

COMMENTARY

# The challenges of Lean management research and practice in the field of entrepreneurship: The roles of I-O psychology theories and I-O psychologists

Chao Miao<sup>1\*</sup>, Shanshan Qian<sup>2</sup>, and Ronald H. Humphrey<sup>3</sup>

<sup>1</sup>Salisbury University, <sup>2</sup>Towson University, and <sup>3</sup>Lancaster University

\*Corresponding author. Email: [cxmiao@salisbury.edu](mailto:cxmiao@salisbury.edu)

Balzer, Brodke, Kluse, and Zickar (2019) present a focal article to discuss why Lean management, in spite of its popularity in some other areas, receives little attention in the field of industrial and organizational (I-O) psychology. Moreover, they argue that I-O psychologists can play a role in improving Lean management and in amplifying its impact. Specifically, Balzer et al. identify a set of topics that may stimulate I-O psychologists' interest in Lean management. Based on our review of the cited literature in Balzer et al., we found that major entrepreneurship journals were not cited. Entrepreneurship was depicted as “an exciting field of inquiry for I/O psychology” (Frese & Gielnik, 2014, p. 430), and it is known to enhance and enrich our knowledge in I-O psychology (Frese & Gielnik, 2014). Given the recent rise of the “psychology of entrepreneurship” (Frese & Gielnik, 2014), we argue that this omission in Balzer et al. may have to be addressed because Lean management is an important topic in the field of entrepreneurship. Although the field of entrepreneurship has begun paying attention to I-O psychology, more needs to be done. Research on Lean management may help to reduce the gap between I-O psychology and entrepreneurship. We will discuss the status quo of Lean management in entrepreneurship studies, the challenges of Lean management research and practice in the field of entrepreneurship, and how I-O psychology theories address these challenges and enrich the current understanding of Lean management in entrepreneurship.

## Lean management in entrepreneurship

Lean management has gained considerable popularity in the field of entrepreneurship. Guided by Lean management principles, practitioners (e.g., Blank, 2013; Blank & Dorf, 2012; Ries, 2011) have developed Lean startup methods based on extrapolation from their own startup experiences. The popularity of Lean startup methods has been rapidly growing and has spread across hotbeds of entrepreneurship (e.g., Silicon Valley) and across global audiences (Mansoori & Lackéus, *in press*). There are also claims that Lean startup methods have become the most popular system for accelerators, entrepreneurs, incubators, and entrepreneurship programs (Blank, 2013; Mansoori & Lackéus, *in press*).

Lean startup approaches take a hypothesis testing approach to entrepreneurship through which entrepreneurs translate their ideas into business model hypotheses, evaluate their assumptions about customers' needs, and create a “minimum viable product” (MVP) to examine their proposed solutions to customers' needs (Blank, 2013; Ghezzi & Cavallo, *in press*). Based on the outcomes of testing, entrepreneurs may decide to (a) proceed with the proposed business model; (b) pivot to a revised business model; or (c) scrap the business idea (Blank, 2013). This process

iteratively continues until hypotheses are confirmed via MVP tests (Ghezzi & Cavallo, *in press*). In contrast to the traditional process of writing a business plan where the focus is on intricate planning, the Lean start-up method focuses on testing hypotheses about consumer preferences. The goal is to “get out of the building” to contact customers and partners for feedback on their business model, utilize their input to refine their assumptions, and search for a repeatable and scalable business model that works after numerous adjustments and revisions (Blank, 2013). In sum, this Lean startup method reflects the core of Lean management, which is the customer focus (see the “roof” of Lean house; Balzer et al., 2019).

### **Challenges for Lean management in entrepreneurship**

The Lean startup method, notwithstanding its popularity in the field of entrepreneurship, has been questioned for being intuitive and lacking a clear theory to support such practices (Ghezzi & Cavallo, *in press*). As a practitioner-grounded entrepreneurship method, the Lean startup method has inevitably received criticisms for lacking theoretical rigor (Mansoori & Lackéus, *in press*). One way to enhance the theoretical rigor of the Lean startup method is to draw on scholarly grounded works (Mansoori & Lackéus, *in press*), such as theories from the field of I-O psychology.

### **The roles of I-O psychology theories**

#### ***Personality***

We argue that the Big Five personality framework has potential with regard to laying a theoretical foundation for the Lean startup method. For example, Lean startup processes require entrepreneurs to make good guesses when forming their hypotheses (Blank, 2013). Hence, entrepreneurs need to be creative and thoughtful in order to sketch out these hypotheses, and these personal behavioral tendencies are characterized by the personality trait of openness (Li, Barrick, Zimmerman, & Chiaburu, 2014). In addition, Lean startup methods also require entrepreneurs to interact with customers (i.e., to get out of the building) to test hypotheses and to go through iterative processes to continuously adjust their business model until it is working (Blank, 2013). As such, entrepreneurs need to be sociable (i.e., Extraversion), calm and patient (i.e., Emotional Stability), and persistent (i.e., Conscientiousness) so that they can effectively interact with customers and persevere in revising their business model.

#### ***Leadership***

The field of leadership is renowned for its research and theory development, and leadership theories have been confirmed to be robust by meta-analytic findings (e.g., Hoffman, Woehr, Maldagen-Youngjohn, & Lyons, 2011). Among different leadership styles, we think that transformational leadership may have its theoretical relevance to the Lean startup method and has the promise of enhancing the theoretical underpinning of the Lean startup method. The emphasis of Lean startup method is on creativity, nimbleness, and speed (Blank, 2013). This corresponds to the “intellectual stimulation” dimension of transformational leadership (Bass & Riggio, 2006/2007). Entrepreneurs who are high on transformational leadership should set high expectations for themselves and their startup team and provide the intellectual stimulation necessary to quickly develop MVP, test it with customers, and explore creative ways to efficiently adjust their business model.

### Teamwork

The search and execution processes of Lean startup methods are usually done by teams due to the high labor intensity of these processes. Thus, characteristics and work processes of a team may influence the effectiveness of the Lean startup method. For example, different types of team interdependence (e.g., pooled interdependence, sequential interdependence, and reciprocal interdependence; Saavedra, Earley, & Van Dyne, 1993) may differentially influence the effectiveness of the implementation of Lean startup processes. Scholars may develop theories and help entrepreneurs choose and apply the best team interdependence type that fits the context of their business to facilitate the implementation of the Lean startup method.

### The roles of I-O psychologists

We argue that I-O psychologists may play a very important role in shrinking not only the gap between theory and practice but also the gap between I-O psychology research, Lean management, and entrepreneurship research. For example, I-O psychologists may utilize professional conferences, such as the Society for Industrial and Organizational Psychology (SIOP), to organize caucuses, symposia, professional development workshops, and/or roundtable discussions to get academics (e.g., I-O psychologists and entrepreneurship researchers) and practitioners (e.g., entrepreneurs and practicing managers) in conversation with one another. We avow that professional conferences, such as SIOP, are important venues where academics and practitioners can engage in deep-level conversations on important topics. Such conversations can reduce the gap among disciplines and the gap between science and practice (Banks et al., 2016). We believe the outcomes of these conversations may lead to (a) more theory-driven Lean management methods, (b) more knowledge transfer from I-O psychology theories to practices (e.g., improved firm outcomes), and (c) reduced gap between I-O psychology and entrepreneurship research. The Lean startup method is a topic that has attracted considerable attention from both practitioners and researchers, so it may serve as a useful starting point for researchers and practitioners to come together and develop synergistic outcomes.

We also encourage owners of small enterprises to invite I-O psychologists as their advisors or consultants to give them evidence/research-based advice in the process of developing their businesses. This will not only help small business owners make informed decisions based on research and theory, but also help I-O psychologists develop theory for existing practical tools (e.g., Lean startup method) and formulate research questions that have practical value. I-O psychologists may also plan and initiate conversations with the authors of some bestselling practitioner-oriented books (e.g., Lean startup methods) to explore routes to enhance the theoretical foundation of popular practical tools/concepts and to improve the practical value of I-O theories.

### References

- Balzer, W. K., Brodke, M. H., Kluse, C., & Zickar, M. J. (2019). Revolution or 30-year fad? A role for I-O psychology in Lean management. *Industrial and Organizational Psychology: Perspectives on Science and Practice*, *12*(3), 215–233.
- Banks, G. C., Pollack, J. M., Bochantin, J. E., Kirkman, B. L., Whelpley, C. E., & O'Boyle, E. H. (2016). Management's science–practice gap: A grand challenge for all stakeholders. *Academy of Management Journal*, *59*, 2205–2231.
- Bass, B. M., & Riggio, R. E. (2006/2007). *Transformational leadership* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.
- Blank, S. (2013). Why the lean start-up changes everything. *Harvard Business Review*, *91*, 63–72.
- Blank, S. G., & Dorf, B. (2012). *The startup owner's manual: The step-by-step guide for building a great company*. Pescadero, CA: K&S Ranch Publishers, Inc.
- Frese, M., & Gielnik, M. M. (2014). The psychology of entrepreneurship. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*, 413–438.
- Ghezzi, A., & Cavallo, A. (In press). Agile business model innovation in digital entrepreneurship: Lean startup approaches. *Journal of Business Research*. doi:10.1016/j.jbusres.2018.06.013

- Hoffman, B. J., Woehr, D. J., Maldagen-Youngjohn, R., & Lyons, B. D.** (2011). Great man or great myth? A quantitative review of the relationship between individual differences and leader effectiveness. *Journal of Occupational and Organizational Psychology*, **84**, 347–381.
- Li, N., Barrick, M. R., Zimmerman, R. D., & Chiaburu, D. S.** (2014). Retaining the productive employee: The role of personality. *Academy of Management Annals*, **8**, 347–395.
- Mansoori, Y., & Lackéus, M.** (In press). Comparing effectuation to discovery-driven planning, prescriptive entrepreneurship, business planning, lean startup, and design thinking. *Small Business Economics*. doi:10.1007/s11187-019-00153-w
- Ries, E.** (2011). *The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses*. New York, NY: Crown Publishing Group.
- Saavedra, R., Earley, P. C., & Van Dyne, L.** (1993). Complex interdependence in task-performing groups. *Journal of Applied Psychology*, **78**, 61–72.

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