Does country-of-origin brand personality generate retail customer lifetime value? A Big Data analytics approach

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ARTICLE INFO

ABSTRACT

Many retail firms have witnessed the erosion of customer loyalty with the rise of e-commerce and its resulting benefits to consumers, including increased choices, lower prices, and ease of brand switching. Retailers have long collected data to learn about customer purchasing habits; however, many currently do not use data-mining analytics to increase marketing effectiveness by predicting future buying patterns and potential customer lifetime value, particularly to important segments such as loyal and potential repeat customers. Data mining can efficiently analyze large amounts of business data ("Big Data") in an effort to forecast consumer needs and increase the lifetime value of customers (CLV). Previous studies on these topics primarily focus on conceptual assumptions and generally do not present empirically valid models.

The present study sought to fill the research gap by using Big Data analytics to analyze approximately 44,000 point-of-sale transaction records for 26,000 customers of a Taiwanese retail store to understand how consumer personality traits relate to the country-of-origin (COO) traits (brand personality) of beer brands, and to predict potential customer lifetime value (CLV). The findings revealed that consumers tend to purchase and co-purchase brands with traits similar to their own personality traits (i.e., Japan—peacefulness, Belgium—openness, Ireland—excitement, etc.). Significantly, customers with the group of personality traits associated with "peacefulness" and "openness" were the most profitable customers among the five analyzed clusters (CLV value = 0.3149, 0.2635). The study provides valuable new insights into COO brand personality and consumer personality traits with co-purchase behaviors via data mining techniques, and highlights the value of extending CLV in developing useful marketing strategies.

1. Introduction

Competition is both intensifying and shifting to new arenas in the current retail business environment in response to the increase in comparable and competitive offerings of products and services and growing consumer options (Bharadwaj et al., 2013). It has been repeatedly indicated in the literature that consumers are rapidly evolving their approaches to making purchase decisions, often resulting in the erosion of consumer loyalty (Gupta et al., 2004). Consumer free will to switch to better and/or less expensive choices in the retailing market means that it typically costs nothing for customers to switch from one retailer to another. Consequently, it is imperative for companies to focus on maintaining good customer relations and enhancing customer retention over the customer lifetime in order to generate higher profitability and growth in comparison to the significant costs and drawbacks associated with attracting and maintaining new customers (Aeron et al., 2008).

In customer retention efforts, segmentation is a critical tool for understanding how consumers differ in terms of their interactions with and behavioral responses to retail marketing (Wedel and Kamakura, 2002). Segmentation can be a powerful descriptor and drives more precise targeting and positioning, which can ultimately increase customer value (Foster et al., 2011). Using segmentation, firms may be able to offer products, services, and marketing campaigns that are very similar to those of other firms to many current consumers of those firms, who have a tendency to react or interact similarly. Time-tested segmentation approaches utilize information such as demographics, as well as psychographic methods, in order to surpass superficial customer segmentation and better comprehend purchase motivations and additional behaviors (Boone and Roehm, 2002; Malcolm and Dunbar, 2012; Wiertz and DeRuyter, 2007). Developing effective retail marketing methods first means understanding consumer buying behaviors.

The concept of brand personality recently has been analyzed extensively in marketing and consumer literature as a segmentation

variable (Keller, 2001). The concept has been described as the human personality traits that a brand is associated with (Aaker, 1997). While an individual's personality may be displayed in behavior, beliefs, and physical traits, brand personality is capable of being formed via direct/indirect consumer brand experience (Kim et al., 2010). Thus, consumers can have personality traits similar to those of their preferred brand personalities. Brand personality traits can describe a brand in terms of a mutual cohort of the affiliation between brand and consumer (Sweeney and Brandon, 2006). Furthermore, brand personality has been found to have a positive effect on consumers' loyalty, satisfaction, and recommendations to peers (Keller and Richy, 2006; Lin, 2010). Having a remarkable "personality" makes a brand special in consumers' minds, thus forming and enlarging the equity of the brand (Freling and Forbes, 2005). However, while this has been noted by many scholars (Moilanen and Rainisto, 2008; Mulyanegara et al., 2009) brand personality has been applied infrequently to the context of national, country-of-origin (COO) brands in comparison to product or corporate brands.

Country-of-origin can be also perceived as a brand via the typical view held by consumers of the products/brands of a given nation (Bluemelhuber et al., 2007). As such, in a single advertisement two distinct brands (both the nation itself and the advertised brand/product) and their relationships with the consumer can be present. Country-of origin brand personality is currently salient to marketers because it is critical to differentiate nation brands (which are known to affect customer purchase decisions) (Yasin et al., 2007).

Country-of-origin brand personality is the association of individual personality characteristics with a COO product/brand. Positive COO brand personalities are typically preferred by customers and build trust, loyalty, and assurance. They also allow for different types of positioning strategies among the myriad marketing techniques in the competitive retail industry, thus potentially influencing consumers' purchase intentions (Dinnie, 2008). Marketers emphasizing COO brand personality should strive to match the personality or self-image of the consumer via segmentation-based efforts (Casidy et al., 2009; Lin, 2010). In addition, COO brand personality is an important component of consumers' emotional perceptions, which affect buyer perceptions and evaluations (Avis et al., 2012). In this regard, a COO brand personality approach can make valuable contributions to the development of an effective customer-driven marketing strategy.

Another stream of customer-based marketing that has received considerable attention involves customer lifetime value (CLV), which is the current valuation of projected profits over the course of a consumer's "lifetime" (relationship) with a company (Benoit and Van den Poel, 2009). Increasing numbers of marketers and performance evaluators have an eye toward relationships with customers, and retailers can draw substantial benefits from understanding more about CLV. As Kumar and Rajan (2009) stated, a critical challenge for companies is the implementation of the right "mix" of consumer treatment according to loyalty levels in order to maximize financial gains. A useful way to identify customer value/profitability of customers is the CLV concept, which employs recency/frequency/monetary analysis in order to develop segmented markets (Gupta et al., 2006). However, no standardized method exists to measure customer lifetime value, and the extant literature is limited with regard to actual application of the envisioned methodologies. Chan et al. (2010) emphasized that there are very few simple, robust, flexible, empirically valid CLV measurement models in the field of retailing, and there are few studies thus far that address CLV in a significantly better way.

A review of the previous research on CLV indicates that it is centrally concerned with customer personality traits as reflected in products and that it has been infrequently applied to the context of country-of-origin (COO) brands. Furthermore, guidelines on optimal marketing decisions for maximizing CLV and predicting potential CLV are scarce. Those studies that do address these issues in great part make educated guesses and lack models verified empirically; they are primarily based in theory alone (Haenlein et al., 2006; Jain and Singh, 2002). An important attribute of the present research is the use of state-of-the-art data mining techniques for examining COO brand personality and predicting potential CLV in order to create a comprehensive model that can be applied when making marketing decisions. More specifically, the findings of this study can help practitioners to gain an understanding of whether the COO brand personality should be used in targeting specific customer segments and the RFM model should be congruent to COO brand personality, and how these factors impact customer lifetime value in the retailing industry.

2. Literature review

2.1. Brand personality

Brands can possess attributes that mirror individual personality characteristics and are meaningful for both the brand and consumers (Azoulay and Kapferer, 2003). The personality of a brand is the way in which consumers define a brand based on its qualities and attributes (Parker, 2009). Furthermore, according to Plummer (1985), a brand can be defined as a mind-based creation developed by the consumer, who forms mental pictures about the brand through his or her experiences, perceptions, misconceptions, and value systems. This definition stresses that the creation of a brand personality is the result of an active and dynamic interaction of consumer/brand characteristics. Individual personality is revealed in the ways that people employ stable ways of thinking, feeling, and behaving (Keller and Richy, 2006. Both individuals and brands can have unique personalities. Given people's tendency to imbue "things" with human traits to facilitate interactions in an "intangible" realm (Sung and Tinkham, 2005), direct/indirect experiences with brands cause consumers to develop ideas about brand personality (Bosnjak et al., 2007). Lee and Cho (2009) stated that a brand personality is created from these experiences, and that perceptions do not take place without the influence of one's own needs, motives, and personality (Sweeney and Brandon, 2006).

In light of the ease with which competing companies can mimic product traits, creating and developing a distinct, cohesive brand is a difficult task for marketers. According to Mithas et al. (2013) successful branding means knowing how to build a brand personality that enables customers to view the distinctive personality of the brand and subsequently build a solid and enduring partnership with the brand. A successful brand personality is a real asset in differentiating a product from similar products. Thus, industry marketers can significantly benefit from developing and integrating features of brand personality in their marketing plans, using brand personality traits as an important guiding consideration (Sung and Tinkham, 2005). In order to be successful, a brand personality must have a very distinct differentiation that conveys and expresses that is unlike other brand personalities (Huang et al., 2012) and is carefully and continuously fostered over an extended period of time.

From a psychological perspective, consumers can develop relationship dyads with brands that are humanized by marketers (D'Astous and L'evesque, 2003). This relationship allows consumers to establish a reflexive evaluation of a product (Geuens et al., 2009). In this regard, brand personality strongly influences customers' brand choices, since customers typically chose brands that match their personal characteristics. A brand's matching "personality" traits provide avenues for consumers to symbolize and express themselves (Ahn et al., 2009). Specifically, Thomson et al. (2005) stated that consumers tend to select brands that match their real or ideal self-concepts or social self-concepts. Furthermore, brand personality may create genuine affection for particular brands, thus reinforcing consumers' views of themselves. In summary, brands have individual personalities, and consumers are more likely to choose products that match their own personalities and preferences (Romaniuk, 2008).