

# Chapter 4

## Organizational Learning and Technological Innovation Practices: The Mediating Role of Knowledge Donation and Knowledge Collection

**Zhimin Wang**

*Department of Management, Business School, University of Otago, New Zealand*

**Kwek Choon Ling**

*Department of Management, Faculty of Accountancy, Finance, and  
Business, Tunku Abdul Rahman University, Malaysia*

### **ABSTRACT**

*This chapter investigates the relationships among organizational learning, knowledge donation, knowledge collection, and technological innovation practices. The collected data based on a total of 157 managers from the manufacturing industries will be evaluated by applying the PLS-SEM and fsQCA. The empirical outcomes based on PLS-SEM analysis demonstrate that organizational learning positively impacts knowledge donation and knowledge collection. This chapter confirms that both knowledge donation and knowledge collection act as mediators in mediating the positive relationship between organizational learning and technological innovation practices. The fsQCA results indicated that the conditional support for the proposed antecedent and outcome expectation of knowledge donation and knowledge collection are organizational learning and technological innovation practices. The findings of fsQCA analysis show that the complex solutions with three combinations of organizational learning, knowledge donation, and knowledge collection sufficiently explain the technological innovation practices.*

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## **INTRODUCTION**

Technological innovation currently represents a type of organizational innovation practices and capabilities that support the competitiveness of an organization in a turbulent environment and facilitate the superior organizational performance (Azar & Ciabuschi, 2017; Le Bas, Mothe, & Nguyen-Thi, 2013; Coccia, 2017). Technological innovation practices can be considered as a type of dynamic capability which refers to the firm's abilities "to integrate, build, and reconfigure internal and external competence to address the rapidly changing environment" (Teece, Pisano, & Shuen, 1997; Teece, 2007). Although competitive firms are driven by technological innovation, technological innovation itself is a process of high level of risk and uncertainty (Cheng, 2016). Moreover, the acceptable framework development does not help firms to characterize and categorize its technological innovation activities if they do not understand technological innovation practices. Nevertheless, limited studies can be identified in the existing literature which calls for the antecedents of technological innovations (e.g., De Massis, Frattini, & Lichtenthaler, 2013; Planko et al., 2017). Specifically, the need for further research on investigating the issues on the association of technological innovation practices with intangible organizational attributes / elements are learning activities, routines, as well as the exchange and transfer of informal knowledge (e.g., Coccia, 2017; Garcia-Muiña, Pelechano-Barahona, & Navas-Lopez, 2009; Teece, 2007; Zuo, Fisher, & Yang, 2019).

Organizational learning may determine the success of technological innovation practices because organizational learning is a part of the intangible assets that is difficult to be imitated and replicated and it does facilitate the firm to achieve competitive advantage (Boj, Rodriguez-Rodriguez, & Alfaro-Saiz, 2014). However, Zuo et al., (2019) state that although organizational learning is significantly related to innovation, organizational learning activities may not directly impact on a firm's technological innovation novelty. Due to the importance of organizational learning in the study of technological innovation practices, studies on identifying the mediating factor the relationship between organizational learning and technological innovation practices are still underexplored. Previous study showed that knowledge management could be a key mechanism between learning and innovation practices (Abdi et al., 2018; Sanz-Valle, Naranjo-Valencia, Jiménez, & Perez-Caballero, 2011) since knowledge management is a valuable intangible resource generator which dynamically contributes to the achievement of competitive advantages (Birkinshaw & Sheehan, 2002). Moreover, some scholars argue that the relationship between organizational learning and knowledge management still remains unclear from past studies (e.g., Abdi et al., 2018; Liao & Wu, 2010).

The role of knowledge sharing has always been largely ignored in the field of knowledge management (Titi Amayah, 2013; Henttonen, Henttonen, Kianto, Kianto,

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