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Does personality of owners of micro enterprises matter for the relationship between startup capital and entrepreneurial success?

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Following the devastating effects of the recent global economic and financial crisis, both developing and developed countries are desperate to boost economic development and reduce unemployment rates. Consequently, entrepreneurship is being promoted. The resulting enterprises contribute to economic development and create employment opportunities. However, the contribution to economic development can only be realized if the enterprises themselves are growing. Whereas the contribution of both startup capital and personality to entrepreneurial success is well researched, the interaction between the two leading to entrepreneurial success has not been investigated. Using a sample of 384 owners of micro-enterprises from a cross-section of industry sectors in Uganda, The study examine the moderating effect of Big Five personality factors on the relationship between startup capital and entrepreneurial success. The study observes that startup capital, agreeableness and extraversion positively predict entrepreneurial success. Neuroticism, on the other hand, negatively predicts entrepreneurial success. Extraversion is the only factor in the Big Five model that moderates the relationship between startup capital and entrepreneurial success, highlighting the importance of interpersonal skills in microenterprises. The study also discusses implications for research, entrepreneurial education and support in relation to startup capital, specific personality factors.

Key words: Big Five personality factors, business, entrepreneurial success, micro entrepreneurs, startup capital.

INTRODUCTION

Entrepreneurship stimulates economic transformation (Chattopadhyay and Ghosh, 2002; Ireland and Webb, 2007; Skriabikova et al., 2014; Williams et al., 2013; Zahra, 2005). This is the motivation behind enormous efforts of developing nations and their development partners aimed at intensifying entrepreneurial activities. Whereas these efforts are yielding reasonable results, there are still significant challenges (Singer et al., 2015). For example, an assessment of success rates among self-employed entrepreneurs in developing countries

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found that only seven percent were successful (Gindling and Newhouse, 2014). Moreover, entrepreneurship can only be a vehicle for sustainable development if the enterprises are staying in operations for longer periods and growing.

The commonly cited reason for failure of startups is inadequate financing and failure to realize profits (Singer et al., 2015). Majority of entrepreneurs use their own small resources (Aldrich and Martinez, 2007; Orobia et al., 2011) or borrow funds to finance their entrepreneurial activities. The resources used by micro-entrepreneurs vary in nature including money, personal property, business knowledge and skills as well as experience. Some supplement these with small loans from banks, micro-finance institutions, relatives or friends (Carlton and Wien, 2001; Orobia et al., 2011). The source and amount of funds affect business in different ways including limiting inputs, competitiveness, profitability and the growth of business (Van Gelderen et al., 2006).

Some scholars and practitioners emphasize financial capital, knowledge and experience in managing business (Hsu, 2007; Merz et al., 2010). There is also over-whelming evidence that funding affects entrepreneurial success; however, psychological resources are also important resources for an entrepreneur at the startup phase and nurturing the enterprise to success (Chatterjee and Das, 2015; Nair, 2003). In essence, psychological resources are as important as finances. For example, an entrepreneurs' character influences entrepreneurial decisions and behaviors (Legohérel et al., 2004) which, in the long run, impact the success of an enterprise. This study particularly focuses on how the entrepreneur's character influences the relationship between startup capital and success. The study examines whether startup capital and personality predict entrepreneurial success and the moderation effect of personality on the startup capital – entrepreneurial success relationship. Understanding of these relationships can be essential for entrepreneurial support interventions.

Startup capital and entrepreneurial success

Startup capital comprises of resources which are necessary for establishing a business venture. Although financial resources are the most highlighted form of capital, other forms including human capital (Unger et al., 2011) and social capital (Lengyel, 2015) may be equally important for entrepreneurial startups. The financial approach particularly focuses on sources and size of startup funds (Van Gelderen et al., 2006). Using this approach, research shows that most entrepreneurial failings are attributed to inadequacy of funds (Fairlie and Robb, 2008; Gindling and Newhouse, 2014) and ineffective sources of funding (Indarti and Langenberg, 2004). Most nascent entrepreneurs who own small businesses start their ventures with small amounts of capital, usually obtained from personal savings or selling their assets (Aldrich and Martinez, 2007). Some complement these sources with loan funds or solely start businesses with loan funds (Carlton and Wien, 2001; Orobia et al., 2011; Robb and Robinson, 2014). This can be dangerous for nascent entrepreneurs (Robb and Robinson, 2014; Van Gelderen et al., 2006). As a result, majority of micro-enterprises are bound to fail given the inadequate startup capital challenge.

Studies have shown that many business startups become insolvent soon after the start (Manolova et al., 2007; Merz et al., 2010). Those who have access to funds must have the ability to use the resources appropriately. However, this ability is not solely dependent on the source and amount of funding, but other factors such as human capital. Human capital includes experience, knowledge and skills which correlate with growth and profitability as measures of success (Unger et al., 2011). Research shows that experience is important for success of a business because it enables one to learn from previous experiences, which improve judgment in entrepreneurial decision-making (Cassar, 2014). Experienced entrepreneurs are also likely to have better access to the required resources (Merz et al, 2010) and use the resources more appropriately. This also determines the likelihood of success in starting another venture (Hsu, 2007). The entrepreneur's ability to appropriately use startup capital may also be affected by the individual's character. The study therefore expects startup capital to be significantly correlated to entre-preneurial success.

H1. Startup capital will positively predict entrepreneurial success

Personality and entrepreneurial success

The theory of vocational personalities and work environments (Holland, 1997) is particularly relevant to the study of entrepreneurial personality. The theory posits that career choices are partly chosen in congruence with person-occupational environment fit (Barrick, 2005). This fit translates into performance and career satisfaction. Based on these facts, then it can be asserted that entrepreneurial personality exists (Rauch and Frese, 2007; Tokar et al., 1998; Zhao et al., 2010); and differentiates entrepreneurs from non-entrepreneurs. Entrepreneurial personality has been measured using such traits as locus of control, goal orientation, creativity, risk taking propensity, achievement orientation, marketing ability and competitive aggressiveness (Campos et al., 2015; Halim et al., 2012; Hansemark, 2003; Korunka et al., 2010; Littunen, 2000; Shane and Nicolaou, 2015; Utsch et al., 1999; Zaman, 2013).

Gradually, research is also linking traits such aspsychopathy and narcissism to entrepreneurial ability

(Kramer et al., 2011). These traits are considered to provide the motivational force to engage in entrepreneurial activities (Mount et al., 2005) and maintain entrepreneurial roles (Wille et al., 2010). Despite a range of these personality traits, entrepreneurial personality research is increasingly dominated by focus on the Big Five Personality Factors model.

The Big Five personality factors and entrepreneurial success

The Big Five factors model is considered the most complete and accurate description of personality (Holt et al., 2007; McCrae, 2011; Roccas et al., 2002). This model defines personality in five broad factors: extraversion, agreeableness, openness to experience, conscientiousness and neuroticism (Costa and McCrae, 1992). These factors are deemed appropriate for business research because they describe behaviors that tend to demonstrate entrepreneurial competence (Holt et al., 2007; Obschonka et al., 2015; Obschonka et al., 2012; Rauch and Frese, 2007; Zheng et al., 2010). A general description of entrepreneurial personality based on this model shows that entrepreneurs tend to be endowed with conscientiousness, extraversion, openness and low on neuroticism and agreeableness (Lounsbury et al., 2009).

Extraversion predicts success among occupations requiring social interactions (Barrick and Mount, 1991). This is because entrepreneurs need to spend more time interacting with different stakeholders (Shane and Nicolaou, 2013a). The entrepreneurial role is particularly appealing to extraverts because it requires domination, adventure, pleasure-seeking, ambitiousness, impulsiveness and self-confidence (Holland, 1997). Therefore, extraversion is related to both entrepreneurial intentions and success (Fine et al., 2012; Wang et al., 2015; Zarafshani and Rajabi, 2011). Risk taking behavior of extraverts increases entrepreneurial optimism (Nicholson et al., 2005) and self-efficacy (Hartman and Betz, 2007; Rauch and Frese, 2007; Wang et al., 2015), which may enhance entrepreneurial intentions and success. Extraversion also boosts entrepreneurial success via the ability to succeed in business leadership roles (Chan et al., 2015; Cogliser et al., 2012; Hartman and Betz, 2007).

Business leadership requires entrepreneurs to be active, good communicators, upbeat, negotiators, marketers and network builders.

These tasks are congruent to the extraversion trait profile. However, there is no evidence whether these attributes of extraverted individuals enable them to use startup resources appropriately for the success of their enterprises. The study expects extraversion to positively correlate with entrepreneurial success and to moderate the relationship between startup capital and entrepreneurial success.

H2a. Extraversion will positively predict entrepreneurial success

H2b. Extraversion will positively moderate the startup capital - entrepreneurial success relationship.

Neuroticism is one of those traits that can be labeled as a 'dark' personality trait. It is a tendency towards emotional instability involving experiencing fear, sadness, anger and hostility (Barrick and Mount, 1991; Holt et al., 2007; Reed et al., 2004; Zhao et al., 2010). Behavioral tendencies of neurotic individuals such as being sensitive to negative feedback, distress from small failures and anxious responses to difficult situations (Barrick and Mount, 1991; Reed et al., 2004; Zhao et al., 2010) are indicative of a negative relationship between neuroticism and entrepreneurial success. On the other hand, entrepreneurship requires ability to cope with adversity and taking personal responsibility (Shane and Nicolaou, 2013b; Zhao et al., 2010). Neuroticism also tends to reduce risk-taking propensity (Sinha and Srivastava, 2013), thus reducing the likelihood of persisting in entrepreneurial roles (Patel and Thatcher, 2014). Moreover, neurotic individuals are likely to have lesser social capital arising from their lack the social competence (Barrick, 2005; Cogliser et al., 2012; Patel and Thatcher, 2014). This makes them less successful in entrepreneurial activities that require social skills. However, no research has been carried out to establish whether deficiencies of neuroticism result into poor management of business startup resources and lead to entrepreneurial failure.

H3a. Neuroticism will negatively predict entrepreneurial success.

H3b. Neuroticism will negatively moderate the startup capital – entrepreneurial success relationship.

Openness to experience involves purposeful seeking and appreciation of new experience (Reed et al., 2004). Hence, individuals endowed with openness to experience tend to be open-minded and tolerate a range of values (Lee et al., 2000; Reed et al., 2004; Roccas et al., 2002; Zhao et al., 2010). These characteristics can help entrepreneurs to appreciate customer needs and learn to deal with competition and market trends. Openness to experience is associated with self-direction and stimulation values (Gorgievski et al., 2011) and intellectual curiosity (Zhao et al., 2010), which are necessary for entry, persistence as well as succeeding in entrepreneurial roles. However, individuals scoring high on openness tend to be unconventional entrepreneurs (Holt et al., 2007). They are more likely to question existing ways of doing business, which, in addition to their intellectual capacity, results into identification of new opportunities. This may justify the correlation that research has found to exist between openness to experience and financial success (Shane and Nicolaou, 2013b). This suggests that entrepreneurs with high level of openness are more likely to appropriately use startup

resources for the success of their businesses. Unfortunately, there is no evidence to prove whether this is true.

H4a. Openness to experience will positively predict entrepreneurial success.
H4b. Openness to experience will positively moderate the relationship between startup capital and entrepreneurial success.

Agreeableness is the personality factor concerned with interpersonal behavior and attitude (Lee et al., 2000; Zhao et al., 2010). Research has associated high level of agreeableness with inability to succeed in business situations (Patel and Thatcher, 2014; Schröder et al., 2011; Shane and Nicolaou, 2013b). The entrepreneurial incompetence of agreeable individuals is attributed to their low self-interest, low achievement orientation and low competitiveness (Roccas et al., 2002) and possibilities of conflicts in business (Zhao et al., 2010). Their altruistic tendencies also makes agreeable individuals incapable of negotiating challenging deals and influencing others (Schröder et al., 2011) to attain business goals. However, agreeable entrepreneurs can command respect, trust and cooperation (Cogliser et al., 2012). Consequently, agreeableness may be a success factor particularly in service-oriented businesses (Zhao et al., 2010).

Moreover, entrepreneurs with high agreeableness are more likely to have higher social capital (Patel and Thatcher, 2014), which is an important factor for owners of micro-enterprises who have less opportunities to obtain funding from institutions. But, little evidence is available about the effect of their altruistic behaviors on their ability to use startup resources to achieve the desired business outcomes.

H5a. Agreeableness will positively predict entrepreneurial success.
H5b. Agreeableness will positively moderate the startup capital - entrepreneurial success relationship.

Conscientiousness is the disposition to follow rules and exert effort to achieve goals (Barrick, 2005; Reed et al., 2004). This definition summarizes several positive attributes including personal competence, achievement-striving, self-discipline, confidence, and dependability (Costa and McCrae, 1992; Holt et al., 2007; Mount et al., 2005; Roccas et al., 2002; Watson & Newby, 2005). These attributes can foster achievement values or conformity values (Roccas et al., 2002). The former is more relevant for entrepreneurial roles, given that the need for achievement tends to increase entrepreneurial competence and performance. Conscientious individuals have leadership abilities (Cogliser et al., 2012);therefore, they are capable of managing businesses. Conscientiousness is also related to high level of psychological capital (Luthans et al., 2007). This form of capital can increase an entrepreneur's effort and persistence towards achieving business goals. Again, little is known about the contribution of conscientiousness towards an entrepreneur's ability to appropriately use startup funds to achieve the desired business outcomes.

H6a. Conscientiousness will positively predict entrepreneurial success.
H6b. Conscientiousness will positively moderate the startup capital - entrepreneurial success relationship.

METHODOLOGY

Participants and procedures

The study used a convenient sample comprising of 384 owners of microenterprises in major trading hubs (Kampala city and Wakiso district) in Uganda. Most participants were male youths (52%) with an average age 31; they had a relatively high level of education, bachelor or higher degrees (35.8%). Questionnaires were administered only to owners of micro-enterprises who were able to read, write and understand English. Participants were drawn from a range of industries including whole sale and retail trade (52.6%), financial and insurance intermediaries (12.8%), hotel and food services (8.9), manufacturing (6.1%) and health (5.5%). The others were engaged in construction, agribusiness, communication, quarrying, and education. Using Westhead and Wright (1998) classification, 67.8% of the participants were novice, 13.3% were habitual while 18.8% were portfolio entrepreneurs.

Measures

Personality

The Big Five Inventory (BFI) developed by John and Srivastava (1999) was adopted. The inventory consists of 44 items measuring the big five personality dimensions namely extraversion – 8 items, agreeableness – 9 items, conscientiousness – 9 items, neuroticism – 8 items, and openness – 10 items. The inventory has an overall reliability coefficient α of .83 and standardized validity coefficients of .92. Each factor also has high reliability and validity coefficients (John et al., 2008). In the present study, the BFI had a high overall Cronbach's α of .84.

Startup capital

The items for measuring startup capital assessed the different forms of capital often used by owners of micro enterprises as indicated in literature. The questionnaire consisted of nine items focusing on financial, material, knowledge and experience capital. The questionnaire had an overall reliability coefficient α of .72. It included items such as 'How much money (in Uganda Shillings) did you use to start this business' with response options ranging from1 - <500.000 to 6 - >50.000.000); 'Before starting your business, did you have any experience in handling/ managing businesses' and the response options ranged from 1 - no experience at all to 6 - experience of more than 10 years.

Entrepreneurial success

The entrepreneurial success instrument consisted of 16 items items measured on a five-point Likert format scale (1-strongly disagree to 5-strongly agree). The questionnaire had a reliability

Table 1. Results of moderated multiple regression analysis†.

Variables	Entrepreneurial success		
	Model 1	Model 2	Model 3
Independent variable			
Startup capital	3.14***	2.52**	2.72***
Moderator variables (personality factors)			
Extraversion	-	3.10***	2.98***
Agreeableness	-	6.73****	6.72****
Conscientiousness	-	0.20	0.08
Neuroticism	-	-1.28	-.98
Openness to experience	-	-1.69*	-1.72*
Interaction effect			
Startup capital * extraversion	-	-	1.74*
Startup capital * agreeableness	-	-	-.48
Startup capital * conscientiousness	-	-	.79
Startup capital * neuroticism	-	-	.15
Startup capital * openness to experience	-	-	-.35
R	0.16	0.52	0.53
R^2	0.03	0.27	0.28
Adjusted R^2	0.02	0.26	0.26
ΔR^2	-	0.24	0.01
F	9.84***	23.12****	12.98****

n = 384; * P <10; ** P < .05; *** P < .01; **** P < .001; † Standardized regression weights.

coefficient α of .86. The instrument was purposively designed to measure four aspects of success that literature posits to be relevant to micro-entrepreneurs: financial rewards (profitability and liquidity of the enterprise), survival time, owner's satisfaction and generated employment. For example, 'I am not satisfied with the profitability of my business.'

Data analysis

A Moderated Multiple Regression (MMR) analysis was applied to test for both prediction and moderation effects. The first model of the regression tested whether startup capital predicts entrepreneurial success. The second model tests for whether the five personality factors predict entrepreneurial success. The third model involves the independent and moderator variables to test for the interaction effect of startup capital and the five personality factors on entrepreneurial success. Centering was employed to reduce on multicollinearity. In addition, moderation slopes were constructed to determine the size of the effect of each personality factor on the relationship between startup capital and entrepreneurial success.

FINDINGS

The study focused on examining the moderation effect of personality on startup capital, entrepreneurial success relationship, and whether startup and personality predict entrepreneurial success. Results of the regression analysis (Table 1) show that although startup capital is a significant predictor of entrepreneurial success (t = 3.14, p <.01), it only contributed two percent of entrepreneurial success (Adjusted R^2 = .02). In Model 2, moderator variables were added to the regression analysis. Agreeableness (t = 6.73, p < .001) was the best predictor,while extraversion(t = 3.10, p < .01) also positively and significantly predicted entrepreneurial success. On the other hand, openness to experience (t = -1.69, p < .10) significantly but negatively predicted entrepreneurial success. Conscientiousness and neuroticism were non-significant predictors of entrepreneurial success, yet neuroticism had a negative effect on entrepreneurial success. The model reveals that startup capital and the Big Five Personality factors combined predict 26% of entrepreneurial success (*F* = 23.12, p < .001, Adjusted R^2 = .26).

Model 3 of the multiple regression, tests for the moderation effect of personality factors on the startup capital – entrepreneurial success relationship. Interaction variables were derived for each personality factor (personality factor multiplied by startup capital). Results show that only extraversion had a significant moderation taken together had a negligible moderation effect on the relationship (t = 1.74, p < .10). However, the model is significant at *F* = 12.98, p < .001. Nonetheless, with

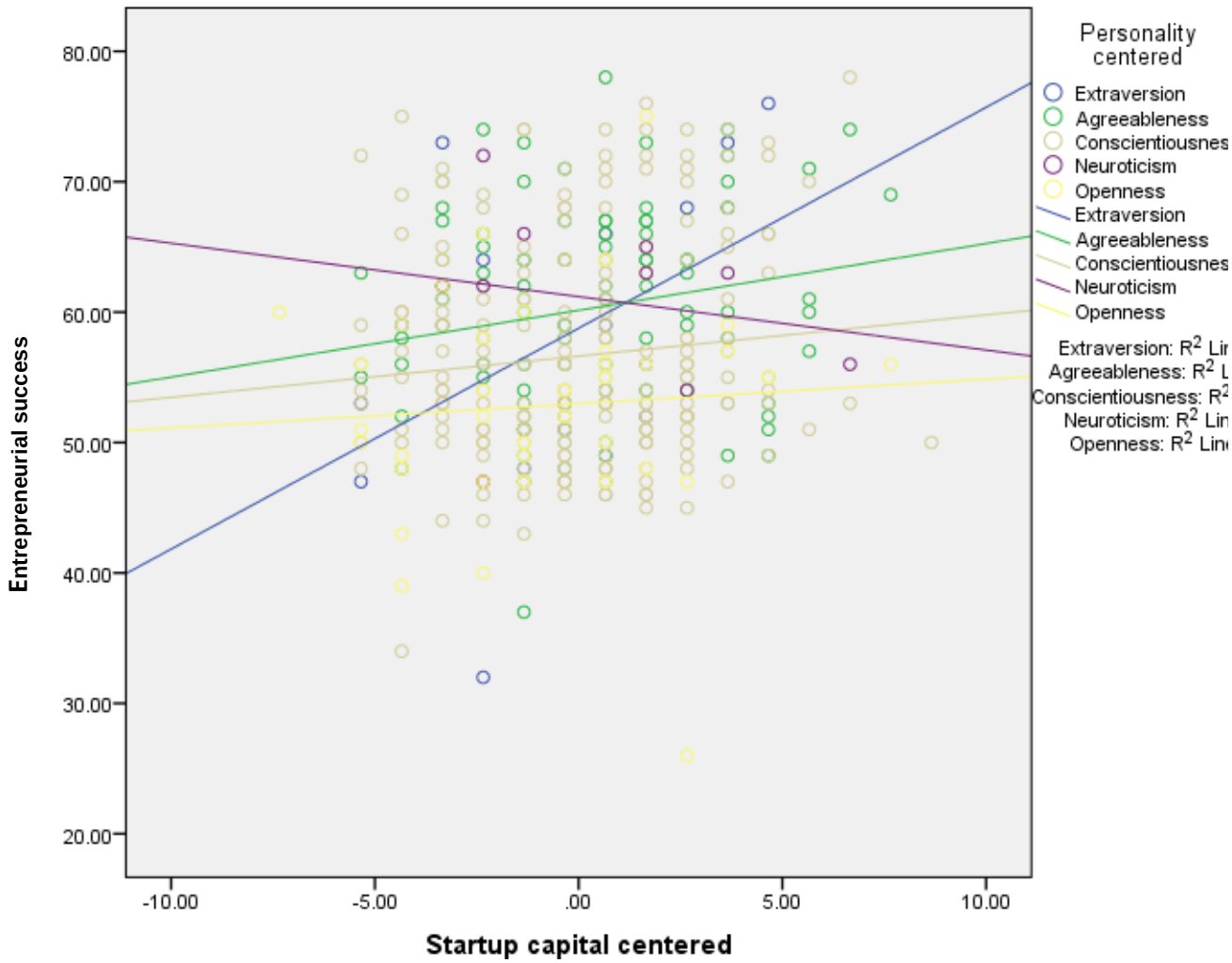

Figure 1. The interaction of startup capital and personality on entrepreneurial success.

Adjusted R^2remaining the same (.26) and R^2slightly changing (ΔR^2 = .01), the Big Five personality factors effect on the startup capital – entrepreneurial success relationship between startup capital and entrepreneurial success.

The relationship between startup capital and entrepreneurial success for each personality factor is demonstrated in the moderation slopes (Figure 1). The slopes were generated using statistical package for the social sciences (SPSS), and interpreted using the procedure described by Hayes (2013). The magnitude of the moderation effect of extraversion on the relationship between startup capital and entrepreneurial success is further reflected in its superior R^2 linear coefficient of .200. This implies that the correlation between startup capital and entrepreneurial success is .447 for entrepreneurs who have extraversion as their predominant personality trait. Openness to experience has the weakest moderation effect with R^2 linear coefficient of .005, indicating a correlation of .071 between startup capital and entrepreneurial success for entrepreneurs whose predominant personality trait is openness.

DISCUSSION

The results of the current study reaffirm Nair (2003) proposition that money and mind are important resources for successful business startup. Adequate resources at the startup phase, when effectively utilized, are precedence for entrepreneurial success. Van Gelderen et al. (2006) posit that money is often portrayed as the most important entrepreneurial input against which success is built and measured (whether there is a return on this financial investment). Entrepreneurs who start with higher amounts of money are more likely to realize profits than those who start with fewer inadequate funds. However, the amount of start-up funds does not necessarily

guarantee the long-term survival of the enterprise. The ability to use the available funds appropriately may in fact be more important, this ability is a function of the entrepreneur's human capital (Hsu, 2007). Therefore, all forms of capital contribute towards specific aspects of success (Appendix

1: correlation between components of startup capital and entrepreneurial success). An important form of startup capital for starting micro-business in developing countries is "material capital". Due to lack of access to adequate funds, micro entrepreneurs in developing countries use their personal properties to start business ventures (Siemens, 2010). Personal properties such as land, houses, compounds, cars, and phones are being used as important business inputs. Such material inputs relieve them of costs such as rent which would otherwise affect profitability and sustainability of small business ventures.

This study confirms that the Big Five personality model is relevant for predicting entrepreneurial outcomes. Past research has posited that the altruistic nature of agreeable individuals makes them less suited for entrepreneurial roles (Patel and Thatcher, 2014; Schröder et al., 2011; Shane and Nicolaou, 2013b; Zhao and Seibert, 2006). However, in the present study, agreeableness and extraversion were the most significant predictors of entrepreneurial success. High levels of agreeableness may be problematic, particularly in large businesses. Previous studies have suggested that an entrepreneur needs to be socially tough. This guards them against exploitative stakeholders. However, owners of micro enterprises in developing economies may need to be good-nurtured and trustworthy entrepreneurs. Such interpersonal skills are necessary in attracting and retaining more customers, earn respect of their employees and other business stakeholders which in the long run can translate into success. Customers of micro-entrepreneurs tend to be low income populations who value their relations with the sellers.

The finding that extraversion significantly predicts entrepreneurial success among owners of micro-enterprises is less surprising. Extraversion tendencies are relevant to entrepreneurial behaviors and outcomes (Fine et al., 2012; Shane and Eckhardt, 2003; Shane and Nicolaou, 2013b; Zhao et al., 2010). Extraverted individuals are believed to possess high entrepreneurial self-efficacy (Hartman and Betz, 2007), risk-taking propensity (Rauch and Frese, 2007), and social skills (Cogliser et al., 2012; Mount, Barrick, & Ryan, 2003). These attributes are essential for business leadership, decision making and optimum resource utilization which may lead to good entrepreneurial performance.

Conscientiousness has received more attention in entrepreneurship research than the other four factors of the Big Five Personality model; it has consistently been found to be vital for entrepreneurial performance (Schröder et al., 2011; Zhao et al., 2010; Zheng et al., 2010). Although conscientiousness was not a significant predictor of entrepreneurial success in the present study, it positively correlated with financial performance. This still underlines the essentiality of conscientiousness in entrepreneurial roles. On the other hand, the hypothesis that neuroticism negatively predicts entrepreneurial success was supported. Hence, higher levels of neurotic tendencies have a significant negative effect on entrepreneurial outcomes. This confirms that the behavioral inadequacies involved in neuroticism such as anxiety, low self-esteem, fear of failure and poor response to negative feedback (Patel and Thatcher, 2014; Zhao et al., 2010) make individuals endowed with neuroticism less suited for entrepreneurial roles.

The main goal of the present study was to examine the interactive effects of the Big Five personality factors and startup capital on entrepreneurial success among owners of micro-enterprises. The study findings show that only extraversion has significant moderating effect on the startup capital – entrepreneurial success relationship. The moderating effects of the other four factors were weak; moreover, negative for agreeableness and openness to experience. An important observation is that conscientiousness does not significantly predict entrepreneurial success for micro-enterprise owners; neither does it moderate the relationship between startup capital and entrepreneurial success. Yet entrepreneurship psychology literature identifies conscientious as the most relevant trait for most entrepreneurial roles. The ideal attributes of conscientious individuals that enhance their likelihood of succeeding in entrepreneurship (Lounsbury et al., 2009; Patel and Thatcher, 2014; Schröder et al., 2011) do not actually tell us much about their ability to manage business resources. Therefore, this is an area for further research.

With regard to entrepreneurs who are endowed with agreeableness, their gentleness and softness can affect their ability to manage business resources, which negatively affects the relationship between startup capital and entrepreneurial success. Interestingly, although neuroticism is negatively related to entrepreneurial success, its moderation effect on startup capital – entrepreneurial success relationship was stronger than for conscientiousness, agreeableness and openness to experience. This should not be surprising because individuals who are high on neuroticism are self-conscious and high self-monitors (Ang et al., 2006). High levels of consciousness and self-monitoring are important in financial management, financial discipline and handling business resources.

The significant moderation effect of extraversion on the startup capital – entrepreneurial success relationship points to an important role it plays in the management of startup capital among owners of micro-enterprises. The assertive, social, leadership and risk-taking abilities of extraverts are essential for mobilizing resources, making good investment decisions, business related negotiations, and appropriation of business capital. Extraverted individuals are also active, enthusiastic and ambitious

(Costa and McCrae, 1992), attributes that are significant to motivate efforts for achieving business goals. Starting and managing business is a stressful process, hence only those entrepreneurs who are able to cope succeed. Research shows that extraverted individuals have good coping abilities (Carver and Connor-Smith, 2010; Connor-Smith and Flachsbart, 2007); therefore, they can successfully cope with challenges in startup process and increase likelihood of effective utilization of business resources. Extraversion is also correlated to performance in financial management services (Salgado and Rumbo, 1997). Hence extraverted entrepreneurs can provide sufficient financial control and management, which is important for entrepreneurial success.

Limitations

The study has at least two limitations. First, the design of this study was cross-sectional, and focused on owners of micro-enterprises in major trading centers. This poses a few challenges to the generalizability of the findings. The sample used is likely not to be fully representative of the population of micro-entrepreneurs across all developing countries. As highlighted by Bowen and Wiersema (1999), cross-sectional studies tend to underscore the variability of parameters over time and across contexts.

This may result into inflation or underestimation of relationships between variables (Lindell and Whitney, 2001).

Therefore, precautions should be taken when applying these results to different countries and in smaller trading centers given the high variability of business environments.

Secondly, the scales used in measuring variables necessitated self-rating by respondents. It is suspected that some respondents over-emphasized their positive attributes particularly on measures of business success. Consequently, the study cannot rule out the possibility of inflated association between the variables as sometimes it is the case with self-reports (Podsakoff et al., 2003). Relatedly, there is a longstanding debate among entrepreneurship scholars on what constitutes business success. Whereas majority of scholars are inclined to measure in terms of profitability and enterprise growth, owners of micro-enterprises establish businesses for quite different reasons; for example, generation of income for family survival or creating a job for oneself. Such dimensions were considered in assessment of success. Therefore, it is important that in applying these results, caution should be taken on the usage of the term “entrepreneurial success” as used in this study.

Practical implications and directions for future research

One of the practical implications of this research is that it might be helpful to governments of developing countries and their development partners in their efforts to promote entrepreneurship. In developing nations, entrepreneurship is being promoted as a development tool and to reduce unemployment, through ensuring accessibility to micro-credit facilities for startup capital, entrepreneurship training, and setting up entrepreneurship support centers. With the knowledge of the relationships between the different entrepreneurial inputs and outputs, managers of these entrepreneurial promotion programs can now be able to focus on those issues that matter most. Programs aimed at helping young entrepreneurs adopt behaviors that increase the likelihood of business success can be pivotal in improving the entrepreneurial success.

The role of psychological testing and behavioral interventions in micro-businesses is largely ignored in developing countries. Services often tend to include guidance to entrepreneurs on accessing capital funds and business related trainings. Thus, the contribution of entrepreneurs’ strengths and weaknesses embedded in personality and behavior is not acknowledged and utilized. Therefore, entrepreneurial support programs do not yield the best possible impact. The study findings suggest that it is imperative to incorporate psychological testing and support in the promotion of entrepreneurial programs. However, it is necessary not to use psychological testing as an excluding criteria, but rather as a tool for assessing the kind of support required by individual entrepreneurs.

The influence of personality on entrepreneurial success as well as its interaction effects with startup capital have implications for career counseling, guidance and training. Entrepreneurship is a challenging vocational role that involves difficult tasks and situations, yet entrepreneurs make important decisions on a daily basis. An individual’s personality attributes influence the entrepreneurial decisions and behaviors, which consequently affects the overall health of the enterprise. The results of this study suggest that career counselors and trainers should emphasize behaviors that increase entrepreneurs’ behavioral tendencies towards high extraversion, agreeableness and conscientiousness. This further highlights the importance of entrepreneurial personality testing as an essential step in the processes of entrepreneurial guidance, counseling and mentoring.

Conclusion

Although the study provides insightful findings on the role of personality in the entrepreneurial process, a number of research implications arise. There are no globally agreed indicators of entrepreneurial success, and future research should focus on developing widely acceptable inventories for measuring entrepreneurial success. This challenge is a similar to measuring startup capital. There is a need to develop measuring instruments that measure all aspects of startup capital, not just over-emphasizing the financial

aspect; this is especially important for research on micro-entrepreneurs. There were some surprising results, some of which contradict previous research findings. These require confirmatory studies because they apply to different entrepreneurial contexts. More research is particularly required to examine the moderation effect of conscientiousness and neuroticism on the relationship between startup capital and entrepreneurial success.

Conflict of interests

The authors have not declared any conflict of interests.

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Appendix 1. Correlation results of startup capital and entrepreneurial success.

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
Startup capital	12.34	2.82	1.00	-	-	-	-	-	-	-	-	-
Startup funds	3.20	1.47	0.65**	1.00	-	-	-	-	-	-	-	-
Material capital	3.84	1.17	0.09	0.12*	1.00	-	-	-	-	-	-	-
Experiential capital	2.40	1.30	0.32**	0.36**	0.11*	1.00	-	-	-	-	-	-
Knowledge	3.20	1.47	0.65**	1.00**	0.12*	0.36**	1.00	-	-	-	-	-
Entrepreneurial success	60.82	9.18	0.15**	0.16**	0.17**	0.10	0.16**	1.00	-	-	-	-
Financial rewards	20.80	4.08	0.10*	0.09	0.11*	0.07	0.09	0.84**	1.00	-	-	-
Owners' satisfaction	29.58	4.91	0.17**	0.16**	0.17**	0.08	0.16**	0.90**	0.60**	1.00	-	-
Survival time	3.46	1.15	-.01	0.07	-.01	0.05	0.07	0.08	-.15**	-.01	1.00	-
Generated employment	3.45	1.31	0.09	0.15**	0.06	0.13**	0.15**	0.46**	0.26**	0.27**	0.18**	1.00

** $P < 0.01$, * $P < 0.05$.