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## Research Note:

# PASSION AND HABITUAL ENTREPRENEURSHIP

### Abstract

The purpose of this study is to explore differences between habitual entrepreneurs (serial and portfolio entrepreneurs) and novices in terms of their passion for entrepreneurial activities. Using the Dualistic Model of Passion (DMP) as a conceptual framework, we test our hypotheses using a random sample of entrepreneurs who registered a limited company in 2008. Results of logistic regression analyses showed that habitual entrepreneurs experience extra high passion for entrepreneurial activity. Of the two passion dimensions proposed in the DMP—harmonious passion and obsessive passion— the obsessive component is, however, particularly evident among habitual entrepreneurs. A closer analysis, comparing novice, serial, and portfolio entrepreneurship, suggests that portfolio entrepreneurs score highest on the harmonious dimension of passion.

### Keywords

Harmonious passion, obsessive passion, habitual entrepreneurship, serial entrepreneurship, portfolio entrepreneurship

## Introduction

The importance of studying habitual entrepreneurship and not only focusing on "oneshot" entrepreneurship in scholarly efforts to build a comprehensive theory of entrepreneuring, was the core message in MacMillan's (1986) "*To Really Learn about Entrepreneurship, Let's Study Habitual Entrepreneurship*". By examining habitual entrepreneurship, it is possible to gain more insight into entrepreneurship in terms of how, by whom, and with what effects entrepreneurial opportunities are discovered, evaluated, and exploited (Shane and Venkataraman, 2000: 218) and thus convey more solid implications for theory and practice. Numerous researchers acted upon MacMillan's (1986) inspirational call and developed an extensive body of research. For example, results show that habitual entrepreneurs differ in their attitudes toward entrepreneurship; exhibit greater creative and innovative behavior than novice entrepreneurs (Westhead et al., 2005); and are aboveaverage in general skills such as negotiating, presenting, and generating ideas (Anokhin et al., 2008).

In recent years, research interest has increased in the concept of entrepreneurial passion. Although passion for a long time has been referenced in practice, the study by Cardon et al. (2005) and Cardon et al.'s (2009) conceptual framework became a starting point for academic studies that aim to understand the role of passion for entrepreneurship (see e.g., Breugst et al., 2012; Chen et al., 2009; Murnieks et al., in press). To add to this stream of research, the present study endorses the benefit of highlighting mechanisms among entrepreneurs with experience in more than one business and thus the value of passion by taking a closer look at its presence among habitual entrepreneurs. In this first scholarly attempt to connect passion and habitual entrepreneurship, our purpose is to explore differences between habitual entrepreneurship (serial and portfolio entrepreneurship) and novice entrepreneurs in terms of passion.

We build our conceptual framework on Vallerand et al.'s (2003) Dualistic Model of Passion (DMP). With its foundations in social psychology, DMP proposes there are two types of passion: harmonious passion (HP) and obsessive passion (OP). This framework has received extensive empirical support when applied in various contexts and to different activities (e.g., Mageau et al., 2005; Ratelle et al., 2004; Seguin-Levesque et al., 2003). We suggest that both HP and OP are particularly evident in habitual entrepreneurship.

We test our predictions using a dataset of 704 Swedish entrepreneurs. By integrating insights from passion scholars with the entrepreneurship literature, the present study provides a framework for understanding the role of passion for habitual entrepreneurship. Specifically, compared with novices, OP is particularly evident in habitual entrepreneurship. Moreover, HP is especially likely to be found among portfolio entrepreneurs and less likely to be found among novices.

## Theory and hypotheses

The DMP builds on the notion that passion is a strong inclination toward a selfdefining activity that people like, find important, and in which they invest time and energy (Rip et al., 2012; Vallerand et al., 2003). These characteristics are reflected in both types of passion, HP and OP, which means that a person and an entrepreneur can experience both HP and OP and that the two often are at least slightly correlated (Vallerand, 2010). How the activity becomes important in defining the self, also called internalization is distinct between the two, however, and explain why a person is more or less likely to be primarily driven by one type of passion (Vallerand et al., 2003).

Deci and Ryan (2000) proposed that HP originates from an autonomous internalization. This means that the individual does not feel any psychological pressure is attached to the activity in question. Instead, the activity is valued as important to the person's identity independent of any pressure. This results in engaging in an activity built entirely on free will and flexibility. In other words, the activity is part of how the individual identifies him- /herself, but he/she has control over the activity and not vice versa. While the definition includes the notion that time and energy are spent on the activity, the individual still maintains a balance such that the activity does not conflict with other life domains (Stenseng, 2008).

In contrast, OP is proposed to originate from a controlled internalization. Although the individual enjoys the activity and has positive feelings toward it, pressure to engage in the activity is attached. These pressures could be intra-personal well as inter-personal (Mageau et al., 2009). For these contingencies, maintaining self-esteem, pressuring social environments, and pressures for high performance are often mentioned (Mageau et al., 2011). This results in the individual valuing the activity highly, but it takes a disproportionate space in his or her identity. Thus, the individual gives the activity top priority compared to activities in other life domains (Vallerand et al., 2003). Moreover, rather than the individual having control over his/her engagement in the activity, the activity controls the individual.

Some outcomes are shared between HP and OP. Research on the DMP has demonstrated that both passions are positively associated with flow (Forest et al., 2011); vigor (Stoeber et al. 2011); and deliberate practice and mastery goals (Vallerand et al., 2007, 2008), while both are negatively associated with inefficacy (Stoeber et al., 2011). Nevertheless, because the activity is internalized differently, HP and OP have distinct outcomes. Harmonious passion is positively associated to self-determination (Curran et al., 2011); affective commitment (Forest et al., 2011); attention and absorption (Ho et al., 2011); and dedication (Stoeber et al., 2011). Obsessive passion, on the other hand, is positively associated to time spent on the activity (Caudroit et al., 2011); conflict with other life spheres (Vallerand et al., 2010); ruminations about the activity when engaging in other activities (Carpentier et al., 2012); and negatively related to psychological disengagement in terms of devaluing the importance of the activity (Caudroit et al., 2010). Because HP and OP feature these characteristics and outcomes, it is particularly likely that they play important, but somewhat distinct, roles in habitual entrepreneurship. We elaborate on this below.

We expect that HP and OP are more likely to be represented in habitual entrepreneurship than in other kinds of entrepreneurship. This group consists of entrepreneurs who have multiple venturing experiences (Zhang, 2011). The underlying mechanism is that both types of passion drive repeat behavior. In addition to work that has conceptualized passion (e.g., Vallerand et al., 2003; Mageau et al., 2009, 2011), studies have reported that passion is positively associated with mastering goals (i.e., the individual wants to master the activity and develop the competence to do so) and deliberate practice (i.e., the individual spends significant time improving his/her performance in the activity). Both of these activities manifest this proposition (Vallerand et al., 2007, 2008). For musicians, for example, such behavior is displayed by repeating difficult movements over and over again (Bonneville-Roussy et al., 2011) and actors repeat difficult roles (Vallerand et al., 2007), whereas athletes work hard to improve difficult physical techniques (Vallerand et al., 2008). Applying these concepts to entrepreneurship, it is likely that repeat behavior would manifest itself in starting up more businesses. In doing so, the individual has the opportunity to make a new effort to master certain things that were difficult (or impossible) in the first business. As such, the individual also develops competence in the entrepreneurship process. In addition, it is likely that a selection process is in play such that those with HP and OP are more likely to have the personal resources to start more than one business. Indeed, research on the entrepreneurship process has proposed that along with other motivators such as drive and a desire for independence, passion plays a significant role in attracting resources and pursuing stakeholders (Shane et al., 2003).

H1a: Habitual entrepreneurs will exhibit more harmonious passion than will novice entrepreneurs.

H1b: Habitual entrepreneurs will exhibit more obsessive passion than will novice entrepreneurs.

With somewhat different underlying mechanisms emphasizing the differences between the typologies of passions, we next expect that HP for entrepreneurship is particularly represented in portfolio entrepreneurship. In line with Carter and Ram (2003), we define portfolio entrepreneurs as those who have experience running two or more businesses at the same time. Portfolio entrepreneurship is at the very core of entrepreneurship. As Westhead et al. (2005) discuss, creativity and innovation help ensure that several businesses can be developed and survive at the same time. It therefore becomes critical that the portfolio entrepreneur enjoys thinking and spending time searching for and being alert to new opportunities and subsequently finds ways and resources to exploit those circumstances (Robson et al., 2012). The multiple venturing efforts also increase autonomy and the chances of doing things entirely by free will, which particularly facilitate HP. For individuals to experience HP about entrepreneurship, the portfolio approach may thus present the perfect engagement. By focusing on portfolio entrepreneurship, an individual's positive inclination toward entrepreneurship is given an outlet and can be nourished constantly; indeed, much higher than novices. Serial entrepreneurs, who have a history of other ventures, are not in the same situation as portfolio entrepreneurs. Limited by options, they will to a high extent be exposed to psychological pressures to succeed with the venture they are now running. This makes their situation similar to that of novices. We thus hypothesize:

H2a: Portfolio entrepreneurs will be particularly prone to exhibit harmonious passion compared to novice entrepreneurs.

H2b: Serial entrepreneurs are not in a better situation to exhibit harmonious passion compared to novice entrepreneurs.

## Methods

#### Sample and data collection

Using the Swedish database Affärsdata, we identified a population of all limited companies registered in 2008. This list consisted of 8,796 ventures, located across Sweden and operating in various industries. From this list, we created a random sample of 3,000 firms. In doing so, we were able to reach the main firm founder/owner in a large, random sample of firms registered in the same time period, as well as gain access to financial and background data. Because the Affärsdata database does not provide email addresses, we contacted respondents by postal mail (i.e., one firm equaled one survey to the main founder/owner). We explained that we aimed to survey individuals who had registered a business in 2008 and that we were interested in their thoughts and experiences related to entrepreneurial activity. In return, we received 704 usable surveys (23.5% response rate).

### Measures

*Dependent variables.* Consistent with previous research such as Zhang (2011), the dependent variable, habitual entrepreneurship, was coded '1' if an entrepreneur had been exposed to multiple venture engagements and '0' if this was the first venture. In a similar vein, we coded serial entrepreneurship with '1' if an entrepreneur had engaged in a previous start-up and '0' if the entrepreneur had no previous venture experience. For portfolio entrepreneurship, the fundamental characteristic measured was whether the entrepreneur was engaging in multiple ventures at the same time. To capture portfolio entrepreneurship we coded '1' if an entrepreneur had started another business while running at least one other

company and '0' if this was not the case, which implied novices were positioned in this group.

*Independent variables.* Because entrepreneurs have little time to spend on surveys, our goal was to keep it short. Like Mageau et al. (2005), Przybylski et al. (2009) and Ratelle et al. (2004), we used 10 items (5 items for HP and 5 items for OP) from Study 4 reported in Vallerand et al. (2003) rather than all 14 items they used in Study 1. We replaced the words 'this activity' with the phrase 'running a business'. A sample item for HP is 'Running a business is in harmony with the other activities in my life', while a sample for OP was 'I have a tough time controlling my need to engage in running a business'. Based on interviews with entrepreneurs, we noticed that it was difficult for them to relate to one of the OP items, namely, 'I cannot live without it [running a business]'. We thus replaced this item with 'I have difficulty imagining my life without this activity [running a business]' (Vallerand et al., 2003, Study 1). The coefficient alpha for HP was 0.81 and for OP 0.80.

*Control variables.* Our analyses also included several control variables. First, we controlled for age, gender, education, and previous industry experience to eliminate confounding effects of these personal demographic characteristics. Entrepreneurs' age was measured by asking how old they were at the time data was collected. Gender was coded as female = 0 and male = 1. The education variable was binary and coded as '1' for university education and '0' otherwise. We captured industry experience by the number of years the entrepreneur had been working in the industry. Second, because some have argued that habitual entrepreneurship may depend on different economic conditions than novice entrepreneurship (Kessler & Frank, 2009), the venture's result (measured as the profit/loss during the first year of operation) and venture's turnover (measured as turnover during the first year of operation) were included as controls.

#### Results

Table 1 summarizes the statistics and Pearson correlations for the variables in the present study's analysis. The data does not show any problems with multicollinearity. The correlations indicate that OP is associated with habitual entrepreneurship. The association between HP and portfolio entrepreneurship seems to be particularly evident.

#### --- INSERT TABLE 1 ABOUT HERE---

To test our two hypotheses, we conducted logistic regression analyses to assess the respondents' involvement in habitual entrepreneurship as a function of the modeled control variables and independent variables HP and OP. The regression results are presented in Table 2. We followed established techniques and conducted the analyses for our hypotheses tests in two steps. In the first step, we entered the control variables (Models 1, 3 and 5). In the second step, we entered HP and OP (Models 2, 4 and 6). Models 1 and 2 test the influence of the factors on habitual entrepreneurship, Models 3 and 4 test the influence of the factors on portfolio entrepreneurship, and Models 5 and 6 the influence on serial entrepreneurship. Because the Wald statistics lose power as the number of coefficients increases (Norusis, 1990), we used a logarithmic likelihood approach. This approach also has the advantage that it can be used to interpret significance in a manner similar to ordinary hierarchical multiple regression analysis.

For the control variables, we discovered that the entrepreneurs' age, gender, and industry experience were all positively associated with serial entrepreneurship, whereas only gender contributed to predicting portfolio entrepreneurship. For the remaining control variables (education, venture turnover, and venture result) the results did not demonstrate any significant associations to either form of habitual entrepreneurship.

Model 2, which tests hypotheses 1a and 1b, reports that in contrast to our prediction in H1a, no association between HP and habitual entrepreneurship was found (coefficient = -.08; p = n.s.). We did, however, find support for H1b in that a positive association was revealed

between OP and habitual entrepreneurship (coefficient = .26; p < .001). For Hypotheses 2a and 2b, Model 4 reports a positive association between HP and portfolio entrepreneurship (coefficient = .18; p < .05), and Model 6 reports that the HP association with serial entrepreneurship was non-significant (coefficient = -.07; p = n.s). Together, these results indicate that portfolio entrepreneurs are particularly prone to exhibit harmonious passion compared to novice entrepreneurs and that serial entrepreneurs are not in a better situation to exhibit harmonious passion compared to novices, supporting H2a and H2b. We noticed that only OP associated with serial entrepreneurship while contrasted to novices (coefficient = .24; p < .001) but not HP (coefficient = -.07; p = n.s.), which further supports our hypothesis and the underlying DMP arguments of behind our conceptual arguments. While consulting further checks for how HP and OP differed between portfolio and serial entrepreneurship, we also observed that HP was significantly higher among portfolio entrepreneurs (p < .001).

The overall model fit of the four models, indicated by the  $-2 \log$  likelihoods and chisquare statistics, demonstrates that including HP and OP significantly improves model fit measurements for the hypothesized framework. Consistent with the suggested theoretical arguments, this improvement is more prominent for portfolio entrepreneurship.

#### --- INSERT TABLE 2 ABOUT HERE---

#### Discussion

The present research note suggests a relationship between passion and habitual entrepreneurship. We have discussed how and why passion may be particularly evident in habitual entrepreneurship. First, the results support that OP is clearly associated with habitual entrepreneurship, while HP is not. Drawing on the DMP, the high presence of OP implies that habitual entrepreneurship involves individual pressures attached to engaging in entrepreneurship activities in order to sustain self-identity. Second, a more specific analysis of portfolio entrepreneurship indicate that not only OP but also HP is evident. This suggests,

therefore, that passion plays an important part in habitual entrepreneurship, but when we break it down into HP and OP and different types of habitual entrepreneurship, HP is especially likely to be found among portfolio entrepreneurs. Based on our findings, we can speculate that pressures are balanced to a greater extent in portfolio entrepreneurship, which gives the individual more control over the activity (i.e., the entrepreneurship activity does not entirely control the individual). This facilitates and ensures high presence of HP

The present study makes a novel contribution to research on entrepreneurial passion by applying the passion concept in the context of habitual entrepreneurs. Building on MacMillan's (1986) call to test ideas and concepts related to habitual entrepreneurs, the present findings suggest that passion is indeed important for understanding the essence of entrepreneurship and the processes surrounding it. Specifically, our findings indicate that habitual entrepreneurship, which is at the core of how entrepreneurship is conceptualized, builds on passion. When discussing entrepreneurship motivators, it is thus relevant to acknowledge passion. Moreover, contingencies attached to the entrepreneurship engagement may play an important part in one's entrepreneurial choices. Future research can contribute to illustrating and gaining deeper knowledge about these insights by investigating the sources behind the pressures as they seem to explain differences between HP and OP.

We also believe that the study contributes with further research potentials for serial and portfolio entrepreneurs. For other activities to which the DMP has been applied, it has been found that OP can result in several negative outcomes for the individual. For example, OP is negatively related to well-being (Carpentier et al., 2012), mental health (Forest et al., 2011) and emotional exhaustion (Lavigne et al., 2012), whereas it is positively related to work–life interference (Caudroit et al., 2011) and perceived conflict in relationships (Seguin-Levesque et al., 2003). The present study's notion that OP is evident in both portfolio and serial entrepreneurship will add interest to exploring and testing the existence of any

maladaptive effects from passion among entrepreneurs. Also, it will be interesting to examine whether portfolio entrepreneurs have a greater work–life balance than serial entrepreneurs, considering its combination with HP. Given that entrepreneurship is an activity in which the outcomes can occur on both an individual level (e.g., well-being) and on a firm level (e.g., venture performance), it would also be interesting to test the effects from the two types of passion on several levels of analysis. Are there possibly passion effects that are positive for the venture, but negative for the individual and vice versa? The present study and the attention it directs to the passion concept thus offer several opportunities for future research toward building a comprehensive understanding of entrepreneurship. This means that although our data allow us to draw conclusions about our specific hypotheses, the most significant contribution to entrepreneurship research is how the present study opens avenues for further research on the role and consequences of passion in entrepreneurial processes.

With a view toward the DMP research, the present study also contributes to this stream of research by validating the dualistic approach in an entrepreneurship context. In doing so, it also adds to the notion that for those with passion for an activity, it is important for them to master that activity. For entrepreneurial endeavors, this seems to be manifested by investing time and effort into more than one business rather than focusing solely on isolated entrepreneurial endeavors.

The present research note also offers implications for policy. Specifically, it explores differences between habitual entrepreneurship and other kinds of entrepreneurship in that passion provides insight into one of several considerations that may guide how resources are allocated. The insight revealed here must be combined with future research, however, to constitute a foundation from which policy makers can recommend actions. From prior research, we know that portfolio entrepreneurs pursue and exploit innovative activity and thus play a key role in generating jobs and creating wealth (e.g., Robson et al., 2012). The

present study indicates that both HP and OP are positively associated with portfolio entrepreneurship. It would be too simple to say, however, that policy makers could target their support and resources, such as education programs, to entrepreneurs who display the highest passion for entrepreneurship because if they fail they are likely to try again. We do not know if such a model would be effective. More research is needed regarding how public agencies can identify those with high passion in practice, as well as to test how portfolio entrepreneurship affects the economy (and how such entrepreneurs, in turn, are affected by policy interventions). Such information will help policy makers determine whether targeted support would meet established policy goals. Also, as Storey (2011) emphasized, public agencies face major difficulties in picking winners. To support only those with high passion based on their increased probability of serial and portfolio entrepreneurship would currently be investing resources in an uncertain path. Combining and analyzing the present study's results with more in-depth analyses of economic effects from habitual entrepreneurship are thus required to develop solid policy recommendations.

The present study has some limitations that should be taken into account when interpreting the results. This study does not capture background information on the habitual entrepreneurs' multiple businesses (e.g., their growth, profit, turnover, and head count). Neither does it consider whether venture capitalists have been involved in the entrepreneurial process or to what extent individual or team-based processes were used. Future research is thus encouraged to develop individual and team-based explanations of how and why entrepreneurial passion is associated to entrepreneurship. Moreover, the present study builds on cross-sectional data. Based on the data to which we had access, we can report that passion is important in explaining habitual entrepreneurship, but we cannot draw causal inferences.

## Conclusion

We have suggested and found support for a strong positive association between passion and habitual entrepreneurship. Using a dataset of 704 entrepreneurs, we found that passion generally plays an important role in habitual entrepreneurship. Specifically, our findings indicate that portfolio entrepreneurship builds on both types of passion, harmonious and obsessive, as suggested in the Dualistic Model of Passion (DMP). Furthermore, only the obsessive component, not the harmonious, is found to be positively associated to serial entrepreneurship. Our findings suggest that passion is important in the entrepreneurial process and that more research on this topic is warranted.

## References

- Anokhin, S, Grichnik, D, and Hisrich, R D (2008) The journey from novice to serial entrepreneurship in China and Germany: Are the drivers the same? *Managing Global Transitions* 6(2): 117–142.
- Bonneville-Roussy, A, Lavigne, G L, and Vallerand, R J (2011) When passion leads to excellence: the case of musicians. *Psychology of Music* 39(1): 123–138.
- Breugst, N, Domurath, A, Patzelt, H, and Klaukien, A (2012) Perceptions of entrepreneurial passion and employees' commitment to entrepreneurial ventures. *Entrepreneurship Theory and Practice* 36(1): 171–192.
- Cardon M S, Wincent J, Singh J, and Drnovsek M (2009) The nature and experience of entrepreneurial passion. *Academy of Management Review* 34(3): 511–532.
- Cardon, M S, Zietsma, C, Saparito, P, Matherne, B P, and Davis, C (2005) A tale of passion: New insights into entrepreneurship from a parenthood metaphor. *Journal of Business Venturing* 20(1): 23–45.
- Carpentier, J, Mageau, G A, and Vallerand, R J (2012) Ruminations and flow: Why do people with a more harmonious passion experience higher well-being? *Journal of Happiness Studies* 13(3): 501–518.
- Carter, S and Ram, M (2003) Reassessing portfolio entrepreneurship. *Small Business Economics* 21(4): 371–380.
- Caudroit, J, Stephan, Y, Brewer, B W, and Le Scanff, C (2010) Contextual and individual predictors of psychological disengagement from sport during a competitive event. *Journal of Applied Social Psychology* 40(8): 1999–2018.

- Caudroit, J, Boiché, J, Stephan, Y, Le Scanff, C, and Trouilloud, D (2011) Predictors of work/family interference and leisure-time physical activity among teachers: The role of passion towards work. *European Journal of Work and Organizational Psychology* 20(3): 326–344.
- Chen, X P, Yao, X, and Kotha, S (2009) Entrepreneur passion and preparedness in business plan presentations: A persuasion analysis of venture capitalists' funding decisions. *Academy of Management Journal* 52(1): 199–214.
- Curran, T, Appleton, P R, Hill, A P, and Hall, H K (2011) Passion and burnout in elite junior soccer players: The mediating role of self-determined motivation. *Psychology of Sport* and Exercise 12(6): 655–661.
- Deci, E L, and Ryan, RM (2000) The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry* 11(4): 227–268.
- Forest, J, Mageau, G A, Sarrazin, C, and Morin, E M (2011) 'Work is my passion': The different affective, behavioural, and cognitive consequences of harmonious and obsessive passion toward work. *Canadian Journal of Administrative Sciences-Revue Canadienne Des Sciences De L Administration* 28(1): 17–30.
- Kessler, A and Frank, H (2009) Nascent entrepreneurship in a longitudinal perspective. International Small Business Journal 27(6): 720–742.
- Lavigne, G L, Forest, J, and Crevier-Braud, L (2012) Passion at work and burnout: A twostudy test of the mediating role of flow experiences. *European Journal of Work and Organizational Psychology* 21(4): 518–546.

- MacMillan, I (1986) To really learn about entrepreneurship, let's study habitual entrepreneurs. *Journal of Business Venturing* 1(3): 241–243.
- Mageau, G A, Carpentier, J, and Vallerand, R J (2011) The role of self-esteem contingencies in the distinction between obsessive and harmonious passion. *European Journal of Social Psychology* 41(6): 720–729.
- Mageau G A, Vallerand R J, Charest J, Salvy S J, Lacaille N, Bouffard T, and Koestner R (2009) On the development of harmonious and obsessive passion: The role of autonomy support, activity specialization, and identification with the activity. *Journal of Personality* 77(3): 601–646.
- Mageau, G A, Vallerand, R J, Rousseau, F L, Ratelle, C F, and Provencher, P J (2005) Passion and gambling: Investigating the divergent affective and cognitive consequences of gambling. *Journal of Applied Social Psychology* 35(1): 100–118.
- Murnieks, C Y, Mosakowski, E, and Cardon, M S (in press) Pathways of passion: Identity centrality, passion, and behavior among entrepreneurs. *Journal of Management*. doi: 10.1177/0149206311433855.

Norusis, M J (1990) SPSS Advanced statistics user's guide. Chicago: SPSS, Inc.

- Przybylski, A K, Weinstein, N, Ryan, R M, and Rigby, C S (2009) Having to versus wanting to play: Background and consequences of harmonious versus obsessive engagement in video games. *Cyberpsychology & Behavior* 12: 485–492.
- Ratelle C F, Vallerand R J, Mageau G A, Rousseau F L, and Provencher P (2004) When passion leads to problematic outcomes: A look at gambling. *Journal of Gambling Studies* 20(2): 105–119.

- Rip, B, Vallerand, R J, and Lafreniere, M A K (2012) Passion for a cause, passion for a creed: On ideological passion, identity threat, and extremism. *Journal of Personality* 80(3): 573–602.
- Robson, P J A, Akuetteh, C K, Westhead, P, and Wright, M (2012) Exporting intensity, human capital and business ownership experience. *International Small Business Journal* 30(4): 367–387.
- Seguin-Levesque, C, Laliberte, M L N, Pelletier, L G, Blanchard, C, and Vallerand, R J (2003) Harmonious and obsessive passion for the Internet: Their associations with the couple's relationship. *Journal of Applied Social Psychology* 33(1): 197–221.
- Shane, S and Venkataraman, S (2000) The promise of entrepreneurship as a field of research. Academy of Management Review 25(1): 217–226.
- Shane, S, Locke, E A, and Collins, C J (2003) Entrepreneurial motivation. *Human Resource Management Review* 13(2): 257–279.
- Stoeber, J, Childs, J H, Hayward, J A, and Feast, A R (2011) Passion and motivation for studying: predicting academic engagement and burnout in university students. *Educational Psychology* 31(4): 513–528.
- Storey, D J (2011) Optimism and chance: The elephants in the entrepreneurship room. International Small Business Journal 29(4): 303–321.
- Stenseng, F (2008) The two faces of leisure activity engagement: Harmonious and obsessive passion in relation to intrapersonal conflict and life domain outcomes. *Leisure Sciences* 30(5): 465–481.

- Vallerand, R J, (2010) On passion for life activities: The dualistic model of passion. Advances in Experimental Social Psychology 42: 97-193.
- Vallerand, R J, Mageau, G A, Elliot, A J, Dumais, A, Demers, M A, and Rousseau, F (2008)
  Passion and performance attainment in sport. *Psychology of Sport and Exercise* 9(3): 373–392.
- Vallerand, R J, Mageau G v A, Ratelle C, Léonard M, Blanchard C L, Koestner R, Gagné M, and Marsolais J (2003) Les passions de l'âme: On obsessive and harmonious passion. *Journal of Personality & Social Psychology* 85(4): 756–767.
- Vallerand, R J, Paquet, Y, Philippe, F L, and Charest, J (2010) On the Role of Passion forWork in Burnout: A Process Model. *Journal of Personality* 78(1): 289–312.
- Vallerand, R J, Salvy, S J, Mageau, G A, Elliot, A J, Denis, P L, Grouzet, F M E, and Blanchard, C (2007) On the role of passion in performance. *Journal of Personality* 75(3): 505–533.
- Westhead, P, Ucbasaran, D, and Wright, M (2005) Experience and cognition. *International Small Business Journal* 23(1): 72–98.
- Zhang, J (2011) The advantage of experienced start-up founders in venture capital acquisition: Evidence from serial entrepreneurs. *Small Business Economics* 36(2): 187–208.

## Table 1. Descriptive statistics and Pearson correlations

Variable	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Habitual entrepreneurship	0.70	0.46	(-)										
2. Serial entrepreneurship	0.68	0.47	0.95***	(-)									
3. Portfolio entrepreneurship	0.47	0.50	0.62***	0.56***	(-)								
4. Age	46.52	10.73	0.17***	0.17***	0.07*	(-)							
5. Gender	0.80	0.41	0.10**	0.10**	0.14***	0.02	(-)						
6. Education	0.56	0.58	0.00	0.01	-0.01	0.17***	-0.08*	(-)					
7. Industry experience	16.39	11.25	0.15***	0.16***	0.09*	0.53***	0.15***	-0.01	(-)				
8. Venture turnover	2620.87	6330.83	0.02	0.02	0.03	0.03	0.05	-0.01	0.07	(-)			
9. Venture result	275.98	734.55	0.01	0.01	0.04	0.05	0.02	0.16***	0.12**	0.24***	(-)		
10. Harmonious passion	3.72	0.69	-0.01	-0.01	0.11**	0.00	-0.04	0.10**	-0.01	-0.01	0.02	(-)	
11. Obsessive passion	2.77	0.90	0.09*	0.08*	0.14***	-0.13**	0.06	-0.18***	0.01	0.09*	0.04	0.24***	(-)

*Notes:* N = 704; \*\*\*p < .001; \*\*p < 0.01; \*p < 0.05.

Variables	Model 1 (HE)	Model 2 (HE)	Model 3 (PE)	Model 4 (PE)	Model 5 (SE)	Model 6 (SE)
Control variables	· ,	· · ·			, ,	
Age	0.29** (0.10)	0.33** (0.11)	0.11 (0.09)	0.14 (0.10)	0.29*** (0.10)	0.33*** (0.10)
Gender	0.18* (0.08)	0.17* (0.08)	0.27*** (0.09)	0.28*** (0.08)	0.18* (0.08)	0.17* (0.08)
Education	-0.03 (0.09)	0.02 (0.10)	-0.03 (0.08)	-0.01 (0.09)	-0.03 (0.09)	0.02 (0.09)
Industry experience	0.17 (0.11)	0.16 (0.11)	0.07 (0.09)	0.06 (0.09)	$0.20^{\dagger}$ (0.10)	0.19 <sup>†</sup> (0.10)
Venture turnover	0.01 (0.09)	-0.01 (0.10)	0.03 (0.08)	0.02 (0.08)	0.02 (0.10)	0.01 (0.09)
Venture result	-0.01 (0.09)	-0.02 (0.10)	0.08 (0.10)	0.07 (0.10)	-0.02 (0.09)	-0.02 (0.09)
Independent variables						
Harmonious passion		-0.08 (0.09)		0.18* (0.08)		-0.07 (0.09)
Obsessive passion		0.26** (0.09)		0.23*** (0.08)		0.24*** (0.09)
- 2 log likelihood	827.62	819.69	954.57	937.04	848.12	840.85
Probability level	<.001	< .001	< .001	< .001	< .001	< .001
$\chi^2$	28.71	36.65	19.74	37.27	34.57	39.84
Df	6	8	6	8	6	8
Improvement $\chi^2$		7.94		17.53		5.27
Improvement significance		< .05		< .001		<.1

## Table 2. Results of logistic regression analyses

*Notes:* N = 704. Standard errors are in parentheses. The coefficients are standardized. \*\*\*p < .001; \*\*p < 0.01; \*p < 0.05; †p < 0.10. Two-tailed tests.