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Market orientation, knowledge competence, and innovation

H. Erkan Ozkaya [a,*], Cornelia Droge [b,2], G. Tomas M. Hult [b,3], Roger Calantone [b,4], Elif Ozkaya [a,1]

[a] Department of International Business and Marketing, California State Polytechnic University, Pomona, CA 91768, United States
[b] Department of Marketing, Michigan State University, N370 North Business Complex, East Lansing, MI 48824-1122, United States

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ABSTRACT

This study focuses on two dimensions of market orientation and the corresponding dimensions of market knowledge competence: i.e., the *customer* and *competitor* dimensions. We examine whether customer and competitor orientations are transmuted into market-based innovation either directly, or through customer and competitor knowledge competencies indirectly. The findings support that knowledge competencies are indeed mediators of the positive relationships between orientations and market-based innovation. Also, market-based innovation mediates the positive relationships between customer and competitor knowledge competencies and overall firm performance. A cross-country comparison reveals that, in the U.S. as compared to Chinese firms, customer (or competitor) orientation leads to both higher customer (or competitor) knowledge competence and enhanced market-based innovations; in other words, the model's relationship strengths are greater in U.S. firms, indicating that they are better able to leverage customer (or competitor) orientation to obtain performance consequences.

1. Introduction

Market orientation is a central concept in the marketing literature and its effects on innovation and performance have been studied in detail (e.g., Hurley & Hult, 1998; Kumar, Jones, Venkatesan, & Leone, 2011; Wei, Frankwick, & Nguyen, 2012). This research focuses on customer and competitor orientations, which are the components of market orientation that focus of the firm's external environmental scanning efforts (Narver & Slater, 1990). However merely focusing on customers and competitors may not guarantee market-based innovations. Knowing what the customers want and what competitors are doing is very important, but transforming this information into innovation-relevant knowledge may require a different set of competencies. We thus also focus on market knowledge competence, comprised of customer and competitor knowledge competencies. Market orientation (customer and competitor orientations), market knowledge competence (customer and competitor knowledge competencies), and market-based innovations were chosen as our focus because these constructs are domain-consistent (i.e., the domains are matched). Our final dependent construct is overall firm performance.

The first objective of this study is to propose market knowledge competence as a mediator of the relationships between market orientation and market-based innovations. Market knowledge competence has attracted attention due to its positive effects on product innovation and/or other performance consequences (Atuahene-Gima & Wei, 2011; Johnson, Piccolotto, & Filippini, 2009; Li & Calantone, 1998). However its knowledge transformation role hasn't been extensively examined by testing its full (or partial) mediation role between orientation and innovation. Previous research on the direct paths from orientation to various performance outcomes has been mixed. For example, Zhou, Yim, and Tse (2005) suggest that market orientation may have a negative effect on market-based innovations; Frambach, Prabhu, and Verhallen (2003) found negative effects for competitor orientation and positive effects for customer orientation, whereas Perry and Shao (2005) found the reverse; and Gotteland and Boulé (2006) found a positive effect for customer orientation and no effect for competitor orientation. These mixed results suggest treating customer and competitor orientations separately (see also Frambach et al., 2003). We focus on disentangling the direct versus indirect effects of customer versus competitor orientation on market-based innovation, with market knowledge competencies as mediators.

The second objective of this study is to address the role of market-based innovation as the mediator between market knowledge competencies and firm performance. The literature indicates that market knowledge competence (or components thereof) may have a direct effect on performance (e.g., Atuahene-Gima & Wei, 2011; Johnson et al., 2009; Li & Calantone, 1998; Li & Cavusgil, 1999). Others propose that market knowledge competence is related to antecedents of firm performance (e.g., Jayachandran & Kaufman, 2004; Yeniyurt, Cavusgul & Hult, 2005) and that the effects on firm performance itself may be indirect. In our research, we treat customer and competitor knowledge competencies

* Corresponding author. Tel.: +1 909 869 2692.
E-mail addresses: ozkaya@cpp.edu (H.E. Ozkaya), droge@msu.edu (C. Droge), hult@msu.edu (G.T.M. Hult), rogercal@msu.edu (R. Calantone), eozkaya@cpp.edu (E. Ozkaya).
[1] Tel.: +1 909 869 2692.
[2] Tel.: +1 517 432 6405.
[3] Tel.: +1 517 353 4336.
[4] Tel.: +1 517 432 6400.

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separately, and then focus on disentangling their direct versus indirect effects on firm performance, with market-based innovation as the mediator.

Finally, while there are several studies about market orientation and/or market knowledge competence in a domestic U.S. context, studies in an international context are fewer. Due to economic and other differences, the effects of model constructs can vary significantly among countries. Thus the third objective of this study is to test whether the proposed relationships hold across the U.S. versus China. We argue that U.S. firms are better able to leverage orientations to obtain knowledge competencies and innovations (i.e., we argue that the effect sizes are larger in the U.S.).

We begin by defining terms and specifying the theoretical background for the model. We then develop hypotheses, including hypotheses about differences in effect sizes. After discussing samples and measures, we present the results for both the U.S. and China.

2. Theoretical background

2.1. Definitions of constructs

This research examines the relationships among orientations, knowledge competencies, market-based innovation, and firm performance (in that order; see Fig. 1). We begin by defining all constructs and then develop the hypotheses.

"Orientation" constructs such as market orientation, technological orientation, entrepreneurial orientation, and learning orientation can all be considered dimensions of the higher-order construct named strategic orientation (Gatignon & Xuereb, 1997; Grinstein, 2008). All orientation constructs are indicative of a culturally determined focus, specified by the adjective used. Thus *market* orientation is defined in terms of a culture that effectively and efficiently creates the necessary firm behaviors for the creation of superior value for buyers (Narver & Slater, 1990). According to Narver and Slater (1990), important behaviors relate to acquiring and then disseminating information about buyers and competitors. Thus these authors proposed three components to market orientation: customer orientation, competitor orientation and inter-functional coordination. The first two, being orientation constructs, tap the focus or subject of the firm's information gathering activities (what/how do firms sense in the *external* environment). The third taps the *internal* coordinating processes of the firm, which are usually considered manifest of organizational structure. Our research focuses only on customer orientation and competitor orientation, defined as the firm's direction or general focus on its target customers and its target competitors respectively and concerning the gathering and disseminating of information (Gatignon & Xuereb, 1997; Narver & Slater, 1990). Other researchers have also excluded inter-functional coordination in their market or strategic orientation constructs (e.g., Frambach et al., 2003; Gotteland & Boulé, 2006; Perry & Shao, 2005), while some have modeled it as a moderating variable rather than as an independent variable (e.g., Gatignon & Xuereb, 1997). Furthermore, the effects of inter-functional coordination on innovation consequences are well known (see for example Grinstein's (2008) meta-analysis). In contrast, the results have been mixed as to the various performance consequences of customer versus competitor orientation. For example, De Luca, Luigi, Verona, and Vicari (2010) and Im and Workman (2004) found no effects for either; Wong and Tong (2012) and Atuahene-Gima (2005; for incremental but not radical innovation) found positive effects for both customer versus competitor orientation; Frambach et al. (2003) found negative effects for competitor orientation and positive effects for customer orientation, whereas Perry and Shao (2005) found the reverse; and Gotteland and Boulé (2006) found a positive effect for customer orientation and no effect for competitor orientation. Frambach et al. (2003) suggested that treating them separately and disentangling their effects should be a major direction for future research; we concur.

Market knowledge competence is defined as the processes that generate and integrate market knowledge (Li & Calantone, 1998), thus generating market knowledge stock. Market knowledge competence is an organizational competence, and the resulting market knowledge is a strategic asset (Augusto & Coelho, 2009). According to Li and Calantone (1998) and Atuahene-Gima and Wei (2011), market knowledge competence has three components: customer knowledge competence, competitor knowledge competence, and the marketing–research and development (R&D) interface. Corresponding in domain to customer versus competitor *orientation*, we study only the two types of *competence* and do not include the marketing–R&D interface (which reflects internal organizational structure). Customer versus competitor knowledge competence are defined as the firm's ability to generate and then use knowledge pertaining to, respectively (a) customers' current and potential needs for products (including new products); and (b) competitors' products and strategies (Li & Calantone, 1998). Customer and competitor knowledge competence together comprise market knowledge competence (which corresponds in domain to market orientation). Henceforth, all references to market orientation or to market knowledge competence mean the customer and competitor components only.

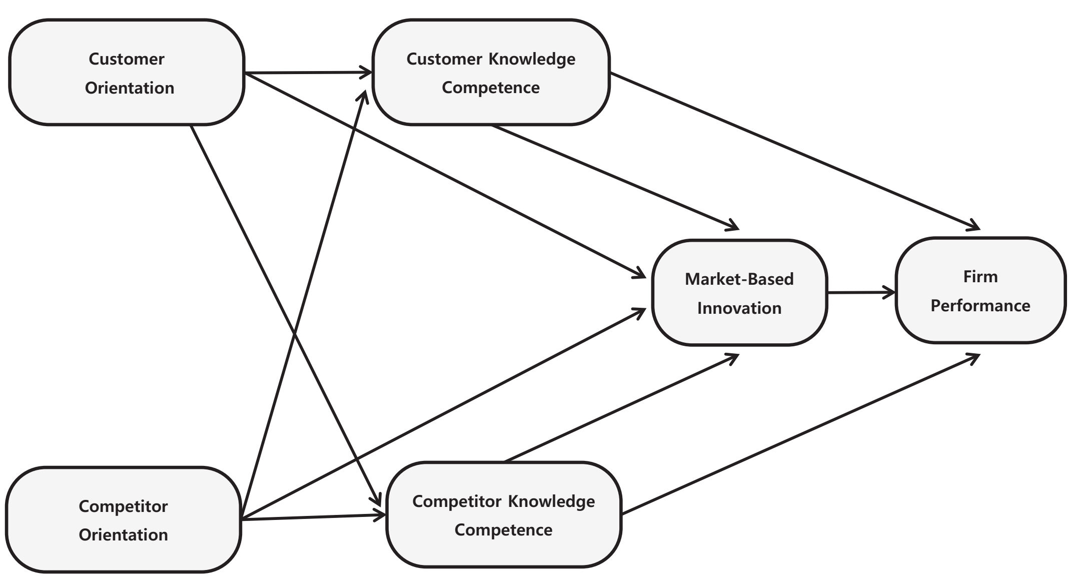

Fig. 1. Conceptual framework: Knowledge competence and market-based innovation as mediators of orientation–performance relationships.