CHAPTER III. THE ENTREPRENEUR AND CHARACTERISTICS

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ENTREPRENEURIAL PERFORMANCE: DOES ENTREPRENEURS’ PERSONALITY MODERATE THE IMPACT OF STRESS?

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ENTREPRENEURIAL PERFORMANCE: DOES ENTREPRENEURS’ PERSONALITY MODERATE THE IMPACT OF STRESS?

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Abstract

It is proposed that personality factors moderate negative effects of entrepreneurs’ job stress on venture performance. Drawing on a sample of 431 entrepreneurs it was found that higher job stress leads to lower venture performance. However, at higher levels of emotional stability, agreeableness, extraversion, and openness to experience, the negative effect of job stress on venture performance are ameliorated; however, a similar effect was not found for the ameliorating role of conscientiousness. Findings have implication for the role of entrepreneurs’ personality in managing venture performance.

Introduction

A large body of research in psychology and management literature addresses work-related stress; yet, studies on entrepreneurs’ experience and coping with stress remain limited (Buttner, 1992; Jamal, 1997). Even though the entrepreneurship literature on job stress is limited, researchers have compared job stress of entrepreneurs and managers (Buttner, 1992) and of self-employed and non-self-employed (Jamal, 1997), examined factors influencing entrepreneurs’ job stress (Schjoedt, 2012), and effects of job stress on entrepreneurs (Wincent, Ortvqvist, and Drnovsek, 2008). Yet, scant work has examined how entrepreneurs harness their individual differences to not only mitigate the effects of stress but to improve venture performance.

Research has shown high demands in relation to an individual’s abilities and resources can lead to the experience of stress (Beehr & Bhagat, 1985; French, Caplan & Harrison, 1982; Jex, 1998). Facing uncertainty, ambiguity and resource constraints, entrepreneurs face substantial stress. Job stress may be defined as an aversive or unpleasant emotional and psychological state that stems from adverse work experiences, particularly those that involve uncertainty or are outside the entrepreneur's control (Jex, 1998). Given the nature and conditions of entrepreneurs’ work, stress is particularly relevant in understanding entrepreneurs’ behavior and performance.

Buttner (1992) examined the moderating effect of personality type (Type A or B) on the relationship between entrepreneurs’ stress and job satisfaction and found that personality type was a significant moderator of stress. Recently entrepreneurship scholars have moved beyond considering personality traits or types, to show there are significant differences in the Big Five personality factors between entrepreneurs and managers (Zhao & Seibert, 2006) and the Big Five personality factors predict entrepreneurial intentions and entrepreneurs’ performance (Brandstätter, 2011). Research also shows that the Big Five personality factors influence venture performance (Ciavarella, Buchholtz, Riordan, Gatewood, & Stokes, 2004).
The purpose of this research is to examine if and how entrepreneurs’ Big Five personality factors ameliorate the negative effect of job stress on venture performance. The results show that four personality factors—emotional stability, agreeableness, extraversion, and openness to experience—weaken the negative effect of entrepreneurs’ job stress on venture performance.

**Hypothesis Development**

Research on job stress may be grouped into two major categories: one, the factors (stressors) that influence job stress (e.g., Schjoedt, 2012); and, two, how job stress influences individual and organizational outcomes (e.g., Wincent, Ortvist, & Drnovsek, 2008). Over the course of that research, several job stress models have been developed. One of the most commonly employed in looking at the results of job stress is the “spillover” model (Cooper, 1983), which provides a way to understand the relationship between job stress and various negative outcomes, such as turnover, absenteeism, lower job satisfaction, use of alcohol, suicide, and venture withdrawal and performance. The “spillover” model forms the theoretical foundation for the present research. Consequently, it is hypothesized that entrepreneurs’ job stress is negatively associated with venture performance.

Scholars examining job stress have examined both the causes and effects of job stress as well as job stress for multiple occupations. One occupational group that has received scant attention from researchers is entrepreneurs (e.g., Begley & Boyd, 1986; Buttner, 1992; Harris, Saltstone, & Fraboni, 1999; Wincent et al., 2008). While all employees experience job stress, entrepreneurs are expected to have particularly stressful jobs due to their long work hours and the demands associated with the creation of a new venture, as well as the responsibility for its executive leadership, employees, survival, and economic success (Hambrick, Finkelstein, & Mooney, 2005; Ganster, 2005; Goffee & Scase, 1985; Greenhaus & Callanan, 1994; Hornaday & Aboud, 1987; Sparks, Faragher & Cooper, 2001). These demands and responsibilities may account for why entrepreneurs have been found to experience more job stress than managers in a comparative study by Buttner (1992).

Butter’s (1992) study also showed that entrepreneurs’ personality affect their job stress. Further, entrepreneurs have been shown to react differently to events due to their individual differences (Baron, 2000) and these individual differences moderate how entrepreneurs react (Arora, Haynie, & Laurence, 2011). Individual differences have been acknowledged as important in entrepreneurship (McMullen & Shepherd, 2006; Schumpeter, 1934; Shane & Venkataraman, 2000; Venkataraman, 1997) and empirical research on entrepreneurs’ individual differences dates back to McClelland’s (1961, 1965) research on entrepreneurs’ need for achievement. Bagley and Boyd (1987) observed that the “hallmarks of entrepreneurial personality” were locus of control, risk-taking propensity, tolerance of ambiguity, and Type A personality. Past research findings on need of achievement and the “hallmarks of entrepreneurial personality” were not consistent (Brockhaus, 1982; Gartner, 1989; Ginsberg & Buchholtz, 1989), in part, due to different operationalizations of the same construct and use of measures that lack of validity and reliability (Johnson, 1990; Gartner, 1989). More recently, research on entrepreneurs’ individual differences, such as the Big Five personality factors—the predominant personality framework (Digman, 1990), has shown that the Big Five personality factors distinguish between entrepreneurs and managers (Zhao & Seibert, 2006) and the Big Five personality factors are related to venture performance (Brandstätter, 2011; Ciavarella et al., 2004).
The Big Five personality factors (McCrae & Costa, 1987) consist of emotional stability, conscientiousness, agreeableness, extraversion, and openness to experience and it provides a robust description of the personality construct and is stable over time (Hogan, 1990; John & Srivastava, 1999; Salgado, 1997). Emotional stability, the inverse of neuroticism, refers to the tendency to experience positive emotions, such as being calm, even-tempered, self-satisfied, comfortable, steady emotionally, unemotional, hardy, stable, confident, effective (Ciavarella et al., 2004). Research shows people high on neuroticism, low on emotional stability, have a low level of tolerance for stress (Eysenck, 1967). Therefore high levels of emotional stability is hypothesized to ameliorate the negative effect job stress has on venture performance.

Conscientiousness is composed of traits such as responsible, dependable, well-organized, hardworking, achievement-oriented, goal-oriented, internal locus of control, and persevering (DeNeve & Cooper, 1998). Conscientiousness has been found to be a consistent predictor of job performance at the individual level across occupations involving managing others and sales performance (Barrick & Mount, 1991; Hurtz & Donovan, 2000). Timmons (1989) points out that “more than any other single factor, total dedication and perseverance to succeed as an entrepreneur can overcome incredible obstacles and setbacks” (p. 32). Considering the need for perseverance and the vicissitudes of the entrepreneurial work, and the fit between the person and the nature of person's work affects the person's work-related outcomes (Holland, 1973, 1985; Kristof, 1996), it is hypothesized that high levels of conscientiousness ameliorate the negative effect of entrepreneurs' job stress has on venture performance.

Agreeableness refers to a person's likability and friendliness and is described by traits like being courteous, flexible, trusting, good-natured, cooperative, forgiving, and tolerant (Ciavarella et al., 2004) It is a personality factor that is mainly associated with the quality of interpersonal relationship through cooperation and trust (DeNeve & Cooper, 1998). Due to the interpersonal nature of entrepreneurs' work, e.g., personal selling, securing capital and support, and building business relationships (Baron & Markman, 2000; Cable & Shane, 1997), high levels of agreeableness is hypothesized to ameliorate the negative effect entrepreneurs' job stress has on venture performance.

Extraversion is primary associated with quality and intensity of the person's relationships with other people (DeNeve & Cooper, 1998). It is composed of traits like sociable, gregarious, assertive, talkative, and active. Research shows that the venture performance of extraverted entrepreneurs is higher (Morison, 1997). This may be due to an important aspect in entrepreneurship is the establishment of networks with suppliers, advisors, and customers that, in turn, influence venture performance (Baron & Markman, 2000). Therefore, it is hypothesized that high levels of extraversion ameliorate the negative effect entrepreneurs' job stress has on venture performance.

Openness to experience describes people who are characterized as being intellectual, intelligent, imaginative, creative, curious, broadminded, and open to new ideas and experiences (Costa & McCrae, 1992; McCrae, 1987). According to Schumpeter (1934, 1942) entrepreneurship is seen as new combinations meaning the doing of new things or the doing of things that are already being done in a new way indicating that entrepreneurs' degree of openness to experience is associated with venture performance. Penrose (1959) and Kirzner (1973) also address the need for entrepreneurs to be high on openness to experience. Empirical findings show that openness to experience is associated with venture performance (Smith, 2013; Zhao, Seibert, & Lumpkin, 2010). Thus, it is hypothesized that high levels of openness to experience ameliorate the negative effect entrepreneurs' job stress has on venture performance.
Based on these considerations,

*H1: Entrepreneurs’ job stress is negatively associated with venture performance.*

*H2: The relationship between entrepreneurs’ job stress and venture performance is ameliorated by high levels of emotional stability (H2a), conscientiousness (H2b), agreeableness (H2c), extraversion (H2d), or openness to experience (H2e).*

**Method**

**Sample and Data Collection**

A directory representative of the population of high technology firms (Meyer & Dean, 1990) and containing firms in a wide range of different development stages indicating entrepreneurial activity (Hanks, Watson, Jansen, & Chandler 1993) was used to identify the entrepreneurs for this research. Data collection was undertaken by contacting 2,392 businesses from the high technology directory for the Rocky Mountains and Texas using a four-contact procedure (Salant & Dillman, 1994). This yielded 572 responses (25 percent response rate). Using number of employees and year of founding, no significant mean differences were found between respondents and non-respondents. Of the 572 responses returned, a number of surveys were eliminated from consideration for the following three reasons: 1) they were incomplete; 2) the survey respondent was considered an outlier because the venture had more than 600 employees, or 3) the respondent was not an entrepreneur (not a founder). These elicitations resulted in 431 useable responses from entrepreneurs.

**Measures**

The dependent variable, venture performance, was assessed as percentage sales growth. Chandler and Hanks (1993) examined performance measures in emerging ventures and found that sales growth was a good assessment of venture performance.

The independent variable, job stress, was assessed directly by a 16-item stress measure developed for and used in a study of top executives (Judge, Boudreau, & Bretz, 1994). For each of the 16 items, respondents were asked to indicate how the item produced stress at work using a five-point scale ranging from 1 (*produces no stress*) to 5 (*produces a great deal of stress*). The 16 items were averaged to obtain the job stress score. In an earlier study (Judge et al., 1994) it was reported the 16-item stress measure had a coefficient alpha reliability estimate of 0.84.

The Big Five personality factors were assessed using the NEO-Five Factor Inventory (Form S) [NEO-FFI] (Costa & McCrae, 1992). The NEO-FFI includes 60 items and has been validated across a large number of studies (Costa & McCrae, 1992; McCrae & Costa, 1987). The coefficients alphas for the personality factors assessments in the NEO-FFI are as follows (Costa & McCrae, 1992): emotional stability, 0.92; conscientiousness, 0.90; agreeableness, 0.86; extraversion, 0.89; and openness to experience, 0.87.

To limit effects of rival explanations (Becker, 2005; Schjoedt & Bird, 2014), control variables were included in the analyses. These control variables are widely used in entrepreneurship research or are associated with job stress. The venture-level control variable was age of the venture. Control variables related to the entrepreneur were education, race, marital status, sex, age, founder status, ownership (in percentage), work centrality, number of other businesses started, job satisfaction, and four core job characteristics [autonomy, task variety, feedback, and task identity] (Schjoedt, 2002).
Regression analysis was the principal method of data analysis. Moderation was examined using the procedure suggested by Baron and Kenny (1986).

**Results**

The results of the OLS regression analysis show that job stress is negatively related to sales growth \( (\beta = -1.080, p < 0.10) \) providing support for Hypothesis 1. Related to Hypothesis 2, the interaction term of job stress and conscientiousness is not significantly related to venture performance \( (H2b: \beta = 0.764, \text{n.s.}) \). The effect of job stress on venture performance is weakened by emotional stability \( (H2a: \beta = 1.356, p < 0.01) \), agreeableness \( (H2c: \beta = 1.192, p < 0.01) \), extraversion \( (H2d: \beta = 1.194, p < 0.05) \), and openness to experience \( (H2e: \beta = 1.264, p < 0.05) \). While these results do not provide support for hypothesis 2b, they do provide support for hypotheses 2a, 2c, 2d, and 2e.

**Discussion**

Recent research illustrates the potential explanatory value of the Big Five personality factors in entrepreneurship (Brandstätter, 2011; Ciavarella et al, 2004; Zhao & Seibert, 2006). The purpose of this research was to examine if and how the Big Five personality factors ameliorate the effect entrepreneurs’ job stress has on venture performance. The results show that high levels of emotional stability, agreeableness, extraversion, and openness to experience ameliorate the effect entrepreneurs’ job stress has on venture performance.

This research further the limited, but growing, body of research showing the importance of personality in entrepreneurship when considered in the conceptual framework of the Big Five personality factors (e.g., Brandstätter, 2011; Ciavarella et al, 2004; Zhao & Seibert, 2006). This body of research shows that the Big Five personality framework can be used to distinguish between entrepreneurs and managers (Zhao & Seibert, 2006; Brandstätter, 2011); to predict entrepreneurial intention and entrepreneurs’ performance (Brandstätter, 2011); and are associated with venture survival (Ciavarella et al., 2004). This present research adds to the growing body of research by illustrating that the Big Five personality factors hold explanatory value in entrepreneurship; specifically in the case of the present study how four personality factors—emotional stability, agreeableness, extraversion, and openness to experience—ameliorate the negative effect of entrepreneurs’ job stress has on venture performance.

Contrary to expectations, conscientiousness is not found to moderate the effect of entrepreneurs’ job stress on venture performance. Research shows that a higher level of conscientiousness is a distinguishing factor of entrepreneurs relative to managers (Zhao & Seibert, 2006). Although, a closer examination of two personality traits (dimensions) that are part of conscientiousness—achievement motivation and dependability—reveals that only achievement motivation differentiates entrepreneurs from managers (Brandstätter, 2011). While conscientiousness as personality factor (without distinction of the personality traits that make up the conscientiousness personality factor) is not found to moderate the effect of entrepreneurs’ job stress has on venture performance in this research, it makes sense for future research to examine the moderating effects of the personality traits that constitute conscientiousness have on the negative effect that entrepreneurs’ job stress has on venture performance.

At least since Schumpeter (1934) observed the importance of the psychology of the entrepreneur, scholars have presumed entrepreneurs’ personality has an impact on entrepreneurship. With McClelland’s (1961, 1965) examination of entrepreneurs’ need for achievement a body of empirical
research developed that largely ended in the early 1990s due to calls for abandonment of personality research in entrepreneurship (e.g., Gartner, 1989). Outside the entrepreneurship literature, researchers validated the Big Five personality factors, and associated assessment tools, (Costa & McCrae, 1992; McCrae & Costa, 1987) resulting in the Big Five personality factors is considered the predominant personality framework (Digman, 1990). The early research in entrepreneurship based on the Big Five personality factors (e.g., Brandstätter, 2011; Ciavarella et al., 2004; Zhao & Seibert, 2006) and the present research show that the Big Five personality factors hold potential to advance our understanding of entrepreneurship. The present research also shows additional research on entrepreneurs’ personality is needed, at least with respect to conscientiousness.

In addition to further growing the body of research on the Big Five personality factors in entrepreneurship, this research also further the limited, but growing, body of research on entrepreneurs’ job stress. Unlike most research on entrepreneurs’ job stress using an indirect approach to assess job stress based on role theory that has led to a lack of consistent findings (e.g., Buttner, 1992; Harris et al., 1999), the present research is based on a direct measure of entrepreneurs’ job stress. Given entrepreneurs react to their experience of job stress, not to inferences about their job stress; the direct approach to assessing entrepreneurs’ job stress holds potential for future research and advancement of the entrepreneurship literature.

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