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Exploring new product portfolio management decisions: The role of managers' dispositional traits

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Abstract

Product strategy links to new product development (NPD) through new product portfolio management (NPPM). This dynamic decision process addresses the strategy implementation questions of identifying which new product ideas to pursue and their relative priorities. Despite the importance of NPPM in implementing product strategy, firms exhibit substantial performance-affecting differences. We investigate one potential source for such differences by examining the impact of managers' dispositional factors as a possible explanation. Using a case study research method, we examine differences in NPPM strategies and managers' revealed dispositional traits across three divisions of a single conglomerate firm operating in different business-to-business markets. Based on our analysis, we offer propositions relating managers' dispositions to NPPM strategy: analytic cognitive style is associated with balance, ambiguity tolerance is associated with strategic fit, and leadership style is associated with the relative weights applied to each dimension.

Keywords: New product portfolio management; Managers' dispositions; Case studies; Analytic cognitive style; Ambiguity tolerance; Leadership style

1. Introduction

Managing product development, where goods and service solutions that customers need and want are created, is so important in delivering customer value that Srivastava, Shervani, and Fahey (1999) categorize it as one of the three core business processes to which marketing contributes. Despite the importance of managing new product development (NPD), firms still struggle to achieve success in their NPD efforts (Griffin, 1997). Researchers investigating NPD best practices have delineated numerous processes to enhance success likelihood. One popular process is to implement an evaluation system where NPD activities are measured and evaluated on a pre-arranged schedule to assess if the development is proceeding to plan (Crawford, 1986). Evaluation decisions often are referred to as gates and encompass two decisions: first identifying a set of feasible projects by assessing individual projects against hurdles that all projects must clear, then prioritizing the multiple feasible projects to identify which will be developed (Cooper, Edgett, & Kleinschmidt, 1997b).

Within such an evaluation process, the pre-development decisions are both critical and difficult. These pre-development evaluation decisions have been referred to as product portfolio selection (McDonough & Spital, 2003) and as new product portfolio management (NPPM). NPPM is the dynamic decision process of evaluating, selecting, prioritizing, and allocating resources to product development projects (Cooper, Edgett, & Kleinschmidt, 2001a). NPPM involves determining resource allocations to maximize the resulting program benefit given a set of alternatives that require common scarce resources (Baker, 1974).

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NPPM is critical because of the considerable budget and human resources firms commit and the opportunity costs incurred as projects move from screening to development (Cooper & de Brentani, 1984). Empirical evidence reveals that product advantage and predevelopment task proficiency (i.e., project identification and selection) are correlated significantly with new product performance (Henard & Szymanski, 2001). Product advantage is substantially affected by project selection decisions in that product features and benefits are defined prior to project selection. When firms improve their abilities to generate multiple new product ideas that are consistent with current product strategy and select the projects with the highest likelihood of success, new product performance should improve.

At the same time, NPPM is difficult because these critical decisions must be made with relatively little reliable information about customer demand, specific design requirements, and the total investment in both time and money that will be required (Cooper & de Brentani, 1984). In addition, the ability of decision models to accurately select the best projects post-hoc varies with both the criteria used and weights applied to the criteria (Baker & Albaum, 1986). Perhaps for these reasons, managers often rate NPPM as the weakest NPD area and report that formal portfolio discussion and explicit decision criteria are lacking (Cooper et al., 2001a). As a result, managers suspect that their firms implement too many of the wrong types of projects.

Extant research examining NPPM focuses on identifying the criteria managers use to make such decisions. Researchers have reported the type and number of criteria managers use in NPPM (Baker & Albaum, 1986; Carbonell-Foulquie, Munuera-Aleman, & Rodriguez-Escudero, 2004; Cooper & de Brentani, 1984; Rochford, 1991; Ronkainen, 1985) and have grouped the criteria into various evaluative dimensions (Cooper, Edgett, & Kleinschmidt, 1997a; Tzokas, Hultink, & Hart, 2004). An important conclusion from this research is that the criteria and dimensions used, as well as the formality of the evaluation processes, vary across firms. What has not yet been explored, however, is an examination of the source of this variation. How are the evaluative criteria and dimensions chosen? What drives the difference across firms? One potential factor influencing the choice of NPPM criteria that we examine here is that of manager dispositions. Dispositions (or personality traits) are stable characteristics or frames of reference associated with consistent ways of thinking, feeling, and behaving across situations (Chiu & Francesco, 2003; Renn, Allen, Fedor, & Davis, 2005).

Rather than organizational or environmental factors, personality characteristics largely explain management influence on innovations (Hoffman & Hegarty, 1993). Much of the research investigating management influence on NPD focuses on managers' functional backgrounds (Gupta & Govindarajan, 1984; Hart, Hultink, Tzokas, & Commandeur, 2003; Hoffman & Hegarty, 1993). However, past research hints that psychological forces influencing managerial interpretations have an impact on organizational change (Milliken & Lant, 1991). Moreover, personality differences between marketing and R&D personnel influence new product success through their impact on functional integration (Lucas & Bush, 1988). While few research studies have explored the impact of dispositional factors on NPPM, these studies suggest that dispositional variables do play an important role (Mullins, Forlani, & Walker, 1999).

We explore the role of managers' dispositions in NPPM by identifying several management characteristics affecting the use of NPPM evaluative dimensions. Given the lack of an established theory and scant empirical results in this area, our research is exploratory in nature and so we naturally employ a qualitative research case study approach. Specifically, we examine the NPD and NPPM processes being implemented at three different strategic business units (SBUs) operating in business-to-business markets of a single corporation. The corporation recently mandated the SBUs to grow via innovation rather than through mergers and acquisitions. Because these SBUs only recently began viewing new products as key to long-term survival, this is an ideal environment to study dispositions as they are implementing changes to improve the financial and market performance of their future product offerings. Moreover, potential variation due to such contextual variables as change impetus, industry, and ownership is minimized because the SBUs we examine operate in different business-to-business markets within the same general industry and are divisions of the same corporation.

This paper proceeds by first reviewing the extant literature regarding the evaluation dimensions used in NPPM decisions and the role of manager personality characteristics in strategy implementation and NPPM. Then, we describe the qualitative research methods we use to explore the potential relationships between managers' dispositions and NPPM evaluative dimension use. Subsequently, we summarize the NPPM strategies implemented in each of the three SBUs studied, as well as the managers' dispositions revealed in our interpretive analysis. Lastly, we offer propositions linking managers' dispositions to implemented NPPM strategies, and conclude with a discussion of the implications of this research.

2. Literature review

2.1. NPPM evaluative dimensions

Managers use different evaluation criteria or criteria weights at different evaluation points, or gates, in NPD processes. Research in this area suggests managers use three criteria types: product, market, and financial (Ronkainen, 1985). This research reveals that market criteria typically are important in early gates, product criteria are important in middle gates, and financial criteria are important in the later gates, although differences across firms are exhibited. Recent research elaborates further on these differences. Empirical research conducted with Spanish firms developing highly innovative products supports Ronkainen's (1985) results, adding strategic fit as an important evaluative criteria at the beginning of the NPD process (Carbonell-Foulquie et al., 2004). Also, more criteria are used in early gates than in later gates, presumably to compensate for information inaccuracy in early NPD stages. Empirical research with Dutch and British firms reveals five evaluative dimensions: market-