrepreneurs responded to items using a scale ranging from 1 (strongly disagree) to 7 (strongly agree) (see Appendix for the list of items). Cronbach's alpha for this scale was 0.908.

Mediating variable: Resilience. We measured resilience using the 14-item copyrighted resilience scale developed by Wagnild and Young (1993). Entrepreneurs responded to items using a scale ranging from 1 (strongly disagree) to 7 (strongly agree). Cronbach's alpha for this scale was 0.931.

Moderating variable: Entrepreneur's age. We measured each entrepreneur's age in years. Respondents' ages ranged from 19 to 65, with an inter-quartile range of 29 to 41. The distribution of the respondents' ages approximates a normal distribution. Although it is skewed left, the range is sufficient for continuous modelling.

Control variables. Guided by previous research (Harris, Heller and Braddock, 1988; Pugliesi, 1995; Schieman, Van Gundy and Taylor, 2001) we controlled for several individual and firm-level variables that may account for differences in SWB. Individual level controls include gender, years of entrepreneurial experience and management education. Since poor venture performance may influence SWB, we controlled for three aspects of firm performance: venture size, measured by number of employees; sales turnover (logged), which is only weakly correlated with venture size; sales growth over the previous year, and we controlled for sector using a dummy variable for manufacturing.

Construct Validity

As recommended by Podsakoff et al. (2003), we used confirmatory factor analysis (CFA) to establish adequate construct validity of the continuous variables used in our study. A four-factor model with items loaded on the appropriate variables (business networks, self-efficacy, resilience and SWB) produced the following goodness-of-fit indices ($\chi^2 = 1090.22$, $df = 399$, $RMSEA = 0.06$, $CFI = 0.98$, $IFI = 0.98$). These indices are significantly better than those of a one-factor model ($\chi^2 = 1090.22$, $df = 1952.38$, $RMSEA = 0.10$, $CFI = 0.96$, $IFI = 0.96$), and a three-factor model, where the items measuring resilience and self-efficacy are loaded onto one factor ($\chi^2 = 1345.92$, $df = 402$, $RMSEA = 0.08$, $CFI = 0.98$, $IFI = 0.98$). These results suggest adequate discriminant and convergent validity between study variables, and provide confidence that common method bias is not a problem in our study.

Data Analysis

We present means, standard deviations and correlations of the study variables in Table 2. We tested our hypotheses using PROCESS, the path-analytic conditional process modelling program for SPSS designed by Andrew Hayes (2013). PROCESS enabled us to examine the indirect and conditional indirect effects in moderated mediation models, and to bootstrap indirect and conditional indirect effects. We supplemented these analyses with ordinary least squares (OLS) regression to illustrate the nature of the relationships between our variables of interest. To limit problems associated with multicollinearity, we *z*-standardized all variables (including the dependent variable) prior to analysis (Tabachnick and Fidell, 2007). Regression assumptions of normality, linearity, and absence of multicollinearity were satisfactory. The next section presents detailed results of these analyses.

INSERT TABLE 2 HERE

EMPIRICAL FINDINGS

In Hypothesis 1, we proposed that the relationship between an entrepreneur's utilization of his or her business network and SWB is mediated by self-efficacy. Results of a *t*-test for

unequal variances show significant differences in the means for SWB and self-efficacy ($t = -2.19$; $p < .03$), thus reducing the likelihood of spurious regression results. Second, the Kruskal-Wallis equality-of-populations rank test in Table 3 demonstrates a positive link between the medians of SWB and self-efficacy, resilience and business networks. Medians were compared because of unequal variances. Similarly, the ANOVA test in Table 4 shows a positive significant association between age and SWB, self-efficacy and resilience. Moreover, Figure 2 presents six histograms documenting the distribution for SWB, self-efficacy and resilience. The top row shows the distribution for SWB, self-efficacy and resilience for those above the median age. The bottom row shows the distribution for SWB, self-efficacy and resilience for those below the median age. Together these demonstrate greater numbers of higher values for those above the median age on all three constructs.

INSERT TABLES 3 AND 4 HERE

INSERT FIGURE 2 HERE

Results in Table 5, model 2 show a significant and positive relationship between business network utilization and self-efficacy ($\beta = .15$, $p < .01$). Hypothesis 2 suggested that the relationship between an entrepreneur's utilization of his or her business network and SWB is mediated by resilience. Results of the t -test for unequal variances show significant differences in the means for SWB and resilience ($t = -2.42$; $p < .01$), again minimizing the likelihood of spurious regression results. Results in Table 5, model 5 show a significant and positive relationship between business network utilization and resilience ($\beta = .17$, $p < .01$). Although the results in Table 6, model 2 show a significant relationship between business network utilization and SWB ($\beta = .11$, $p < .05$), this relationship loses statistical significance when incorporating either self-efficacy in model 3 when the relationship falls to ($\beta = .01$, SE

= .04), or resilience in model 4 when the relationship falls to ($\beta = .00$, $SE = .04$), and when incorporating both in model 5 ($\beta = -.01$, $SE = .04$), suggesting mediation. Including self-efficacy and resilience significantly increases the explanatory power of the model to 51% (from 18% without self-efficacy and resilience), although the coefficient for resilience differs from model 4, suggesting some multicollinearity and the need to calculate variance inflation factors (VIF). The average VIF is just 1.58; although the VIFs for self-efficacy (3.39) and resilience (3.44) are higher, both values are well below the recommended VIF threshold of 10. The substantive point is that both self-efficacy and resilience contribute independently to explaining SWB, reinforced by the fact that the standard errors for these two variables demonstrate good fit and match the increases in R^2 . Collectively, the evidence suggests little concern about multicollinearity (O'Brien, 2007).

Our models show a one standard deviation increase in the entrepreneur's business network boosts resilience from 5.66 to 5.86 (2.9%) and self-efficacy from 5.63 to 5.81 (2.6%), raising SWB from 5.55 to 5.68 (1.9%). Increasing the entrepreneur's age by one standard deviation from 35 to 43 boosts resilience from 5.62 to 5.82 (2.9%) and self-efficacy from 5.60 to 5.83 (4.7%) raising SWB from 5.53 to 5.67 (2%). Table 6 illustrates that one standard deviation increase in self-efficacy boosts SWB from 5.57 to 5.92 (5%) and a one standard deviation increase in resilience boosts SWB from 5.57 to 5.74 (2.4%). Hence business networks and age increase psychological resources such as self-efficacy and resilience which, in turn, are strongly and positively associated with SWB.

INSERT TABLES 5 AND 6 HERE

We conducted several robustness checks. We tested for selection bias through a Heckman selection model see Table 7. These models use a median split to create two new variables with above average self-efficacy and above average resilience as the selection mechanism. When resilience is modelled controlling for the selection on the above average level of

resilience, the co-efficient is still significant at $\beta = 0.60$, $p < .01$. The model itself is insignificant with the LR test for independent equations at 0.21, $p = 0.65$ suggesting a selection model was inappropriate for modelling this data but resilience was robust for the change in specification. When self-efficacy is modelled controlling for the selection on the above average level of self-efficacy the co-efficient is still significant at $\beta = 0.37$, $p < .01$. The model itself is insignificant with the LR test for independent equations at 0.06, $p = .80$ suggesting a selection model was an inappropriate model but that the effect of self-efficacy was robust. Controlling for selection both self-efficacy and resilience remain significant. In addition, we retested the SWB model in Table 6 using sub-groups of entrepreneurs with higher and lower self-efficacy and resilience based on a median split. Coefficients are significant for entrepreneurs in both groups for self-efficacy (scores > 6 : $\beta = .605$, $p < .01$; scores < 6 : $\beta = .622$, $p < .01$) and resilience (scores > 6 : $\beta = .605$, $p < .01$; scores < 6 : $\beta = .657$, $p < .01$). Thus, selection does not explain the significant relationships in the models.

INSERT TABLE 7 HERE

To further test Hypotheses 1 and 2, we performed mediated regression analyses based on bias-corrected bootstrapping of the indirect (mediated) effect, as recommended by Preacher and Hayes (2008). This approach is more powerful than Sobel tests and is not based on parametric assumptions, so has become the recommended technique for determining mediation and moderation (for a detailed discussion see Preacher and Hayes, 2008). We simultaneously entered both mediators (i.e., self-efficacy and resilience) into the regression. Bootstrapping is powerful (Fritz and MacKinnon, 2007) because it enables the extent of indirect effects to be determined. As shown in Table 8, results of a bias-corrected test of 1,000 bootstrapped samples establish that the indirect effect of business network utilization

on SWB is .10 via self-efficacy (95% CI: .05 to .18) and .06 via resilience (95% CI: .02 to .13). Since 0 is not within the 95% confidence interval for either indirect effect, Hypotheses 1 and 2 are supported. We then tested whether self-efficacy and resilience fully or partially mediate the relationship between business network utilization and SWB. Controlling for self-efficacy and resilience, the direct effect between business network utilization and SWB is not statistically significant ($\beta = .00, p > .05$; see Table 8); thus, full mediation is inferred.

INSERT TABLE 8 HERE

In Hypotheses 3 and 4, we predicted that an entrepreneur's age moderates the relationship between business network utilization and SWB through self-efficacy and resilience, respectively, such that these relationships become stronger with age. An initial examination of histograms of the distribution for SWB, self-efficacy, and resilience for sub-groups of entrepreneurs who were older and younger than the median age (see Figure 2) reveals that those older than the median age provided a greater number of higher scores on all three constructs. To test our hypothesized model, we regressed the two mediators (i.e., self-efficacy and resilience) on the control variables, business network utilization, entrepreneurial age and the interaction term (business network utilization x entrepreneurial age). As shown in Table 5, the effect of the interaction between age and business network utilization is positive and significant for both self-efficacy (model 3: $\beta = .10, p < .05$) and resilience (model 6: $\beta = .09, p < .05$).³

Since these results are only indicative, we formally tested the moderated mediation relationships proposed in Hypotheses 3 and 4 using the approach proposed by Preacher, Rucker, and Hayes (2007), and Hayes (2013). Consistent with the theoretical arguments

³ An additional robustness check for non-linearity revealed an exponential squared estimate to be significant as well. We interpret the positive coefficient of the squared estimate to mean that the effect of the coefficient becomes stronger as age increases; that is, the effect did not peak at any particular age in our data. For consistency and simplicity of interpretation, we report the linear version. We thank an anonymous reviewer for this suggestion.

outlined earlier, we hypothesized that an entrepreneur's age moderates the effects of business network utilization on both self-efficacy and resilience. That is, we hypothesized that this moderation effect occurs in the first stage (i.e., the path from the independent variable to the mediator) of the mediation model (Edwards and Lambert, 2007).

Then, we calculated the conditional (moderated) indirect effect through self-efficacy and resilience (Preacher et al., 2007). The conditional indirect effect measures the strength of the indirect effect at different values of the moderator (i.e., entrepreneur age). Consistent with Preacher and Hayes's (2007) recommendations, we examined the statistical significance of the indirect effect through both mediators at the mean value for age, and at 1 SD below and above the mean. We present our results in Table 9.

INSERT TABLE 9 HERE

A bias-corrected test using 1,000 bootstrapped samples revealed that the conditional indirect effects via self-efficacy and resilience are non-significant and marginally significant, respectively, at 1 SD below the mean age of 28.05 years (self-efficacy: bootstrapped indirect effect = .04; 95% CI: -.00 to .12; resilience: bootstrapped indirect effect = .03; 95% CI: .01 to .09), stronger at the mean age of 35.88 years (self-efficacy: bootstrapped indirect effect = .10; 95% CI: .05 to .18; resilience: bootstrapped indirect effect = .06; 95% CI: .02 to .13) and strongest at 1 SD above the mean age of 43.71 years (self-efficacy: bootstrapped indirect effect = .15; 95% CI: .07 to .27; resilience: bootstrapped indirect effect = .09; 95% CI: .02 to .20). Overall, these results support Hypotheses 3 and 4. Collectively, our results show that a 1 SD increase in age (i.e., from 35 to 43 years) increases SWB by .16 (2.3%), which is enough to move an entrepreneur from the top 50% to the top 40% of the distribution⁴.

⁴ This effect is calculated by aggregating four paths from age to subjective well-being: First, age increases self-efficacy, which increases SWB. Second, age interacts with networks to increase self-efficacy, which increases SWB. Third age increases resilience, which increases SWB. Fourth, age interacts with networks to increase resilience, which increases SWB.

INSERT TABLE 9 HERE

DISCUSSION

Building on COR theory (Hobfoll, 2002), which suggests that contextual resources from an individual's work environment may bolster personal psychological resources, we found that support from an entrepreneur's business network contributes positively to SWB through the mediating mechanisms of self-efficacy and resilience. Furthermore, consistent with SST, we found that an entrepreneur's age moderates the mediated relationship between business network utilization and SWB through self-efficacy and resilience such that these relationships strengthen as entrepreneurs age.

Contributions

This study contributes to knowledge on the antecedents of entrepreneurs' SWB. Our theoretical perspective, COR theory, enabled us to explain how *business* networks drive SWB by enhancing entrepreneurs' self-efficacy and resilience, thereby highlighting the importance of business networks as a source of socioemotional support and vicarious learning for entrepreneurs. Although scholars who study SWB have already highlighted the importance of social support, they have largely overlooked business networks. Our study provides a more nuanced view of the sources of social support that can enhance SWB. We also extend emerging scholarship on entrepreneurial business networks by examining the mechanisms through which utilization can benefit entrepreneurs' SWB (Pollack, Coy, Green and Davis, 2015). Furthermore, since scholars have focused primarily on the role of business networks in facilitating access to resources and information (Hoang and Antoncic, 2003; Lechner and Dowling, 2003; Lechner et al., 2006; Watson, 2007), our findings advance extant scholarship on the value of business networks. Although we have addressed calls to examine how an

individual's social network influences personal psychological resources (Newman et al., 2014) by showing that business network utilization boost entrepreneurs' SWB through self-efficacy and resilience, additional work is required to explore *how* business networks support the development of these psychological resources.

Second, our study contributes to the nascent literature on entrepreneurs' SWB (Baron et al., 2016; Uy et al., 2013). Although scholars have examined how an entrepreneur's personal characteristics and orientations predict SWB (Baron et al., 2016; Uy et al., 2013), until now little was known about how entrepreneurs' social relationships affect their SWB. Further, extant research has applied psychological constructs that were developed in a Western context (i.e., the United States) in the same developed economy setting. To our knowledge, we are among the first in the entrepreneurship field to have adopted a COR perspective to explain how social interactions within business networks enhance entrepreneurs' SWB by bolstering psychological resources—namely, self-efficacy and resilience. Furthermore, we do so in the developing economy setting, allowing us to test the universal applicability of the latter psychological constructs. We believe that a psycho-social resources approach offers a richer theoretical perspective than previous approaches (e.g., attraction-selection-attrition theory). This is particularly so in less-developed institutional contexts such as India, where entrepreneurs may not self-select into entrepreneurship, but do so out of necessity, arguably weakening the explanatory power of theories such as attraction-selection-attrition. For necessity-driven entrepreneurs who may not have extensive psychological resources, business relationships may play an even more important role in SWB.

Third, we make an important theoretical contribution by synthesizing SST with COR theory and introducing SST to the entrepreneurship literature. We argue that SST has a great deal to offer in terms of improving our understanding of how entrepreneurs use relationships in their business networks to achieve different goals at different life stages. While COR

theory helps explain how social and psychological resources work together to influence SWB, SST suggests that the positive relationship between social and psychological resources and SWB strengthens as individuals age. Our finding that the influence of business network utilization on SWB strengthens as entrepreneurs age is noteworthy, because it reveals how the importance of an entrepreneur's business network evolves over time. Although Baron et al. (2016) suggested that SWB increases with age, they attributed the effect to stress reduction rather than increases in self-efficacy and resilience. Our findings suggest that as they age, individuals increasingly utilize their business relationships to access socioemotional support as they begin to prioritize goals such as emotion regulation. In contrast, younger individuals tend to focus on resource-oriented goals such as gaining access to information or obtaining material resources from their networks (Lansford et al., 1998). Understanding how entrepreneurs utilize their networks differently throughout their lives is important if we are to address calls for scholars to take a more dynamic view of networks to reflect their changing composition and usage over time (Greve and Salaff, 2003; Hite, 2005; Hite and Hesterly, 2001; Sullivan and Ford, 2014).

Practical Implications

Our findings have important practical implications. Media accounts suggest entrepreneurs may experience loneliness, isolation, and reluctance to seek emotional support from close family members to protect them from the stresses of entrepreneurship. Besides providing entrepreneurs with access to information and resources, our research suggests entrepreneurs, especially as they age, should build business networks as important sources of socioemotional support and vicarious learning which help build self-efficacy and resilience, thereby supporting SWB. Our findings reinforce the positive role played by business networks in the entrepreneurial process, and the benefits that business networks yield beyond immediate instrumental benefits for entrepreneurial ventures.

Our findings also have important implications for government agencies tasked with supporting the needs of different generations of entrepreneurs. Such agencies could provide entrepreneurs with opportunities to meet like-minded people with similar age profiles and/or similar needs. Government agencies tasked with supporting middle-aged entrepreneurs could focus on providing platforms that enable entrepreneurs not only to share commercial advice, but also to offer each other psychological support. In addition, our research points to the important role that self-efficacy and resilience play in SWB. Policies relating to the provision of business support might be usefully tailored to build self-efficacy and resilience (Chen, Greene and Crick, 1998).

Limitations and Suggestions for Future Research

As with all studies, our work is not without limitations. First, we collected data in a relatively underdeveloped institutional context in which business networks are vital in helping new ventures overcome institutional barriers and gain preferential access to resources (Ahlstrom and Bruton, 2001; Du, Guariglia and Newman, 2015). For the purposes of generalization, it is important to replicate the study in a more developed institutional context to re-validate our findings.

Moreover, we measured all study variables using a single survey, which raises possible concerns with respect to common method variance (although see Spector, 1987; Wang and Rafiq, 2014). However, in extant research on the antecedents of entrepreneurs' SWB, scholars noted that complex models including mediation and moderation are less likely to suffer from common method bias (e.g. Baron et al., 2016). In addition, CFA results suggest that common method bias did not affect our ability to detect significant relationships in the study. Thus, it seems unlikely that our findings resulted from the use of same-source data. Another concern with same-source data is the difficulty associated with ruling out reverse causality. To address this concern, we examined an alternative model in which social

networks mediate the relationship between resilience and self-efficacy and SWB. The mediating effects are non-significant, providing support for our original model and eliminating reverse causality as an explanation of our findings. Nevertheless, in future work researchers should consider using a longitudinal research design and collecting data for independent, mediating, and dependent variables at different times and from multiple sources whenever possible.

A final limitation relates to our measures. Our simple measure of business networks does not tell us about the exact nature of the network ties such as strength and frequency of contact between entrepreneurs and network members, nor about the exact resources derived. In future quantitative work, researchers should consider more sophisticated measures of networks that capture such information. Scholars might also supplement various business network measures with those gleaned through digital social networks like LinkedIn and Twitter. In addition, qualitative techniques could reveal the specific resources that entrepreneurs derive from their business networks and how such resources boost their psychological resources and SWB. Finally, our study did not collate detailed financial information from the entrepreneurs including the use of various forms of financing like venture capital and debt. Future studies might test for potential negative impact of leverage and risk capital on entrepreneurs' SWB.

CONCLUSION

Entrepreneurs often report high levels of job satisfaction compared to other professionals (Bradley and Roberts, 2004); however, their work can also be extremely stressful given the high levels of uncertainty, change, and risk they face (Baron et al., 2016; Hahn et al., 2012.; Uy et al., 2013). Our findings help explain how entrepreneurs maintain SWB by utilizing their business networks as a source of support helping them develop both resilience and self-efficacy. Business networks not only provide material resources and information, as

suggested by extant studies, but also help entrepreneurs build psychological resources of self-efficacy and resilience, which contribute to SWB. Moreover, consistent with SST (Carstensen et al., 1999), these positive effects of business network utilization on SWB appear to strengthen over time. In conclusion, our findings highlight the value of a psychosocial perspective in enhancing our understanding of what drives entrepreneurial SWB. We hope our work will stimulate future research in this area.

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FIGURE 1

A Model of Entrepreneurs' Business Network Utilization and Their Subjective Well-being

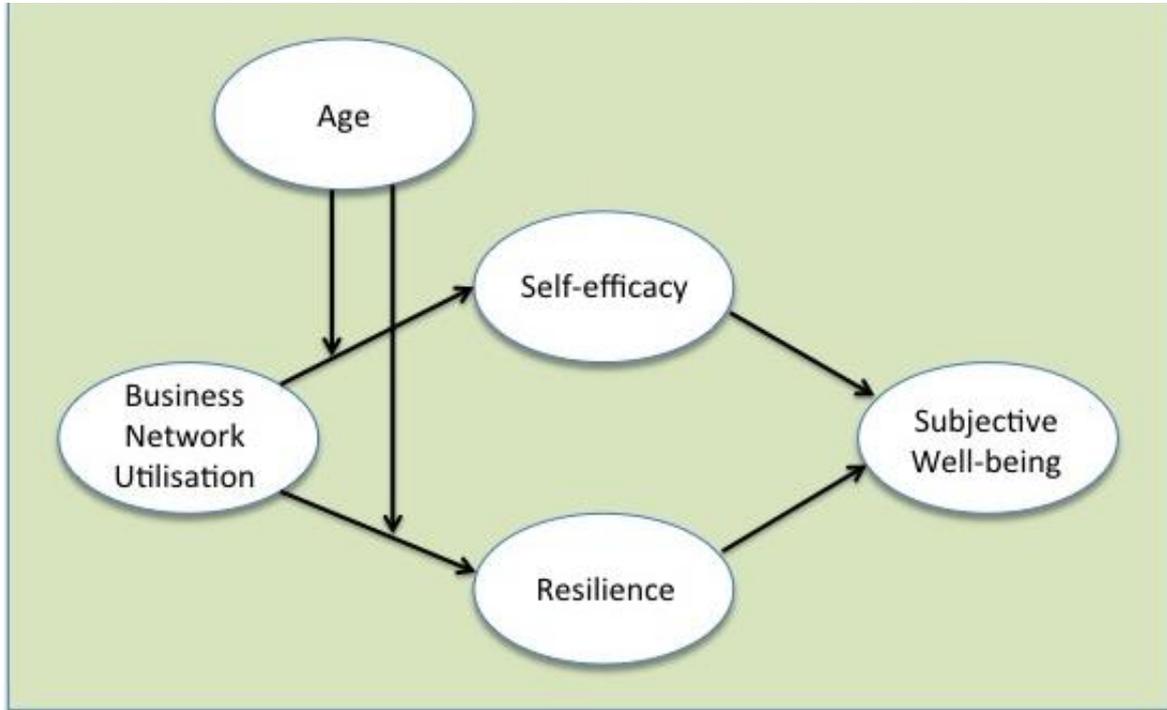
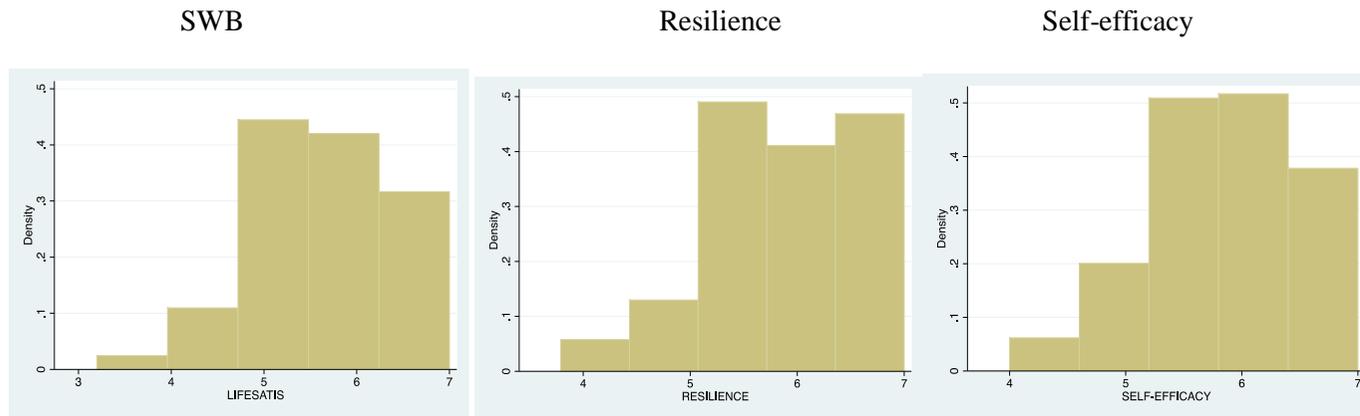


FIGURE 2

Histograms of SWB, Resilience and Self-efficacy by age median split

Age above median



Age below median

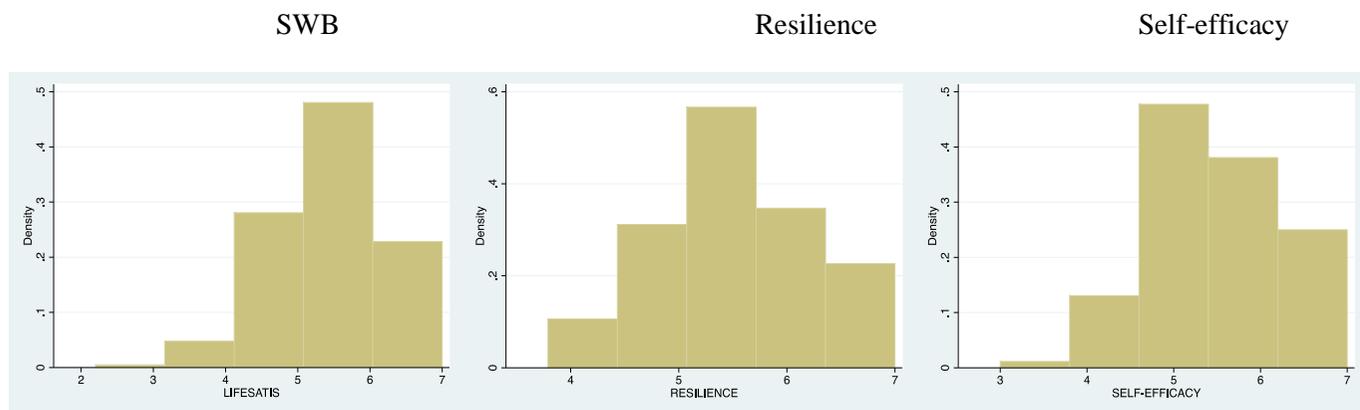


TABLE 1: Nonparametric equality-of-medians test on respondents with missing data (for employment and sales growth) and the rest of the sample

Variable	Chi-squared	Probability
Subjective well-being	.12	.73
Self-efficacy	2.57	.11
Resilience	.17	.68
Business Networks	.13	.72
Entrepreneur's Age	1.97	.16

TABLE 2: Means, Standard Deviations, and Correlations among the Study Variables

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Entrepreneurial experience	3.87	1.43											
2. Management education	2.29	1.91	-0.11										
3. Entrepreneur's age	36.23	7.56	0.21**	0.12*									
4. Gender	0.92	0.27	0.00	-0.07	-0.01								
5. Sales Turnover	14.39	1.63	0.02	0.19**	0.20**	0.11							
6. Sales Growth	31.47	76.7	-0.15**	0.16**	-0.05	0.05	0.05						
7. Employees	15.33	24.7	0.01	0.15**	0.23**	0.06	0.43**	0.02					
8. Manufacturing	0.51	0.51	0.02	-0.05	0.09	0.15**	0.17**	-0.00	0.20**				
9. Business networks	5.74	0.97	0.07	0.17**	0.19**	-0.06	0.14*	-0.04	0.12*	-0.03			
10. Resilience	5.67	0.72	-0.00	0.19**	0.33**	-0.08	0.12*	-0.04	0.25**	-0.07	0.32**		
11. Self-efficacy	5.64	0.77	-0.05	0.22**	0.34**	-0.05	0.16**	-0.03	0.21**	-0.03	0.29**	0.83**	
12. Subjective well-being	5.55	0.81	-0.17**	0.23**	0.22**	-0.05	0.19**	-0.02	0.24**	0.02	0.23**	0.62**	0.67**

Note. N=335 * $p < .05$, ** $p < .01$

TABLE 3: Kruskal-Wallis equality-of-populations rank test of subjective well-being

Variable	chi-squared	Degrees of freedom	Probability
Self-efficacy	178.90	27	<0.001
Resilience	160.84	43	<0.001
Business Networks	39.28	15	<0.001

TABLE 4: ANOVA test of entrepreneur age with subjective well-being, self-efficacy and resilience

ANOVA	SWB		Self-efficacy		Resilience	
Entrepreneur's age						
	Between groups	Within groups	Between groups	Within groups	Between groups	Within groups
Sum of squares	38.04	183.29	42.25	155.30	33.79	140.83
Degrees of freedom	34	300	34	300	34	300
Mean square	1.12	.61	1.24	.52	0.99	.47
F test	1.83		2.15		2.12	
Prob > F	0.00		0.00		0.00	
Bartlett's test for equal variances						
chi2(30)	32.74		33.78		24.08	
Prob>chi2	0.25		0.21		0.68	

TABLE 5: Hierarchical Regression Models of Self-efficacy and Resilience

Variables	(1) Self-efficacy	(2) Self-efficacy	(3) Self-efficacy	(4) Resilience	(5) Resilience	(6) Resilience
<i>Individual Controls</i>						
Business ownership experience	-0.06* (0.03)	-0.05 (0.03)	-0.05 (0.03)	-0.02 (0.03)	-0.01 (0.03)	-0.01 (0.03)
Management education	0.06** (0.02)	0.05* (0.02)	0.05* (0.02)	0.05* (0.02)	0.04 (0.02)	0.04 (0.02)
Age of entrepreneur	0.03** (0.01)	0.03** (0.01)	0.03** (0.01)	0.03** (0.01)	0.02** (0.01)	0.02** (0.01)
Gender	-0.09 0.14	-0.06 (0.14)	-0.07 (0.14)	-0.16 (0.14)	-0.13 (0.13)	-0.14 (0.13)
<i>Organizational Controls</i>						
Sales Turnover	0.02 (0.03)	0.01 (0.03)	0.00 (0.02)	-0.01 (0.03)	-0.02 (0.02)	-0.02 (0.02)
Sales Growth	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Employees	0.00 (0.00)	0.01* (0.00)	0.01* (0.00)	0.01** (0.00)	0.01** (0.00)	0.01** (0.00)
Manufacturing	-0.12 (0.08)	-0.10 (0.08)	-0.10 (0.08)	-0.17* (0.08)	-0.16* (0.07)	-0.16* (0.07)
<i>Main and Interaction effects</i>						
Business network		0.15** (0.04)	0.18** (0.04)		0.17** (0.04)	0.19** (0.04)
Age x business network			0.10* (0.04)			0.09* (0.04)
Constant	4.44** (0.41)	3.76** (0.45)	3.69** (0.44)	4.95** (0.39)	4.17** (0.41)	4.13** (0.41)
R ²	0.18	0.22	0.23	0.18	0.23	0.24
ΔR ²		0.03	0.01		0.05	0.01
Prob of ΔR ²		0.00	0.01		0.00	0.02

Note. Statistics to 2 decimal places. Standard errors in parentheses; * $p < .05$, ** $p < .01$

TABLE 6: Hierarchical Regression Models of Subjective Well-being (SWB)

Variables	(1) SWB	(2) SWB	(3) SWB	(4) SWB	(5) SWB
<i>Individual Controls</i>					
Business ownership experience	-0.12** (0.03)	-0.11 (0.03)	-0.08** (0.02)	-0.10** (0.02)	-0.08** (0.02)
Management education	0.07** (0.02)	0.06** (0.02)	0.02 (0.02)	0.04 (0.02)	0.03 (0.02)
Age of entrepreneur	0.02** (0.00)	0.02** (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
Gender	-0.14 (0.15)	-0.12 (0.15)	-0.08 (0.1)	-0.03 (0.13)	-0.05 (0.12)
<i>Organizational Controls</i>					
Sales Turnover	0.04 (0.03)	0.04 (0.03)	0.03 (0.02)	0.05* (0.02)	0.04 (0.02)
Sales Growth	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Employees	0.00 (0.00)	0.00* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Manufacturing	-0.03 (0.09)	-0.01 (0.08)	0.05 (0.07)	0.09 (0.07)	0.08 (0.07)
<i>Main effects</i>					
Business network		0.11* (0.04)	0.01 (0.04)	-0.00 (0.04)	-0.01 (0.04)
Self-efficacy			0.67** (0.05)		0.47** (0.08)
Resilience				0.66** (0.05)	0.27** (0.08)
Constant	4.63** (0.44)	4.12** (0.48)	1.62** (0.42)	1.34** (0.45)	1.24** (0.43)
Observations	335	335	335	335	335
R ²	0.16	0.18	0.49	0.45	0.51
ΔR ²		0.02	0.31	0.27	0.02
Prob of ΔR ²		0.01	0.00	0.00	0.01

Note. Statistics to 2 decimal places; standard errors in parentheses; $p < .05$, ** $p < .01$

TABLE 7: Heckman Selection Model for Subjective Well-being (SWB) selecting on High Levels of Resilience and High Levels of Self-efficacy

Variables	(1) SWB	(2) HIRES	(3) SWB	(4) HIESE
<i>Individual Controls</i>				
Business ownership experience	-0.09* (0.04)	0.02 (0.05)	-0.08* (0.04)	-0.08 (0.05)
Management education	0.01 (0.03)	0.05 (0.04)	0.03 (0.03)	0.08 (0.04)
Age of entrepreneur	0.00 (0.01)	0.05** (0.01)	0.00 (0.00)	0.05** (0.01)
Gender	0.04 (0.15)		-0.12 (0.16)	
<i>Organizational Controls</i>				
Sales Turnover	0.04 (0.03)		0.06 (0.04)	
Sales Growth	-0.00 (0.00)		-0.00 (0.00)	
Employees	0.00 (0.00)	0.01** (0.00)	0.00 (0.00)	0.02** (0.01)
Manufacturing	0.25* (0.11)	-0.43** (0.16)	-0.05 (0.10)	-0.29 (0.16)
<i>Main effects</i>				
Business network	0.06 (0.10)	0.21** (0.08)	0.09 (0.07)	0.35** (0.09)
Resilience	0.60** (0.15)			
Self-efficacy			0.37** (0.14)	
Constant	1.23 (1.07)	-2.91** (0.57)	2.52* (1.09)	-3.58** (0.60)
Athrho	0.19 (0.35)		0.08 (0.31)	
Lnsigma	-0.47** (0.06)		-0.53** (0.05)	
LR test of indep. Eqns	0.21		0.06	
Prob > chi2	0.65		0.80	

Note. Statistics to 2 decimal places; standard errors in parentheses; * p < .05, ** p < .01, N= 335

TABLE 8: Bootstrapped Indirect Effects

Model	Subjective Well-being			
	Bootstrapped indirect effect	Bootstrapped SE	95% CI	
			LL	UL
Business network utilization on SWB (via self-efficacy)	.10	.03	.05	.18
Business network utilization on SWB (via resilience)	.06	.03	.02	.13

Note. Bias-corrected and accelerated confidence intervals are reported. $N = 407$; bootstrapped sample size = 1,000; CI = confidence interval; LL = lower limit; UL = upper limit.

TABLE 9: Conditional Indirect Effects

Model	Age of entrepreneur	Subjective Well-being			
		Bootstrapped indirect effect	Bootstrapped SE	95% CI	
				LL	UL
Business network utilization on SWB (via self-efficacy)	-1 SD (28.05 yrs)	.04	.03	-.01	.12
	Mean (35.88 yrs)	.10	.03	.05	.18
	+1 SD (43.71 yrs)	.15	.05	.07	.27
Business network utilization on SWB (via resilience)	-1 SD (28.05 yrs)	.03	.02	.01	.09
	Mean (35.88 yrs)	.06	.03	.02	.13
	+1 SD (43.71 yrs)	.09	.04	.02	.20

Note. Bias-corrected and accelerated confidence intervals are reported. $N = 407$; bootstrapped sample size = 1,000; CI = confidence interval; LL = lower limit; UL = upper limit.

Appendix: Key constructs and items

Business networks

To what extent has the surveyed business has utilized the following types of connections?

- a) Connections with domestic buyers
- b) Connections with domestic suppliers
- c) Connections with domestic competitors
- d) Connections with foreign companies
- e) Connections with universities and/or research institutes

Resilience

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Self-efficacy

- a) I will be able to achieve most of the goals that I have set for myself.
- b) When facing difficult tasks, I am certain that I will accomplish them.
- c) In general, I think that I can obtain outcomes that are important to me.
- d) I believe I can succeed at most any endeavor to which I set my mind.
- e) I will be able to successfully overcome many challenges.
- f) I am confident that I can perform effectively on many different tasks.
- g) Compared to other people, I can do most tasks very well.
- h) Even when things are tough, I can perform quite well.

Subjective well-being

- a) In most ways my life is close to my ideal.
- b) The conditions of my life are excellent.
- c) I am satisfied with my life.
- d) So far I have gotten the important things I want in life.
- e) If I could live my life over, I would change almost nothing.

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