



Contents lists available at ScienceDirect

## Journal of Business Research



## How does knowledge inertia affect firms product innovation?☆

Xuemei Xie<sup>a</sup>, Liangxiu Fang<sup>a</sup>, Saixing Zeng<sup>b,\*</sup>, Jiage Huo<sup>a</sup><sup>a</sup> School of Management, Shanghai University, Shanghai 200444, China<sup>b</sup> Antai School of Management, Shanghai Jiaotong University, Shanghai 200052, China

## ARTICLE INFO

## Article history:

Received 1 January 2015

Received in revised form 1 August 2015

Accepted 1 September 2015

Available online xxxx

## Keywords:

Knowledge inertia

Knowledge-transfer behavior

Product innovation

Knowledge potential

## ABSTRACT

This study identifies three dimensions of knowledge inertia (procedural, learning, and experience) and their relationships with product innovation. Drawing from a survey of Chinese high-tech firms, the study uses multiple hierarchical regressions to explore the mediating effect of knowledge-transfer behavior on the relationship between knowledge inertia and product innovation, as well as the moderating effect of knowledge potential on the relationships between knowledge inertia and each of knowledge-transfer behavior, knowledge inertia, and product innovation. The results show that knowledge inertia has a positive effect on product innovation, and knowledge-transfer behavior correlates positively with product innovation. Both dimensions of knowledge-transfer behavior (motivation and capacity) mediate the relationship between knowledge inertia and product innovation. In addition, knowledge potential moderates the relationship between procedural knowledge and each of product innovation, knowledge inertia, and knowledge-transfer motivation. Overall, this research contributes to the theory and research of knowledge management by exploring the role of knowledge inertia as well as identifying the impact of knowledge-transfer behavior and potential on successful product innovation.

© 2015 Elsevier Inc. All rights reserved.

## 1. Introduction

Knowledge, as both a source of power and a resource, is strategically important to innovation activity. Knowledge management is now a well-established discipline in the worlds of academia and business alike (Donate & Sánchez de Pablo, 2015). Innovations are the prerequisite of knowledge creation and the essence of knowledge management in firms' business activities. Firms around the world develop and implement knowledge-management initiatives to improve the efficiency of business processes (Nguyen & Mohamed, 2011). Hence, to meet current challenges, firms should look for ways to strengthen their research and the development of knowledge, and to use knowledge effectively.

In a stable environment, employees usually meet problems by resorting to existing knowledge and experience; this problem-solving strategy is “knowledge inertia.” Previous work examines the effect of knowledge inertia from different perspectives. Knowledge inertia may enable or inhibit the problem-solving ability of an organization or an individual (Liao, 2002). Experience inertia relates positively to organizational innovation, because organizational innovation leads to greater efficiency. However, learning inertia relates negatively to organizational innovation (Liao, Fei, & Liu, 2008).

However, limited work so far explores the relationship between knowledge inertia and each of product innovation, knowledge-transfer behavior, and knowledge potential. The current focus is on the effect of knowledge absorptive capacity (Lau & Lo, 2014; Lin, Wu, Chang, Wang, & Lee, 2012), knowledge transfer (Herrera, Muñoz-Doyague, & Nieto, 2010), and external knowledge sharing (Ritala, Olander, Michailova, & Husted, 2015) on innovation performance. Although some work exists on the relationship between knowledge management and innovation performance (Lai, Hsu, Lin, Chen, & Lin, 2014), little research focuses on the effects of knowledge inertia on product innovation.

This study aims to explore the effect of knowledge inertia on product innovation. The study introduces knowledge-transfer behavior as a mediating variable and knowledge potential as a moderating variable, and conducts an in-depth exploration of the mechanism of how knowledge inertia affects product innovation.

☆ The authors thank two anonymous referees for their helpful and valuable suggestions as well as Kun-Huang Huang, Feng Chia University, and Domingo E. Ribeiro-Soriano, Universitat de Valencia for their careful reading and suggestions. The authors also gratefully acknowledge financial support from the National Natural Science Foundation of China (71002053, 71472118), “Shu Guang” Project of Shanghai Municipal Education Commission and Shanghai Education Development Foundation (13SG41).

\* Corresponding author at: Antai School of Management, Shanghai Jiaotong University Shanghai 200052, China. Tel.: +86 21 52302563; fax: +86 21 62932577.

E-mail addresses: xxm1030@126.com (X. Xie), fangliangxiulx@163.com (L. Fang), zengsaixing@sjtu.edu.cn (S. Zeng), huojiage@163.com (J. Huo).

## 2. Hypotheses

### 2.1. Knowledge inertia and product innovation

Liao et al. (2008) first defines the theory of knowledge inertia as the use of problem-solving routine procedures, prior knowledge, or previous experience to solve problems and seek new knowledge. Building on previous studies, this study divides knowledge inertia into procedural inertia, learning inertia, and experience inertia. Procedural inertia refers to routine reliance on existing procedures for problem-solving and handling new situations (Liao, 2002). Experience inertia means resorting to the existing knowledge structure, experience, and sources when facing a new situation or problem to guide one's response. Learning inertia refers to acquiring new knowledge to solve problems and thus to break inertia of thinking.

In a dynamic environment, the key to product innovation for firms is integrating dynamic capabilities. Initial research on inertia focuses on its negative effects on innovation performance (Starbuck, Greve, & Hedberg, 1978). However, many researchers begin to notice the positive effects of inertia. In some models, knowledge inertia closely links to product innovation, which in turn relies on existing knowledge and experience, so knowledge inertia can reduce the complexity and uncertainty in the product innovation process. Experience inertia has a positive effect on innovation performance (Liao et al., 2008). If a firm can actively acquire new knowledge and methods, seek new knowledge sources, and proactively try new ideas, then that firm has higher learning inertia. The view of what type of knowledge is critical is beginning to expand because the path dependency of learning is still a core component of innovation activity. Nevertheless, understanding how things initially emerge and how quickly they do so continues to be critical (Casillas, Barbero, & Sapienza, 2015). Overall, employees with greater experience and learning inertia can continue to seek new sources of knowledge, try new technology, and find ways to cultivate innovative thinking, as well as improve the level of innovation. However, procedural inertia is somehow a mindset. When procedural is stronger, firm members are more likely to look backward to face emerging problems, ultimately hindering product innovation. Hence, the study presents the following hypotheses:

**H1a.** Learning inertia associates positively with firms' product innovation.

**H1b.** Experience inertia associates positively with firms' product innovation.

**H1c.** Procedural inertia associates negatively with firms' product innovation.

### 2.2. Knowledge inertia and knowledge-transfer behavior

Knowledge transfer is a well-known concept that draws the attention of academics and practitioners (Bergal-Mirabent, Lafuente, & Solé, 2013; Spraggon & Bodolica, 2012). This study divides knowledge-transfer behavior into motivation and capacity. Knowledge-transfer motivation concerns with the characteristics of sender and recipient, the strength of procedural, learning, and experience inertia. All these aspects affect the efficiency of knowledge transfer. The more knowledge and experience one has, the stronger is the desire to learn, and the faster is the subsequent knowledge transfer. Knowledge-transfer motivation affects people's behavior, plans, and interests, enriches existing knowledge structures, and ultimately promotes knowledge transfer (Martin & Salomon, 2003). Knowledge-transfer motivation becomes an important factor in selecting the sender and recipient when facing different levels of knowledge inertia and potential. Following the premise of different levels of knowledge inertia, where the opportunity to transfer exists, transfer will occur when a motivation to do so exists. The ability to

evaluate and use external knowledge is largely a function of the level of prior and related knowledge (Tho & Trang, 2014). When some overlaps in knowledge inertia between individuals exist, the sender has the ability to transfer knowledge. Managing knowledge for competitive advantage requires the dissemination of knowledge to other units and coworkers at the right time and in the right way (Santosh & Muthiah, 2012). Successful knowledge transfer relies on opportunity and on the motivation and ability of both sender and recipient. The amount of knowledge that both sides hold is a prerequisite for transfer. Following the premise of knowledge inertia, the motivation of both sides makes knowledge transfer occur, but the effect of the transfer depends on their ability. Hence, the study presents the following hypotheses:

**H2.** Knowledge inertia positively associates with knowledge-transfer behavior.

**H2a.** Knowledge inertia positively associates with knowledge-transfer motivation.

**H2b.** Knowledge inertia positively associates knowledge-transfer capacity.

### 2.3. Knowledge-transfer behavior and product innovation

Some studies explore the transfer motivation of the sender (Kogut & Zander, 1995) and the recipient (Gupta & Govindarajan, 2000). Moliterni, Philippen, and Pammolli (2004) suggest that knowledge-transfer motivation is an inevitable part of the process of innovation. Szulanski (1996) also identifies that a lack of motivation from the knowledge source as a likely source of internal "stickiness." This consequence may owe to the fear of losing ownership and hence a position of privilege or superiority, or simply the unwillingness to devote time and resources. Therefore, the knowledge source affects transfer motivation. If motivation is absent between partners, each will protect his or her knowledge and this defensive behavior will hinder knowledge transfer (Simonin, 1999), and ultimately reduce product innovation.

Knowledge-transfer capacity refers to the capacity of knowledge holders to elaborate on their knowledge and apply their knowledge on other occasions (Martin & Salomon, 2003). A distinction exists between the transfer capacity of the organization that develops the knowledge (source transfer capacity) and that of the organization seeking to access the knowledge (recipient transfer capacity). Capacity has a positive effect on knowledge transfer (Chini, 2004). The stronger a firm's knowledge-transfer capacity is, the more knowledge a firm will amass, and the more likely a firm is to share its sources. Therefore, knowledge-transfer capacity is an important aspect for firms to gain competitive advantage. Hence, the study presents the following hypotheses:

**H3.** Knowledge-transfer behavior positively associates with firms' product innovation.

**H3a.** Knowledge-transfer motivation positively associates with firms' product innovation.

**H3b.** Knowledge-transfer capacity positively associates with firms' product innovation.

The use of knowledge inertia can allow firms to avoid roundabout routes to innovation, and to reduce the cost of innovation. Firms with different degrees of knowledge inertia can facilitate knowledge transfer, recognize and assimilate knowledge, and gain competitive advantage in the process of knowledge integration. Strong learning inertia strengthens knowledge-transfer motivation. More importantly, firms can obtain new knowledge and experiences between and outside themselves through knowledge transfer (Badaracco, 1991); thus, motivation plays an important role in knowledge inertia and product innovation. Transfer capacity appears as a form of heterogeneous knowledge that those who transfer

Download English Version:

<https://daneshyari.com/en/article/10492750>

Download Persian Version:

<https://daneshyari.com/article/10492750>

[Daneshyari.com](https://daneshyari.com)