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Title	Personality and entrepreneurial, professional and leadership motivations
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Personality and Entrepreneurial, Professional and Leadership Motivations

Abstract

Using a new framework that includes entrepreneurship, professionalism and professionalism as different dimensions of subjective career space, we investigated whether different kinds of people are motivated towards entrepreneurial as compared to organizational leadership or specialized professional work-roles. Correlations from two samples of 396 and 272 undergraduates indicate personality traits have more similar relationships with both entrepreneurial and leadership than with professional work-role motivations. Specifically, while the Big Five personality traits, low risk aversion and proactive personality correlate with entrepreneurial and leadership motivations, high risk aversion correlate with the motivation for more vocationally-based, professional work. Hierarchical multiple regression analyses indicate that whether proactive personality and risk aversion add to the prediction of entrepreneurial, professional and leadership motivations beyond the Big Five depends on the Big Five measure used and sampling differences. Overall, this study fills a gap in the comparative appreciation of the role of traits in leadership and entrepreneurial emergence, which has resulted from the historic separation of both research fields, and has implications for the entrepreneurial and/or leadership development of professionals in organizations.

Keywords: Big Five; Proactive personality; Risk aversion, Entrepreneurial motivation, Professional motivation, Leadership motivation; Careers; Work-roles

Personality and Entrepreneurial, Professional and Leadership Motivations

Research on the trait-motivational basis for various work-roles (e.g., McClelland, 1961; Miner, 1976) has advanced with new constructs and measures like Chan and Drasgow's (2001) "motivation to lead" and more recently, Chan et al.'s (2012) Entrepreneurial, Professional and Leadership (EPL) career framework. Using these new operationalizations, we examine whether different kinds of people have a higher proclivity towards entrepreneurial as compared to organizational leadership or specialized professional work-roles. Although meta-analytic studies have shown correlations between the Big Five and leadership (e.g., Judge et al., 2002) and between the Big Five and entrepreneurship (e.g., Zhao & Seibert, 2006; Brandstätter, 2011), the historic separation of entrepreneurship and leadership research fields (cf. Cogliser & Brigham, 2004; Vecchio, 2003) in terms of samples, measures, and methods of data collection has made the integration of research findings difficult if not impossible. The study of professionals and professionalism has remained as a topic of sociological study (e.g., Hall, 1968) with some organizational extensions (e.g., Kerr, Von Glinow & Schriesheim, 1977), so hardly any studies have attempted to establish any trait or personality linkages as a possible basis for understanding the motivational antecedents for highly-specialized, professional work. Although Brandstätter claimed that the "influence of personality traits may be stronger with entrepreneurs than with most other *professions*" (p. 229; Brandstätter, 2011; italics added), no actual data had been presented to support this proposition.

It therefore remains unclear whether entrepreneurially and leadership-motivated individuals are more similar in their personality than they are different, and, what crucial personality difference lies between them and those motivated to pursue more vocationally-specialized, professional work. So long as trait research is conducted separately within respective

fields, we will lack an appreciation of the relative extent and nature of trait influence on each of them. Within-field research also prevents us from considering how individuals may have motivations across multiple work-role or career domains (e.g., to be a professional-leader or entrepreneurial-leader). Some traits such as risk aversion seem exclusively studied in relation to one of the fields (entrepreneurship), but one could also make a case to link it to leadership and even professional work-roles.

EPL Framework of Careers

To reconcile the abovementioned limitations, we use the person-centered career framework by Chan et al. (2012) which sees entrepreneurship, professionalism and leadership not as distinct domains, but as key dimensions of subjective “career space” representing how people think about their careers in an increasingly “boundaryless” career context (Arthur, 1994). This framework sees individuals as having motivations and capacities across multiple career/work-role domains (e.g., I want to be a professional-leader or entrepreneurial professional or entrepreneurial leader) rather than limiting them to one particular career track. As such, the framework more closely reflects the realities of today’s work environments where specialists (e.g., doctors, engineers, accountants) are increasingly asked to handle managerial and commercial challenges that often lie outside of their functional training.

Theoretically, the EPL framework has its roots in an earlier macro-level career models proposed by Kanter (1989) and Schein (1978). Chan et al. (2012) operationalized motivations for entrepreneurial, professional and leadership by incorporating Chan & Drasgow’s (2001) measure of motivation to lead (MTL) which has been shown to have antecedents in the Big Five personality factors and which predict leadership emergence over time (see Chan & Drasgow, 2001; Luria & Berson, 2013), and adapting the MTL scale to measure entrepreneurial and

professional motivations. In a large empirical study, they provided evidence empirical evidence to validate their new career motivation framework and measures.

Present Study: Aim & Hypotheses

This study examines the relationships between various kinds of personality traits with entrepreneurial, professional and leadership motivations of university students who are likely to exhibit the most variation in their career aspirations as they actively explore their career options across a broad number of industries and work forms. Specifically, we report on the relationships between measures of “Big Five” personality factors, proactive personality (Bateman & Crant, 1993; Crant, 1995, 1996), and risk aversion (Cable & Judge, 1994), with measures of entrepreneurial, professional and leadership motivation developed by Chan et al. (2012). In doing so, we attempt to fill the research gap in understanding the role of similar or different traits in leadership and entrepreneurial emergence. As we will discuss later, this research also has implications for entrepreneurial and leadership development of professionals. While we hardly have any past research to propose specific relationships between traits and professional motivations, we make some hypotheses regarding the relationships between traits and motivations for professionalism, leadership and entrepreneurship as follows.

Big Five personality factors. The Big Five (Goldberg, 1990) are seen as the most comprehensive framework for personality and has, therefore, been a typical starting point for personality research on leadership and entrepreneurship. In separate meta-analyses, Judge and colleagues (2002) reported a multiple correlation of .53 between the Big Five and leadership emergence, while Zhao, Seibert and Lumpkin (2010) reported a multiple correlation of .36 between the Big Five and entrepreneurial intentions. While the corresponding estimates were consistently smaller for entrepreneurship than for leadership across extraversion, openness,

emotional stability and conscientiousness, the differences in criterion measures (emergence vs. intentions) preclude making definitive statements about the relative strengths of these dispositional influences. We know of no research that examined traits in relation to professional motivations, although we anticipate that one's desire to specialize in a particular subject area is more likely driven by vocational interests (Holland, 1997) than personality. On these bases, we hypothesized:

Hypothesis 1: Big Five personality factors will account for more variance in entrepreneurial and leadership motivations than with professional motivations.

Proactive personality. Bateman and Crant (1993) introduced the proactive personality construct to describe relatively stable individual differences in the tendency to identify opportunities, to take initiative, and to persevere in efforts to change one's environment in a manner that is "unconstrained by situational forces". Empirically, the construct was linked to entrepreneurial intentions (Crant, 1996) and to transformational and charismatic leadership ratings (Crant & Bateman, 2000). However, while proactive personality is clearly featured in reviews of entrepreneurial traits, it hardly appears in leadership-trait reviews. It is not clear if proactive personality is more uniquely a feature of entrepreneurial than leadership motivation, or, if it is related to having stronger career motivations – irrespective of whether it is for leadership, professional or entrepreneurial work. As part of our aim to study the comparative extent of trait influence across entrepreneurial, professional and leadership work-role motivations, we hypothesize these alternatives:

Hypothesis 2a: Proactive personality is positively correlated with entrepreneurial and leadership motivations but not with professional motivations.

Hypothesis 2b: Proactive personality is positively correlated with entrepreneurial, professional and leadership motivations.

Risk aversion. Beyond the Big Five factors, risk-related traits are probably most studied in relation to entrepreneurship (e.g., Stewart & Roth, 2001); Zhao et al.'s (2010) recent meta-analysis featured relationships between risk propensity with entrepreneurial intentions "as a separate dimension of personality" beyond the Big Five factors. In contrast, risk-related traits are much less the focus in the trait approach to leadership today despite claims about risk-taking or propensity as a leadership-related trait. Judge et al.'s (2002) meta-analysis of the Big Five to leadership links did not mention risk-related traits, while a recent meta-analytic study and integration of trait and behavioral theories of leadership by DeRue, Nahrgang, Wellman and Humphrey's (2011) discussed risk-taking as part of the task and change-related *behaviors* of leaders. This lack of specific focus on risk and leadership may be due to the dominance of the Big Five model in explaining the interpersonal as opposed to task and change aspects of leadership. Are risk-related traits incrementally and thus more uniquely related to entrepreneurship and leadership beyond the broad Big Five of personality? It is possible that individual differences in risk-related tendencies may be subsumed within all of the Big Five personality factors (e.g., Chauvin, Hermand, & Mullet, 2007), so such traits do not add to the prediction of leadership or entrepreneurial motivations beyond the Big Five factors. Without any prior research on risk and professional motivation, we considered Chan et al.'s (2012) finding of a negative correlation between professional and entrepreneurial motivations and our observation that *professionally*-motivated participants in our early pilot-study interviews expressed much aversion towards the perceived risks in entrepreneurial work, and hypothesized:

Hypothesis 3: Risk aversion is negatively correlated with entrepreneurial and leadership motivations but positively correlated with professional motivations.

METHOD

Participants and Procedures

This paper includes data from two research efforts conducted one year apart. We administered personality measures alongside entrepreneurship, professionalism, and leadership motivation scales to university students in a large comprehensive university in Singapore. Students were recruited from a wide range of disciplines including engineering, science, business and humanities. The first sample had 396 participants (mean age 22.6 years, 62% male) and included Goldberg's (1992) Big Five scale, Cable and Judge's (1994) risk aversion scale and Crant's (1995) proactive personality scale. The second sample had 272 students (mean age: 21.9 years, 53% male) but used an alternative measure of Big Five developed by Chernyshenko, Stark, and Drasgow (2010). Both surveys were conducted with Institutional Review Board approval. Participants were compensated S\$10 for completing the questionnaires.

Measures

EPL motivations. These were measured using Chan et al.'s (2012) 27-item EPL motivation scale. Participants indicated on a 5-point scale (*strongly disagree* to *strongly agree*) whether they wanted to be an entrepreneur, a professional, or a leader for affective/identity, calculative/non-calculative, or social-normative reasons. Sample items were: "I feel that I have a duty to lead others if I am asked" (leadership motivation); "Ever since I was a kid, I have dreamed about opening my own business" (entrepreneurial motivation); "I like to be highly specialized and experienced in a specific area of expertise" (professional motivation). Cronbach alpha reliability

coefficients for all three scales were generally acceptable and similar to that reported by Chan et al. (2012) ranging from .66 to .81 in both samples.

Big Five. In the first survey, the Big Five were measured using 35 bipolar adjective markers from Goldberg's (1992) scale. Participants indicated how each pair of adjectives described them on a 1 to 9-point scale. An example of an adjective pair from the Extraversion dimension would be "silent-talkative." In the second study, the Big Five were measured using 120 items selected from the Tailored Adaptive Personality Assessment System (TAPAS; Chernyshenko et al., 2010) as an alternative way of measuring the Big Five for better generalizability. Unlike Goldberg's (1992) bipolar-adjective items, the TAPAS used more conventional 5-point Likert statements organized around 3 to 4 narrow-order traits found to be most closely associated with each Big Five personality dimension (see also DeYoung, Quilty, & Peterson, 2007). Cronbach alpha reliability coefficients for all Big Five scales were between .81 to .89 in both samples.

Proactive personality. Proactive personality was measured using Crant's (1995) 10-item scale. Participants indicated on a 5-point scale whether they agreed with statements like "If I see something I don't like, I fix it" and "I excel at identifying opportunities". Cronbach alpha reliability coefficient was .76 and .81 for the samples.

Risk aversion. Risk aversion was measured using 6-items from Cable and Judge (1994). Participants indicated on a 5-point scale whether they agreed with statements like "I am a cautious person who generally avoids risks". Cronbach alpha reliability was good at .80 and .76 for the samples.

Statistical Analyses

Scale means, standard deviations, Cronbach alpha reliabilities, and intercorrelations were first computed and summarized in Table 1. As the data were based on cross-sectional, self-report surveys, we checked the correlation matrices and noted a mix of positive, negative and non-significant-near-zero coefficients, indicating that common method bias was not a significant concern (Spector, 2006). Confirmatory factor analyses were then conducted to establish both unidimensionality and discriminant validity of all scales included the study. Next, inter-scale correlations were examined to check that the relationships between established constructs were consistent in their direction and magnitude with past studies. Similar to Chan et al. (2012), entrepreneurial and professional motivations were uncorrelated in both samples, while leadership and entrepreneurial motivations have moderately positive correlations ($r = .17$ in survey 1 and $r = .24$ in survey 2) indicating that similar kinds of students were attracted to these work roles. Consistent with Fuller and Marler (2009), proactive personality had high positive correlations with extraversion, openness to experience and conscientiousness. Risk aversion had high negative correlations with extraversion which was consistent with Eysenck's theory (Eysenck & Eysenck, 1985). We then proceeded to test the various hypotheses relating personality traits and EPL motivations, first by examining correlations the inter-scale correlations in Table 1, and then by conducting hierarchical multiple regression analyses to examine the relative, incremental value of different traits in relation to entrepreneurial, professional and leadership motivations.

RESULTS

The correlations in Table 1 showed that proactive personality was consistently positively related with both entrepreneurial and leadership motivations but unrelated with professional motivations in both samples, supporting Hypothesis 2a. Risk aversion was negatively related

consistently with both entrepreneurial and leadership motivations and positively related with professional motivations in both samples, supporting Hypothesis 3b.

Table 1 also indicates that the Big Five seem to have a more similar pattern of correlations with entrepreneurial and leadership motivations than with professional motivation. Specifically, extraversion, openness to experience and emotional stability are significantly correlated with both entrepreneurial and leadership motivations but unrelated with professional motivation in both samples. Conscientiousness is consistently correlated with leadership but not with entrepreneurial motivation in both samples; it is also very weakly ($r = .13$ in both samples) correlated with professional motivation. Beyond the latter observation, it appears from Table 1 that professional motivation is unrelated with the Big Five traits.

Table 2 summarizes hierarchical multiple regression results where various personality variables were added successively. Controlling for age and gender, the Big Five explained almost twice the variance in leadership motivation ($R^2_{sample1} = .20$; $R^2_{sample2} = .33$) than for entrepreneurial motivation ($R^2_{sample1} = .09$; $R^2_{sample2} = .16$). In contrast, the Big Five accounted for only very limited variance in professional motivation ($R^2_{sample1} = .05$; $R^2_{sample2} = .05$). The overall pattern of relationships generally supported Hypothesis 1 and the use of the Big Five in trait approaches to entrepreneurship and leadership, especially when contrasted with professional careers. More specifically, the multiple regression findings in Table 2 indicate that across both samples (where different Big Five measures were used), extraversion is most strongly and consistently related to leadership motivation, whereas professional motivation seems consistently related to introversion. Conscientiousness is significantly related to leadership motivation in Sample 2 (which employed the TAPAS measure of Big Five) but not in Sample 1.

Models C, D and E in Table 2 indicated that proactive personality explained significant incremental variance in entrepreneurial motivations beyond the Big Five for both samples. Proactive personality also explained significant incremental variance in leadership motivation beyond the Big Five for sample 1 but not for sample 2. Risk aversion explained significant incremental variance in entrepreneurial (negatively-related) and professional motivations beyond the Big Five, but not for leadership motivations in sample 1. In sample 2, however, risk aversion could not explain any significant incremental variance in professional motivation and leadership motivation, and explained only very small amount incremental invariance in entrepreneurial motivation.

DISCUSSION

Overall, the data suggest that in terms of traits like the Big Five, proactive personality and risk aversion, those who are motivated or who aspire toward entrepreneurial careers seem more similar with those who aspire towards organizational leadership careers; and, these two groups are different from those motivated to pursue more vocationally-specialized, professional careers. Traits accounted for the greatest variance in leadership, followed by entrepreneurial motivation. More specifically, proactive personality and extraversion are positively related to both entrepreneurial and leadership motivations. The key differences between those motivated to pursue these two career paths seem to be that those who are conscientious prefer to pursue leadership, while those who are not risk averse and open to experience prefer entrepreneurship. Those who were attracted to professional careers were more risk averse and to a limited extent, introverted.

There are several possible explanations for finding less incremental validity for proactive personality and risk aversion measures in sample 2. First, sample 2 was smaller which increased

sampling error and reduced statistical power. Second, the TAPAS Big Five, proactive personality, and risk aversion measures shared the common response format (5-point Likert), which could have inflated inter-scale correlations to negatively impacted hierarchical regression results. Finally, the 120-item TAPAS measure may have higher bandwidth and fidelity (cf. Cronbach & Gleser, 1957) for measuring Big Five personality traits than Goldberg's (1992) 35-item measure so that the proactive personality and risk aversion measures could share more variance with TAPAS scales than with Goldberg's scales. Future research is therefore needed to better understand the incremental effects of proactive personality and risk aversion on career motivations. Still, our findings suggest that it may be useful to go beyond Big Five in explaining the difference between the motivation for entrepreneurship and leadership. Further research also may examine how other individual-difference factors such as social values (e.g., individualism-collectivism, power distance, uncertainty avoidance) and career attitudes (e.g., boundarylessness, self-directedness) may distinguish entrepreneurial, professional and leadership motivations. More attention should also be paid to the role of environmental influences including personal history, family and social influences in shaping career motivations.

Theoretically, this research provides support to Chan et al.'s (2012) recently-proposed EPL framework which recognizes and measures entrepreneurship, professionalism and leadership as three independent dimensions of subjective career space. It also provides a starting point to extend Chan and Drasgow's (2001) theory of the role of individual differences in leadership development to the study of entrepreneurial and professional development. We also address Chan et al.'s (2012) call for more research to "unravel the boundaries" of entrepreneurship, professionalism, and leadership. From this perspective, conceptually, our empirical findings on the relationships between traits and EPL motivations, contribute mutually

to what Cogliser and Bingham (2004) termed Stage 1 of both entrepreneurship and leadership research fields which examine “what/who is a leader/entrepreneur?” This study is also a pioneering attempt to examine the dispositional basis of more vocationally-specialized, professional career motivations, which may be important in understanding professional development and career success. Traditionally, research and theory on professional development has focused on the role of socialization practices in the development of professionals with little attempt to examine the motivation for entry into professional work, and whether this has any basis in dispositional traits. The differences between the entrepreneurially- and leadership-inclined versus the professionally- inclined in terms of risk aversion also present an interesting start-point; future studies should look into potential inter-group challenges faced in communication and collaboration (especially among professionals versus entrepreneurs or leader/managers) and what Raelin (1986) called the “Clash of Cultures” between professionals and managers in organizations.

Practically, the finding that those who aspire towards professional careers tend to be risk averse suggests that more attention should be paid to the interaction of traits, motivations and socialization in the development and performance of professionals. These differences may explain why some professionals are not attracted towards entrepreneurial or leadership roles, and present challenges in providing entrepreneurship or leadership training to highly professionally-motivated individuals. For example, self-awareness-related personality feedback provided to highly professionally-inclined individuals as part of leadership or entrepreneurship training may have to go beyond the Big Five to include risk-related dispositions.

Like any empirical study, ours is not without limitations. First, we examined only motivations which are at best predictive of role emergence or occupancy criteria. Further

research should also consider the relationship between personality and other distal criteria such as career performance, effectiveness, or success. Second, we focused on the broad Big Five rather than narrower facets. Future research may explore the differential effects of facet-level measures of personality. Third, the cross-sectional nature of our study precludes us from making causal implications. Nonetheless, our study represents an initial step towards a more nuanced examination of the relationships among traits and EPL motivations. Finally, given the cross-sectional, self-report nature of our data one cannot totally rule out the threat of common method bias. Future studies should employ other designs and methods to scrutinize causal relationships and model temporal stability and to cross-validate the present findings.

To conclude, our data from two samples indicate that those who aspire towards entrepreneurship and leadership seem more similar in their personality traits than they are different, and the crucial difference lies between them and those motivated to pursue professional careers. We hope that researchers see the value of using the EPL career framework to clarify conceptual boundaries of entrepreneurship, professionalism, and leadership.

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