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The moderating role of reward systems in the relationship between market orientation and new product performance in China

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ABSTRACT

Extant studies concerning the relationship between market orientation and new product performance have produced inconclusive results. Drawing on the contingency theory, the authors argue that one reason for these mixed results may be the lack of an appropriate reward system within the new product development process. This study theoretically and empirically examines the moderating role of reward systems in the relationship between market orientation and new product performance. The authors conducted interviews and surveys in China. The moderating effects suggest that Chinese firms should simultaneously use both a high-level, long-term-oriented reward system and a low-level, risk-taking reward system in order to enhance the positive effects of market orientation on new product performance. The results provide a more refined understanding of how the interplay between marketing and human resource management influences the implementation of market orientation and new product innovation.

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1. Introduction

Successful new product development (NPD) is critical for the renewal, survival, and success of organizational and economic growth (Brown & Eisenhardt, 1995; Lukas & Ferrell, 2000; Sarin & Mahajan, 2001; Wind & Mahajan, 1997). Market orientation (MO) is the degree to which an organization collects information on its customers and market environment, disseminates that information across functions, and collectively responds to market information to cater to the needs of customers (Kohli & Jaworski, 1990). Although some research has recognized that a firm's MO is a key antecedent of new product performance, mixed empirical results in relevant literature have led researchers to explore the potential mediators and moderators in that relationship (e.g., Deshpande & Farley, 2004; Gotteland & Boule, 2006; Im & Workman, 2004; Lukas & Ferrell, 2000, etc).

Firms' reward systems are one such area for exploration. Reward systems entail the deliberate use of the pay system to guide and direct the behavior and efforts of various individuals and departments toward achieving a firm's goals (Gomez-Mejia & Balkin, 1987). Reward systems are a crucial contributor to strategy implementation (Yanadori & Marler, 2006) and to a firm's effectiveness and competitive advantage (Gomez-Mejia & Welbourne, 1988; Shaw, Gupta, & Delery, 2001). Thus, it is not surprising that the impact of reward systems on the evaluation and control of performance has been ranked a top-tier research priority (e.g., Hauser, Tellis, & Griffin, 2006; Marketing Science Institute, 2004–2006).

Management strategy literature, but not marketing strategy literature, has documented empirical evidence of the moderating role of reward systems in the strategy-performance relationship (e.g., Allen & Kilmann, 2001; Rajagopalan, 1997; Shaw, Gupta, & Delery, 2001). Shaw, Gupta, and Delery (2001) argue that the effectiveness of strategy implementation depends on a match between organizational systems, such as marketing, technology, and human resources management (HRM; reward systems and leadership, etc). Thus, the coupling of MO with appropriate reward systems may enhance or moderate the effect of MO on new product performance. As a result, the marketing strategy literature's neglect of the moderating role of reward systems in the MO-new product performance link may not only reduce the predictive efficacy of MO theory, but may also lead firms to misallocate resources and effort, which may in turn cause new products to fail.

This article contributes to the marketing strategy literature in two respects. First, we provide theoretical and empirical insights into the mixed results regarding the MO-new product performance relationship by investigating the potential moderating effects of reward systems, which we hope will advance extant research and provide guidance to managers on how firms can best leverage new product performance by matching reward systems with MO. Second, although it is widely acknowledged that small changes in reward systems may lead to large payoffs in NPD performance (Feldman, 1996), many firms do not achieve NPD objectives because they have adopted reward

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systems that are inappropriate for their strategic orientation or NPD approach (Sarin & Mahajan, 2001). Literature has documented the importance of the marketing, Research and Development (R&D), sales, and manufacturing interface (Leenders & Wierenga, 2008). The findings of this study, conducted in China, may improve the current level of marketing researchers' and managers' understanding of how an appropriate marketing-HRM interface influences NPD performance, which is the foundation of a firm's growth and success.

2. Theory and hypotheses development

The contingency theory states that in order to be effective, an organization must match its structure to its contingent factors and, thus, to its environment (e.g., Galbraith, 1973; Lawrence & Lorsch, 1967). Organizations adapt to their internal and external environments; consequently, managers make strategic decisions about organizational relationships in an attempt to alter "the system of constraints and dependencies confronting the organization" (Pfeffer & Salancik 1978, p. 267). Previous research has shown that reward systems are instrumental to new product performance (Sarin & Mahajan, 2001) and that a firm's MO may have an impact on new product innovation (e.g., Frambach, Prabhu, & Verhallen, 2003; Sandvik & Sandvik, 2003; Wei & Morgan, 2004). Based on contingency theory, we argue in this study that the impact of a firm's MO on new product performance depends on the firm's ability to match appropriate reward systems with MO, because employees respond differently to various reward systems.

Many types of reward systems have been documented in relevant literature. In order to understand which types of rewards systems firms in China commonly use in the new product innovation process, we conducted 19 in-depth interviews with Chinese managers of 11 electronics companies to identify and confirm the type of rewards that are considered important to the success of new products (e.g., Kohli & Jaworski, 1990). Managers came from different departments, such as R&D, marketing, and administration, among others. By using local business journals, we identified 11 companies that actively engaged in NPD in two different Chinese cities. Interviews lasted from one to two hours and were conducted mostly in Chinese. Open-ended questions were asked, such as, "What kind of reward does your company provide in order to improve new product performance?" All interviews were recorded and subsequently transcribed.

The interview data showed that managers agree that rewards are important to the NPD process. A R&D manager in an electronics company remarked, "Sometimes it is difficult to measure new product professionals' work. They might sit in the office and think nothing. Reward is very important to motivate them, especially for the innovative product development." The field data also suggested that Chinese firms commonly use two reward strategies in the NPD process: risk-taking strategies and long-term-oriented strategies. We first discuss the risk-taking reward strategy. An HRM manager for a television manufacturer indicated, "We use a risk-sharing reward. The salary in our company ranges from RMB ¥ 5,000–18,000 (US$650-2300) per month. The salaries of all employees change monthly according to the sale revenues of company." However, a project leader in the same company commented, "Sometimes it is difficult to use sales revenue to measure new product success and then link the salary of new product professionals, since the sales volume of a new product is also influenced by company strategies. Too close of a linkage between sales volume and reward prevents us from developing an innovative product." Moreover, a senior engineer and board vice chairman in another electronics company remarked, "We did not link salaries with our sales volume and revenue in our reward strategy. We do not think that every employee wants to be pressured to pursue high rewards; some employees prefer a low-pressure environment."

The second reward strategy is long-term-oriented. A R&D manager in another electronics company pointed out, "After [the employees] finish NPD, rewards are available. We prefer a long-term reward strategy, such as stocks. That will give us a 'feeling of belonging' [to the company]." Other interviewees also supported this view. Thus, the interview results show that risk-taking and long-term-oriented rewards are the two major reward types that Chinese companies use in the NPD process.

2.1. Direct effects of reward systems on new product performance

2.1.1. Risk-based rewards

This reward system is designed with the aim of spreading a firm's performance risk between the firm and its employees. Under a high risk-taking reward system, employees' rewards are uncertain and vary according to the firm's performance (Diaz & Gomez-Mejia, 1997). Under a low risk-taking reward system, employees' rewards are guaranteed regardless of the firm's performance. Risk-based rewards are firm-performance-based pay rather than individual-performance-based pay. Individual-performance-based pay is a merit pay system, determining an individual's pay based on his or her individual job performance as compared with others (Balkin & Gomez-Mejia, 1990). However, a risk-based reward system links a part of employees' rewards with the firm's performance, such as its profit level. A low-risk-based reward system will reward employees regardless of profit levels or the outcome of NPD projects. However, under a high-risk-based reward system, the employees who succeed in the NPD process will receive higher pay because of increased profits. In contrast, the employees who take risks and fail in the NPD process may face the penalty of a pay reduction as a result of decreased profits. In other words, for employees who tend to be highly innovative in their NPD projects, there is a higher possibility of failure and thus a higher possibility of lower pay, compared with those employees who tend to be involved in less risky and less innovative projects.

Although high-risk-taking rewards provide the firm with an opportunity to share positive outcomes with employees who take risks in the NPD process, employees may also feel penalized if their risk-taking leads to failure. According to Zhou and Pham (2004), certain objects or situations can trigger one's motivational states, some of which lead to a focus on promotion, while others lead to a focus on prevention. A major difference between promotion and prevention is a differential sensitivity to positive versus negative outcomes (Higgins, 1998). We propose that different reward systems trigger employees' distinct motivational foci. Compared to low-risk-taking rewards, high-risk-taking rewards may trigger employees' prevention focus and lead them to be more sensitive to the presence or absence of a negative outcome from potential NPD failure.

The introduction of new products is risky and expensive. The promotion of and commitment to risk-taking and experimentation are essential to a firm's new product success (Jassawalla & Sashittal, 2002). In the NPD process, many environmental uncertainties cannot be analyzed (e.g., technology uncertainty), which increases the difficulties and costs in achieving new product success (Atuahene-Gima & Li, 2004). Calantone, Garcia, and Droge (2003) argue that organizations should be tolerant and supportive of employees' risk-taking failures in the NPD process. High-risk-taking rewards may lead employees to focus on prevention, which means that they will avoid risk-taking failure rather than pursue risk-taking success. Thus, it is likely that high-risk-taking rewards will not foster new product performance. Low-risk-taking rewards are more likely to lead to better new product performance because employees with a low-level prevention focus will not worry about personal financial setbacks if their risk-taking fails, which may increase their willingness to experiment with creative new ideas.

H_1. The lower the level of risk-taking rewards, the better is the new product performance.

2.1.2. Long-term rewards

With time-oriented awards, employees are rewarded on the basis of a short- or long-term time horizon (Diaz & Gomez-Mejia, 1997).