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An Investigation of Personality Correlates of Small Business Success

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To the Graduate Council:

I am submitting herewith a dissertation written by Kimberly Sue Owens entitled "An Investigation of Personality Correlates of Small Business Success." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

John Lounsbury, Major Professor

We have read this dissertation and recommend its acceptance:

Eric Sundstrom, Sky Huck, Mike Johnson

Accepted for the Council:

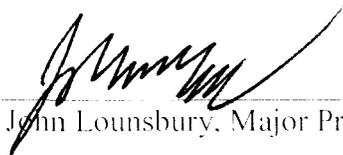
Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

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and recommend its acceptance:







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Vice Provost and Dean of
Graduate Studies

**AN INVESTIGATION OF THE PERSONALITY CORRELATES
OF SMALL BUSINESS SUCCESS**

A Dissertation Presented
for the Doctor of Philosophy Degree
The University of Tennessee, Knoxville

Kimberly Sue Owens
December 2003

DEDICATION

For my mother, Judy Bridgers Owens,
and my father, Alfred Owens,
for Rhonda, Derek, and Dan,
and especially for my grandparents, William and Ethel Bridgers.

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Finally, I would like to thank my family. I am grateful to my father for his enthusiasm and encouragement and to my sister and brother for their support and good humor. I am thankful to my grandparents for their unconditional love and generosity. And I am grateful to my mother for tirelessly helping me in every way possible, always.

ABSTRACT

The purpose of the current study is to empirically examine the relationship between personality characteristics and small business success. A cluster of 14 personality variables were examined using a work-based measure of personality, the Personal Style Inventory (PSI), adapted for small business owners. Small business success was operationally defined in terms of financial and personal dimensions of success. The two criterion variables assessed were business performance and work satisfaction. It was hypothesized that personality is related to both dimensions of success. It was also hypothesized that business performance and work satisfaction are positively related.

One hundred forty-seven small business owners completed the web survey. Correlational analyses revealed personality characteristics were significantly related to business performance and work satisfaction. Goal-setting orientation, emotional resilience, ability to sell self, social networking, and work-related locus of control were positively related to both business performance and work satisfaction. Additionally, autonomy, adaptability, competitiveness, optimism, risk tolerance, work drive, and tolerance for financial security were positively correlated with work satisfaction measures. Results also indicated that business performance and work satisfaction are moderately correlated. The hypotheses were further tested using step-wise regression procedures. Organizational variables (company age, size, and industry type) were controlled in the regression analyses. The first regression analysis identified one personality variable, goal-setting, as a significant predictor and the model accounted for 8% of the variance in business performance. In examining work satisfaction, regression

analysis identified optimism and work-related locus of control as significant predictors.

The model accounted for 26% of the variance in owners' work satisfaction.

The findings of the present study provide further support for research evidence suggesting that entrepreneurs' personality traits are related to success outcomes. Studies of personality and small business success are useful in career counseling, personnel selection, and in the design of training and development programs for small business owners.

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1. Introduction

Small businesses have long been recognized as important contributors to economic growth. Currently, increased attention is focused on small business entrepreneurs as a result of new evidence supporting their association with economic development and prosperity. In a recent set of studies of global entrepreneurial activity, researchers reported that the national level of entrepreneurial activity is positively related to the level of economic growth (Reynolds, Bygrave, Camp, & Autio, 2000). Further, small firm formation and growth have been linked to significant job creation, increases in productivity, and innovation (Acs, 1999; Kuratko & Hodgetts, 1995; Reynolds & White, 1997). The latest findings, along with accrued evidence of entrepreneurs' contributions to economic well-being, continue to heighten interest in small business research and development (Cromie, 2000).

Studies of self-employed small business owners fall within the domain of entrepreneurship research. A main objective of this area of research is to identify factors associated with business start-up and successful operation. As the "nucleus" (Gasse, 1982) or motivating force behind these processes, the individual entrepreneur has been a focal point for entrepreneurship researchers. Over the past 50 years, the psychological characteristics of entrepreneurs have been among the most heavily researched topics within the field of entrepreneurship (Bygrave & Hofer, 1991; Churchill & Lewis, 1986; Herron & Robinson, 1993; Mitton, 1989). Further, Stewart and colleagues (Stewart, Watson, Carland, & Carland, 1999) point out that several researchers have included the psychological characteristics of the entrepreneur as a substantial component of models of

entrepreneurships (e.g., Frese & Rauch, 2000; Sandberg, 1986; Naffzinger, Hornsby, & Kuratko, 1994).

The psychological approach to the study of entrepreneurship emerged in the 1960s, led by McClelland's influential research linking the need for achievement and entrepreneurial tendencies (McClelland, 1961). Over time, many personality traits have been examined and those receiving the most attention are need for achievement, locus of control, and risk-taking (Rauch & Frese, 2000). Despite the large number of psychological studies, researchers continue to cite the need for developing a constellation of personality traits that epitomize entrepreneurs (Carland, Carland, & Stewart, 1996; Cromie, 2000; Johnson, 1990).

While trait research has offered insights as to who is more likely to start a business, fewer studies have investigated how personality relates to entrepreneurial outcomes such as business performance (Johnson, 1990). Therefore, the aim of the current study is to empirically examine the relationship between personality characteristics and small business success among a sample of small business owners. A revised personality scale adapted for the self-employed is used to assess personality characteristics. Potential applications of entrepreneurial trait studies include career counseling, selection tools, and training and development.

Definitional quandary. A broad definition of entrepreneur is "an individual who independently owns and actively manages a small business" (Stewart & Roth, 2001). This definition has been used with some consistency in the personality-entrepreneurship literature. However, there had been much debate over what it means to be an entrepreneur.

In 1988, Gartner identified 32 different definitions in the entrepreneurship literature and the definitional dilemma continues. One source of debate involves differentiating entrepreneurs from small business owners. According to Carland and colleagues (Carland, Hoy, Boulton, & Carland, 1984), “while there is overlap between entrepreneurs and small business owners, they are distinct entities”. Many researchers have the same opinion but there is disagreement about the criteria for distinguishing between the two (Vesper, 1990). Some definitional criteria require that entrepreneurs aspire to business growth and expansion (Carland et al., 1984; Stewart et al., 1999), pursue innovation (Drucker, 1985), and take more risks (Stewart & Roth, 2001) in comparison to small business owners. Begley and Boyd (1987) suggest that an entrepreneur must have founded the business venture, and excludes those who inherit or purchase an existing business. Since consensus around a definition of entrepreneurship is not likely, Gartner (1990) has urged researchers to explicitly describe how they have operationalized the definition in their own work.

The current study is focused on self-employment and small business success rather than entrepreneurship. Participants will be referred to as *small business owner* and *self-employed*. References to the term entrepreneur will be limited to discussion of extant entrepreneurship research literature.

Theoretical framework

It is intuitively appealing to assume that entrepreneurs possess distinctive personality characteristics that predispose them to pursue self-employment and business ownership. This notion has received considerable attention from the academic research community. Within the field of entrepreneurship, studies of the psychological characteristics of

entrepreneurs outnumber most other topics (Lee & Tsang, 2001). However, the field has had an erratic relationship with the psychological approach over the years. In the following section, I will identify some reasons for the shifting perspectives in a brief synopsis of the personality-entrepreneurship research.

Background of the trait approach to entrepreneurship. McClelland's findings (1961) on need for achievement and entrepreneurship stimulated a great deal of interest in a psychological approach and many researchers began to search for "entrepreneurial personality" traits (e.g., Begley & Boyd, 1987; Brockhaus & Horwitz, 1986; Carland, et al., 1984; Cooper & Dunkelberg, 1987; Sandberg, 1986; Smith & Miner, 1984; Stewart, 1996; Stewart et al., 1999). Eventually, the list of proposed entrepreneurial characteristics grew to be so extensive that it included traits that seemed to be associated with success in nearly any type of work. By the 1980s, Hornaday (1982) and McClelland (1987) had identified 42 characteristics mentioned in the literature and noted that there is very little empirical evidence to support many of them.

In an influential article, Gartner (1985) argued that the focus on the individual entrepreneur should be abandoned in favor of concentration on the entrepreneurial process. Others expressed similar disappointment with the lack of progress in developing a consistent psychological profile of entrepreneurs (Bird, 1989; Sandberg & Hofer, 1987; Sexton & Bowman, 1983; Shaver & Scott, 1991; Wortman, 1986). However, quite a few researchers have opposed excluding the individual entrepreneur from the study of entrepreneurship (Bygrave, 1989; Carland & Carland, 2001; Hofer, 1992; Miner, 1997; Rauch & Frese, 2000).

Thus, Gartner's article did not signify the end of the trait approach, but it did mark a

decisive moment. In response to criticisms of the psychological approach, researchers turned their attentions to identifying inconsistencies that likely contributed to the preponderance of mixed and inconclusive findings. For example, some authors suggest that disagreement around the definition of entrepreneur has slowed progress (Cromie, 2000; Stewart, Carland & Carland, 1996). Others contend that dissimilar samples and methodological problems have hindered the research on entrepreneurship (Chell, Haworth, & Brearley, 1991; Johnson, 1990; Shaver & Scott, 1991; Wortman, 1986). Also, the lack of psychometrically sound instruments designed to assess entrepreneurs has been mentioned as a reason for disappointing findings in the research (Brockhaus, 1994; Herron, 1992; Robinson, Stimpson, Huefner, & Hunt, 1991).

Perhaps as a result of concerns such as these, in recent years, relatively few personality studies have been published in the entrepreneurship literature. However, the trait approach appears to be evolving rather than declining. In 2000, the European Journal of Work and Organizational Psychology devoted a special issue to psychological approaches to entrepreneurship, including several trait studies, in hopes of “stimulating further research in this important area” (Hisrich, 2000). Additionally, several respected researchers take an optimistic view of trait research and have called for renewed research efforts in defining concepts, identifying traits, and refining and validating instruments (e.g., Baum, Locke & Smith, 2001; Chell, 2000; Rauch, 2001; Stewart et al., 1996).

Entrepreneurial personality characteristics. Despite inconsistent findings among some trait studies, fairly strong evidence has emerged around certain factors. In particular, three traits have been consistently linked with entrepreneurship: need for achievement, risk-taking propensity and locus of control (e.g., Begley & Boyd, 1987;

Brockhaus & Horwitz, 1986; Duchesneau & Gartner, 1990; Furnham, 1992). The first and most frequently mentioned entrepreneurial characteristic, is the need for achievement. Individuals with a high need for achievement have a strong desire to attain excellence and tend to set challenging goals and standards for themselves. Following McClelland's work linking achievement motivation to entrepreneurship (1961), many studies have confirmed the relationship and need for achievement is largely accepted as a key trait of entrepreneurs (e.g., Bellu, 1988; DeCarlo & Lyons, 1979; Hornaday & Aboud, 1971; Johnson, 1990; McClelland, 1965; Miner, Smith & Bracker, 1989).

The second entrepreneurial characteristic is the propensity for risk-taking. Risk-taking, both personal and financial, has traditionally been considered a defining characteristic of entrepreneurial activity (McClelland, 1961; Palmer, 1971; Timmons, 1994; Welsh & White, 1981). Many researchers have reported significant associations between risk tolerance and entrepreneurship. In a meta-analytic review, Stewart and Roth, (2001) examined studies of risk-taking and concluded that risk-tolerant individuals are likely to choose entrepreneurial careers and risk-averse individuals are likely to choose organizational employment.

Another psychological characteristic of entrepreneurs that has been explored extensively is locus of control. Developed by Rotter (1966), the locus of control construct is associated with how an individual perceives the causal locus of events. Brockhaus (1982) suggested that internal locus of control causes entrepreneurs to seek out situations where they can take initiative and personally achieve results. Robinson et al. (1991) concluded that entrepreneurs had more internal control expectations than non-entrepreneurs and many other researchers have reported evidence of a connection

between an internal locus of control and entrepreneurship (Ahmed, 1985; Begley & Boyd, 1987; Brockhaus, 1980; Daviddson, 1991; Herron, 1994; Lee & Tsang, 2001; Venkatapathy, 1986). Other traits associated with entrepreneurs include innovativeness, competitive aggressiveness and autonomy (Utsch, Rauch, Rothfuss, & Frese, 1999), tolerance for ambiguity (Sexton & Bowman, 1985), and proactiveness (Becherer & Maurer, 1999). Table 1 presents a list of some of the personality variables associated with entrepreneurs.

Linking personality and success. The cited studies provide substantial evidence of the utility of trait research in predicting who is likely to become an entrepreneur but there is less evidence that personality helps to explain why some entrepreneurs are successful and others are not. To date, fewer studies have investigated personality characteristics and performance outcomes; further research is needed in answering a key question in entrepreneurship research—what factors are associated with success? Herron (1992) asserts that investigating the potential for entrepreneurial talent is important, but “actual performance is the *sine qua non*”.

In reviewing the entrepreneurship research, it appears that several factors play a role in explaining why the body of research on personality and entrepreneurial performance is smaller than one might expect. The majority of the research has sought to determine who becomes an entrepreneur, while relatively little research has focused on the impact of personality on entrepreneurial performance. The distinction is an important one because the characteristics which predispose one to become an entrepreneur aren't necessarily the same ones that lead to successful performance. It is likely that the degree to which personality exerts an influence on vocational choice differs from the degree to which it

Table 1

Personality characteristics associated with entrepreneurs

Personality trait	Selected studies
Need for achievement	McClelland, 1965; Begley & Boyd, 1987
Risk-taking propensity	Liles, 1974; Shane, 1996
Locus of control	Churchill, 1983; Herron, 1994
Autonomy/independence	Gartner, 1985; McGrath, MacMillan & Scheinburg, 1992
Competitiveness	Hornaday & Aboud, 1971; Utsch et al., 1999
Emotional stability	Brandstaetter, 1997; Morrison, 1997
Initiative	Utsch et al., 1999
Innovativeness	Utsch et al., 1999
Optimism	Lee, Ashford & Jamieson, 1993
Persistence	Kourilsky, 1980; Spencer & Spencer, 1993
Tolerance for ambiguity	Schere, 1982; Sexton & Boxman, 1985
Proactiveness	Bateman & Crant, 1996; Becherer & Maurer, 1999
Networking	Aldrich & Zimmer, 1986; MacMillan, 1983
Self-efficacy	Bandura, 1997; Baum, 2001
Tenacity	Baum, 2001
Work ethic	Bonnett & Furnham, 1991

influences job performance. Rauch and Frese (2000) point out that in the personality-leadership research, personality is a better predictor of leadership emergence than leadership performance, and they suggest that a similar pattern also holds in entrepreneurship research.

Another factor impacting the progress of personality-success research involves alternative psychological explanations for entrepreneurial success. Several researchers have turned their attention to other psychological characteristics, which may mediate the relationship between personality and success, such as, attitudes (Robinson et al., 1991), action strategies (Frese, van Gelderen, & Ombach, 2000), planning (Rauch & Frese, 1997), and goal-setting (Baum et al., 2001). Additionally, several entrepreneurship researchers have conceptualized entrepreneurial orientation at the organizational level rather than at the individual level (Lumpkin & Dess, 1996).

Measuring personality. With regard to personality measurement, entrepreneurship researchers have repeatedly drawn attention to the need for valid, reliable instruments designed to measure entrepreneurs' psychological characteristics (Johnson, 1990; Rauch & Frese, 2000; Shaver & Scott, 1991). There are several reasons for this emphasis on the development of new measures. First, widely-used instruments for measuring general traits, such as the Big Five, are not the best predictors of specific criteria. Instead, narrower measures have been found to yield higher validity coefficients (Cronbach, 1984) and many researchers have called for the use of narrower bandwidth measures in predicting work-related behaviors, such as job performance (e.g., Ashton, 1998; Bandura, 1997; Baum, 1995; Fishbein & Azjen, 1975; Hogan & Roberts, 1996; Hough, 1992; Pauononen, Rothstein, & Jackson, 1999; Robinson, et al., 1991; Schneider, Hough

& Dunnette, 1996). Further, the predictive utility of personality assessment is enhanced when job type and personality constructs are matched (Raymark, Schmit, & Guion, 1997). Therefore, researchers have called for the development of scales to measure and predict entrepreneurship which incorporate both narrow, job-relevant constructs and the situational context.

Also, the availability of psychometrically sound instruments for measuring entrepreneurial personality would increase the likelihood that common or equivalent traits are examined across studies. To date, many traits have been investigated, but few of the studies are replicated. In a quantitative review, Rauch and Frese (2000) have concluded that “it is not possible to do a proper meta-analysis in this area, because there are too few studies and the quality of the studies is often insufficient (e.g., standard deviations, exact *t*- or *F*-values, or exact correlations are often not reported)” (p.101, 2000). Therefore, researchers have suggested re-considering personality using more sophisticated approaches such as, domain-specific personality factors, moderating and mediating processes, and situational variables (Rauch & Frese, 2000; Stewart et al., 1999). Additionally, Rauch and Frese (p.115, 2000) contend that small correlations are to be expected, rather than strong main effects, “when examining personality-outcome relationships such as entrepreneurial success because such an outcome is probably due to a whole range of personality characteristics and not just one... thus, the multiple effects of several relevant personality characteristics rather than single traits should be analyzed.”

Defining entrepreneurial success. As with other constructs in entrepreneurship, there is no widely accepted definition of entrepreneurial success (Murphy, Trailer, &

Hill, 1996). The most common operational definition of success involves the measurement of economic factors associated with the performance of the business. Economic indicators used to measure success include firm survival (Duchesneau & Gartner, 1990; Ibrahim, 1986; Reid, 1991), growth in employees (Chandler & Hanks, 1994; Covin & Covin, 1990), profitability (Srinivasan, Woo, & Cooper, 1994), sales growth (Smith, Bracker, & Miner, 1987) and return on assets (Begley & Boyd, 1987). Cooper & Artz (1995) suggest that owner satisfaction is a measure of performance, in that it may play a role in an owner's readiness to invest additional time and money in the business.

In recent research, there appears to be agreement that success is a multi-dimensional construct which includes the entrepreneur's personal satisfaction (Brandstaetter, 1997; Buttner & Moore, 1997; Driessen & Zwart, 1999; Frese et al., 2000; Mehta & Cooper, 2000; Rauch & Frese, 1997; Solymossy, 1997). However, few studies to date have incorporated personal indicators of success, such as job satisfaction, that are prevalent in organizational research (Jamal, 1997; Tuunanen, 1999).

Drawing on the work of Judge, Cable, Boudreau, & Bretz, (1995), as well as the entrepreneurship model proposed by Rauch and Frese model (2000), in the current study I have defined success along dimensions personal satisfaction, as well as business performance. Judge et al. (1995) and others (Poole, Langan-Fox, & Omodei, 1993) believe that career success is composed of subjective and objective components. Their approach is consistent with the Porter-Lawler expectancy model (1968) which demonstrates that individuals are motivated to achieve both intrinsic and extrinsic rewards. Numerous studies have reported that entrepreneurs' frequently cite autonomy

(intrinsic) and financial security (extrinsic) as motives for seeking self-employment (Langan-Fox & Roth, 1995; Morrison, 1997; Solymossy, 1997).

Judge et al. (1995) determined that extrinsic success criteria and intrinsic success criteria are only moderately correlated and therefore, can be assessed as “relatively independent outcomes...the variables that contributed to one definition of success are not necessarily the same as those that contributed to another definition of career success”. Additionally, in the current study, business and personal success were assessed at different levels of analysis, and therefore, are deserving of separate treatment.

Conceptual framework

The conceptual framework used in this study (see Figure 1) is adapted from the Giessen-Amsterdam Model of entrepreneurial success, a psychological model proposed by Rauch and Frese (2000). Their general model includes personality but does not suggest a direct relationship between traits and success, rather goals and strategies serve as the links between personality and success. For this study, the model has been adapted to investigate potential direct links between certain personality traits and two dimensions of small business success. Job-related personality traits are hypothesized to be related to the economic performance of the business. Additionally, business performance (assessed at the firm level) is expected to relate to work satisfaction (measured at the individual level).

Empirical studies of personality and entrepreneurial success. Studies of the personality and success outcomes seek to explain and predict an entrepreneur’s likelihood of success based on his/her personality characteristics. Table 2 presents a list of selected studies and the personality and success variables examined. In most studies, the

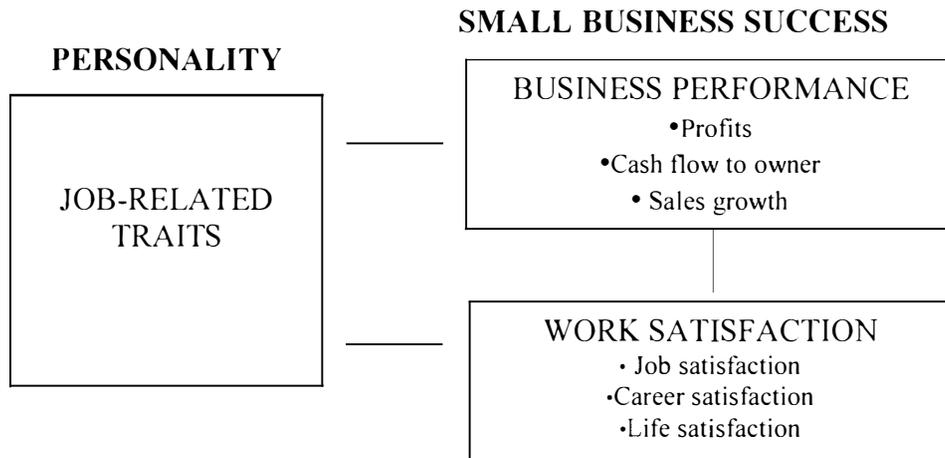


Figure 1

Conceptual framework for study of personality and small business success

Table 2

Selected studies of personality and entrepreneurial success

Relationships Examined	Author
<ul style="list-style-type: none"> • Need for achievement, risk-taking propensity, locus of control, tolerance for ambiguity and firm profitability, return on assets, and liquidity 	Begley & Boyd, 1987
<ul style="list-style-type: none"> • Risk-taking propensity and firm survival 	Brockhaus, 1980
<ul style="list-style-type: none"> • Need for achievement, risk-taking propensity, number of employees, sales volume, personal income to owner, owner satisfaction 	Rauch & Frese, 1997
<ul style="list-style-type: none"> • Need for achievement, locus of control, employee growth, increase in revenue, increase in profits 	Box, Biesel & Watts, 1995
<ul style="list-style-type: none"> • Need for achievement, locus of control, productivity-per-employee, and market share 	Carsrud, Olms & Thomas, 1989
<ul style="list-style-type: none"> • Need for achievement, locus of control, extroversion, self-reliance, venture growth 	Lee & Tsang, 2001
<ul style="list-style-type: none"> • Need for achievement, locus of control, employee growth, and profit growth 	Utsch & Rauch, 2001
<ul style="list-style-type: none"> • Need for achievement, risk-taking propensity, employee growth, sales growth, personal income 	Smith et al., 1987
<ul style="list-style-type: none"> • Independence, emotional stability, owner's satisfaction with work 	Brandstaetter, 1997
<ul style="list-style-type: none"> • Proactivity 	Becherer & Maurer, 1999
<ul style="list-style-type: none"> • Optimism, owner satisfaction, survival, cash returns 	Mehta & Cooper, 2000
<ul style="list-style-type: none"> • Networking, venture performance 	Duchesneau & Gartner, 1990

methodology for linking personality and success has involved correlating personality scores with performance measures. Results of these studies provide empirical evidence of small relationships between personality variables and business success.

In a quantitative review of multiple studies of personality and entrepreneurial success, Rauch and Frese (2000) reported small significant average correlations for the traits of need for achievement (.13) and internal locus of control (.11). However, there was no support for a significant relationship between risk-taking and success.

Other traits have been examined but the studies have not been replicated. For example, recent research has examined entrepreneurial outcomes in relation to proactivity (Becherer & Maurer, 1999), self-efficacy (Utsch & Rauch, 2000), and optimism (Mehta & Cooper, 2000). Although, the Big Five have been the focus of a large number of studies within the organizational psychology literature, they have not received similar attention among entrepreneurship research. In two studies, researchers included a single trait from the Big Five among other specific traits examined. Brandstaetter (1997) reported that emotional stability was positively associated with business owners' satisfaction with work and Lee and Tsang (2001) found positive correlations between extraversion and venture growth.

Selection of variables. The objective of my dissertation project was to systematically analyze a carefully chosen set of personality traits and their relation to small business success. Entrepreneurship and personality researchers have made specific recommendations that I followed in selecting the traits and measures in the study. For example, in a construct-oriented approach, Schneider et al. (1996) recommend choosing narrow traits, that on rational or empirical grounds are expected to relate to performance

criteria. Several researchers have recommended investigating the effects of multiple traits on success outcomes (Cromie, 2000; Rauch & Frese, 2000; Stewart, 1996). In view of these considerations, the research questionnaire is composed of narrow measures of job-relevant personality traits and success criteria. Next, I advance individual hypotheses for the traits examined in the study.

Hypotheses

A review of the literature reveals evidence of relationships between personality measures and economic and personal success. Based on a review of entrepreneurship and organizational psychology literature, I have formed three main hypotheses. As indicated below, the results are expected to yield more correlates between personality and work satisfaction than with business performance.

Hypothesis 1: Personality traits relate to business performance.

H1a. Competitiveness is positively related to business performance.

Competitiveness involves a tendency to evaluate one's accomplishments in relation to others and with standards of excellence. In a highly competitive business world, owners who measure themselves against the competition and seek to improve their performance may be more likely to achieve business success (Hornaday & Aboud, 1971).

H1b. Goal-setting orientation is positively related to business performance.

According to McClelland's need for achievement theory (1961), as well as other theories of motivation, high-achieving individuals typically demonstrate an ability to set high, yet obtainable goals. This suggests that business owners who tend to set challenging goals may have more successful businesses. Since business

owners face many demands on their attention and energy, careful planning may help them to focus their efforts on the more productive activities. Several researchers have reported links between goals and small venture performance (Baum, 1995; Frese, Krauss & Friedrich, 1999).

H1c. Work-related locus of control is positively related to business performance.

An internal locus of control involves the perception of having personal control and not being at the mercy of circumstances or fate. A strong internal locus of control is frequently associated with entrepreneurs who are thought to pursue self-employment because it offers the opportunity to control one's destiny and take responsibility for the outcome of one's efforts. Studies of locus of control and its relation to entrepreneurial success have resulted in mixed findings. Positive correlations have been found between internal locus of control and success criteria such as, venture growth (Lee & Tsang, 2001), productivity, and market share (Carsrud et al., 1989). Other researchers have found no relation between locus of control and success outcomes (Begley & Boyd, 1987; Box et al., 1995; Utsch & Rauch, 2000). In a quantitative review of the literature, Rauch and Frese (2000) report a small, positive relationship between internal locus of control and success ($r=.11$)

H1d. Social networking is positively related to business performance.

Networking among business owners usually involves communicating with individuals who are external to their businesses. Building an extensive network of contacts can be a significant important resource for a successful business owner (Aldrich & Zimmer, 1986; MacMillan, 1983) and is particularly important for

new and small businesses which generally lack access to capital and information about technological and operational advancements (Bruno & Tybjee, 1982). Several studies have found positive relationships between networking and performance (Duchesneau & Gartner, 1990; Hansen, 1995). Additionally, networking is related to the Big Five trait of Extroversion, which has been associated with and leadership effectiveness (Judge, Bono, Ilies, & Werner, 2002), venture performance (Lee & Tsang, 2001), franchisee performance (Morrison, 1997), and job performance, particularly in jobs requiring social skills (Barrick & Mount, 1991; 1993).

H1e. Emotional resilience is positively related to business performance.

Small business owners, in particular, may face high levels of stress due to work demands (Buttner, 1992; Jamal, 1997; Rahim, 1996). Therefore, it seems reasonable to expect that individuals who remain emotionally resilient in the face of job stress may operate more successful small businesses. Further, Morrison (1997) reported a positive association between emotional stability and business performance in a sample of franchise business owners.

H1f. Dependability is positively related to business performance.

Dependability is a facet of the Big Five trait, Conscientiousness (e.g., Judge, Martocchio, & Thoresen, 1997). Conscientiousness has been found to be the most consistent personality predictor of job performance across many jobs (Barrick & Mount, 1991; Hurtz & Donovan, 2000; Tett, Jackson, & Rothstein, 1991). However, the self-employed were not included in the research samples, therefore, it is important to determine whether this finding generalizes to

self-employed business owners.

Hypothesis 2: Personality is related to work satisfaction.

H2a: Adaptability is positively related to work satisfaction.

Small business owners often operate in unstructured, changing conditions and are called upon to function well in a variety of roles. To be successful, an owner must be flexible and responsive to new and changing demands. Therefore, it seems likely that highly adaptive individuals are more better satisfied with self-employment.

H2b: Autonomy is positively related to work satisfaction.

Autonomy refers to the desire for control over one's life and it is the most common motive named by entrepreneurs when asked why they started their own business (e.g., Feldman & Bolino, 2000; Hisrich, 1990). In several studies, entrepreneurs have been found to have a higher need for autonomy than non-entrepreneurs (Cromie, 2000; Utsch & Rauch, 2000). Autonomy has been positively associated with owners' satisfaction with work and expectations for future success (Brandstaetter, 1987).

H2c: Emotional resilience is positively related to work satisfaction.

Emotional resilience reflects the degree to which an individual is calm and confident rather than anxious and insecure. An emotionally stable business owner is more likely to cope well with the pressures of business ownership.

Brandstaetter (1997) reported that emotional stability was positively correlated with satisfaction with work among the 252 entrepreneurs in the study. In studies of other job types, greater emotional stability is consistently associated with better

job performance and career satisfaction (Lounsbury et al, 2003).

H2d: Optimism is positively related to work satisfaction.

Optimism has been associated with a number of beneficial work-related outcomes including goal attainment, achievement in times of adversity, (Scheier & Carver, 1987), job satisfaction and career satisfaction (Lounsbury et al., 2003). Further, in a longitudinal study, Mehta and Cooper (2000) found that entrepreneurs who were more optimistic were more successful.

H2e: Persistence is positively related work satisfaction.

Persistence involves a willingness to persevere despite setbacks. To be successful, business owners should be able to maintain their focus and determination in the face of challenges. Spencer and Spencer (1993) named persistence as one of eight competency variables that differentiate successful from unsuccessful entrepreneurs. Hornaday and Aboud (1971) reported that successful entrepreneurs rated above average on perseverance and other researchers have identified similar entrepreneurial traits such as tenacity (Baum, 2001; Sexton & Bowman-Upton, 1991).

H2f: Tolerance for financial insecurity is positively related to work satisfaction.

Small business owners are likely to experience financial demands such as a fluctuating cash flow or low earnings (Hamilton, 2000). Further, owners may tap into their personal equity in order start up or expand the business. Therefore, an individual's ability to live comfortably with a degree of financial uncertainty, and possibly face financial losses, may play a role in overall

satisfaction with business ownership.

H2g: Ability to sell self is positively related work satisfaction.

Ability to sell self refers to an individual's willingness to communicate and promote one's own ideas convincingly. Business owners must continually demonstrate their competence and persuade others of the value of their products, services, and ideas. Bhide (2000) suggested that the ability to sell is an essential characteristic for entrepreneurial success. Therefore, it seems reasonable to expect that an individual who is comfortable promoting his or her own work to others is more likely to be satisfied with business ownership.

H2h: Risk tolerance is positively related work satisfaction.

Self-employment is generally believed to involve more risk than paid employment (Duchesneau & Gartner, 1990). Thus, a more positive or tolerant attitude towards risk has been associated with entrepreneurial intentions (Douglas & Shepherd, 2002). Therefore, it is expected that individuals who are willing and able to take moderate risks are likely to report greater work satisfaction with business ownership.

H2i. Work drive is positively related work satisfaction.

Hard work, long hours, and perseverance have long been associated with the Protestant work ethic. Work demands can dominate the lives of self-employed individuals who have been found to work longer hours, travel more, and report working harder (Chay, 1993; Eden, 1975; Hameresh, 1990; Jamal, 1997). For example, an average work day for a small business owner can extend beyond ten hours (Jamal & Badawi, 1995). Additionally, work drive has been positively

associated with job and career satisfaction across a broad range of occupations (Lounsbury et al., 2003; Lounsbury, Gibson & Hamrick, in press). Thus, an individual with a higher level of work drive may be more satisfied with self-employment.

Hypothesis 3: Work satisfaction is positively related to business performance.

Empirical studies have shown that extrinsic rewards, such as salary, are moderately correlated with job satisfaction and career success (e.g., Siebert, Crant, & Kraimer, 1999). In a study of franchise business owner's, Morrison (1997) reported that owners' satisfaction levels were positively related to organizational performance outcomes. Thus, among small business owners, a moderate, positive correlation is expected between business performance and work satisfaction.

2. Method

Procedure

In order to identify potential participants for this study, I contacted directors of southeastern chapters of various national and regional non-profit organizations that provide support and benefits to small business owners. I contacted numerous organizations including Tennessee Small Business Developments Centers, SCORE, Chambers of Commerce. Appendix A presents a list of the organizations invited to participate in the study. I explained the purpose of the study and invited participation from members and clients affiliated with the organization and as an incentive, a one-page summary of the results of the study was offered to all participants. Appendix B presents a copy of the letter to organization directors. In order to protect members' privacy, rather than providing members' names and email addresses, I asked organization directors to forward an invitation letter to the members on my behalf. Appendix C presents a copy of the letter to potential participants. In some cases, if membership lists with email addresses were publicly available, I sent email invitations directly to potential participants. Since I was unable to contact most participants directly, I have not calculated a response rate for participation in the study and a low response rate is assumed.

The instrument was presented as a web-based survey because responses rates to mail questionnaires are particularly low for small business owners (Aldrich, 1992; Fischer, Rueben et al., 1993). I set up the web survey instrument using SPSS Data Editor (Statistical Package for the Social Sciences, 2002) and it was hosted on a University of Tennessee secure survey at the web address: <http://surveys.utk.edu/kowens/index.htm>.

Appendix D presents a copy of the survey instrument. Participants who were interested in receiving a copy of the results were asked to provide an email address. All respondents were promised confidentiality and anonymity. Two participants reported technical difficulties accessing the web survey and were offered paper copies of the instrument.

Participants

In this study, a self-employed small business owner is operationally defined as an individual who: 1) is at least one-third owner of a small business, 2) is involved in the day-to-day management of the business, 3) has been operating the business no less than 6 months. A total of 167 participants completed the survey and of those 147 met the criteria. A summary description of the demographic characteristics of the participants is presented in Table 3. Female (73) and male (74) business owners were nearly equally represented in the sample population. The majority of respondents were college-educated and 40 held graduate degrees. The average age of respondents was 43 years ($sd = 10.1$). Almost all respondents were the founders of their current businesses (89 %).

Table 4 presents a summary description of the businesses in the research sample. Most of the companies in the sample are service organizations (73%) and had been in operation 8 years on average ($sd = 7.3$). About one-third of the businesses are sole proprietorships and half of the businesses employed between two and 10. Company size ranged from one to 81. The average number of employees was seven ($sd = 13.4$). A total of 73% firms were in professional or consumer services, 13% in retail, 6% in manufacturing, 5% in construction, 2% in wholesale, and 1% in agriculture. In entrepreneurship research, it is customary to control for the effects of certain demographic characteristics of the organization on firm performance. Following

Table 3

Demographic characteristics of the study participants

Characteristics	Number reporting
Individual characteristics:	
Gender: Female	73
Male	74
Age: 25 or younger	2
26 to 35	36
36 to 45	53
46 to 55	41
56 or older	15
Education:	
Some high school	2
High school	6
Some college	32
College degree	48
Some grad school	19
Master's degree	30
Professional/doctoral degree	10
Founder/Non-founder:	
Founded company	127
Purchased company	14
Related to founder	4

Table 4

Characteristics of participating businesses

Company characteristics:	
Type of business:	
Professional services	82
Consumer services	24
Retail	19
Wholesale	3
Manufacturing	9
Construction-related	8
Agriculture-related	1
Company age:	
1 to 5 years	80
6 to 10 years	26
11 to 15 years	16
16 to 20 years	17
More than 20 years	8
# Employees (including owner):	
1	48
2 to 10	74
11 to 50	22
51 to 100	3

previous researchers (Dess, Ireland & Hitt, 1990; Stewart et al., 1999), three organizational variables (company age, size, and industry type) were controlled in the statistical analysis following previous researchers. Dichotomous variables for industry type were used to designate the six categories. The industry variables were dummy coded with the agriculture industry serving as the excluded group.

Measures

A detailed web survey was used to collect data for this study. All personality dimensions and success criteria were assessed using existing measures. Below is a brief description of the instruments used in the study.

Personality variables. Fourteen dimensions of personality were measured by the Resource Associates Personal Style Inventory (PSI). The validated instrument was adapted for a small business owner sample. Reliability coefficients for the instrument in its original form range from .69 to .86. For further validity information, see Lounsbury & Gibson (2000), Lounsbury, Loveland & Gibson (2001); Lounsbury, Tatum, Chambers, Owens & Gibson (1999). The adapted personality measure contains fourteen subscales and a total of 86 items. Each subscale represents an independent variable and is scored separately. Item responses are indicated on Likert-type scale. Scores for each personality subscale were generated by computing the mean of the participant responses (one to five) for each construct. Below is a brief description of personality variables examined in the study.

Adaptability. This subscale assesses flexibility and willingness to adjust in the face of changing demands. (e.g., "When working on a project, I am very good at improvising when faced with unanticipated obstacles.")

Autonomy. This subscale assesses the need for independence and freedom from control with regard to one's life and work. (e.g., "It is very important for me to decide who I work with on my job.")

Competitiveness. This subscale assesses preference for embracing challenges and measuring oneself against others. (e.g., "I tend to perform at my best when I am in competition with others.")

Dependability. This subscale assesses the degree to which one is responsible, reliable, and careful to meet obligations. (e.g., "I never miss a deadline.")

Emotional resilience. This subscale assesses overall level of adjustment and emotional resilience in the face of job stress and pressure. (e.g., "When I suffer a setback in my life, I always bounce back right away.")

Goal-setting. This subscale assesses propensity to establish and pursue goals. (e.g., "I write down my goals on a daily or weekly basis.")

Optimism. This subscale assesses the presence of a hopeful outlook concerning prospects, people, and the future, even in the face of difficulty and adversity. (e.g. I always feel hopeful when I think about the future.")

Persistence. This subscale assesses willingness to persevere despite setbacks. (e.g. I will stay up late and even lose sleep to finish a project.")

Risk tolerance. This subscale assesses capacity for taking risks in the pursuit of potential rewards. (e.g. "I can tolerate a moderate amount of risk in exchange for good prospects of substantial gain.")

Ability to sell self. This subscale assesses willingness to communicate and promote one's own ideas convincingly. (e.g., "Anyone who talks with me for a while would say

I'm very good at selling myself.”)

Social networking. This subscale assesses a tendency to develop informal contacts with potentially helpful people. (e.g., “I feel completely at ease in large gatherings of people.”)

Tolerance for financial insecurity. This subscale assesses the level of acceptance of an uncertain future income. (e.g., “It doesn't bother me if I don't know where my income will come from in 6 months”.)

Work-related internal locus of control. This subscale assesses one's belief that career success is a result of one's actions rather than luck or fate. (e.g., “What happens next in my career will depend on the choices I make.”)

Work drive. This subscale assesses the disposition to work for long hours and invest one's time and energy into job and career success. (e.g., “It could easily be said of me that I live, eat, and breathe my work.”)

Business performance variable. In this study, performance was operationally defined in terms of three financial indicators that are frequently used in entrepreneurship research. While most agree that multiple measures should be used to assess performance (e.g., Duchesneau & Gartner, 1990; Murphy et al., 1996; Srinivasan et al., 1994), several researchers suggest that growth variables are the best measures (Brush & Vanderwerf, 1992; Utsch et al., 1999). Therefore, in this study, I have included growth measures for three performance indicators. Six items assessed sales growth, profit growth, and personal income to the owner. A sample question is “Since start-up, profits have grown by ____”. All responses were measured on a six point scale ranging from “under 5%” to “100%+.” Responses to the performance questions were combined into a performance

index. The index score was computed by summing the responses to the six items. Coefficient alpha reliability was .83 for the performance measure. The maximum possible score for the performance measure was 36. Index scores ranged from a low of 6 to a high of 36, with a mean of 19.4 and a standard deviation of 8.7.

Work satisfaction variable. A four-item work satisfaction measure was compiled from previous research. Two items focusing on self-employment satisfaction are based on Solymossy's (1997) suggestion to expand the definition of success to include measures of material and general satisfaction. The items were: "How satisfied are you with the standard of living your business provides for you?" and "What is your overall level of work satisfaction with self-employment? Ratings were made on a 5-point scale ranging from 1 (very dissatisfied) to 5 (very satisfied). One item from Lounsbury & Gibson (2000) measured career satisfaction. Scarpello and Campbell (1983) found that such global indices of satisfaction can be more valid than facet-based measures. The item was "I am fully satisfied with my career to date" and responses were indicated on a five point scale. One item from Lounsbury & Gibson (2000) measured life satisfaction as follows: "All in all, I am very satisfied with my life as a whole." and responses were indicated on a five point scale.

The scores for the work satisfaction variable reflect the mean response for the four questions. Higher scores indicated greater work satisfaction. The alpha reliability coefficient for the measure was .74. Participants' work satisfaction scores ranged from 1 to 5. It is notable that approximately 69% of participants had scores greater than 3.5 indicating they are satisfied or very satisfied overall. The mean score was 3.8 with a standard deviation of 0.8.

3. Results

Data analysis

Hypotheses 1, 2, and 3 were tested using the Pearson correlation coefficient (Pearson, 1951) and step-wise multiple regression (Cohen & Cohen, 1983). All data were examined using univariate techniques to ensure that the assumptions of regression analysis were met (Aiken & West, 1991). Descriptive statistics and reliability estimates for personality variables are presented in Table 5.

The internal consistency reliability was assessed using Cronbach's alpha (Cronbach, 1960). The reliabilities for a few subscales (Persistence, Autonomy, Competitiveness and Emotional Resilience) were below the .70 cut-off point (between $r_{ii} = .56$ and $r_{ii} = .69$) that is considered adequate for early stages of instrument validation (Nunnally, 1978). The results for these scales should be interpreted with caution. Most of the subscales in the study yielded alpha values within an acceptable range (between $r_{ii} = .70$ and $r_{ii} = .82$). Nunnally (1978) recommends that instruments used in applied settings, have internal consistency estimates of about .80 or better so additional work is needed to raise the reliabilities of several personality subscales. Inter-correlations among personality traits are common (Costa & McCrae, 1992). Since the personality variables in the study were all selected to measure small business success, it was expected that personality subscales would be inter-related (Robinson, et al., 1991). The subscale correlations ranged from .01 to .60.

Hypothesis tests

Table 6 presents a summary of the hypotheses and findings. Generally, the hypotheses are supported and personality is related to business performance and work

Table 5

Descriptive statistics, reliabilities, and intercorrelations for personality variables

	<u>M</u>	<u>SD</u>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1) Adaptability	3.89	.59	(.70)													
2) Autonomy	4.01	.65	.27**	(.67)												
3) Competitive	3.19	.83	-.11	-.01	(.60)											
4) Dependability	3.88	.74	.11	.20**	-.07	(.76)										
5) Emotional res	4.11	.88	.44**	.13	.09	.31	(.68)									
6) Goal-setting	3.60	.74	.16*	.24**	.15	.25**	.22**	(.72)								
7) Optimism	3.93	.68	.43**	.24**	.17*	.18*	.55**	.20**	(.80)							
8) Persistence	3.69	.66	-.01	.09	.15	.21**	-.01	.23**	.09	(.56)						
9) Risk tolerance	4.43	.89	.41**	.24**	.09	.01	.16*	.20**	.37**	.25**	(.82)					
10) Ability to sell	3.50	.85	.26**	.26**	.21**	-.01	.16*	.36**	.41**	.18*	.36**	(.76)				
11) Networking	4.04	.82	.42**	.34**	.03	.08	.25**	.23**	.48**	.11	.30**	.60**	(.73)			
12) Tol financial insecurity	3.35	.75	.36**	.24**	-.03	.00	.30**	.07	.44**	-.14	.49**	.12	.26**	(.77)		
13) LOC	4.21	.62	.31**	.32**	.20*	.18*	.31**	.38**	.53**	.15	.32**	.33**	.37**	.31**	(.79)	
14) Work drive	3.65	.83	.07	.11	.08	.06	.15	.17*	.12	.24**	.18*	.23**	.20**	.08	.14	(.62)

* p<.05 , **p<.01

Table 6
Summary of hypothesis tests

Hypothesis	Results
<i>H1: Personality is related to business performance.</i>	
H1a: Competitiveness is positively related to business performance.	Not supported
H1b: Goal-setting orientation is positively related to business performance.	Supported
H1c: Work-related internal locus of control is positively related to business performance	Supported
H1d: Social networking is positively related to business performance.	Supported
H1e: Emotional resilience is positively related to business performance.	Supported
H1f: Dependability is positively related to business performance.	Not supported
<i>H2: Personality is related to business owners' work satisfaction.</i>	
H2a: Adaptability is positively related to work satisfaction.	Supported
H2b: Autonomy is positively related to work satisfaction.	Supported
H2c: Emotional Resilience is positively related to work satisfaction.	Supported
H2d: Optimism is positively related to work satisfaction.	Supported
H2e: Persistence is positively related to work satisfaction	Not supported
H2f: Tolerance for financial insecurity is positively related to work satisfaction.	Supported
H2g: Ability to sell self is be positively related to work satisfaction.	Supported
H2h: Risk tolerance is positively related to work satisfaction.	Supported
H2i: Work drive is positively related to work satisfaction.	Supported

satisfaction. Correlations ranged from .04 to .44 and most were of low magnitude. Of the fourteen traits examined, only two traits, dependability and persistence were not significantly related to subjective or objective measures of business success. None of the control variables (age, size, type) were significantly related to criterion variables.

Personality and business performance. Hypothesis 1a-1f predicted relationships between personality traits and business performance. Table 7 presents the results. The traits competitiveness, goal-setting orientation, work-related locus of control, optimism, social networking, emotional resilience, and dependability were hypothesized to be related to performance criteria. Low, positive associations were found between business performance and five personality variables: goal-setting ($r=.16, p<.05$), social networking ($r=.14, p<.05$), work-related locus of control ($r=.15, p<.05$), ability to sell self ($r=.17, p<.05$), and emotional resilience ($r=.18, p<.05$).

Hypothesis 1a: Hypothesis 1a proposed that competitiveness correlates positively with business performance. The prediction was not supported ($r=.07, p>.05$).

Hypothesis 1b: Hypothesis 1b proposed that goal-setting orientation correlates positively with business performance. The prediction was supported ($r= .16, p<.05$).

Hypothesis 1c: Hypothesis 1c proposed that work-related locus of control correlates positively with business performance. The prediction was supported ($r= .15, p<.05$).

Hypothesis 1d: Hypothesis 1d proposed that social networking correlates positively with business performance. The prediction was supported ($r= .14, p<.05$).

Hypothesis 1e: Hypothesis 1e proposed that emotional resilience correlates positively with business performance. The prediction was supported ($r=.18, p<.05$).

Hypothesis 1f: Hypothesis 1f proposed that dependability correlates positively with

Table 7

Correlations between personality scores and success measures

Personality Variable	Business Performance	Work Satisfaction
Adaptability	.07	.21**
Autonomy	.12	.16*
Competitiveness	.07	.19**
Dependability	.02	.12
Emotional resilience	.18*	.35**
Goal-setting	.16*	.19**
Optimism	.13	.47**
Persistence	.10	.09
Risk tolerance	.04	.15*
Ability to sell self	.17*	.26**
Social networking	.14*	.27**
Tolerance for financial insecurity	.06	.23**
Work-related locus of control	.15*	.38**
Work drive	.13	.14*

* p<.05 , **p<.01

business performance. The prediction was not supported ($r=.02, p>.05$).

Additionally, a positive significant correlation with performance was found with one variable that was not included in Hypothesis 1: ability to sell self ($r=.17, p<.05$).

Personality and work satisfaction. Hypothesis 2a-2j predicted positive relationships between personality and work satisfaction. Five of the six hypotheses were supported. Significant correlations ranged from .14 to .47. All results are presented in Table 7.

Hypothesis 2a: Hypothesis 2a proposed that adaptability correlates positively with work satisfaction. The prediction was supported ($r= .21, p<.01$).

Hypothesis 2b: Hypothesis 2b proposed that autonomy correlates positively with work satisfaction. The prediction was supported ($r= .16, p<.05$).

Hypothesis 2c: Hypothesis 2c proposed that emotional resilience correlates positively with work satisfaction. The prediction was supported ($r= .35, p<.01$).

Hypothesis 2d: Hypothesis 2d proposed that optimism correlates positively with work satisfaction. The prediction was supported ($r=.47, p<.01$).

Hypothesis 2e: Hypothesis 2e proposed that persistence correlated positively with work satisfaction ($r= .09, p>.05$). It should be noted that the alpha reliability coefficient for the persistence scale was below the acceptable range.

Hypothesis 2f: Hypothesis 2f proposed that tolerance for financial insecurity correlates positively with work satisfaction. The prediction was supported ($r= .23, p<.01$).

Hypothesis 2g: Hypothesis 2g proposed that ability to sell self correlates positively with work satisfaction. The prediction was supported ($r= .26, p<.01$).

Hypothesis 2h: Hypothesis 2h proposed that risk tolerance correlates

positively with work satisfaction. The prediction was supported ($r = .15, p < .05$).

Hypothesis 2j: Hypothesis 2j proposed that work drive correlates positively with work satisfaction. The prediction was supported ($r = .14, p < .05$)

Additionally, significant correlations with work satisfaction were found among traits that were not included in Hypothesis 2: goal-setting ($r = .19, p < .01$), social networking ($r = .27, p < .01$), and work-related locus of control ($r = .38, p < .01$).

Hypothesis 3: Hypotheses 3 proposed that the two success criteria -- business performance and work satisfaction -- are positively related. The hypothesis was supported as $r = .40, p < .01$. The finding is consistent with previous research suggesting that objective and subjective success are moderately related (Judge & Bretz, 1994). It is not surprising that the performance-satisfaction correlation in the present study is slightly higher than the mean true correlation (.30) between overall job satisfaction and job performance reported in a meta-analysis of job performance-job satisfaction studies (Judge, Thoresen, Bono, & Patton, 2001). In a small business, it seems reasonable to think that work satisfaction is more closely linked to performance than in a large organization where one may not perceive his or her actions as having as much impact on the company's success.

Regression analyses. Step-wise multiple regression analysis was used to examine the influence of personality variables on the economic and personal success. The first step in these analyses included control variables that might also impact success: company age, size, and industry type.

Hypothesis 1: In the second step of the first regression analysis, all personality variables were added. Table 8 presents the results. Regression analysis yielded a model

Table 8

Summary of multiple regression for personality and business performance

Dependent variable: Business performance

Step	Variable	<i>R</i>	<i>R</i> ²	ΔR^2	β
1	Control variables	.19	.04	.04	
	Size of company				-.02
	Company type – Service				.17
	Company type – Retail				.11
	Company type – Manufacturing				.25*
	Age of company				-.10
2	Goal-setting	.28	.08	.04	.20*

n=147 * = $p < .05$ ** = $p < .01$

that accounted for 8% of the variance in business performance and included the control variables and goal-setting orientation. The standardized beta weight for goal-setting (.20) was statistically significant at the .05 level. The results provide some support for Hypothesis 1.

Hypothesis 2: The second regression analysis examined the relationship of personality and work satisfaction. Table 9 presents the results. Two personality variables were significant predictors at the .05 level. The factors, in order of their standardized beta weights, were optimism (.37, $p < .05$) and work-related locus of control (.19, $p < .05$). The final regression model accounted for 26% of the variance ($R = .51$, $p < .01$) in work satisfaction. These findings provide support for Hypothesis 2 which predicted that individuals with greater optimism and internal locus of control would indicate greater satisfaction with self-employment.

Hypothesis 3: In order to further investigate work satisfaction, I tested the impact of business performance. In the regression model ($R = .40$, $p < .01$), venture performance accounted for only 16% of the variance in satisfaction levels. It appears that many owners of lower performing businesses were generally satisfied. Future research should seek to clarify the relationship between venture performance and owner satisfaction and further identify the intrinsic rewards of business ownership and self-employment that enhance work satisfaction.

Table 9

Summary of multiple regression for personality and work satisfaction

Dependent variable: Work satisfaction

Step	Variable	<i>R</i>	<i>R</i> ²	ΔR^2	β
1	Control variables	.14	.02	.02	
	Company type – Service				.11
	Company type – Retail				.03
	Company type – Manufacturing				.09
	Age of company				.06
	Size of company				.09
2	Optimism	.49	.24	.22	.37**
3	Locus of control	.51	.26	.02	.19*

n=147 * = $p < .05$ ** = $p < .01$

4. Discussion

This study explored the role of personality characteristics in self-employment success among a sample of small business owners. It was hypothesized that job-relevant personality characteristics are related to business performance and work satisfaction. The findings from the study lend partial support in the case of business performance and general support in the case of work satisfaction. Twelve personality variables emerged as correlates of business performance or work satisfaction and each are discussed below. It should be noted that while a good number of the relationships were statistically significant, the squared coefficients or coefficients of determination indicate that very little variance is explained by several personality traits and therefore, the practical significance of the correlations is unclear.

Summary and interpretation

Adaptability. Successful business owners must be willing to make changes when a strategy is not working well. Therefore, those who are resistant to change may not find self-employment as personally rewarding. In this study, adaptability was positively correlated with work satisfaction.

Autonomy. It is not surprising that autonomy is positively associated with work satisfaction with business ownership. There have many studies linking autonomy with entrepreneurial emergence but few have examined its relationship with successful outcomes. The finding is similar to the results in Brandstaetter's study in which independence was associated entrepreneurs' satisfaction and expectations for future success.

Competitiveness. The personality variable, competitiveness was not significantly related to business performance. This finding was surprising because competitiveness is associated with need for achievement, which has a positive relationship with business performance (Rauch & Frese, 2000). The failure to identify a relationship between competitiveness and performance criteria is puzzling. In order to investigate whether this finding was likely due to weakness in the competitiveness subscale measure, I computed the correlation after applying the correction for attenuation (Guilford, 1954). Even with the correction, the correlation rises only to .08 indicating no significant relationship between competitiveness and performance. However, since competitiveness is related to achievement motivation and seemingly should bear some relation to performance, this finding should be interpreted cautiously and further investigation is needed.

Dependability. The personality variable, dependability was not a significant correlate of business performance or work satisfaction. The trait was included in the study because it is associated with the Big Five trait Conscientiousness which has been associated with job performance across many occupations (Barrick, Mount & Judge, 2001). However, the trait appears to be less useful in gaining insights about self-employed individuals.

Emotional resilience. Emotional resilience was positively related to both business performance and work satisfaction. The findings support previous research indicating that emotional stability is associated with performance and satisfaction criteria (e.g., Barrick, Mitchell, & Stewart, 2003; Lounsbury et al., 2003). In meta-analytic reviews have found that emotional stability is a predictor of job performance across jobs (e.g., Judge & Bono, 2001; Salgado, 1997). However, it did not predict business

business performance or work satisfaction in this sample.

Goal-setting orientation. Goal setting was the only personality trait with a direct effect on business performance. The variable explained a small but significant amount of the variance in business performance. The importance of goal-setting and performance has been emphasized by several researchers and the results in this study support their findings (Baum, 1995; Frese, Krauss, & Friedrich, 1999).

Optimism. Optimism had positive correlations with business performance and work satisfaction. These are consistent with previous research findings indicating links between optimism and performance (Mehta & Cooper, 2001) and entrepreneurial satisfaction (Cooper & Artz, 1995).

Persistence. Persistence was not significantly correlated with performance or satisfaction criteria. Since the alpha reliability for the subscale was low, I applied the correction for attenuation. The corrected correlation indicated a statistically significant relationship between persistence and business performance ($r = .16$). However, the correction did not indicate a significant relationship between persistence and work satisfaction.

Risk tolerance. Risk-taking propensity has yielded mixed findings in the literature. Many researchers have argued that entrepreneurs are not high risk-takers, rather they take moderate calculated risks. A correlation between risk-taking and business success has not been empirically established. Therefore, in this study, risk tolerance was expected to relate to work satisfaction, but not to business performance. A small positive association was found with work satisfaction and there was no significant relationship with business performance.

Ability to sell self. Ability to sell self was positively related to business performance and work satisfaction. The findings support Bhide's (2000) emphasis on the ability to sell as important factor in entrepreneurial success

Social networking. Social networking had positive associations with business performance and work satisfaction. The findings are consistent with previous research linking networking and venture performance (Duchesneau & Gartner, 1990; Hansen, 1995).

Work-related locus of control. This study's finding of a small significant association between work-related locus of control and business performance is consistent with previous research results. In a quantitative review of several trait studies, Rauch and Frese (2000) reported an average mean correlation of .11 between locus of control and business performance criteria. The results of this study provides further evidence of a small positive relationship. Locus of control was a better predictor of the study's other success criterion, work satisfaction. A stronger belief that one has personal control and responsibility for the performance of the business appears to contribute to higher levels of satisfaction. The significant association between locus of control and satisfaction found in this study echoes research results linking entrepreneurial emergence and success with intrinsic motivators, such as need for autonomy (Langan-Fox, 1995).

Work drive. Work drive was significantly related to work satisfaction but not business performance. Since the alpha reliability for the subscale was low, I applied the correction for attenuation. The corrected correlation indicated a statistically significant relationship between work drive and business performance ($r=.15$). The corrected correlation for work drive and work satisfaction rose to .17. The findings indicate that

revisions to the scale are needed and the trait appears to be useful in understanding business performance and work satisfaction.

In the present study, success was operationalized along two dimensions: business performance and work satisfaction. The performance dimension focuses on financial, objective performance indicators of success while the satisfaction dimension includes personal, subjective indicators. The performance and satisfaction measures were moderately correlated. Interestingly, there were different personality correlates for each of the success criteria. For example, several traits were significantly related to work satisfaction but showed no relation to business performance (e.g., adaptability, risk tolerance). The findings lend support to the work of several researchers who suggest that small business success is a multi-dimensional construct (Brandstaetter, 1997; Buttner & Moore, 1997; Dreissen & Zwart, 1999; Frese, van Gelderen, & Ombach, 2000; Mehta & Cooper, 2000; Rauch & Frese, 1997; Solymossy, 1997).

Business performance variable. Small positive correlations were indicated between personality and business performance. The results obtained in this study showed that four personality variables (emotional resilience, goal-setting orientation, ability to sell self, social networking, and locus of control) have statistically significant but relatively weak relationships with business performance with correlations ranging from .14 to .18. Stepwise regression analysis revealed that goal-setting orientation explains a small but significant portion of the variance in performance. The findings are consistent with those of several personality-performance researchers (e.g., Morrison, 1997; Utsch & Rauch, 2000) and lend further support to the Giessen-Amsterdam entrepreneurship model (Frese & Rauch, 2000). Given the small correlations between personality traits and small

business success, a logical next step would be to investigate whether moderator variables might be attenuating these relationships (cf. Baum, 2001; Frese & Rauch, 1998).

Work satisfaction variable. Small to moderate correlations were found between twelve personality variables and work satisfaction indicating that personality played a role in the participants' subjective evaluations of success. There were significant effects on work satisfaction with the control variables, optimism, and locus of control accounting for 26% of the variance. Individuals with higher scores on optimism and internal locus of control tended to report higher levels of work satisfaction. These results are consistent with the literature supporting relationships between personality characteristics and job satisfaction (Cropanzano, James, & Konovsky, 1993), career satisfaction (Lounsbury, et al., 2003; Siebert & Kramer, 2000) and self-employment satisfaction (Cooper & Artz, 1995).

Contributions

A review of the literature found that past trait research on entrepreneurs has been criticized for conceptual and methodological weaknesses. This study was designed with an attempt to take into account several of these concerns. First, I avoided equating small business owners with entrepreneurs (Carland et al., 1984) and gathered descriptive information about the individual owners and the businesses so the study can be compared to others. It is notable that nearly all of the participants in the study were business founders which is one of the criteria used to characterize entrepreneurs.

Second, the personality instrument used in the study was adapted to the situational context and job demands associated with self-employment and business ownership (Brockhaus, 1994; Herron, 1992; Hornaday, 1982; Rauch & Frese, 2001; Robinson et al.,

1991). The specific personality variables assessed were selected because they had an empirical or practical relation with small business ownership (Schneider, et al., 1996). Further, the study was designed to analyze for multiple effects of several personality characteristics (Rauch & Frese, 2000).

Finally, the study draws on multiple perspectives on entrepreneurial success and includes both financial and non-financial measures. In particular, subjective measures of success were incorporated in an attempt to better understand business owners' personal definitions of success. This strategy yielded further evidence that business performance and work satisfaction are only moderately correlated and additional research is needed to investigate how both variables impact the entrepreneurial process.

Limitations

Although attempts were made to address several gaps in the literature, this study is primarily exploratory and somewhat limited in scope. One limitation of this study is its reliance on self-report data. Self-report measures are the dominant data collection methodology in personality research and in much of the entrepreneurship research on venture performance. However, self-report data are vulnerable to the social desirability bias that occurs when the respondent consciously or unconsciously distorts responses in a positive, favorable direction (Paulhus, 1991). While success measures are likely to be effected by social desirability bias, Frese (2000) points out that "it is practically impossible to get other measures from small scale business starters". Additionally, since self-report data was relied upon for both predictor and criterion measures, the influence of common method variance cannot be ruled out. Second, in an effort to construct a meaningful sample group, I worked with professional associations for small

business owners to ensure that I had some general information about the characteristics of participants rather than simply soliciting any volunteers willing to participate (Dillman & Bowker 2001). Since I worked with directors at organizations who issued invitations on my behalf, it was not feasible to calculate an accurate response rate. A low response rate should be assumed. Thus, the sample examined in this study may be subject to selection and non-response biases and cannot be assumed to be representative of all small business owners in the United States.

Survivor bias is an additional source of potential bias in most studies of small business ownership (Frese, et al., 2001). In this study, all businesses in the sample were successful in that they had survived at least six months and on average had survived for seven years. Response bias is another potential validity threat in this study. For example, the range of respondents may be somewhat restricted in that the participants were members of small business owner organizations such as the Young Entrepreneurs Organization or National Association of Women Business Owners. It is possible that business owners who join such organizations may be better at networking and seeking resources than business owners who have not joined professional organizations. If members of such organizations tend to be more successful than the average business owner, the observed correlations may be lower than the true correlations due to restriction of range. Similarly, the participants in the study reported fairly high levels of personal satisfaction. It may be that owner satisfaction is unusually high or consistent among this sample group. Satisfied business owners may be more willing to participate in small business research. A non-response bias of low participation among dissatisfied business owners would also restrict the range and result in lower correlations.

An additional limitation of the study involved the internal consistency of the some of the personality scales: a few had reliability coefficients below .70. Therefore, the findings related to these variables should be interpreted cautiously. Further work should be directed toward revising these subscales for improved internal consistency.

Directions for future research

The results of this study suggest several directions for future research. First, the personality instrument (Personal Style Inventory) used in the study was revised for small business owners. Future validation studies should investigate its' utility in distinguishing self-employed from organizationally employed participants. Although this study did include small businesses across various industries, additional studies are needed to replicate trait findings with other small business populations. Small business owners are not a homogeneous group and personality characteristics may have different associations among different types of self-employment.

Future research could examine both direct and indirect effects of personality characteristics by including moderator variables. Several authors have initiated research on the effects of strategies, goals, and action plans (Baum et al., 2000; Frese et al., 2000; Rauch & Frese, 1997). In seeking to identify other potentially relevant moderators, it may be helpful to review findings from trait studies of leadership emergence and effectiveness.

Longitudinal studies are needed to determine the effects of personality characteristics during different stages of organizational life cycle. Personality may exhibit a stronger influence on business success at certain points in a company's development. For example, a characteristic such as risk-taking tolerance may be more important during

start-up than after five years of successful operation. Additionally, longitudinal studies could provide insights into the effects of survivor bias (Carland, et al., 1996).

With regard to success indicators, growth is the most widely used performance measure. However, future studies should attempt to learn more about owners' goals for business growth and expansion. In the present study, many business owners indicated high levels of satisfaction in low growth businesses. It appears that some owners are satisfied once they reach a certain level of financial performance and may have no desire to expand the business further. Ideally, researchers should include some measures of success that are closely aligned with owners' personal goals in addition to traditional entrepreneurship performance indicators. For example, Katz (1994) distinguished between autonomy goals and growth goals. Future studies of self-employment satisfaction and success should examine individuals' own objectives and definitions of success.

Conclusions

The results of this study are consistent with and extend prior findings in entrepreneurship research, and they contribute to the large body of empirical evidence in organizational psychology literature supporting the utility of personality in predicting work-related outcomes. Since personality has a place in many entrepreneurship and small business models, further insights into the correlates and predictors of success outcomes are helpful. In addition, this research supports the view that work success involves both financial and personal rewards (Brandstaetter, 1997; Buttner & Moore, 1997; Cooper & Artz, 1995; Frese et al., 2000; Judge et al., 1995).

Another contribution of the study is that it investigates the role of narrow, job

-relevant personality dimensions in small business success. In the present study, there were several non-significant results for correlates of business performance correlates and the average personality-success correlations reported have been small. However, they are similar in magnitude to the validity coefficients reported in meta-analytic studies of the Big Five and job performance and these well-researched constructs have been demonstrated as useful and of theoretical and practical significance (Witt, 2003). Also, in small business research, survivor bias is likely to lead to lower observed correlations. E. Sundstrom (personal communication, November 3, 2003) suggested that studying successful performance among surviving businesses is analogous to conducting a selection validation study on successful hires, which creates range restrictions and lowers the observed correlations. Despite the limitations associated with personality and entrepreneurship research, recent quantitative reviews indicate that personality has a small, significant effect on small business and entrepreneurial outcomes. Such evidence assures that there will be continued interest in understanding the role of individual differences in entrepreneurial success. The present study contributes additional data aimed at building toward a more comprehensive understanding of the determinants of small business success. Potential applications of this research include career guidance, selection, and educational and training programs.

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APPENDICES

Appendix A

List of Organizations Invited to Participate in the Study

- Chambers of Commerce
- Young Entrepreneurs Organization
- Tennessee Small Business Development Centers
- Counselors to America's Small Businesses (SCORE)
- Business Ideas Café "Top Business Owners"
- National Association of Women Business Owners

Appendix B

Example of recruitment letter sent to small business organizations



---University of Tennessee Small Business Study---

Dear Membership Director,

I am a doctoral student at UT and I am conducting a research study focusing on small business entrepreneurs. I am contacting you to request your help in inviting participation from the clients and partners of the West Tennessee chapter of Tennessee Small Business Development Centers. I appreciate any assistance that you can offer in reaching the potential participants.

Participation in the study is anonymous and the survey responses are confidential. The results of the research study will be made available to all participants and I will be happy to provide any further information that may be of interest. The targeted completion date for surveys is July 11. Please contact me at kowens@utk.edu or 865-300-9951 if you have any questions or suggestions. Thank you for your time and help.

Sincerely,

Kimberly Owens
Doctoral Candidate
University of Tennessee

Appendix C

Sample invitation letter to potential participants



---University of Tennessee Small Business Study---

Dear Chamber of Commerce Member,

As a small business owner, you are invited to participate in a University of Tennessee small business study. I am a graduate student at UT and as part of my dissertation research project, I am seeking to learn more about the role of the individual entrepreneur in small business success.

I have put together an online survey to collect data for the research project. I realize that business owners are especially busy people and I greatly appreciate your time. The survey takes about 20 minutes to complete and provides invaluable information for entrepreneurship researchers. Your anonymity and confidentiality are assured. If you would like to participate, please go to: <http://surveys.utk.edu/kowens/index.htm>. If you have any questions about the survey, please contact me at kowens@utk.edu.

If you choose, you may receive a one page summary report of the results of the study. It is hoped that the information obtained from the study will be helpful in designing educational programs aimed at training and developing the business and life skills needed for success as a small business owner. Thank you very much for your time and input. I wish you continued success with your business.

Best regards,
Kimberly Owens
Doctoral Candidate
University of Tennessee

Appendix D

Web Survey



University of Tennessee Small Business Study

Dear Business Owner,

There is a critical demand for educational programs aimed at training and developing the business and life skills needed for success as a small business owner. The information collected in this 15-minute survey contributes towards our understanding of the role of the individual entrepreneur and helps in the identification of key factors of success.

Benefits of participation: 1) contributing towards a better understanding of U.S. small businesses 2) if you choose, you will have access to a written report summarizing the results of the study.

Confidentiality: The questionnaire is anonymous and your participation is voluntary. No identifying information will ever be associated with your responses. The information collected will be used for research purposes only. Responses will be analyzed and reported as a group, not individually. Your confidential answers will be solely under the care of the researcher, Kimberly Owens. If you have any questions or concerns, please contact me at kowens@utk.edu.

This is a topic that is important in small business research and development, so your honest, complete answers are requested. Prompt responses are greatly appreciated. Thank you very much for taking the time to participate in the study.

Sincerely,

Kimberly Owens, PhD candidate
University of Tennessee

Please answer every item. Your opinions and perceptions matter and will assist in providing a more complete understanding of self-employment and small business entrepreneurship in the U.S.

What type of business do you own? (please select only one; if more than one applies, identify area with the most sales revenue)

- Professional services (e.g., accounting, consulting, healthcare)
- Consumer services (e.g., hair dressing, auto service)
- Guest services (hotel, restaurant)
- Construction-related (including all trades)
- Agricultural or agriculture-related
- Retail
- Wholesale
- Manufacturing

Are you the founder of your current business?

- I am the founder.
- I am related to the founder.
- I purchased an existing business.

What year was the business started?

Are you actively involved in the day-to-day management of your company?

- Yes
- No

How many people work for your business (excluding yourself)?

What percentage of the business do you own?

_____ %

What is your age?

What is your gender?

- Male
- Female

What is your education level?

- Some high school
 - High school diploma
 - Some college
 - College degree
 - Some graduate school
 - Master's degree
 - Doctoral or professional degree (e.g., PhD, JD, MD)
-

Since start-up, profits have grown by...

- under 20%
- 21-39%
- 40-59%
- 60-79%
- 80-99%
- 100% or more

Since start-up, sales have grown by...

- under 20%
- 21-39%
- 40-59%
- 60-79%
- 80-99%
- 100% or more

Since start-up, my personal income has grown by ...

- under 20%
 - 21-39%
 - 40-59%
 - 60-79%
 - 80-99%
 - 100% or more
-

Compared to 2001, last year (2002), profits grew by...

- under 5%
- 6-9%
- 10-14%
- 15-19%
- 20-24%
- 25% or more

Compared to 2001, last year (2002), sales grew by...

- under 5%
- 6-9%
- 10-14%
- 15-19%
- 20-24%
- 25% or more

Compared to 2001, last year (2002), my personal income grew by ...

- under 5%
 - 6-9%
 - 10-14%
 - 15-19%
 - 20-24%
 - 25% or more
-

How satisfied are you with the standard of living that your business provides for you?

- Very Dissatisfied
- Dissatisfied
- Neither
- Satisfied
- Very Satisfied

What is your overall level of personal satisfaction with self-employment?

- Very Dissatisfied
- Dissatisfied
- Neither
- Satisfied
- Very Satisfied

It is important to me that I am self-employed throughout my career, rather than work for someone else.

- Strongly Disagree
 - Disagree
 - Neither
 - Agree
 - Strongly Agree
-

PERSONAL STYLE INVENTORY (PSI)

The PSI personality inventory was used by special permission from the authors John Lounsbury and Lucy Gibson. Copyright 2000 by Resources Associates, 7044 Lake Bluff Court, Knoxville, TN 37920. Please contact the publisher for use or reproduction of the PSI.

If you wish to receive a one-page summary of the results of the study, please provide an email address below.

Email address:

Thank you for your participation. Please click the SEND ANSWERS button to submit your responses.

Vita

Kimberly S. Owens was born in Farmville, NC on June 22, 1965. She graduated from the University of North Carolina in Greensboro in 1987 with a Bachelor of Science in Business Administration. Kim worked in business for ten years before attending East Carolina University in Greenville, NC to study psychology. In 1998, she enrolled at the University of Tennessee to pursue the Doctorate of Philosophy in Psychology with a concentration in Industrial/Applied. While pursuing her degree, she was a teaching assistant for various undergraduate courses and a contract student researcher for Tennessee Valley Authority, Resource Associates, Inc., Impact Associates, Inc., and Park Studies, Inc. Kim received her Ph. D. in psychology in December 2003.