



Factors affecting on brand equity

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Abstract

Brand equity, a measure of the overall value of a brand (Keller, 1998), is a key concept in brand management. Brand equity identified as a valuable source of competitive advantage for many organizations. The first aim of this research is to assess the relative impact of brand personality dimensions and perceived marketing actions on brand equity formation. Second, we posit that the relative impact of these two elements varies depending on the consumer segment. Results reveal that consumers can segmented into four groups for which the relative impact of the two independent constructs vary. These exploratory results indicate that brand equity management should be adapted to specific consumer segments via brand personality dimensions and marketing mix elements.

Introduction

Consumer purchasing decisions is the decision regarding the preference for brands that exist in the set of options (Kotler and Armstrong, 2001). The consumer's decision to modify, delay or avoid the purchase decision is influenced by the risk unthinkable. The magnitude of the risk of thought vary depending on the amount of money at stake, the large uncertainty attributes, and the magnitude of consumer confidence. Purchasing decisions is particularly important for companies or organizations engaged in industrial goods and services. Companies should consider buying decision will be made by consumers and customers. Thus, interest in purchasing a product consumers will be very subjective and is influenced by various factors that are intangible or later called brand equity (Tjiptono, 2007).

Brand equity is defined as the incremental value a given brand adds to a basic product (Farquhar, Han and Ijiri, 1991) or as the differential effect that brand knowledge has on consumer responses to the marketing actions of that brand (Keller, 1993). Brand equity is an



important construct since it influences future profits and long term cash-flow (Srivastava and Shocker, 1991), mergers and acquisitions (Mahajan et al., 1994). In spite of its formidable importance in the domain of brand management, very limited research has been directed at understanding or measuring the process of brand equity formation (Barwise, 1993; Yoo, Donthu and Lee, 2000). In order to adequately understand the impact of brand equity in an increasingly competitive consumer market it is helpful to first explore some of its antecedents. In this paper we focus on the impact of marketing efforts and brand personality on consumer preferences and the resulting brand equity. As stated in the literature, marketing efforts (Keller, 2003), in particular communication activities (Aaker, 1991), price, store image, distribution intensity, promotion deals and advertising spending influence consumer brand value judgments and have a positive impact on brand equity. An interesting determinant in the creation of brand equity is brand personality. Brand personality is defined as “the set of human characteristics associated with a brand” (Aaker, 1997) and it impacts different aspects of brand equity in divers ways. For instance, it enhances consumer preferences and loyalty to a brand (Levy, 1959; Fournier, 1998), thus creating the sought after brand equity (Keller, 1993). In keeping with previous research, we propose that marketing mix activities (predominantly communication activities) deployed by the firm and brand personality influence consumer perception of overall brand value. As a result, the question of the relative contribution of brand personality (considered as a “recent, symbolic” marketing tool) and marketing mix elements (a “traditional” tool) on brand equity formation arises. Although the impact of each element has been treated separately in the literature, the question of the relative impact of these two sets of variables on brand equity has not yet been explored. This is an important issue both scientifically and from a management standpoint. The fact that marketing actions may have different impacts on different consumer groups is well established. Consumers vary in terms of price sensitivity (Garbor and Granger, 1979, Tellis, 1988), innovativeness (Midgley and Dowling, 1978), and deal-proneness (Blattberg et al., 1978), to name but a few aspects. In brief, consumer segments respond differently to different marketing instruments. Concerning brand personality dimensions, studies also demonstrate that the impact of brand personality traits varies across consumer groups (Bartikowski, Merunka and Valette-Florence, 2008). Therefore, the relative impact of marketing mix elements and brand personality factors should also vary across consumers. Based on these previous findings, the first objective of this study is to examine how perceived



marketing mix actions (here limited to marketing communications) and brand personality dimensions impact brand equity. The second objective is to assess heterogeneity in consumer response to these two elements across consumer groups. To that end, we implement an innovative methodology that helps identify consumer segments exhibiting different responses. Following by Ringle et al., (2008) a finite mixture-PLS procedure is applied to our data pool.

Literature review

Brand equity

Brand equity can be measured globally and is integral to the “value added” by a brand name to a given product. It can be measured using methods such as price premiums (Aaker, 1991), conjoint analysis of brand names (Cobb-Walgren et al., 1995), collections of consumer-based perceptions (Agarwal and Rao, 1996) or purchase behavior (Kamakura and Russel, 1993). Yoo and Donhu (2001) developed a different measurement approach by using a multidimensional consumer brand equity scale and successfully identified three significant dimensions: loyalty, perceived quality and brand association/attention. This finding was later confirmed by Washburn and Plank, (2002). More recently, Guizani et al. (2008) developed a scale with four distinct dimensions: brand loyalty, brand knowledge, social value and perceived quality. An interesting feature of this scale is that it takes into account the brand’s social value, referring to the brand’s ability to gather a group of consumers around it as a sort of “community” (Muniz and O’Guinn, 2001). We will use this scale in our research.

Marketing actions and brand equity

Marketing actions, or what Kirmani and Wright (1989) call marketing efforts undertaken by a company, broadly correspond to marketing mix elements (the four Ps). Marketing mix is defined as all controllable marketing actions that influence consumer brand knowledge, (i.e. consumer psychological perceptions) and that result in a positive or a negative impact on brand equity (Yoo, 1996). For example advertising campaigns and the resources allocated to that end are considered to be part of marketing mix, and these efforts can be measured in terms of real and perceived marketing efforts. The correlation between actual and perceived marketing efforts is very strong and consumers consider that large firm investment implies high brand value. Therefore, perceived marketing actions are strong predictors of brand



valuation (Kirmani and Wright, 1989). More recently, in their research focusing on the influence of marketing mix elements, Yoo, Donthu and Lee (2000) use perceived marketing efforts rather than real marketing actions to evaluate brand equity. In this paper we focus on consumer perceptions of marketing efforts and we particularly focus our research on their perceptions of advertising expenditures and promotion frequency.

Brand personality and brand equity

As previously mentioned, consumer perceptions of marketing actions are considered as traditional marketing tools. With this in mind, it is interesting to consider the novel effect of brand personality dimensions on the consumer and the resulting brand equity. The literature provides us examples of brand personality dimensions that are integrated into the brand judgment process with subsequent affects on consumer behavior and attitudes toward a given brand (Wysong, 2000). Brand personality dimensions are therefore considered as relevant determinants of brand added value and thus affect brand preference (Kim, 2000), consumer/brand relationships and brand attachment (Sung, Park and Han, 2005) or brand trust (Hess et al., 2007).

To sum up, the literature review supports the notion that in order to effectively measure and subsequently manage brand equity the relative importance of brand personality versus traditional marketing mix tools must be considered

Research model

Bearing in mind the importance of consumer brand perceptions, making reference to previous research and given our research objectives, we propose the following model to study the impact of brand personality and perceived marketing actions on brand equity. Our first hypotheses are:

H1: Only dominant brand personality dimensions significantly impact brand equity

H2: Perceived marketing communications significantly impact brand equity.

H2a: Perceived advertising expenditures positively impact brand equity.



H2b: Perceived promotion frequency negatively impacts brand equity.

As previously stated we attempt to demonstrate that the impact of brand personality and perceived marketing actions on brand equity will vary across consumer groups.

Research methodology and results

Data collection and measurement scales

To test these hypotheses we use the brand personality scale developed by Ambroise (2006) in the same French context as our study since culture was found to influence brand personality dimensions (Aaker, Benet-Martinez and Garolera, 2001, Sung and Tinkham, 2005) and brand equity is measured with the scale developed by Guizani et al. (2008). Finally, perceived advertising pressure and consumer promotion frequency are measured in accordance with Yoo et al. (2001). All constructs are measured on a five point Likert scale. Data was collected using an on-line questionnaire targeting graduate students and staff in a large south-eastern French university. Two versions of the questionnaire were developed, one concerning two major laptop brands (Sony Vaio and Acer) and the other concerning two major French coffee brands (Grand'mère and Carte Noire). Ultimately, 538 questionnaires were included for data analysis (52% female, 48% male, 71% student and 29% university staff). The response rate was roughly 24%.

Analysis and results

Prior to testing the proposed structural relationships, a series of Confirmatory Factor Analyses were performed to ensure the robustness of the selected scale structures. All scales were found to be reliable and valid across product categories and brands. Brand personality dimensions were aggregated into two second-order dimensions: a positive dimension of brand personality grouping (Agreeability, Conscientiousness and Sophistication) and a negative dimension grouping (Fallaciousness and Introversion). As with the brand personality scale results from the exploratory and confirmatory factor analysis show that brand equity is a global construct assembling four first order dimensions: social value, brand knowledge, brand loyalty and perceived quality.



Main effects

Hypotheses were tested using Structural Equation Modeling (Partial Least Square approach, Wold, 1985). Overall fit of the structural model was very good as indicated by the Goodness of Fit Index (Gof = .942) and the R^2 ($R^2 = .87$). Estimation of the path coefficients of the model support each of the hypothesized relationships at $p < 0.05$, except for H2a. This implies that for the four brands under consideration, perception of brand advertising pressure does not influence brand equity. Going into greater detail, we find that there are two significant second-order dimensions of brand personality. The first one groups positively-valenced brand personality dimensions (Agreeability, Conscientiousness and Sophistication) and shows that they have a high impact on brand equity (0.49, $p = .05$). The second one groups negatively valenced-dimensions (Introversion and Fallaciousness) and demonstrates that their impact is much less noteworthy than that of the positive dimensions (-.15, $p = .05$).

Variations across consumer segments

In previous analyses, researchers have considered consumers as homogeneous relative to the relationships being tested. We conjecture the existence of consumer segments that vary depending on the relative impact (or path coefficients) of communication mix and personality on brand equity. Since our research is exploratory, we follow recent developments by Ringle et al., (2005) and Hahn et al., (2002) and apply the mixture model methodology to partial least squares (PLS) structural equation models (finite mixture PLS approach or FIMIX-PLS). Mixture procedure applied via Smart PLS software results in a four segment structure. This choice is based on the Entropy (closest to 1) and on the lowest AIC index. Entropy is 0.71, indicating a good separation in the estimated individual class probabilities. Both path coefficients and descriptive data for each group help explain the characteristics of the segments.

Table 1 shows path coefficients for the second-order brand personality dimensions and for the two marketing tools (advertising and consumer promotions) related to brand equity.

	<i>Segment 1: Functional.</i>	<i>Segment 2: Deal Prone</i>
Positive personality dim.	0,232	0,677
Negative personality dim.	-0,159*	-0,163*
Consumer promotions	0,268	0,436
Advertising expenditures	0.247	-0,291
	<i>Segment 3 : Risk Averse</i>	<i>Segment 4 : Symbolic</i>
Positive personality dim.	0,518	0,712
Negative personality dim.	-0,524	-0,274
Consumer promotions	0,074*	-0,063*
Advertising expenditures	-0,052*	0,236

* non-significant at p=0.05

Table 1: Path coefficients for FIMX PLS revealed segments

To test the difference between path coefficients across segments, we conducted a multi-group analysis with a series of permutation tests (Chin, 2003). We do not present the results here (in the name of brevity) but take them into account when interpreting the four revealed groups. Globally, segments differ significantly by at least two of the four independent variables, negative personality dimension and consumer promotions being the most important, thus supporting the fact that they are good indicators of consumer heterogeneity.



Consumer segment 1 is characterized by strong positive path coefficients between perceived marketing actions (both advertising and promotion) and brand equity. Individuals in this group are strongly influenced by their perceptions of company marketing efforts, rather than by symbolic elements such as brand sophistication or extroversion, when judging brand added value. The impact of positive personality dimensions is weak as compared to other groups.

Segment 2 is also very sensitive to marketing actions, especially to consumer promotions. The high positive impact of perceived promotional activities on brand equity indicates that consumers in this segment are deal-prone and value the brand for the frequency of its deals. They also value positive brand personality dimensions (more than segment 1 but not differently than segments 3 or 4). They do not value advertising expenditures which relate negatively to brand equity. This might be linked to their preference for consumer promotions.

Segment 3 is characterized by strong negative structural relationships between negative brand personality dimensions (Introversion and Fallaciousness) and brand equity. Marketing mix elements do not significantly contribute to this group's perception of brand equity. These consumers are cautious and selective and mostly pay attention to the symbolic negative aspects of brands. They fear being wrong and value brands that minimize risk. They are essentially risk averse and insensitive to marketing communications.

Segment 4 is composed of consumers who are very sensitive to both positive brand personality dimensions and to advertising. The permutation test indicates that positive brand personality dimensions are statistically more important in segment four than in the other groups in terms of brand equity assessment. They seem to evaluate the symbolic aspects of brands via brand personality dimensions and through advertising.

Conclusion

Our research objective is to test and compare the effects of brand personality and marketing elements on brand equity. At the aggregate level, we find that brand personality dimensions, especially those with a positive valence, impact brand equity more than traditional marketing communication elements. This previously unexplored conception of brand equity becomes



clearer when consumer groups are split into different segments. We achieve this separation through application of a finite mixture PLS procedure on the basis of the impact of brand personality dimensions and marketing communication elements on brand equity. This procedure consists of testing different mixture models and detecting heterogeneity between groups. To this end, we take into account significant differences between path coefficients. Results reveal great differences across consumer groups. For example, marketing communication elements dominate over brand personality dimensions for one group, while for another group all marketing communication elements are insignificant. These results are important from an academic standpoint because prior research has only undertaken separate studies concerning the impact of marketing mix elements and brand personality dimensions on brand equity. Our results enable comparison of the relative impacts of the different elements. Furthermore, our segmentation approach reveals high heterogeneity across the segments. This heterogeneity throws into question previous general findings concerning brand equity formation and deserves to be taken into account in future studies. Additional research needs to focus on further explaining and understanding these differences and their general impact on consumer attitudes and behaviors. To address this shortcoming we suggest an exploration of elements contributing to the attribution of a consumer to one segment over another. These elements might include demographic variables on the one hand and consumption-related variables (such as self-esteem, self-image or conspicuousness) on the other hand. Identification of these variables may permit us to better understand the relative roles of brand personality and marketing mix elements on brand equity. We also need to deepen our analysis of the impact of brand personality dimensions on overall brand valuation as related to brand equity because this is potentially instrumental for managerial decisions.



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