



firms can learn and manage improvisation (Cunha et al., 2015). On the other hand, compositional creativity is a lower degree of creativity that leads to variations and enhancements in ideas, processes, products, and services (Fisher & Amabile, 2009). Hence, the difference between improvisational and compositional creativity is in two factors: time and novelty.

Moreover, SMEs contribute to the global economy substantially (Singh, Garg, & Deshmukh, 2009) and compete for market share with big enterprises. SMEs are agile companies and drivers of innovation, representing the basic units of developed countries. In addition, SMEs have a considerable growth effect on developing countries (Singh et al., 2009). Since SMEs show high levels of flexibility and agility, they will likely practice learning strategies more easily. In contrast, large firms tend to show resistance to change and have difficulty changing current business processes given the costs; thus, large firms are unlikely to accept new technology and knowledge as readily as SMEs. Thus, SMEs have opportunities to use their learning capabilities to foster creativity and innovation and remain competitive. Cassidy (2004) points out that the literature on educational learning is plentiful, but few studies consider the role of learning strategies on employee creativity at the organizational level (Gong, Huang, & Farh, 2009; Hirst, Van Knippenberg, & Zhou, 2009), and no research examines the alternative complex combinations (i.e., casual recipes) of the organizational learning strategies that lead to improvisational creativity, compositional creativity, and innovation.

The literature therefore still contains some degree of ambiguity and inconsistency regarding organizational learning capability, and its potential outcomes, especially in the case of SMEs. This study investigates several pathways of complex antecedents by which organizational learning strategies facilitate improvisational creativity, compositional creativity, and innovation (Fig. 1) with organizational learning theory and organizational improvisation theory as the foundation.

The next section provides the theoretical background. Subsequently, this study uses PLS-SEM to provide symmetrical “net effect” explanations (linear relationships among variables) and fsQCA to provide a holistic view of the interrelationships (asymmetrical relationships between variables) that collectively affect innovation. The last section discusses this study’s contributions, managerial implications, limitations, and future research directions.

## 2. Theoretical background

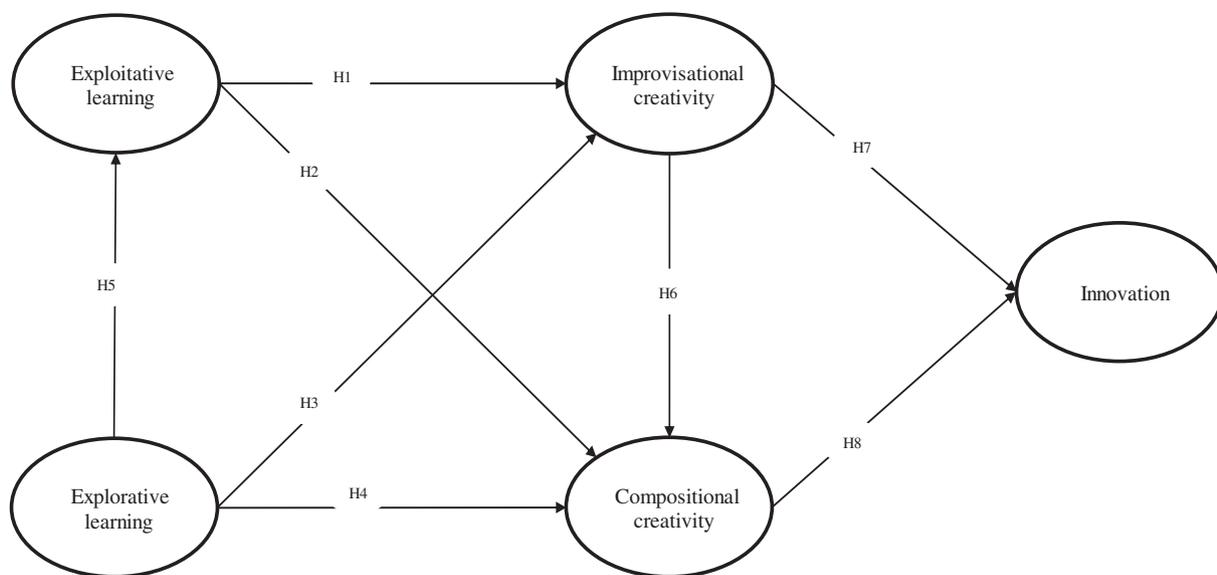
### 2.1. Organizational improvisation theory

Cunha, Kamoche, and Cunha (2003) define organizational improvisation as “the conception of action as it unfolds, by an organization and/or its members, drawing on available material, cognitive, affective, and social resources” (p. 103). They also indicate that organizational improvisation is an obscure concept, and divide improvisation literature into two generations to explain the evolution of improvisation theory in three stages. In the first generation, researchers (Mirvis, 1998; Weick, 1998) investigate improvisation in art and music, especially Jazz. The second generation (Crossan, 1998; Crossan, Lane, White, & Klus, 1996) extends the research to organizational improvisation in business settings using empirical studies. In short, the first generation of authors adapted the features of Jazz music and improvisation theater to an organizational setting to develop the theory (Cunha et al., 2003), while the second generation extends the research into business and personal experiences in organizations (Moorman & Miner, 1998).

Researchers in the third phase of theoretical development revisit studies from the first generation to formally define the concept and features of improvisation (Hatch, 1997; Weick, 1998). Researchers measure improvisation quantitatively at both the individual levels in terms of team leaders (Magni, Proserpio, Hoegl, & Provera, 2009) or relationships between supervisors and individuals (Nisula, 2015) and the organizational level in terms of team improvisation in new product development projects (Magni, Maruping, Hoegl, & Proserpio, 2013) and the improvisational capabilities of R&D teams (Vera et al., 2014).

### 2.2. Organizational learning theory

Fiol and Lyles (1985) define organizational learning as a change in the organization’s knowledge as a function of experience. Dodgson (1993) argues disciplines rarely agree on the concept of organizational learning: the economic literature considers learning as quantifiable improvements in activities while the management and business literature views learning as a comparative competitive advantage. Early studies divide organizational learning into low- and high-level learning in terms of cognition development (Dodgson, 1993). Lichtenthaler (2009) classifies organizational learning into three processes: explorative learning,



**Fig. 1.** Theoretical research model (hypothetical assessment (symmetrical) using PLS-SEM technique\*). Note: \*For fsQCA methodology (asymmetrical), antecedents (causal conditions (exploitative learning strategy, explorative learning strategy, improvisational creativity, compositional creativity) are several subset/s of innovation (outcome condition or solution)).

