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Country-of-origin effects and antecedents of industrial brand equity☆

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ABSTRACT

Does the country-of-origin effect matter to industrial brand equity in international business-to-business (B2B) markets? The effect of a product's country-of-origin (COO) on both industrial buyers' and consumers' perceptions and evaluations has been one of the most widely studied phenomena in the fields of international business, marketing, and consumer behavior since the 1960s. Although many country-of-origin studies focus on consumer behavior in developed countries and acknowledge that the processes and stages of economic development by which consumers use COO information may differ in developing countries, the fact that there has been little research to investigate the effects of COO could explain the variations in international buyers' evaluations of industrial brand equity in the newly-industrialized economies, such as Taiwan. Taiwanese firms are now formidable global B2B market players by successfully transforming themselves from manufacturing mainly low-value and labor-intensive goods to producing many high value-added products that require advanced technology, equipment and significant business expertise. With the adoption of advanced technology and equipment, an important question is whether unique and innovative fastener products from Taiwan have generated the country-of-origin effects in international B2B buyers' minds. The main finding is that the country-of-origin of fasteners has not yet become an important antecedent of industrial brand equity in the case of the fastener industry in Taiwan.

1. Introduction

Taiwanese firms have emerged as formidable global B2B market players by successfully transforming themselves from manufacturing mainly low-value and labor-intensive goods to producing many high value-added products that require advanced technology, equipment and significant business expertise (Chen, 2010; Huarng, 2010). Taiwan is one of the first developing countries to open up to international economic flows, first targeting export markets and then relying on direct investments from foreign multinationals. In this regard, the fastener industry has played a central role in the development of the Taiwan economy.

The fastener industry in Taiwan has a reputation in the world as the kingdom of screws since the 1990s. For example, the market share of Taiwanese fastener products in the U.S. market exceeded 50% until the early 2000s. However, the importance of Taiwanese fastener products to the world has declined with the emergence of Chinese screws in recent years. To cope with the challenges from low-priced Chinese products, many fastener firms in Taiwan have been eager to reposition themselves from an emphasis on original equipment manufacturing (OEM) toward original design manufacturing (ODM) or even original brand manufacturing (OBM) by investing in advanced equipment and upgrading their manufacturing facilities. Therefore, in acknowledging the increasingly important role of brands and innovative products, how to brand Taiwanese fastener products in international B2B markets is a salient issue in international marketing and brand management research. In addition, based on the transformations from OEM to ODM or OBM in Taiwan's fastener industry in recent years, another question concerns whether the unique and innovative screws that Taiwanese fastener firms are now manufacturing have generated the country-of-origin effects in international industrial buyers' minds?

Brand equity has been a prevalent topic in business practice as well as in academic research since the early 1990s. In addition, the country-of-origin (COO) effect has been a key theoretical and empirical issue related to brand equity in the international marketing and consumer behavior fields (Ahmed and d'Astous, 2006). For example, the Sanlu tainted milk powder incident in 2008 represents a negative effect of COO on products from China. After 16 infants were diagnosed with kidney stones in July 2008 due to the presence of the toxic chemical melamine in the Sanlu milk powder, which is one of the top brands in China, most customers including B2C consumers and B2B manufacturers refused to buy any milk products from Sanlu, and even from China. In fact, due to the use of melamine as an ingredient

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in imports of milk powder from China, Lipton and Nestlé, the world's leading instant coffee and milk tea manufacturers, recalled and destroyed all products that were found to contain melamine, especially in Hong Kong, Macau, and Taiwan. However, while most previous studies have investigated the COO effect on customer-based brand equity in the B2C markets, there are so far no studies dedicated to the country-of-origin effect on industrial buyer-based brand equity in international B2B markets.

In the B2B markets, it is increasingly difficult to gain competitive advantage either based on product quality or price. Recently, industrial companies have sought to differentiate themselves from their competitors by implementing B2B branding strategies (Mudambi, 2002; Mudambi, Doyle, and Wong, 1997). For example, Boeing, Cisco Systems, Dell, FedEx, General Electric, HP, IBM, Intel, Microsoft, and SAP are among the most cited best-practice brands in the area of B2B branding. Although most of them also operate in B2C markets, their main business operations are concentrated on B2B. As in B2C markets, brands serve exactly the same general purpose in B2B segments by facilitating the identification of products, services and businesses as well as differentiating them from the competition (Anderson and Narus, 2004). In addition, Kotler and Pfoertsch (2007) suggest the need for branding international B2B companies to increase perceived value to customers, and reduce the complexity involved in the buying decisions.

By comparing B2B studies with the abundance of B2C studies, international B2B branding research is relatively scarce (Mudambi et al., 1997; van Riel, de Mortanges, and Streukens, 2005). Although only a few researchers have recently focused on industrial brand equity or B2B brand equity (e.g., Michell, King, and Reast, 2001; Mudambi, 2002), the depth and extensiveness of customer-based brand equity offer an extensive background to industrial brand equity (Mudambi, 2002). In fact, several dimensions in customer-based brand equity can be directly applied and transferred to industrial brand equity (Michell et al., 2001; van Riel et al., 2005). Therefore, this study in following the previous literature on customer-based brand equity proposes a conceptual framework of industrial branding that is based on the theory of Aaker (1991) with the COO effect, and investigates and validates the sources of industrial brand equity in international B2B markets by using the case of the fastener industry in Taiwan.

2. Conceptual development and research hypotheses

In the consumer marketing literature, “brand equity” is the added value of a brand that forms part of a product created in the minds of consumers in response to past investments in the marketing of the brand (Keller, 1998). In other words, customer-based brand equity is generated when the customer is aware of the brand, perceives the overall quality or superiority of the brand relative to alternative products, and associates some favorable, strong, and unique attributes with the brand's image (Aaker, 1991). Thus the antecedents of brand equity have long been of central interest to international marketing and consumer behavior researchers, as well as to international business managers. Although procurement in industrial markets is often rational and calculative, B2B brands are able to play a significant role in establishing a consideration set of potential suppliers in the mind of the buyer (van Riel et al., 2005). While several of the antecedents of customer-based brand equity, such as brand awareness, brand loyalty and perceived quality, appear directly transferable to industrial branding, others such as brand associations appear irrelevant in most B2B markets (van Riel et al., 2005). For brand associations in the fastener industry, industrial brands are rarely if ever used to evoke non-product-related associations. Therefore brand associations are not regarded as an antecedent of industrial brand equity in this study. By building on the theory of Aaker (1991) and previous studies that conceptualize how customers evaluate brand equity, this study considers the industrial brand equity that accrues to a firm, rather than a product, to be the relevant dependent variable in the context of B2B markets, and attempts to explain why perceived quality, brand awareness, brand loyalty and COO are regarded as sources of industrial brand equity.

The importance of perceived quality as a source of customer-based brand equity is well established in the B2C market (Aaker, 1991), and had recently also been recognized as a driving force behind B2B branding (Bendixen, Bukasa, and Abratt, 2004; McQuiston, 2004). The strength of perceived quality is primarily driven by tangible attributes of the product such as product quality, and intangible attributes of the firm such as service quality. Thus in B2B markets, service quality including personal contact and support services, together with the product's physical quality, increasingly form the basis of competitive advantage (Alvarez and Galera, 2001), and are critical to purchasing decisions and branding (Håkan, 1982; Rauyruen and Miller, 2007). Viewed in this light, the fastener firms can reap significant industrial brand equity by increasing perceived product quality and perceived service quality in international B2B markets. Therefore, this study hypothesizes positive relationships between perceived product quality, perceived service quality and industrial brand equity.

H1. Perceived product quality associates positively with industrial brand equity.

H2. Perceived service quality associates positively with industrial brand equity.

Brand awareness is the customer's ability to recognize and recall the brand among comparable products in a certain industry under different conditions of complexity and time pressure (Aaker, 1991; Keller, 1998), and is a critical antecedent of customer-based brand equity in B2C markets. Since a brand name provides symbolic meanings that aid the customer to recognize and recall the supplier and its product outcome (Janiszewski and Van Osselaer, 2000), brand name is the most fundamental element of brand awareness (Davis, Golicic, and Marquardt, 2008). In many B2B markets brand name is often the company name and a growing number of alternative suppliers can provide similar products to their industrial buyers. Therefore, how to create an effective brand name that embodies unique values to aid the customer in recognizing and recalling the supplier and the product has recently become important to industrial firms. In addition, recent research shows that a brand name and brand awareness explain a significant amount of the variance in brand equity in industrial firms (Davis et al., 2008).

Thus, the fastener firms can reap significant industrial brand equity by building a higher level of brand awareness in the consumers' mind.

H3. Brand awareness associates positively with industrial brand equity.

“Brand loyalty” is a deep commitment to repurchase or a consistent preference for a product/service, and leads to certain marketing advantages such as reduced cost, profitability, and favorable word-of-mouth (Aaker, 1991; Oliver, 1999). Brand loyalty is often recognized as a source or antecedent of brand equity (Aaker, 1991; Keller, 1998). For example, Lassar, Mittal, and Sharma (1995), from a customer-based perspective, argue that brand equity stems from great confidence or impressive images in the customers' minds, and such confidence or images will translate into customers' loyalty that makes them willing to pay premium prices for brands. In addition, van Riel et al. (2005), from an industrial buyer perspective, find a direct positive relationship between brand loyalty and industrial brand equity.

Therefore, the fastener firms can reap higher levels of industrial brand equity by increasing brand loyalty, and this study hypothesizes