

Short paper prepared for: WOA 2015

## The Importance of Entrepreneurs' Traits in explaining Start-ups' Innovation

Leonelli<sup>1\*</sup>, S.; Ceci<sup>2</sup>, F.; Masciarelli<sup>3</sup>, F.

<sup>1</sup> G. d'Annunzio University, Department of Economia Aziendale

Viale Pindaro, 42, Pescara, 65127, Italy, Phd Student

<sup>1</sup>E-mail: [simona.leonelli@unich.it](mailto:simona.leonelli@unich.it)

<sup>2-3</sup> G. d'Annunzio University, Department of Economia Aziendale

Viale Pindaro, 42, Pescara, 65127, Italy.

E-mails: [f.ceci@unich.it](mailto:f.ceci@unich.it), [f.masciarelli@unich.it](mailto:f.masciarelli@unich.it)

### Keywords

Personality traits; Entrepreneurship; Innovation; Start-up.

### Track:

PROCESSES: Information Systems & Innovation.

---

\* Corresponding author

## **Purpose of the paper**

Several studies have proved the existence of a relationship between the personality traits of the entrepreneur and firm performance. However, few of them have focused on how these personal traits can be correlated with innovation performance in start-ups. The aim of this paper is to fill this gap analysing the relationship between start-ups' innovation and entrepreneurs' traits. In particular, it aims to shed light on how narcissism, extraversion, agreeableness, conscientiousness, neuroticism, openness to experience, and locus of control of the entrepreneur impact on start-ups' innovation. The decision to focus on start-ups is based on the crucial role played by entrepreneur in these firms: his (her) personality strongly influences business decisions.

## **Theoretical background**

One of the most important aspects that favors the start-ups' success lies in their innovation capability (Miller & Friesen, 1984): they are called to realize and exploit innovation opportunity (Rosenbusch, Brinckmann, & Bausch, 2011), and accordingly, highly innovative start-ups are able to raise capital more easily (Deeds, 2001).

Exant literature shows the existence of a positive relationship between innovation and the growth of start-ups. Groenewegen and de Langen (2012) state that there three main factors that determine the success of growth in a start-up: the uniqueness of the advantages of the innovation; the start-up organization characteristics; and the person of the entrepreneur.

We can define innovative start-ups such as those that implement product/service and process innovations, and technical innovations. Product/service innovations refer to the introduction of new products/services to fulfill users need or external market (Damanpour, 1996; Utterback & Abernathy, 1975). Process innovations refer to the introduction of new elements in firms in terms of production or service delivery. These new elements can be, for example, new incoming materials, renewal of specific activities, updating the workflow and information, and use of new equipment (Damanpour, 1996; Ettlie & Reza, 1992). Finally technical innovations are products, services and technology employed for the production of products or the provision of services. Examples of technical innovation can be the practical implementation of an idea for a new product or a new service, or the introduction of new elements in the process of product production or service supply (Damanpour, 1996; Damanpour & Evan, 1984).

In start-ups, the personality of the entrepreneur has a strong influences in the business

decision (Baron & Markman, 2003; Brandstätter, 2011; Dyer & Handler, 1994). Several authors state that who establish and manage a new business venture must have certain capabilities: they must be innovative, and risk taker (Chen, Greene, & Crick, 1998; Nga & Shamuganathan, 2010); also they must develop, recognize, evaluate and exploit opportunities, and have to make rapid decisions under uncertainty and in a resource constraint environment (Ardichvili, Cardozo, & Ray, 2003; Eckhardt & Shane, 2003). Previous studies have focused primarily on entrepreneurs' observable characteristics (such as age, sex, previous experiences and tenure) and their effects on the strategy and performance, but this approach can not explain because some entrepreneurs are more successful than others (Boone, Brabander, & Witteloostuijn, 1996). For this reason, in this paper, we use a personality approach that concerns "the characteristics of individual psychological traits that define an entrepreneur" (Nga & Shamuganathan, 2010, p. 261). Moreover, in the psychology field, personality traits are characteristics of individual behavior which clarify because people act differently in similar situations (Llewellyn & Wilson, 2003; Nga & Shamuganathan, 2010).

However, few studies have analyzed how the entrepreneurs' traits might affect firms' innovation (Rauch & Frese, 2007). Innovation is influenced by certain characteristics of the entrepreneur including: the risk appetite, optimism, logical mind, a higher education, most previous work and experience in the field (Kickul & Gundry, 2002; Nga & Shamuganathan, 2010).

Scholars investigate the influence of the Big Five personality trait dimensions on social entrepreneurs' characteristics (Nga & Shamuganathan, 2010; Song, Podoyntsyna, Van Der Bij, & Halman, 2008). In particular they claim that only three of Five Factors influence the innovative capacity of start-ups' social entrepreneurs, and they demonstrate that openness to experience and agreeableness have a positive influence on the innovative dimension of social entrepreneur, while neuroticism has a negative influence on the innovative dimension of social entrepreneur.

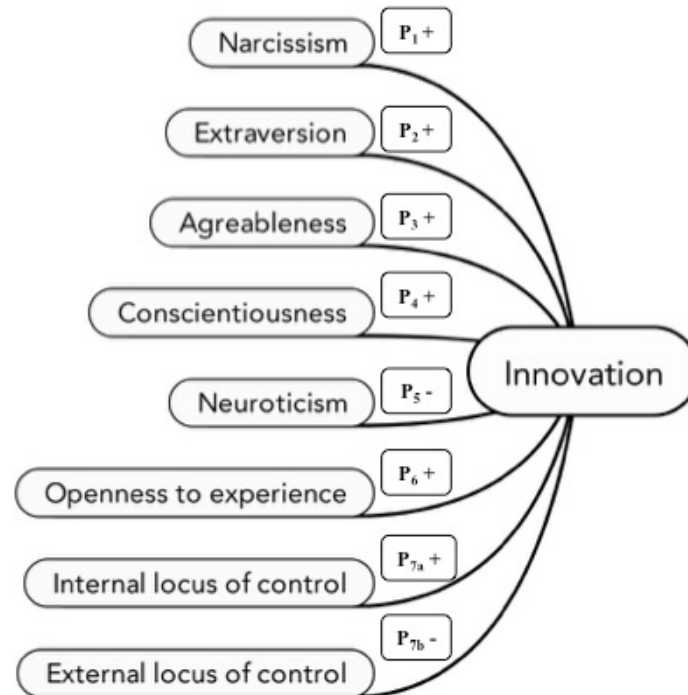
In general, we can say that if entrepreneurs lack the types of education and training linked with innovativeness, they can not transforming customers' needs into new products and services (Zhao, Seibert, & Lumpkin, 2010); moreover, if entrepreneurs are creativity and have the ability to discover innovative ways, they can protecting the firm from competition (Bird, 1989; Ciavarella, Buchholtz, Riordan, Gatewood, & Stokes, 2004). If strategic decisions are framed within the constraints of family and individual goals (Davis, Hills, & LaForge, 1985; Sethi, Smith, & Park, 2001), and if entrepreneurs are risk averse and conservative (Donckels & Fröhlich, 1991), this could block their innovative capacity and then block the start-up's

innovative capacity (Hausman, 2005). Thus, innovation translate into the innovativeness of the owner/manager rather than the innovativeness of the firm (Dyer & Handler, 1994).

### Analytical model

Figure 1 reports the analytical model used in this paper.

**Figure 1: Entrepreneurs' personality traits and innovation.**



We analyze the relationship between each entrepreneurs' personality traits and innovation. In particular, narcissism “reflects the strategies used to promote a positive self-image and facilitate agency by otherwise psychologically well-adjusted individuals” (Ackerman et al., 2010, p. 68). Narcissistic individuals tend to emerge as leaders in organizations, because they have many strengths that will make it easier; they have compelling, even gripping, visions for companies, in fact they do not try to understand the future but they attempt to create it, and they have an ability to attract followers through their oratory ars, that makes them so charismatic and will has a positive effects on organizational outcomes (Bogart, Benotsch, & Pavlovic, 2004; Goncalo, Flynn, & Kim, 2010). A charismatic leadership is usually associated with creativity and innovation (Baum, Locke, & Kirkpatrick, 1998; Maccoby, 2000), therefore narcissists are beneficial to organizations for their visionary and innovator qualities (Goncalo et al., 2010; Rosenthal & Pittinsky, 2006).

However, the relationship between narcissistic entrepreneurs and start-ups' innovation has not been addressed, and then, analyzing all the features possessed by a narcissistic subject, we suggest that:

**Proposition 1 (P<sub>1</sub>):** *Narcissistic entrepreneurs positively influence start-ups' innovation.*

In this paper, we will draw upon the Big Five Factors Model, designed by McCrae and John (1992) the early nineties. According to many authors, the development of this model allowed to organize a confusing variety of personality variables into a meaningful and comprehensive set of personality traits (McCrae & John, 1992; Rauch & Frese, 2007). The five-factor model of personality or Big Five includes neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (Brandstätter, 2011; McCrae & Costa Jr, 1997).

*Extraversion* represents the tendency to be outgoing, assertive, active, enthusiastic and excitement seeking. Many authors argue that entrepreneurs with a high level of extraversion are considered charismatic leaders by employees (Judge & Bono, 2000; Zhao et al., 2010). Therefore, we suggest:

**Proposition 2 (P<sub>2</sub>):** *Entrepreneurs with a high level of extraversion will positively influence start-ups' innovation.*

*Agreeableness* is the tendency to be kind, altruistic, trusting, and modest (Zhao et al., 2010). Many scholars argue that agreeableness is negatively related to firm performance, because entrepreneurs must be able to benefit from opportunities, must think of their own interests and must manipulate situations in order that firms survive and grow (Rothmann & Coetzer, 2003; Zhao & Seibert, 2006). However, other scholars argue that a level of agreeableness is necessary to receive the required support to get a new venture started (Ciavarella et al., 2004). According to Ross and Offermann (1997) there is a positive relationships between some aspects of agreeableness and charismatic leadership. Since we are considering the start-ups entrepreneurs who are motivated and extremely creative, and given that these characteristics are the basis of innovation, we suggest:

**Proposition 3 (P<sub>3</sub>):** *Entrepreneurs with a high level of agreeableness positively influence start-ups' innovation.*

*Conscientiousness* includes thinking before acting, being respectful of the rules and laws, and planning and organizing tasks (Roberts, Chernyshenko, Stark, & Goldberg, 2005). Accordingly, "higher levels of conscientiousness play a pivotal role in the entrepreneur's

ability to lead his/her new venture to long-term survival” (Ciavarella et al., 2004, p. 472). In the light of previous studies, we expect conscientious entrepreneurs will invest more in innovation, to facilitate the development and growth of their own start-up. Therefore, we suggest:

**Proposition 4 (P<sub>4</sub>):** *Entrepreneurs with a high level of conscientiousness positively influence start-ups’ innovation.*

*Neuroticism* is the tendency to be anxious, fearful, depressed, and moody (Costa Jr & McCrae, 1992; Zhao & Seibert, 2006). People with high levels of neuroticism lack self-confidence and self-esteem (Judge & Bono, 2000), and hardly want to take personal responsibilities and strains associated with the entrepreneurial role (Zhao et al., 2010). Thus, we propose:

**Proposition 5 (P<sub>5</sub>):** *Entrepreneurs with a high level of neuroticism negatively influence start-ups’ innovation.*

*Openness to experience* represents the tendency to be creative, imaginative, and perceptive (Judge & Bono, 2000; Zhao et al., 2010). Entrepreneurs with high level of openness to experience use their creativity to solve problems, and take an innovative approach to products, business methods, or strategies (Ciavarella et al., 2004; Zhao & Seibert, 2006; Zhao et al., 2010). Therefore the link between openness to experience and creativity (Judge & Bono, 2000; McCrae & Costa Jr, 1997), and the link between creativity and innovation, leads us to assume:

**Proposition 6 (P<sub>6</sub>):** *Entrepreneurs with a high level of openness to experience positively influence start-ups’ innovation.*

The last variable that we take into consideration is locus of control that indicates the way in which an individual believes that life events are produced by its behaviour (internal locus of control), or from external causes beyond its control (external locus of control) (Rotter, 1966). Entrepreneurs with an internal locus of control, usually believe that one’s own active influence helps to increase the motivation to reach success (Baum, Frese, & Baron, 2014), while entrepreneur with an external locus of control most likely will not implement all the activities that take into account innovation, proactivity and risk taking because leave in a status of uncertainty and ambiguity (Boone et al., 1996; Miller, 2011). In the light of previous studies we can suggest:

**Proposition 7a** (P<sub>7a</sub>): *Entrepreneurs with a high level of internal locus of control positively influence start-ups' innovation.*

**Proposition 7b** (P<sub>7b</sub>): *Entrepreneurs with a high level of external locus of control negatively influence start-ups' innovation.*

### **Main findings and contributions**

All the entrepreneurs' personality traits described in the previous paragraphs influence the behavior of entrepreneurs. Our propositions claim that each trait could have a positive or negative influence on start-ups' innovation.

The analytical model proposed in this paper will make significant contributions to three different literatures. First, it contributes to the entrepreneurship literature by exploring the main personality traits that are common to entrepreneurs. Second, it contributes to the innovation literature by explaining that entrepreneurs with particular personality traits have higher propensity to innovate. Finally, it contributes to the organizational behavior literature because it shows how the relationship between startups' stakeholders and entrepreneurs can influence the startups' activity.

This paper links with the third track (processes) because it refers to innovation, and how entrepreneurs, with specific personality traits, can govern their organizations efficiently to stimulate innovation.

### **References**

- Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., & Kashy, D. A. (2010). What does the Narcissistic Personality Inventory really measure? *Assessment*, 1073191110382845.
- Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, 18(1), 105-123. doi: [http://dx.doi.org/10.1016/S0883-9026\(01\)00068-4](http://dx.doi.org/10.1016/S0883-9026(01)00068-4)
- Baron, R. A., & Markman, G. D. (2003). Beyond social capital: The role of entrepreneurs' social competence in their financial success. *Journal of Business Venturing*, 18(1), 41-60.
- Baum, J. R., Frese, M., & Baron, R. A. (2014). *The psychology of entrepreneurship*: Psychology Press.
- Baum, J. R., Locke, E. A., & Kirkpatrick, S. A. (1998). A longitudinal study of the relation of vision and vision communication to venture growth in entrepreneurial firms. *Journal of Applied Psychology*, 83(1), 43.
- Bird, B. J. (1989). *Entrepreneurial behavior*: Scott Foresman & Company.
- Bogart, L. M., Benotsch, E. G., & Pavlovic, J. D. P. (2004). Feeling superior but threatened: The relation of narcissism to social comparison. *Basic and Applied Social Psychology*, 26(1), 35-44.

- Boone, C., Brabander, B., & Witteloostuijn, A. (1996). Ceo Locus of Control and Small Firm Performance: an Integrative Framework and Empirical Test\*. *Journal of Management Studies*, 33(5), 667-700.
- Brandstätter, H. (2011). Personality aspects of entrepreneurship: A look at five meta-analyses. *Personality and Individual Differences*, 51(3), 222-230. doi: 10.1016/j.paid.2010.07.007
- Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, 13(4), 295-316.
- Ciavarella, M. A., Buchholtz, A. K., Riordan, C. M., Gatewood, R. D., & Stokes, G. S. (2004). The Big Five and venture survival: Is there a linkage? *Journal of Business Venturing*, 19(4), 465-483.
- Costa Jr, P., & McCrae, R. R. (1992). Revised NEO personality inventory (NEO-PI-R) and NEO five-factor (NEO-FFI) inventory professional manual. *Odessa, FL: PAR*.
- Damanpour, F. (1996). Organizational Complexity and Innovation: Developing and Testing Multiple Contingency Models. *Management science*, 42(5), 693-716. doi: 10.2307/2634460
- Damanpour, F., & Evan, W. M. (1984). Organizational Innovation and Performance: The Problem of "Organizational Lag". *Administrative Science Quarterly*, 29(3), 392-409. doi: 10.2307/2393031
- Davis, C. D., Hills, G. E., & LaForge, R. W. (1985). The marketing/small enterprise paradox: a research agenda. *International Small Business Journal*, 3(3), 31-42.
- Deeds, D. L. (2001). The role of R&D intensity, technical development and absorptive capacity in creating entrepreneurial wealth in high technology start-ups. *Journal of Engineering and Technology Management*, 18(1), 29-47.
- Donckels, R., & Fröhlich, E. (1991). Are family businesses really different? European experiences from STRATOS. *Family business review*, 4(2), 149-160.
- Dyer, W. G., & Handler, W. (1994). Entrepreneurship and family business: Exploring the connections. *Entrepreneurship Theory and Practice*, 19, 71-83.
- Eckhardt, J. T., & Shane, S. A. (2003). Opportunities and entrepreneurship. *Journal of Management*, 29(3), 333-349.
- Ettlie, J. E., & Reza, E. M. (1992). Organizational integration and process innovation. *Academy of Management Journal*, 35(4), 795-827.
- Goncalo, J. A., Flynn, F. J., & Kim, S. H. (2010). *From a mirage to an oasis: Narcissism, perceived creativity and creative performance*. Paper presented at the Academy of Management 2010 Annual Meeting - Dare to Care: Passion and Compassion in Management Practice and Research, AOM 2010.
- Groenewegen, G., & de Langen, F. (2012). Critical Success Factors of the Survival of Start-Ups with a Radical Innovation. *Journal of Applied Economics & Business Research*, 2(3), 155-171.
- Hausman, A. (2005). Innovativeness among small businesses: Theory and propositions for future research. *Industrial marketing management*, 34(8), 773-782.
- Judge, T. A., & Bono, J. E. (2000). Five-factor model of personality and transformational leadership. *Journal of Applied Psychology*, 85(5), 751-765.
- Kickul, J., & Gundry, L. (2002). Prospecting for strategic advantage: the proactive entrepreneurial personality and small firm innovation. *Journal of Small Business Management*, 40(2), 85-97.
- Llewellyn, D. J., & Wilson, K. M. (2003). The controversial role of personality traits in entrepreneurial psychology. *Education+ Training*, 45(6), 341-345.
- Maccoby, M. (2000). Narcissistic leaders: The incredible pros, the inevitable cons. *Harvard Business Review*, 78(1), 68-78.



- McCrae, R. R., & Costa Jr, P. T. (1997). Personality trait structure as a human universal. *American psychologist*, 52(5), 509.
- McCrae, R. R., & John, O. P. (1992). An introduction to the five-factor model and its applications. *Journal of personality*, 60(2), 175-215.
- Miller, D. (2011). Miller (1983) revisited: A reflection on EO research and some suggestions for the future. *Entrepreneurship Theory and Practice*, 35(5), 873-894.
- Miller, D., & Friesen, P. H. (1984). A longitudinal study of the corporate life cycle. *Management science*, 30(10), 1161-1183.
- Nga, J. K. H., & Shamuganathan, G. (2010). The influence of personality traits and demographic factors on social entrepreneurship start up intentions. *Journal of business ethics*, 95(2), 259-282.
- Rauch, A., & Frese, M. (2007). Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. *European Journal of Work and Organizational Psychology*, 16(4), 353-385.
- Roberts, B. W., Chernyshenko, O. S., Stark, S., & Goldberg, L. R. (2005). The structure of conscientiousness: An empirical investigation based on seven major personality questionnaires. *Personnel Psychology*, 58(1), 103-139.
- Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing*, 26(4), 441-457.
- Rosenthal, S. A., & Pittinsky, T. L. (2006). Narcissistic leadership. *The Leadership Quarterly*, 17(6), 617-633. doi: <http://dx.doi.org/10.1016/j.leaqua.2006.10.005>
- Ross, S. M., & Offermann, L. R. (1997). Transformational leaders: Measurement of personality attributes and work group performance. *Personality and Social Psychology Bulletin*, 23(10), 1078-1086.
- Rothmann, S., & Coetzer, E. (2003). The big five personality dimensions and job performance. *SA Journal of Industrial Psychology*, 29(1), p. 68-74.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological monographs: General and applied*, 80(1), 1.
- Sethi, R., Smith, D. C., & Park, C. W. (2001). Cross-functional product development teams, creativity, and the innovativeness of new consumer products. *Journal of Marketing Research*, 38(1), 73-85.
- Song, M., Podoyntsyna, K., Van Der Bij, H., & Halman, J. I. (2008). Success Factors in New Ventures: A Meta-analysis\*. *Journal of Product Innovation Management*, 25(1), 7-27.
- Utterback, J. M., & Abernathy, W. J. (1975). A dynamic model of process and product innovation. *Omega*, 3(6), 639-656.
- Zhao, H., & Seibert, S. E. (2006). The big five personality dimensions and entrepreneurial status: a meta-analytical review. *Journal of Applied Psychology*, 91(2), 259.
- Zhao, H., Seibert, S. E., & Lumpkin, G. T. (2010). The relationship of personality to entrepreneurial intentions and performance: A meta-analytic review. *Journal of Management*, 36(2), 381-404.