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A model to investigate the influence of marketing-mix efforts and corporate image on brand equity in the IT software sector

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ABSTRACT

A model is developed to examine the relationships among marketing-mix efforts (channel performance, value-oriented price, promotion, and after-sales service), corporate image, three dimensions of brand equity (brand awareness with associations, perceived quality, and brand loyalty), and market performance. The model considers three distinctive aspects of business markets. After-sales service is taken as a key marketing-mix effort. Corporate image is placed as a mediator from the marketing-mix efforts to the dimensions of brand equity. Personal selling is defined as a main component of promotion. The model is tested in the context of a Korean IT software sector. The test results show that all the marketing-mix efforts positively affect the overall value of brand equity, which is a proxy of market performance, via the three dimensions of brand equity. Corporate image mediates the effect of the marketing-mix efforts on the three dimensions of brand equity.

1. Introduction

A product is branded when target buyers learn about the product and, as a result, store in their memory knowledge structures of the product (Keller, 1993; Krishnan, 1996). These knowledge structures increase the value buyers obtain from the product by influencing their thinking, feeling and doing with respect to the product. Thus, the product is of more value when it is branded than unbranded, and this greater value is referred to as brand equity (Aaker, 1991, 1996; Keller, 1993). When the brand equity of a product is high enough, target buyers behave positively towards the product. For example, they pay more for the product, purchase it repeatedly, engage in favorable word-of-mouth behaviors, and so on (Aaker, 1991; Keller, 2008). In this respect, a firm can enhance its competitive position and increase financial performance by making its brand stronger.

Brand equity as sourced from the knowledge structures may be characterized by a set of dimensions. According to Aaker (1996), these dimensions include brand awareness, brand associations, perceived quality, and brand loyalty. Keller (2008) proposes six dimensions of brand equity, arranged in four hierarchical levels: salience in the bottom level, performance and image in the next level, judgment and feeling in the second-to-top level, and resonance in the top level. Consumer choice is much affected by brand equity characterized as such, and thus those in consumer markets are fully aware of the need to appropriately manage brand equity (Aaker, 1991, 1996; Keller, 2008).

On the other hand, brand equity is relatively downplayed in business markets due to some distinct aspects of the business market exchange (Kotler & Pfoertsch, 2007; Webster & Keller, 2004). A relatively small number of buyers exist in business markets and then it is wasteful to invest in building up a vast coverage in, for example, brand awareness and brand loyalty. Also, a group of people with different roles (defined as initiators, users, buyers, deciders, influencers, and gatekeepers) participate in the process of purchasing industrial goods. Decision making in this process is more rational because it is group-oriented, and experts in product purchase and/or usage are involved in it. Individuals' perceptions and feelings are less likely to affect the group-oriented decision making (Bendixen, Bukasa, & Abratt, 2004). Thus, it may be argued that brand equity plays a less important role in industrial marketing than consumer marketing (Saunders & Watt, 1979; Sinclair & Seward, 1988).

Despite the argument, research indicates that brand equity is a critical competitive driver in industrial marketing, as well as in consumer marketing (Kotler & Pfoertsch, 2007; Mudambi, 2002; van Riel, Pahud de Mortanges, & Streukens, 2005; Webster & Keller, 2004). As brand strength increases, industrial buyers become more likely to repurchase and pay a price premium (Bendixen et al., 2004; Hutton, 1997; Roberts & Merrilees, 2007; Taylor, Hunter, & Lindberg, 2007). Higher brand reputation would lead to more assurance of the industrial product quality (Cretu & Brodie, 2007). Even in a much earlier period, for example, it was once popularly mentioned: "Purchase managers prefer IBM PCs to unbranded high value

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alternatives." Furthermore, Borghini and Cova (2006) explain that brand equity is a basis for sellers' cultivating relationships with buyers. Webster and Keller (2004) also explain that sellers with higher brand equity are more likely to develop and maintain their relationships with buyers. A strong brand helps sellers to reinforce their control over the relational exchange with buyers. For example, Intel successfully launched the "Intel Inside" campaign, which brought Intel more of such control. In sum, brand equity is instrumental to making the buyer–seller relationship stronger, and in turn this stronger relationship leads to the higher brand equity.

Cretu and Brodie (2007) reported that three brand-relevant studies were conducted prior to 1990. These three studies focus mainly on issues involving the brand-naming factor and its impact on marketing activities such as positioning and promotion. As seen in Tables 1 and 2, a literature survey reveals that a limited number of studies have been conducted since 1990 to investigate the phenomena of brand equity in business markets. Among these studies, 12 studies focus on the relationships between the dimensions of brand equity and marketing-mix efforts (e.g., price and promotion) or market performance variables (e.g., profit and sales volume). They do not comprehensively consider the key variables that concern (1) the characteristics of brand equity in business market context, (2) marketing-mix efforts, and (3) market performance. In addition, none of the studies looks into the entire structural relationships among the three sorts of variables. Instead, each study selects several variables relevant to a particular product market context, and only explores relationships among those selected variables.

We thus address a gap in the research—i.e., the need to establish a comprehensive model that incorporates the three sorts of key variables and explain the entire structural relationships among these variables. This structural relationships model is managerially important because it helps firms to understand which marketing efforts they should undertake to build up the dimensions of brand equity that contribute to strengthening their market power and in turn increasing their financial performance. As an example, suppose channel performance has more impact on brand image, a dimension of brand equity, than the value-oriented price, and brand image is the most influential on profit among all the critical dimensions of brand equity. Given this information, the firm may decide to allocate a large portion of its resources to leveling up channel performance.

The structural relationships model is well established in consumer marketing, and knowledge produced from this model is useful for understanding how brand equity is developed and how it affects market performance in business markets (Atilgan, Aksoy, & Akinci, 2005; Chaudhuri & Holbrook, 2001; Netemeyer et al., 2004; Simon & Sullivan, 1993; Villarejo-Ramos & Sanchez-Franco, 2005; Yoo & Donthu, 2001, 2002; Yoo, Donthu, & Lee, 2000). However, this model cannot capture some distinctive aspects of business markets, and as a result we need to develop a comprehensive model for business markets, taking into consideration these distinctive aspects.

Among these aspects, three are particularly noteworthy. First, it is frequently acknowledged that the role of corporate image is more important in industrial marketing than consumer marketing (Bendixen et al., 2004; Schuiling & Moss, 2004; van Riel et al., 2005; Webster & Keller, 2004). Research in business markets indicates that corporate image has greater impact on brand loyalty than product image (van Riel et al., 2005), or choice decision varies depending on corporate reputation (Cretu & Brodie, 2007). Few studies in consumer marketing systematically investigate the role of corporate image in the brand equity building process. Second, the relationship between the seller and the buyer is much more critical for securing market power in business markets than consumer markets. After-sales service is instrumental to cultivating the buyer–seller relationship in business markets (Kuhn, Alpert, & Pope, 2008). It contributes a great deal to buyer satisfaction and in turn strengthens the buyer–seller relationship (Mudambi, Doyle, & Wong, 1997; van Riel et al., 2005). In consumer marketing, after-sales service is taken as a product-, promotion-, or channel-related element; because of this, its role has been less emphasized. Third, as mentioned above, relatively few buyers exist and group decision making frequently occurs for product purchase in business markets. Thus, promotion in business markets is pursued in a very different manner from that in consumer markets (Kuhn et al., 2008; Mudambi, 2002; Webster & Keller, 2004). For example, personal selling plays a more important role in business markets than consumer markets, and cents-off promotional activities are frequently undertaken in consumer marketing, whereas they are generally irrelevant in the context of the business market. This nature of promotion should be fully reflected in the analysis of brand equity in the business market context.

Considering the above three aspects, we aim to develop and test a model to comprehensively consider marketing-mix efforts, corporate image, dimensions of brand equity and market performance. This model is addressed in the context of an IT software sector. Brand equity is an important factor to affect buyers' choice behaviors and firms' marketing activities in the industrial market of IT software. Considering what Hutton (1997) explains, for example, we may think that buyers prefer well-known software brands rather than lesser-known ones for three primary reasons. First, they are not familiar with

Table 1
Studies on brand naming and conditions for branding activities.

Study	Business market	Major findings
Saunders and Watt (1979)	Man-made fiber products	Brand naming is not useful to buyers for distinguishing how the products are differentiated; rather, it is rather confusing. Brand naming is rarely effective in the competitive market unless it is accompanied by active promotion.
Sinclair and Seward (1988)	Wood products	Retailers are not sure about the effect of the supplier's brand naming. However, brand naming may be helpful due to a halo effect when corporate image is good enough.
Shipley and Howard (1993)	Random-sampled industrial products listed on the Kompass Register of U.K. companies	Ten propositions about the importance of brand naming, the incidence of brand-name usage, brand naming strategies, brand naming processes, and managerial resource commitment to brand naming are supported. In addition, branding strategies and practices of small firms are different from large firms.
Hutton (1997)	Personal computers, copiers, fax machines and floppy disks	Branding strategies are effective in business markets. Brand is especially important when products are complex and require greater service and support, when buyers face time pressure or resource limitations, and when buyers are afraid of product failure.
Mudambi (2002)	Precision bearings	The industrial buyers are divided into three clusters: branding-receptive, highly tangible, and low-interest buyers. Different branding strategies should be used depending on to which clusters the target buyers belong.
Schuiling and Moss (2004)	Pharmaceutical products	The pharmaceutical and FMCG industries are compared in terms of the choice of brand name strategies, the level of brand globalization, the use of brand extension, and the subject of co-branding. The pharmaceutical industry would benefit from benchmarking of the FMCG branding experience because they rarely have structural differences.