

THE DISCRIMINANT VALIDITY OF ENTREPRENEURIAL PASSION

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ABSTRACT

We conducted two studies to develop and test a multi-dimensional measure of entrepreneurial passion. This new scale is distinguished from scales measuring hope, optimism, state positive emotion, state negative emotion, obsessive and harmonious passion, and passion for work. Results demonstrate the criterion, convergent, and discriminant validity of the measure.

INTRODUCTION

Scholars have recently focused on the role affect and emotion play in entrepreneurship (e.g. Baron, 2008), and in particular have noted that entrepreneurial passion may be an important construct in need of more careful study (Cardon, Wincent, Drnovsek, and Singh, 2009). Passion is important in entrepreneurship because it can “fuel motivation, enhance mental activity, and provide meaning to everyday work” (Brännback et al., 2006: 3). Positive affective states such as passion foster creativity and recognition of new patterns of information critical to opportunity recognition and exploitation in novel environments (Baron, 2008; Sundararajan and Peters, 2007). Moreover, passion has been associated with the ability of entrepreneurs to raise funds from venture capitalists (Chen, Yao, and Kotha, 2009), and hire and motivate key employees (Cardon, 2008), among other things.

Despite the importance of passion to entrepreneurial pursuits, to date there is no empirically validated scale of entrepreneurial passion. Attempts to use scales developed outside of entrepreneurship, such as that developed by Vallerand and colleagues (Vallerand, et al., 2003) have met with mixed results (e.g. Murnieks, 2007). In particular, the more generalized scales show limited relevance when applied to entrepreneurs (Murnieks, 2007) and do not capture a key aspect of passion, the importance of entrepreneurial activities to the role identity of the entrepreneur (Murnieks and Mosakowski, 2006; Murnieks, 2007; Cardon et al., 2009).

The purpose of this paper is to develop an original scale of entrepreneurial passion that is psychometrically valid. In particular, our new entrepreneurial passion scale must be distinguished from scales measuring similar theoretical constructs, such as affects and attitudes of hope, optimism, state positive emotion, and state negative emotion. It must also be differentiated from the non-entrepreneurship specific passion scales of obsessive and harmonious passion (Vallerand, et al., 2003), and a more general scale of passion for work (Baum et al., 2001).

How is entrepreneurial passion different from any passion conceptually? In general, passion has been defined as feelings for activities in which people invest time and energy and that they find important (Vallerand et al, 2003). In contrast, entrepreneurial passion (EP) reflects the positive and intense feelings for activities *associated with roles that are meaningful to the*

self-identity of the entrepreneur (Cardon et al., 2009). Existing scales that measure passion based on the time spent on a task are missing the fundamental nature of passion, which is that it involves affective feelings that are intertwined with the entrepreneur's definition of themselves - their identity (e.g. Stryker & Burke, 2000). Using the Cardon et al. (2009) definition, proper measurement of EP will require measuring both the intensity of positive feelings for the particular activity (as has been measured in other studies), as well as the importance of that activity to the self-identity of the entrepreneur (which is novel to this study). Moreover, such measurement should examine feelings of passion for activities at a very specific level to reflect the three specific role identities believed to be most critical in entrepreneurship (Cardon et al., 2009), rather than a global assessment of feelings, in general, for entrepreneurship or work.

THE CONCEPT OF PASSION

Cardon, et al. (in press) have recently defined the concept of entrepreneurial passion as “*consciously accessible intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful and salient to the self-identity of the entrepreneur.*” They specify that passion includes feelings that are consciously experienced, positive, and intense, such as excitement, elation, or joy. They also specify that in order for such feelings to be considered as passion, they must be experienced for something that is meaningful to the self-identity of the entrepreneur, such as the role of being a founder of a new venture.

Despite ongoing use of the term “passion” in theoretical work in entrepreneurship, and recognition of its importance conceptually, empirical work that measures this construct or demonstrates its role in the entrepreneurial process has been slow to follow. One potential reason is that to date there is no well-validated context specific scale to measure entrepreneurial passion. In psychology, one of the most popular theoretical and empirical examinations of passion has been by Vallerand and colleagues (2003). While not specific to entrepreneurship, Vallerand (2003: 756) defines passion as “a strong inclination toward an activity that people like, that they find important, and in which they invest time and energy.” This definition has been used in entrepreneurship in work by Brännback et al. (2006) and Murnieks (2007). Interestingly, however, these scholars note that Vallerand's scales are perhaps not adequate for use in entrepreneurship as the psychometric properties of the harmonious and obsessive passion scales do not hold up in an entrepreneurial context (c.f. Murnieks, 2007). Other scales measuring passion in entrepreneurship are either more general (such as those of Baum and colleagues, 2001, which measures passion for work) or measure passion as perceived by others (Chen, Yao and Kotha, 2009) rather than as experienced by entrepreneurs. Thus, there is a need for a psychometrically sound measure of entrepreneurial passion, as experienced by the entrepreneur, in order to test the theoretical claims about the role of passion in the entrepreneurial process (c.f. Cardon et al., in press).

Dimensionality of entrepreneurial passion

Because entrepreneurship involves different kinds of activities depending on the life cycle of the firm, we propose that an entrepreneurial passion scale should have three sub-scales, consistent with the theoretical development by Cardon and colleagues (in press). According to their definition of entrepreneurial passion, passion involves feelings focused upon three primary role identities that are relevant in entrepreneurship, that of inventing, founding, and developing

ventures. Thus, a measure of entrepreneurial passion should reflect potentially differential feelings towards activities associated with the three distinct roles.

Passion for inventing is focused upon activities associated with scanning the environment for new market opportunities, developing new products or services, and working with prototypes. Individuals experiencing passion for inventing may actively seek out new opportunities, enjoy coming up with new product or service ideas, and relish inventing solutions to existing problems. Passion for founding involves assembling necessary financial, human, and social resources needed to create a new venture (Cardon et al, 2009). Entrepreneurs who experience passion for founding primarily enjoy the process of founding a venture and often develop identities that are intertwined with the venture identity (e.g. Cardon et al., 2005). Passion for developing firms is associated with activities such as developing new markets and expanding the size of the venture. Entrepreneurs who experience passion for growing their firms may enjoy activities such as developing new products to complement their existing ones, or taking the firm to the next level of competition. Thus, we propose that:

H1: The three sub-scales of EP (passion for inventing, founding, and developing) are empirically distinct from one another.

Related Constructs

Several other positive affects and attitudes have been identified as important in entrepreneurship, including optimism, hope, and episodic emotions. We briefly discuss the conceptual distinction between entrepreneurial passion and each construct.

There is a considerable amount of recent work on entrepreneurial optimism. Hmieleski and Baron (2009) define optimism as a generalized positive outcome expectancy - a confidence in outcomes in general. Optimism is relevant because it may also lead to persistence in the pursuit of challenging goals, as passion has been argued to do. However, an individual can be passionate about something (I love doing research) without expecting only good things to come from that thing (I expect all of my papers to be accepted at journals). Thus passion and optimism are conceptually distinct.

Another affect-oriented construct relevant in entrepreneurship is that of hope. Hope involves having goals, motivation to achieve those goals, and the ability to imagine multiple pathways to achieving those goals (Snyder et al., 1991). Interestingly, hope is a cognitive phenomenon, where an individual experiencing hope can set challenging goals for themselves and create multiple plans to achieve those goals, regardless of whether or not they experience positive and intense feelings for those goals or internalize such goals as critical to their self-identity (both of which are involved in feelings of passion). Thus, while passion may drive goals, in that those experiencing passion may set more challenging goals for themselves (Baron, 2008; Cardon et al., 2009), hope itself is a cognitive rather than affective construct, and as such is distinct from entrepreneurial passion.

Temporary emotions are also important in entrepreneurship. Baron (2008) argues that positive affect, such as emotions, fosters creativity and recognition of new patterns of information that are critical to opportunity recognition and exploitation in novel environments. Indeed, we know that entrepreneurship is full of a roller-coaster of emotions (Arenius, 2008), from elation over signing up new clients or receiving a round of financing to devastation over losing a customer, being unable to make payroll, or having to close down a firm (e.g. Shepherd,

2003). While many emotions have been researched in entrepreneurship with interesting results (see Welpe and Kruger, 2008, for example), most of the empirical work on emotion refers to emotions that are short-term in nature, and that can either be triggered by one's personality or one's immediate environment. As such, when the object that triggered the emotion is no longer present, the positive or negative emotion ends. While significant work has been done on the long term emotion of failure (e.g. Shepherd 2003, 2004) and anticipated failure (e.g., Shepherd, Wicklund, & Haynie, in press), the long-term negative affect of grief over venture failure is distinct from the long-term positive affect of passion. Thus, while emotions such as excitement, joy, or grief are important, such emotions are distinct from entrepreneurial passion (see Wincent et al., 2008 for further explanation of this distinction). Therefore, we propose:

H2: Entrepreneurial passion (EP) is empirically distinct from optimism, hope, positive emotion, and negative emotion.

METHODS

Study 1

Study 1 was designed to develop a measure with content validity based on the definitions of entrepreneurial passion provided by Cardon et al. (2009). Two researchers independently read the definitions and explanations provided by Cardon et al. and generated items related to the three facets of entrepreneurial passion. Redundant items were discarded and remaining items modified to improve clarity and wording. This process yielded 24 items, balanced evenly across passion for inventing, founding, and developing.

Sixty undergraduate students were given the definitions of the three entrepreneurial passion sub-scales and the list of items and asked to rate the extent to which each item reflected each definition on a Likert-type scale ranging from 1 (not at all) to 5 (completely). Items were subjected to one-way ANOVA analysis employing individual mean difference comparisons among the three observations of the item and grouped comparisons. Each item was subjected to three steps to determine if it would be employed in later factor analysis and scale comparison (per-item ANOVAs, followed by sub-scale ANOVAs, followed by group contrasts). If the item maintained significance in each of these tests, we judged it to be a valid and uniquely relevant member of our developed passion scale.

Based on Study 1, the ANOVA comparisons suggest the emergence of 12 items to measure entrepreneurial passion. Other variables either demonstrated no significant group differences, or where significance was demonstrated, their presumed group comparison did not demonstrate a significant difference over the other group possibilities.

Study 2

The purpose of study 2 was to situate entrepreneurial passion within a nomological network of variables related to affect in entrepreneurship (Cronbach & Meehl, 1955). This is important in order to establish that the new measure has convergent validity (is related to theoretically similar constructs) and discriminant validity (is distinct from other constructs). Establishing a nomological network for a new construct requires multiple approaches and the accumulation of evidence (Messick, 1995; Eby et al., 2008).

The sample for this study comes from the Dun and Bradstreet Selectory database and includes single location non-subsidary firms located in Westchester County, NY. The sample includes for-profit firms that were founded in 1998 or later, are privately owned, and had fewer than 250 employees as of January 1, 2008. The population of firms that meet these criteria includes approximately 6,000 businesses. A random selection of firms from among that population was chosen as the sampling frame for this study. One thousand firms were contacted in the spring of 2008 and invited to participate in the study, using the Tailored Design Method (Dillman, 2007). 134 surveys were undeliverable, ten company representatives indicated that their businesses had closed down and 58 surveys were completed, reflecting a 6.8% effective response rate. This response rate is a bit low, but consistent with other studies using Dun and Bradstreet information, and the company reports that 20% of the firms they track change locations every year (Hmieleski & Baron, 2009).

Entrepreneurs in the sample were on average 50 years old, had started two firms including the present one, and had spend an average of 14 years in the industry in which they run their business. The companies they represented were on average seven years old and have nine employees, including the founder.

Ten constructs were included in the survey, including: optimism (Scheier, Carver, and Bridges, 1994), hope (Snyder et al., 1991), positive emotion and negative emotion (Watson, Clark, & Tellegen, 1988), general obsessive passion and general harmonious passion (Vallerand et al., 2003; Murneiks, 2007), passion for work (Baum et al., 1991; 1994), and three new sub-scales of entrepreneurial passion developed in study 1. All items were measured on 5-point Likert-type scales, which ranged from strongly disagree to strongly agree, except where otherwise noted. Cronbach's alphas for all scales ranged from .923 for obsessive passion to .732 for passion for founding, with most scales registering alphas in the mid-800's.

Convergent validity was assessed using multiple methods. Cronbach's alpha scores were initially used to assess scale consistency, a measure of construct validity (Garson, 2008). Next, convergent validity was assessed via confirmatory factor analysis (CFA) in LISREL. In a CFA convergent validity is evident if indicator items for a given construct load unambiguously on their own intended factor. Finally, convergent validity is demonstrated if the variance explained by construct items is greater than measurement error (the average value extracted, or AVE) (Fornell & Larcker, 1981; Garson, 2008).

Discriminant validity was assessed by again employing a confirmatory factor analysis of indicator items for each pair of constructs (Garson, 2008) with the three new EP sub-scales and one other construct at a time, thus providing a more stringent test of the discriminant validity of the new EP scales. We again employed an average value extracted approach to further assure discriminant validity, comparing the AVE of each construct to both the average variance shared between that construct and others, as well as the maximum variance shared between the focal construct and any other construct in our study.

The results indicate support for both hypothesis 1 and 2. Specifically, the three sub-scales of entrepreneurial passion appear to be empirically distinct from one another, supporting H1. In addition, each of the three scales is empirically distinct from scales measuring optimism, hope, positive emotion, and negative emotion, supporting H2. In addition, each sub-scale is distinct from other measures of passion, including passion for work (Baum et al., 2001) and harmonious and obsessive passion (Vallerand et al., 2003).

GENERAL DISCUSSION AND IMPLICATIONS

The purpose of this study was to begin development and psychometric testing of a new scale for measuring entrepreneurial passion. Research in entrepreneurship has suggested that the construct of passion is important and may be different in this context than in others (Cardon et al., in press), yet to date there has not been an entrepreneurship-specific scale available to test the construct or its impact in the entrepreneurial process. Without such a scale, we cannot advance our thinking about passion in entrepreneurship beyond conjectures and ideas to testable and falsifiable arguments concerning passion and its relevance to entrepreneurship.

Research in entrepreneurship has demonstrated that self-efficacy in general and entrepreneurial self-efficacy are different constructs that require different measurement instruments (DeNoble, et al., 1999). Similarly, management research has shown that general satisfaction and job satisfaction are different constructs. By the same logic, passion in general and passion specific to the context of entrepreneurship may well be different constructs requiring different measurement. Even within entrepreneurship, we proposed that passion for inventing, founding, and developing a business may be important sub-dimensions that are worthy of parsing out rather than consolidating into one unitary measure of entrepreneurial passion. Given the recent growth in research on affect and entrepreneurship (e.g. Murnieks, 2007; Baron, 2008; Arenius, 2008), it is essential that empirical work tests the theoretical ideas in order to provide realism and relevance for our theories.

Our results suggest that entrepreneurial passion is indeed an empirically unique construct. In two separate studies our results suggest that entrepreneurial passion can be differentiated from other similar constructs including hope, optimism, positive emotion, and negative emotion. Entrepreneurial passion also appears distinct from more general measures of passion such as passion for work, harmonious passion, and obsessive passion. Finally, results from both studies suggest that entrepreneurial passion can be measured as it is experienced towards three specific types of activities that are quite common in entrepreneurship, those associated with inventing and discovering opportunities, those associated with the founding and birth of a firm, and those associated with developing and growing a firm.

While further research is needed to ensure the psychometric properties of the proposed entrepreneurial passion scale and its three sub-scales, if this new measure of entrepreneurial passion can be fully psychometrically validated, then inclusion of this measure in further research in entrepreneurship will allow us to better understand the effects of passion on cognitions, behaviors, and outcomes important to entrepreneurs. Notably, while this study focused on the nature of entrepreneurial passion, it did not at all touch on the experience of passion, or how passion coordinates the affective, cognitive, and behavioral processes involved in entrepreneurship (Cardon et al., 2009). Such research is a logical next step. Until we have a good measure of entrepreneurial passion and its sub-scales to begin with, we cannot verify or refute the existence of such relationships.

REFERENCES AVAILABLE FROM THE AUTHORS

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