

Customer orientation for decreasing time-to-market of new products: IT implementation as a complementary asset

Taiwen Feng ^{a,b,*}, Linyan Sun ^{b,c,d,1}, Chunyan Zhu ^{e,2}, Amrik S. Sohal ^{f,3}

^a School of Management, Northwestern Polytechnical University, Xi'an, China

^b School of Management, Xi'an Jiaotong University, Xi'an, China

^c The Key Laboratory of the Ministry of Education for Process Control and Efficiency Engineering, Xi'an, China

^d The State Key Laboratory for Manufacturing Systems Engineering, Xi'an, China

^e School of Management, Xi'an University of Science and Technology, Xi'an, China

^f Department of Management, Monash University, Faculty of Business and Economics, Melbourne, Australia

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ABSTRACT

To extend new product development (NPD) research, this study proposes and tests a theory of complementarities between information technology (IT) implementation and customer orientation. In addition, this study provides a fine-grained analysis of associations between various aspects of customer orientation and time-to-market of new products. The data comes from 176 manufacturing companies in China. This study tests the hypotheses that three dimensions of customer orientation shorten time-to-market of new products, and IT implementation moderates the relationship between customer orientation and time-to-market of new products. Regression results indicate that (1) customer focus, customer involvement and communication with customers have significantly negative effects on time-to-market of new products; (2) IT implementation plays a role of complementary asset to customer involvement and communication with customers. We discuss the implications of the findings for a contingency theory of time-to-market reduction through customer orientation, for future research and for managerial practices.

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1. Introduction

With the shortening of product life cycles and the saturation of the current market, the traditional competitive advantages of manufacturing firms, such as cost and quality are being eroded. New product development (NPD) speed is becoming increasingly important for organizations to gain and maintain a competitive advantage in the marketplace and hence sustain high levels of profits and long-term competitiveness (Afonso, Nunes, Paisana, & Braga, 2008). The belief that reduction in time-to-market of new products can build a competitive advantage stems from the notion that speed can facilitate either first-mover or fast-follower strategies (Sánchez & Pérez, 2003b). These perspectives represent a shift in management focus from a more-traditional cost or quality orientation to a time orientation suitable for a fast-changing business environment. Managing time may enable companies not only to reduce their costs but also to offer a broad

product range and upgrade the technology platform of their products. In this paper, we will investigate how customer orientation decreases time-to-market and the complementary roles of IT implementation.

Prior studies have investigated different factors influencing time-to-market of new products. Some theorists focus on strategic characteristics and argue that emphasis on speed, top management support and goal clarity provides the guidance and broad objective for NPD activities, and reflects an innovation strategy that aims to shorten the NPD cycle (Kessler & Chakrabarti, 1996). Other scholars have emphasized the role of project team structure in supporting NPD. Team leaders and members, team empowerment and co-location have been identified to facilitate NPD performance (Brown & Eisenhardt, 1995). Further, the roles of project characteristics (newness and complexity) were also studied. Project characteristics can limit the uncertainty and complexity of NPD projects to facilitate NPD speed. For example, to shorten the NPD cycle, firms tend to pursue incremental products and simple projects to reduce design modifications and developmental errors associated with the development of revolutionary and complex products.

While these studies contribute substantially to a nascent understanding of time-to-market of new products, the roles of customer orientation have been neglected. Besides the direct roles in improving business performance (Deshpandé, Farley, & Webster, 1993; Narver & Slater, 1990; Slater & Narver, 1994), customer orientation likely produces important consequences for time-to-market of new products

* Corresponding author. P.O. Box 1875, Xi'an Jiaotong University, No. 28 Xianning West Road, Xi'an, Shannxi, 710049, China. Tel.: +86 13572190964.

E-mail addresses: typhoonfeng@gmail.com (T. Feng), lysun@mail.xjtu.edu.cn (L. Sun), valeriezhu@mail.xjtu.edu.cn (C. Zhu), amrik.sohal@monash.edu (A.S. Sohal).

¹ School of Management, Xi'an Jiaotong University, No. 28 Xianning West Road, Xi'an, Shannxi, 710049, China. Tel.: +86 2982665091.

² Tel.: +86 2982664645.

³ Tel.: +61 399032033.

(Hooley & Theoharakis, 2008). Treacy and Wiersema (1993) suggested that a close customer relationship could minimize time-to-market of new products. Joshi and Sharma (2004) argued that customers possess knowledge and information in terms of their needs and preferences and gaining an understanding of these needs and preferences can enhance NPD performance. Fang, Palmatier, and Evans (2008) also proposed that customer involvement can improve the effectiveness of the product development process. These findings imply that customer orientation is necessary for developing products on time. However, empirical studies have reported non-significant or even negative direct effects of customer orientation on time-to-market of new products (Campbell & Cooper, 1999; Datar, Jordan, Kekre, Rajiv, & Srinivasan, 1997).

The discrepant findings in the literature suggest the need to identify contingencies that may govern customer orientation–time-to-market of new products relationship. An efficient information system can help companies to build a mechanism allowing staff and customers to share their expertise and knowledge and to store, extract and integrate knowledge from customers for NPD (Tseng, 2009). Considering the important role in facilitating customer orientation, we focus on an important yet neglected factor: IT implementation in this study.

This study focuses on the knowledge-based view (KBV) and complementary assets in an effort to place customer orientation, IT implementation and time-to-market of new products in a theoretical context. Proposed by Grant (1996), KBV indicates that firms can implement demand management in pursuit of a competitive advantage through customer orientation. Complementary assets refer to resources or capabilities that allow organizations to capture the profits associated with a strategy, technology or innovation (Teece, 1986). Complementary assets are required when firms attempt to develop new products or markets. Resources and capabilities involved in forming complementary assets may be physical, human or organizational (Barney, 1991). Examples of complementary assets discussed in the literature include process innovation and implementation capability, workforce organization and training, and R&D, production and marketing capabilities (Swink & Nair, 2007).

We address two research questions in this study. First, what is the effect of different dimensions of customer orientation on time-to-market of new products? Second, how does IT implementation moderate the relationship between customer orientation and time-to-market of new products? The answers to these questions will contribute to both theory and practice. Many manufacturing companies have invested heavily into developing customer relationships over the last three decades. Drawing upon the notion of complementary assets, we extend KBV, and offer empirical evidence on how to create competitive advantages through combining customer orientation and IT implementation.

The remainder of this paper is structured as follows: in the next section, we review the literature on customer orientation, time-to-market of new products and complementary assets. Based on the

literature review, research hypotheses are proposed. In Section 3, data collection, respondent profiles and measurement development are described. The research analyses and results, which include main effects and moderating effects of IT implementation, are presented in Section 4. Section 5 discusses the research results. In the closing section, we present the overall conclusions, managerial implications, limitations and directions for future research.

2. Hypotheses development

Fig. 1 displays our research model. It is centered on the notion that responding to customer demand timely depends upon the adoption of customer orientation (Hooley & Theoharakis, 2008). The model is distinct from existing models of customer orientation in that we describe three dimensions of customer orientation: customer focus, customer involvement and communication with customers. To fully achieve the benefits of customer orientation some complementary assets may also be required (Teece, 1986). Resource-based view (RBV) of organizations suggests that IT implementation may serve as a complementary asset to customer orientation (Grant, 1996). Therefore, we propose that IT implementation will moderate the relationship between individual dimensions of customer orientation and time-to-market of new products.

2.1. Customer orientation and time-to-market of new products

Customer orientation refers to the degree to which the organization obtains and uses information from customers, develops a strategy which will meet customer needs, and implements that strategy by being responsive to customer needs and wants (Hooley & Theoharakis, 2008). While the literature on customer orientation emphasizes that long-term relationships and rich communication between organizations and customers are conducive to acquiring knowledge and capabilities (Brown & Eisenhardt, 1995), it has yet to systematically investigate how different elements of customer orientation affect time-to-market of new products. Lin and Germain (2004) stressed that considering customer orientation from a multi-dimensional perspective will enable a detailed examination of the perhaps subtle relationships between various dimensions of customer orientation and time-to-market of new products. We extend previous research on customer orientation by conceptualizing customer orientation as consisting of customer focus, customer involvement and effective communication with customers and by relating these three components of customer orientation to time-to-market of new products.

For three important reasons, we limit our study to customer focus, customer involvement and communication with customers, as opposed to more broad conceptualizations of customer orientation that include marketing strategies such as customer relationship management and customer retention (Verhoef, 2003). First, our focus is on the effect of customer orientation on NPD, as opposed to the effects of

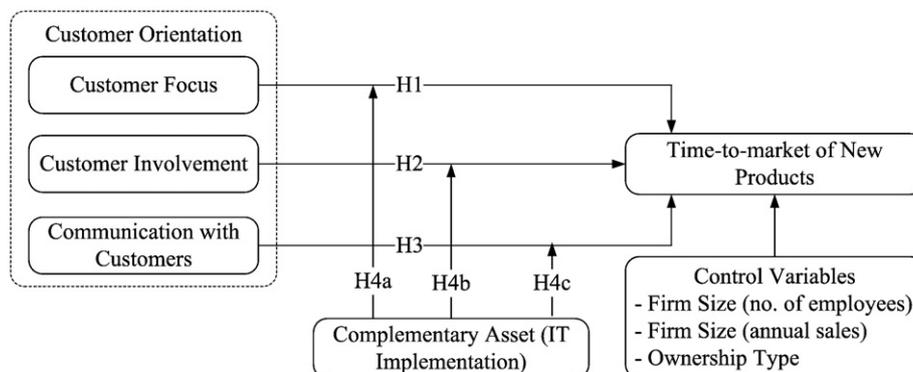


Fig. 1. Conceptual model.

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