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Brand marketing for creating brand value based on a MCDM model combining DEMATEL with ANP and VIKOR methods

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ABSTRACT

When consumers purchase products, they will consider the brand first, because it indirectly leads consumers to associate the products with the quality, functions, and the design. Based on the smiling curve, it showed enhancing the marketing or R&D will create value-added to the products or brands. Thus, this study intended to use brand marketing to create brand value. However, there are many criteria among the strategies, and they are interrelated. Therefore, this study utilized the MCDM model combining DEMATEL with ANP and VIKOR methods to clarify the interrelated relationships of brand marketing and find the problems or gaps; then, evaluated the situation to reduce the gaps in order to achieve the aspired levels and rank the priorities in brand marketing strategies, we also evaluated the customer's satisfaction of brand marketing by three electronic manufacturing companies in Taiwan. As the empirical results, value pricing is the most important factor, followed by consumer's price perception and perceived quality while showed the highest satisfaction of brand marketing was in F2 company. The results of this paper will provide the enterprises with a reference for planning brand marketing.

1. Introduction

In consumer marketing, brands often provide the primary points of differentiation between competitive offerings, and as such they can be critical to the success of companies (Wood, 2000). For consumers, brands can be used to identify the sources or manufacturers while let manufacturers or distributors to know their responsibility. Most importantly, the brands have a special meaning to consumers. Because consumers learned the brands based on the experiences of using the products and from the years of manufacturers marketing plans that they can find which brand is acceptable and which brand are not satisfy their needs. As a result, the brands become a kind of shorthand to simplify products purchase decision tools or methods (Keller, 2001). People may find it rational to make different inferences from the brands they see and from the words they hear (Kuksov, 2007). Therefore, the brands can help consumers connect all the factors of the product. While brands have been widely used to identify products origin and its physical characteristics for many centuries (Farquhar, 1989), currently, the brand-related issues, such as, brand loyalty, brand image and brand equity are widely discussed, but being less concerned about the brand-related marketing to create brand value. Based on the smiling curve (Shih, 1992), it showed enhancing the marketing and R&D will create value-added to the products or brands (see the Fig. 1). Herremans, Ryans, and Aggarwal (2000) also pointed out that customers are retained in several ways but generally by some form of investment in marketing and/or R&D. Marketing support might lead directly to building brand value, which in turn retains customers.

Another possibility is that marketing support might retain customers; customer's retention then reduces return volatility, which in turn builds brand value (Herremans et al., 2000). Keller (2001) noted that the beneficial association to the brands is able to satisfy the consumer's needs and successfully communicate with consumers by the products or marketing strategy. The brand marketing includes many elements, we can generalize the elements from the literature of Keller (2001) who noted the brand-related marketing with product strategy, price strategy, channel strategy and communication strategy, and use them to satisfy customer's needs for creating brand value.

However, there are many factors in brand marketing and they are complicated and interrelated. One of the hybrid MCDM model combining the decision making trial and evaluation laboratory (DEMATEL) with analytic network process (ANP) and VIKOR methods can be effectively used to solve the complex and tangled problem of understanding the complex structure of the causal

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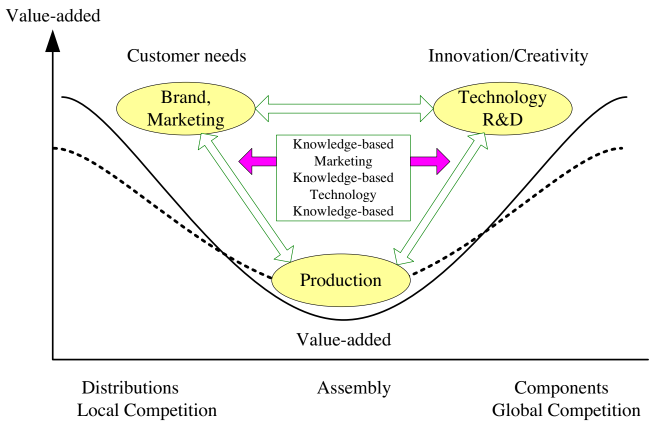

Fig. 1. The smiling curve.

relationships; subsequently, one can probe the interrelated relationships between the dimensions and criteria and then to build a impact relation map (IRM) among criteria for brand marketing evaluation. The weights of each factor of MCDM problem for selecting the best strategy will then be derived by utilizing the ANP combined DMATEL (Li & Tzeng, 2009a, 2009b; Tzeng, Chiang, & Li, 2007). We then identified the most suitable strategy by VIKOR and offered a complete depiction and testing of the decision model for a reference to enterprises (Chen & Tzeng, 2011, Chen, Hsu, & Tzeng, 2011; Chen, Lein, et al., 2011; Huang, Tzeng, & Ho, 2011; Hung, Chou, & Tzeng, 2011; Liou & Tzeng, 2011; Liu, Tzeng, & Lee, 2011, 2012; Ou Yang, Shieh, & Tzeng, 2012; Shen, Lin, & Tzeng, 2011; Yang & Tzeng, 2011).

Currently, the DEMATEL has been applied in marketing to discuss consumers' behavior of marketing strategy (Chiu, Chen, Tzeng, & Shyu, 2006); in the innovation of industries discussing the policy mix on re-configuration (Huang, Shyu, & Tzeng, 2007). And in R&D, Lin and Tzeng (2009) discussed the value of technology innovation. The analytic network process (ANP) was proposed by Saaty (1996) to overcome the problem of dependence and feedback among criteria or alternatives (Liou, Tzeng, & Chang, 2007). Furthermore, the ANP method is used to decide the relative weights of the criteria. It improves the visibility of decision-making processes and generates priorities between the decision alternatives. In order to provide a systematic approach to set priorities among multi-criteria and trade-off among objectives, the ANP method is applied prior to goal programming formulation, for example: selecting management systems for sustainable development (Tsai & Chou, 2009), the choice of logistics service providers (Jharkharia & Shankar, 2007). In addition, the VIKOR method was applied to determine the best feasible solution according to the selected criteria, such as prioritizing land-use restraint strategies (Chang & Hsu, 2009), supplier selection (Sanayei, Mousavi, & Yazdankhah, 2010), portfolio selection (Ho, Tsai, Tzeng, & Fang, 2011).

Therefore, the purpose of this study is intended to provide an empirical case in brand marketing to demonstrate how the MCDM model can be applied to brand marketing to discover important factors that can create brand value. This study proposes a hybrid MCDM model combining the DEMATEL with ANP and VIKOR methods to illustrate the interrelated relationships in brand marketing. After understanding the interrelated relationships, we can find the problems or gaps in brand marketing; then, we evaluate the situation to reduce the gaps in order to achieve the aspired levels in each criterion by considering an impact-relations-map for brand marketing to create brand value. This study also ranks the priorities of dimensions and criteria to find the important factors in brand marketing and also evaluates the customer's satisfaction of brand marketing in 3 chosen electronic manufacturing companies in Taiwan.

The remainder of this paper is organized as follows: we reviewed the literature in Section 2. A hybrid MCDM model combining DEMATEL with ANP and VIKOR for brand marketing is introduced in Section 3. An empirical case of brand marketing is illustrated to demonstrate the proposed methods in Section 4. Conclusions are presented in the last Section.

2. Literature review

The purpose of this Section is to identify the influential factors of brand marketing based on past literatures and discuss studies. To make up for such a gap, this study conducted a literature review of Keller (2001) who noted that the elements and selections of brands will create value for the customer-based brand, and the most important strategy is brand-related marketing activities and marketing planning such as: the perceived quality, perceived value and enhance the consumer experience of product strategy; the consumer's price perception and value pricing of price strategy; the channel design, push and pull strategy and channel support of channel strategy; the advertisement, promotions, event marketing and sponsorship, public relations and publicity materials and personal selling of communication strategy.

2.1. The brand definition

The different approaches to define the brand construct partly stem from differing philosophies (such as product-plus and holistic branding outlined below) and stakeholder perspective, (i.e., a brand may be defined from the consumers' perspective and/or from the brand owner's perspective). In addition, brands are sometimes defined in terms of their purpose, and sometimes described by their characteristics. From this diversity an integrated definition is drawn (Wood, 2000).

The American Marketing Association (1960) proposed the following company-oriented definition of a brand as: a name, term, sign, symbol, or design, or a combination of them, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors. This definition has been criticized for being too product-oriented, with emphasis on visual features as differentiating mechanisms (Arnold, 1992; Crainer, 1995). Watkins (1986), Aaker (1991), Stanton, Etzel, and Walker (1991), Doyle (1994) and Kotler, Armstrong, Saunders, and Wong (1996) adopted this definition. Dibb, Simkin, Pride, and Ferrell (1997) use the Bennett (1988) variant of the definition which is: a brand is a name, term, design, symbol or any other feature that identifies one seller's good or service as distinct from those of other sellers. The key changed to the original definition are the words "any other feature" as this allows for intangibles, such as image, to be the point of differentiation. The particular value of this definition is that it focuses on a fundamental brand purpose, which is differentiation. It should not be forgotten that brands operate in a market environment where differentiation is crucially important. Even where monopolies exist, companies may choose to position their brand(s) with a view to future competition. The other key feature of this definition is that it takes the corporate perspective rather than emphasizing consumer benefits. Ambler (1992) takes a consumer-oriented approach in defining a brand as: the promise of the bundles of attributes that someone buys and provides satisfaction. The attributes that make up a brand may be real or illusory, rational or emotional, tangible or invisible. Many other brand definitions and descriptions focus on the methods used to achieve differentiation and/or emphasize the benefits the consumer derives from purchasing brands. These include (inter