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Brand equity estimation model

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A B S T R A C T

Although a consensus exists among marketing scholars and practitioners about the importance of brand equity, a uniformly accepted estimation model has yet to emerge. Most consumer-based brand equity (CBBE) models do not offer a monetary estimation of brand equity while many financial-based brand equity (FBBE) models do not consider consumers' perceptions. In this paper, the authors develop a model that combines these two approaches: CBBE and FBBE. The former considers consumers' purchase intentions and brand-switching probabilities using Markov matrices, while the latter calculates the monetary value of a brand using net present value of future generated cash flows. Additionally, the model enables the comparison of brand performance in relation to its competitors and the estimation of financial returns of marketing actions, thus distinguishing between the contributions of the different drivers of brand equity.

1. Introduction

Marketing professionals still face the challenge of estimating the value of a brand. As Keller (1998) points out, various forms of estimation with different measurement purposes are available. Consequently, researchers propose many different approaches for capturing brand equity (Shankar, Azar, & Fuller, 2008). However, research in the marketing field has not yet come up with a single, uniformly accepted theoretical basis for brand valuation (Raggio & Leone, 2007). Thus, although the corporate world recognizes the estimation of brand equity as an important marketing activity, the estimation of brand equity (Madden, Fehle, & Fournier, 2006) and the quantification of the returns on marketing activities in financial terms continues to be a major challenge for marketing and brand managers (Mizik & Jacobson, 2008).

Adoption of a new measurement of brand equity results from the informational requirements of the following groups of people: (a) marketers, who seek to increase their organizational credibility by demonstrating the value of branding in clear financial terms (Madden et al., 2006), in order to obtain budgets for their departments and to better manage their brands; (b) scholars, who are under pressure to supply theoretical and methodological support to marketers in order to better measure brand equity, evaluate their brand performance and estimate its investment returns; (c) accountants, who set the price of a brand to be sold or purchased, and include a brand in the company's balance sheet (Feldwick, 1996), especially in mergers and acquisitions; and (d) shareholders and financial analysts, who verify the financial performance and the association between brand equity and shareholder value based on the growing evidence for the relationship between brands and the return of the firm in the stock market, as pointed out by Madden et al. (2006), Mizik and Jacobson (2008), and Shankar et al. (2008).

Despite brand equity relevance, researchers have not reached a consensus about which measures provide the best estimates of this complex and multi-faceted construct (Buil, de Chernatony, & Martínez, 2013; Raggio & Leone, 2007), in part because different perspectives exist to define and measure this concept, such as the financial or consumer perspectives (Buil et al., 2013; Keller, 1998). Hence, the creation of a unified brand equity model is necessary in order to ally these two perspectives.

Although models for financial measurement of brand equity already exist, they do not always consider the consumer's perspective. This oversight demonstrates the shortcomings of these models, since authors such as Ailawadi, Lehmann, and Neslin (2003), Tong and Hawley (2009) consider that measuring brand equity should begin with estimates derived from consumer perspectives, and that any brand vision is a function of the value delivered to consumers. By contrast, although the literature contains some well-accepted conceptual models for consumer-based brand equity (CBBE) (e.g. Aaker, 1991, 1996, Keller, 1998), most CBBE models that estimate brand equity focus on individual or aggregate measures of consumer perceptions, and do not usually present the monetary brand equity that the consumer perspective represents.

Even though one recognizes the presence of a growing body of literature concerned with how to measure CBBE on the one hand, and on firm-based or financial-based brand equity (FBBE) on the other (Ferjani, Jedidi, & Jagpal, 2009; Keller & Lehmann, 2006), few studies

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integrate these two perspectives. Table 1 illustrates this point and compares a range of brand equity studies.

Hence, the main purpose of this study is to develop a model that allows the monetary estimation of consumer-based brand equity through the combination of two approaches, CBBE and FBBE. This paper offers a unique brand equity model, because it presents a theoretical contribution to the brand equity construct – according to the framework for conceptual contributions of MacInnis (2011) – by revising existing perspectives of this concept and offering an alternative approach that unifies CBBE and FBBE. Application of this model makes possible the estimation of brand equity performance from a temporal perspective (i.e. in the future), as well as brand competitors' performance and it is possible to evaluate the contribution of each of the drivers to brand equity performance, thus addressing the shortcomings of previous brand equity models (see Table 1). This paper offers a disclosure brand equity model, allowing replications.

Although the authors recognize the existence of models developed by institutions and companies (e.g. Young & Rubicam (Y & R), Interbrand, Brand Finance, Brand Analytics) to unify these two views on brand equity (Villanueva & Hanssens, 2007), these companies do not explicitly disclose their calculation procedures, making the examination of their detailed evaluations and replications impossible. Furthermore, despite the substantial number of different brand equity models in use (Leone, Rao, & Keller, 2006), most lack the theoretical rigor (Raggio & Leone, 2007) required to avoid arbitrariness (Burmann, Jost-Benz, & Riley, 2009). A major problem with the existing CBBE models is the lack of theoretical foundation for the drivers of brand equity (Buil et al., 2013), which represents a big challenge to marketing scholars and necessitates a call for improvements to CBBE scales.

Some studies do provide brand equity in monetary terms while considering the consumer perspective. However, they use aggregate measures of consumer behavior, which do not allow managers to relate a brand's equity to its sources (Srinivasan et al., 2005). The proposed model, on the contrary, allows managers to estimate both individual and aggregate measures (for each consumer studied), to determine the main drivers of CBBE, and to investigate the relationship between investment in the drivers and their respective impact on brand equity — which is one of the main deficiencies of the existing measurement models of brand equity.

Alongside the theoretical proposition, this paper also presents empirical evidence gained by testing the brand equity model in the Brazilian telecommunications industry, comprised of four main national brands (they represent approximately 99% of the Brazilian market, according to Teleco, 2013). Empirical evidence shows that with this model, managers can measure and evaluate over time the main drivers of brand equity, allowing them to verify strategic and tactical alternatives for increasing brand equity and monitoring the brand performance of their competitors.

This paper contributes to the literature of marketing metrics and brand valuation by providing a model for estimating consumer-based brand equity in monetary terms. This model unifies consumer and financial perspectives of brand equity by integrating Aaker's (1991) theoretical model of brand equity with the return on marketing (customer equity) framework of Rust, Lemon, and Zeithaml (2004b). Hence, this study offers an integrative model of brand equity, starting with an indirect measure of CBBE (the sources of CBBE), incorporating a direct metric of CBBE and finishing with a financial measure of brand equity — the discounted cash flow. The proposed model also makes improvements on traditional scales measuring consumer-based brand equity by empirically differentiating between brand awareness and brand associations dimensions, testing different visions of brand associations, using a more complete scale.

This paper opens with a discussion of measurement models of brand equity. The next section explains the steps for developing a model to estimate consumer-based brand equity. Then the authors present the data and the scale used. The following sections present the empirical results of the study. The paper concludes by outlining the final considerations, managerial and theoretical contributions and limitations of the research.

2. Measurement models of brand equity

"As firms struggle to produce ever-higher profits in increasingly competitive environments, calls to justify their expenditures are growing" (Rust, Ambler, Carpenter, Kumar, & Srivastava, 2004a, p. 85). Despite this assertion, the instrumentation that companies use to measure the actual return on investment in marketing is still incipient (Rust et al., 2004b). Indeed, many executives view marketing processes as lacking the pure quantitative properties found in the production and finance fields (Eliashberg & Lilien, 1993). Despite the generally accepted understanding that marketing expenditures have an impact on demand, this type of expenditure also generate costs, and in general, given this trade-off, systematic information capable of supporting the decisions of managers is rarely available (Eliashberg & Lilien, 1993). In this context, marketing models have an opportunity to support managers in decision-making by demonstrating the results that marketing can generate and, consequently, to improve the credibility of their marketing department to other organizational departments and shareholders (Hanssens, Rust, & Srivastava, 2009; Mizik & Jacobson, 2009; Rust et al., 2004a; Rust et al., 2004b; Srivastava, Shervani & Fahey, 1998).

Rust et al. (2004b, p. 109) "present a unified strategic framework that enables competing marketing strategy options to be traded off on

Table 1
Brand equity studies.

Author(s)	Consumer perception	Monetary value	Competition-monitoring	Brand-switch probability	Temporal perspective	Presents the contribution of each of the drivers
Simon and Sullivan (1993)	No	Yes	No	No	Yes (past)	No
Park and Srinivasan (1994)	Yes	Yes — partially	Yes	No	No	No
Erdem and Swait (1998)	Yes	Yes — partially	Yes	Yes	No	No
Ailawadi et al. (2003)	No	Yes	Yes	No	No	No
Damodaran (2006)	No	Yes	No	No	Yes	No
Erdem, Swait, and Valenzuela (2006)	Yes	Yes	Yes	No	No	Yes
Yoo and Donthu (2001)	Yes	No	Yes	No	No	Yes
Pappu, Quester, and Cooksey (2005)	Yes	No	Yes	No	No	Yes
Srinivasan, Park, and Chang (2005)	Yes	Yes	Yes (with a product without brand)	No	No	Yes
Buil, de Chernatony, and Martínez (2008)	Yes	No	Yes	No	No	Yes
Tong and Hawley (2009)	Yes	No	Yes	No	No	Yes
Ferjani et al. (2009)	Yes	Yes	Yes (with a product without brand)	No	No	No
Model proposed in this article	Yes	Yes	Yes	Yes	Yes	Yes

Note: "Yes" means that the brand equity model of the quoted study observes consumer perception, temporal perspective, competitors, offers a monetary estimation of the value of the brand, a detailed disclosure of the model and/or presents the contribution of each of the brand equity drivers.

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