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Measuring Brand Equity: The Marketing Surplus and Efficiency (MARKSURE)-Based Brand Equity*

C. Whan Park
University of Southern California

Deborah J. MacInnis
University of Southern California

Xavier Drèze
University of Pennsylvania

Jonathan Lee
California State University

Introduction

The equity associated with brands has been identified as one of the most powerful intangible assets driving corporate value (others include investments in R & D, patents, databases, human capital, software development ([Lev, 2001]). Some suggest that brands represent large assets with approximately 40% of the market value of firms (Barth, Clement, Foster, & Kasznik, 1998). In fact, the brand may be regarded as the fifth major business resource following human resources, goods, money, and information. The concept of brand equity has thus been of interest to marketing academics and practitioners alike (Aaker, 1991; Farquhar, 1989; Keller, 1993; MSI, 1999; Park, Jaworski, & MacInnis, 1987). An issue of considerable relevance concerns how brand equity should be defined and measured. This issue is critical in two ways.

First, a valid measure of brand equity would enable an *assessment of a firm's brand on its balance sheet*, particularly if it were theoretically based and consistent with accounting standards. In accounting, the development of

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a measure suitable for disclosure on a balance sheet is stymied by what accounting academics regard as problematic treatment of intangible assets like brands in accounting practice (Barth et al., 1998). Unlike the practice of some countries (e.g., Canada, Japan, Australia, France, and the United Kingdom), the U.S. Financial Accounting Standards Board (FASB) has historically viewed the estimation of intangible assets like brands as unreliable (Barth et al., 1998). As such, generally accepted accounting principles (or GAAP), dictate that only externally acquired (versus internally developed) brands are recognized as assets and amortized against net income over the brand's estimated useful life (which cannot exceed 40 years). The failure to include the value of internally developed brands in standard financial statements renders accounting information in financial reports misleading, and results in a severe underestimation in the asset valuation of firms and excessive cost of capital, hindering business investment and growth (Lev, 2001).

Second, measuring brand equity is critical for purposes of assessing the performance of the brand's marketing activities. Measuring brand equity can provide useful information regarding the effectiveness of marketing decisions. Brand equity measures can also be used to track the brand's health compared to that of competitors and over time. Indeed, a marketing-relevant brand equity measure that is not confounded with nonmarketing factors would be highly useful for monitoring the brand's health and the effectiveness of the marketing strategy that drives it. Understanding the factors that drive brand equity could also provide insight into decisions that must be altered or monitored so as to enhance equity.

The concept of "brand equity" has been defined and measured in a number of ways. As such, it is helpful to explore several conceptual issues concerning the construct before addressing its measurement. These issues are described below. We then develop an alternative perspective on the construct and its measurement. This alternate perspective, termed marketing surplus and efficiency (or MARKSURE) metric, takes a specific stance on each of these issues. We discuss several operational issues regarding this alternative view. Finally, we describe the limitations and the boundary conditions for this alternative perspective on brand equity assessment.

Perspectives on Brand Equity

Table 8.1 reviews a set of different perspectives on the meaning and measurement of brand equity. The diversity of meaning and measurement

TABLE 8.1

Review of Existing Measures of Brand Equity (BE)

Perspectives	Customer Based			Performance Outcome Based		Financial Marketplace Based	A Brand Holder's Perspective
Authors	Park & Srinivasan (1994)	Kamakura & Russell (1993)	Swait et al. (1993)	Ailawadi et al. (2003)	Interbrand	Simon & Sullivan (1993)	MARKSURE model
View of BE	Added value endowed by a brand as perceived by a consumer	Component of the brand's value that cannot be directly attributed to its physical features	Equalization price (EP), which equates the utility of a brand with the utility of a brand in a market with no brand differentiation	Revenue premium of the brand compared to a private label brand	Excess of the brand's estimated after-tax profits over the generic after-tax profits multiplied by brand strength	Intangible asset that is the fraction of firm's replacement value	Value of a brand is determined by considering both customers' input (i.e., sales revenue) and the firm's input (i.e., marketing costs)
Sources of data used to compute the BE measure	Every survey and consumer survey	Single-source scanner panel	Discrete choice experiment	Store-level scanner data	Financial statement and brand strength multiplier	Stock price and compustat financial statement	A firm's internal accounting data

TABLE 8.1 (continued)

Review of Existing Measures of Brand Equity (BE)

Perspectives	Customer Based			Performance Outcome Based		Financial Marketplace Based	A Brand Holder's Perspective
Determinants of BE	Difference between consumer's overall preference and objective multi-attribute preference	Brand intangible value created by brand name associations and perceptual distortions	Brand name, product attributes, brand image, consumer heterogeneity, and usage	Own marketing mix/price; competitor mix/price; category characteristics; firm strength (e.g., image, R & D capabilities)	Net brand-related profits and brand strength	Current and past advertising; advertising share; brand age; order of entry	Marketing surplus (TRt. TMCt) and marketing efficiency $(1-(TMCt / TRt) \mid)$
Nature of input data	Non-attribute-based and attribute-based	Remainder of brand value after accounting for price and advertising	Price of a brand, total utility of a brand, and price coefficient	Volume of brand; price of brand; volume of private label; price of private label	Operating income of a brand and generic brand, a brand strength multiplier	Demand enhancing components; cost-reducing components	Price and the quantity sold at the intermediary level (wholesale or retail) and all the itemized marketing costs

Referent	Mean equity scaled to zero	Mean equity scaled to zero	Brand in a market with no product differentiation	Private label brand	Generic brand	Unbranded product	No referent
BE Estimation	BE = non-attribute-based + attribute-based component	Brand value = intangible value (BE) + tangible value	EP = price − (total brand utility of consumer + price coefficient)	BE = revenue (brand) − revenue (private label)	BE = (brand profit − generic profit) x brand strength	BE = adv(t) +adv (t−1) + age + brand-based share	BE = (TRt. TMCt) × (| 1- (TMCt/ TRt) |)

perspectives itself illustrates why the brand equity construct has been so nettlesome. Until there is agreement on the construct and its properties, clarity on how the construct should be measured will be difficult.

As Table 8.1 shows, several metrics examine brand equity from the standpoint of the customer, focusing on the added value or utility that *customers perceive* from the brand (Park & Srinivasan, 1994)—value that cannot be explained by physical product features (Kamakura & Russell, 1993; Swait, Erdem, Louviere, & Dubelaar, 1993). Consistent with this customer focus, these metrics utilize consumer data from surveys, scanner panels, or discrete choices as inputs. Brand equity is typically conceptualized as deriving from associations linked to the brand and its attributes.

Other metrics reflect a *performance outcome-based perspective.* Ailawadi, Lehmann, and Neslin's (2003) conceptualization of brand equity as the revenue premium that accrues to a brand compared to a private label counterpart is illustrative of this perspective. *Financial World's* Interbrand model adopts a similar perspective, operationalizing brand equity as the relative after-tax profit of the brand in comparison with a generic brand multiplied by an index of brand strength (based on the seven subjective factors).

Simon and Sullivan (1993) adopt a *marketplace metric* of brand equity, designed to assess the value of the brand as determined by the financial marketplace. Consistent with this perspective, brand equity is based on stock prices and financial statement data, specifically "the incremental cash flows which accrue to branded products over and above the cash flows which would result from the sale of unbranded products" (p. 29).

Interestingly, one perspective on brand equity has not been elucidated— the value of the brand from the *brand holder's perspective.* This perspective on brand equity is relevant as it links the three perspectives described above. It does so by considering the brand's relationship with its customers, the firm's effort at developing this relationship, and hence the potential value of the brand to the financial marketplace. Existing measures of brand equity are incomplete in representing this brand holder's perspective. No matter how great a brand's relationship is with customers (e.g., reputation and goodwill), it is not valuable to a firm (or investors and prospective corporate buyers) if it requires excessive firm efforts (e.g., marketing costs) to develop and maintain this relationship. The marketplace metric of brand equity (e.g., stock price) measures the equity of a brand at a corporate level, not at an individual product level. Hence, it provides little guidance to the brand holder on equity-building possibilities for individual products produced by the firm.

More specifically, there are several uniquely differentiating characteristics of the brand equity measure that represents the *brand holder's* perspective. They are discussed next.

Costs to the Firm to Secure Customer Relationships (Firm Effort)

To serve as a useful construct that describes a brand's value to the brand holder, brand equity must be distinguished from other key performance indicators such as brand revenue or profit. Building and maintaining relationships with customers clearly involves real dollar costs to the firm. However, Ailawadi et al.'s (2003) revenue premium model does not incorporate costs (though their alternative theoretical model includes total variable costs). At issue here is not only whether costs should be included in the measure of brand equity, but also which costs are informative.

We argue that a measure of brand equity from the brand holder's perspective should include those *costs incurred in developing and maintaining a relationship between customers and the brand.* Unlike Ailawadi et al.'s alternative model, we do not believe that all variable costs should be considered in such a metric. Costs such as manufacturing or administrative costs are internal and hence hidden from customers' relationship with a brand. While they constitute costs borne by the firm, they do not directly impinge on customers' perceptions of the brand's benefits or their desires to stay in a long-term brand relationship. On the other hand, the *marketing costs* that the firm invests in a brand are primarily designed to develop customer relationships (e.g., creating, communicating, and delivering brand benefits for customers). They are the primary source of information from which customers infer brand benefits and develop a transactional brand relationship. Thus, marketing costs, not total costs invested in a brand, should constitute the relevant costs to be incorporated in the brand equity measure (see the forthcoming discussion about what constitutes marketing costs).

The separation of marketing from nonmarketing costs is an important departure from previous approaches. As we demonstrate later, a measure of brand equity based on marketing (versus total costs) need not correlate with a brand's profit as marketing and nonmarketing costs may differ in their operational efficiency (e.g., very inefficient manufacturing and very efficient marketing costs). Thus, a brand equity measure that considers only marketing costs serves as a unique performance measure that is different from profit, sales, market share, brand reputation, or goodwill. The two measures are, however, complementary. Hence, it is highly informative for a firm to examine performance measures (e.g., profit, sales, market share, etc.) that assess brand operations and to examine brand equity as an indicator of brand health.

The "Referent Brand"

Common to a number of brand equity definitions (see Table 8.1) is the inclusion of a *comparative entity or referent*. Typically, the referent is an "unnamed," "generic," or "private label brand." For example, Ailawadi et al. (2003) defined brand equity as "The marketing effects or outcomes that accrue to the product with its brand name as compared to the outcomes that would accrue if the same product did not have the brand name." Other definitions (Aaker, 1991; Farquar, 1989; Keller, 1993) benchmark the equity of a brand relative to a fictitious (generic or private) brand.

Although consideration of such a referent may be useful in the assessment of brand equity, use of an unnamed, fictitious, or generic brand has some significant shortcomings. To illustrate, consider the celebrity brand "Angelina Jolie". This brand name would be valued highly even if the famed actress had a fictitious name; part of the value of her name lies with her physically attractive features. Therefore, the difference between the real and an unknown or fictitious Angelina Jolie would not reflect the true value of Angelina Jolie. Consider another example—the iPod. The iPod's distinctive design is a fundamental contributor to the value consumers place on the brand and is essential to the brand's value (it must have contributed to the development of its brand equity in the first place.). Since this brand characteristic is salient and forms a basis for initial and continuing brand relationships, an unnamed brand that also has these attributes would still be valued—at least to some extent. Consequently the difference between the brand and an unnamed counterpart would be smaller than the real value of iPod. Hence, the true value of a brand should include not just the value of its name but also other product characteristics associated with that name.

The present chapter proposes that brand equity must be understood in terms of the value of a *brand*, not the value of its name (if this were the case, we would also have package design equity, product design equity, etc.). Hence, we recommend avoiding use of an unnamed, generic, or private label brand as referents. Avoiding the use of a referent brand also resolves some *operational* problems that make reliable assessment of brand equity difficult. In some industries, a private label or generic counterpart does not exist. Moreover, if multiple private label and/or generic brands are available it is not clear on the basis of which private label or generic brand equity should be assessed. Comparisons to one may yield quite different values than comparisons to another. Finally, it is difficult to measure brand equity relative to an unnamed (generic or private label) brand when the brand lacks physical, substantive, or explicit transaction properties. For example, brands representing services, places, countries, organizations, or sports teams (e.g., AT&T, New York, Japan, Stanford University,

or the L.A. Dodgers) do not have specific referents that can be separated from their names. It is unclear how the equity of New York, Stanford University, or the L.A. Dodgers can be measured against an unnamed or private label New York, Stanford, or L.A. Dodgers.

Rather than specifying how valuable a brand is relative to an unnamed, generic, or private label referent brand, perhaps brand equity assessment is better assessed in terms of its absolute value to the firm (the brand holder). Brand equity measured in an absolute sense allows firms to compare the equity of one brand to a private label or generic referent brand, other brands within the same company, or with other brands in the same or a different industry. Hence comparison with any referent is possible. Such comparisons are more difficult when brand equity is conceptualized and measured based on a comparison between a target and a fictitious (generic or private) brand. Importantly, the proposed conceptualization and measurement perspective allows for the comparison of the value of a brand to any referent (not just an unnamed, generic, or private label brand). However, the referent brand is compared after an assessment of brand equity has been made. The referent is *not* part of the assessment of the brand's equity.

Measuring brand equity in terms of current value raises another related issue. It involves the distinction between the flow and stock concept of brand equity. The current-value-based brand equity is more a flow (e.g., income) concept than a stock (e.g., wealth) concept. The two have different meanings. One can have low income and still be wealthy, or have high income but not yet be wealthy. In accounting, equity like an asset is a stock concept, not a flow concept. Thus, the current-value-based equity measure appears to be the per-period measure of brand equity, not the total value of a brand at a point in time. It is in this sense that the current-value-based brand equity may be appropriate for the income statement but not part of the balance sheet. In order for this measure to be included in a firm's balance sheet, it may have to be converted to the measure that satisfies the stock concept of brand equity. Addressing this issue, albeit critically important, is beyond the scope of this chapter.

Temporal Issues Involving Brand Equity

Another thorny issue when measuring brand equity concerns the temporal perspective that should be adopted in conceptualizing and measuring brand equity. Current perspectives disagree on whether brand equity should be based on the brand's current value, or its current value and future expected value. For example, the Interbrand model incorporates a

brand's future growth potential while others (Ailawadi et al., 2003) focus on the current value of a brand.

Conceptually, a brand's future growth potential is an important consideration for certain decision making situations (e.g., mergers and acquisitions). It does not, however, justify why a future growth potential should be intrinsic to the conceptualization and measurement of brand equity itself. As Ailawadi et al. (2003) note, including future growth potential brings a high degree of uncertainty and judgment into the measure, making the measure subjective and speculative. We believe that brand equity is best conceptualized and measured in terms of current value. While assessments of future value may be added subsequently, developing an accurate and non-subjective estimate of current value would produce a more reliable estimate. Notably, the calculation of current value enables a comparison of the brand's current value relative to the value attained in the past. Such comparisons may be extremely informative to internal brand strategy decisions.

Marketing Surplus and Efficiency (MARKSURE)-Based Brand Equity

With these considerations in mind, we develop a new perspective on brand equity and its measurement called the marketing surplus and efficiency (MARKSURE) measure. The metric bears some similarities to that of Ailawadi et al. (2003). Their metric is based on brand unit sales and price in comparison with a private label counterpart. Unit sales and price are derived from purchase behavior, and assessed from scanner data. Their revenue premium measure is as follows: $(Volume_b) \times (Price_b) - (Volume_{pl}) \times (Price_{pl})$ where subscripts b and pl refer to the focal national brand and the equivalent private label, respectively. Their model is interesting and useful as a reference to proposed MARKSURE because it deals with two of the three key variables that our newly proposed model relies on (unit price and the quantity sold).

However, our MARKSURE model differs *conceptually* and *operationally* from that of Ailawadi et al. (2003). We redefine brand equity by incorporating both inputs of a firm and its customers. We also extend Ailawadi et al.'s model *operationally* by specifying different procedures for brand equity assessment. The latter is achieved by (1) including marketing costs as a relevant input for measuring brand equity, (2) removing the private label referent brand (or unidentified brand name) as part of the measure, and (3) including the efficiency ratio of a firm's marketing costs. We

believe that these extensions are fundamental and significant to a more useful metric. Specifically, the proposed measure entails several desirable features that address some of the issues described earlier. It also allows the firm to (1) assign a financial value to the brand in financial transactions and (2) to track brand health vis-à-vis competitors and over time. The next section discusses how the proposed measure performs these two different functions.

Revised Definition of Brand Equity

In light of the issues described earlier, we propose a new definition of brand equity, defining it as the current financial value of the brand to its holder (the firm) at a specific point in time. Conceptually, this value assessment is based on *the difference between customers' willingness to bear the costs to obtain the brand's benefits and the firm's costs expended to create these benefits in the minds of customers.* In other words, brand equity is *the difference between customers' endowment to a brand and the investment the brand holder has had to bear to secure this endowment from customers.* This conceptual perspective is operationalized by considering how the following three key variables drive brand value: (1) unit price (P), (2) unit marketing cost (MC), and (3) the quantity sold (Q).

Unit Price

Abundant empirical evidence supports the strong positive relationship between the strength of customers' relationship with a brand and the unit price level they are willing to bear (Aaker, 1996; Doyle, 2001; Erdem, Swait, & Louviere, 2002; Firth, 1993; Keller, 1993; Lassar, Mittal, & Sharma, 1995; Park & Srinivasan, 1994; Randall, Ulrich, & Reibstein, 1998; Swait et al., 1993; Yoo, Donthu, & Lee, 2000). Accordingly, evidence for an increase in brand equity would be revealed when a firm increases its unit price (P) from time t-1 to t but does so with no negative impact on demand (Q) and no additional marketing costs (MC) during the same time period (i.e., $Q_{t-1} = Q_t$; $MC_{t-1} = MC_t$).

Quantity Sold

Research similarly supports the relationship between the value customers place on their relationship with a brand and quantity sold (Aaker, 1992, 1996; Cobb-Walgren, Erdem & Swait, 2004; Keller, 1993; Park & Srinivasan, 1994; Ruble, & Donthu, 1995; Smith & Park, 1992). Customers who value

their relationship with a brand are more willing to forgive brand mishaps and to be loyal to it (Ahluwalia, Burnkrant, & Unnava, 2000). Accordingly, brand equity should be revealed when demand for a brand increases from t-1 to t without (1) an associated unit price reduction (P), or (2) an increase in unit marketing cost (MC) during the same time period.

Marketing Costs

Finally, research supports the relationship between the value consumers place on their relationship with the brand and marketing costs (Aaker, 1992; Keller, 1993; Smith & Park, 1992). A brand with strong equity influences customers' trust in the brand, their willingness to promote positive word-of-mouth, and their relative insensitivity to reciprocity in communications by the firm (e.g., neither expecting nor requiring extensive marketing effort to remain loyal). Accordingly, brand equity should increase when a firm can (1) reduce marketing costs (MC) at time t from t-1 without an associated reduction in revenue, or (2) realize a revenue increase without an associated increase in marketing costs (MC).

Two Key Components of the MARKSURE Metric

The above three variables provide the basis for measuring two key components of the proposed brand equity metric—the *magnitude* of value generated by the brand (or marketing surplus) and the *efficiency* at which such value is achieved. These two components are examined below.

$$\text{Marketing Surplus: } (p_{jt} - mc_{jt})q_{jt}$$

$$\text{Marketing Efficiency: } 1 - \frac{mc_{jt}q_{jt}}{p_{jt}q_{jt}}$$

where:

p_{jt}: Price of the brand j at time t
mc_{jt}: Marketing cost of the brand j at time t
q_{jt}: Quantity sold for the brand j at time t
$mc_{jt}q_{jt}$: Total marketing cost
$p_{jt}q_{jt}$: Total revenue

Total Marketing Surplus: $(P_t - MC_t) * Q_t$

$(P_t - MC_t)$ represents the difference between the customer's costs at time t and the brand holder's costs at time t (hereafter, we drop the brand subscript j). The difference between customers' willingness to pay a certain cost (unit price, P_t) to obtain the benefits of a brand and the firm's unit marketing cost to create, communicate, and deliver such benefits is called "unit marketing surplus." Multiplying unit marketing surplus by the number of units sold (Q_t) yields total marketing surplus. Since willingness to pay represents the customer's side and the unit marketing costs represent the firm's side, both customer and firm perspectives are reflected in *marketing surplus*. To the extent that a firm can create, communicate, and deliver brand benefits at a lower cost than the price customers are willing to pay, the brand enjoys a *marketing surplus*. The greater the total marketing surplus is, the greater the brand's value becomes. Thus, total marketing surplus reflects the *magnitude* of brand value.

Unit price in the above formula reflects the wholesale price. Wholesale price is determined by total revenue divided by the number of units sold at the wholesale level. Total marketing costs (aimed at both middlemen and end users) represent the expenditures the firm has borne to generate this revenue during time t. While a time lag is sometimes observed between marketing costs and resultant revenue, we do not formally include time lag effects in the model given the myriad issues associated with estimating lag length and magnitude (discussed later). Failure to incorporate lag effects may also be less problematic if the brand equity measure allows a sufficient time period to make the inclusion of a lag unnecessary.

$$\text{Marketing Efficiency: } (1 - [TMC_t / (P_t * Q_t)])$$

The ratio of total marketing costs to total revenue reflects the proportion of revenues that are allocated to creating customer value. One minus this ratio represents *marketing efficiency.* The lower the marking costs in relationship to the revenues, the greater the firm's marketing efficiency. Brand equity increases as marketing efficiency increases. Thus, the less a firm spends on brand marketing to generate a specific revenue level, the greater is the brand's equity. Unlike Ailawadi et al.'s model, this metric explicitly considers the brand's return on marketing investments. *Marketing efficiency* therefore reflects the efficiency with which the brand achieves its marketing surplus. This variable assumes that the brand's revenue is greater than 0. As with *total marketing surplus*, *marketing efficiency* involves both customers' input (customers' responses in the form of total revenue) and a firm's input (total marketing costs).

Importantly, *marketing efficiency* and *marketing surplus* are independent entities; each serves as an independent dimension according to which the levers of brand value can be judged. Combined, these variables also offer an overall assessment of brand equity. In this case, *marketing efficiency*

serves as a weight for *marketing surplus.* It adjusts *total marketing surplus* because the same amount of marketing surplus can be obtained at different levels of efficiency. Specifically, even if two brands have the same total marketing surplus $((P_t - MC_t) * Q_t)$, they may not reflect the same brand value when they differ in the ratio of marketing investments over total revenue.

To illustrate, consider the two brands shown in Table 8.2. Brand A has $100 in total revenue ($10 in unit price and 10 units sold) and $10 in marketing investment ($1 in unit marketing investment). Brand B has $200 in total revenue ($20 in unit price and 10 units sold) and $110 in total marketing investment ($11 in unit marketing investment). Both brands have the same total marketing surplus ($90). However, they differ greatly in their marketing efficiency. The former should be higher in value since the latter spent more to achieve the same marketing surplus. Assuming that all other costs for the two brands are equivalent, the difference between the two brands suggests that Brand B spent eleven times more in marketing dollars to generate the same unit profit (P – MC – all other costs). This adjustment yields value of $81 for brand A and value of $40.5 for brand B. This adjustment (1– (total marketing costs/total revenue)) is based on the logic that the brand's value is positively related to the proportion of marketing spending given its total revenue. Simply stated, a brand enjoys the highest (lowest) value when it generates substantial (limited) revenue with no (extensive) marketing costs.

Brand Equity Measure

Marketing surplus and marketing efficiency combined reflect the proposed brand equity metric. The composite MARKSURE measure is thus operationally defined as:

TABLE 8.2

An Example for Adjusting Marketing Surplus with Marketing Efficiency

Factors	Brand A	Brand B
Price	$10.00	$20.00
Q	10	10
Marketing costs	$1.00	$11.00
Marketing surplus	$90.00	$90.00
Marketing efficiency	0.9	0.45
Brand equity	$81.00	$40.50

Note: Where Marketing Surplus $((P_t - MC_t) * Q_t)$ is $9 x 10 = $90 for Brand A and $9 x 10 = $90 for Brand B, respectively, and Marketing Efficiency (1– $[TMC_t/ Pt*Qt]$) is 1 – 01= 0.9 for Brand A and 1 – 0.55 = 0.45 for Brand B, respectively.

$$BE_t = (p_t - mc_t)q_t \left| 1 - \frac{mc_t q_t}{p_t q_t} \right|$$

That is, brand equity reflects the difference between the brand's unit price at time t and its unit marketing cost at time t, multiplied by the total number of units sold at time t, adjusted by the ratio of total marketing investments over total revenue (the lower this ratio is, the less the adjustment becomes). Note that when a brand spends more money for marketing than its total revenue ($mc > p$), brand equity becomes negative.* Illustrative examples of brand equity measure are found in the Appendix. They clearly show the value of the MARKSURE measure.

According to the MARKSURE measure, brand equity at any given point in time cannot exceed total revenue. This assumption is reasonable because brand revenue at a particular point in time represents the total possible value of that brand judged by customers at that time. Note also that the composite MARKSURE measure is a joint product of (1) the magnitude of a brand's value (total marketing surplus) and (2) the efficiency at which such magnitude was obtained. Extending from an individual product level to a corporate level, we propose that corporate brand equity is assessed based on the same marketing surplus and efficiency components. In this case brand level revenue and marketing costs are replaced by corporate revenue and marketing costs (for more about this issue, see the Discussion section).

Operational Characteristics of the Marketing Surplus and Marketing Efficiency-Based Brand Equity Measure

Several additional factors, described below, distinguish the operational characteristics of the MARKSURE measure.

Operational Definition of Marketing Costs

From an operational standpoint, we focus on costs incurred to create, communicate, and deliver brand value to customers over time. Any costs

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* Brand equity would be negative when mc is greater than p. Current accounting practice does not recognize negative brand equity. Thus, the measure may not be used for purposes of disclosure on balance sheets when brand equity is negative. However, observing and tracking equity when it is negative (or positive) likely has an important role for internal management control purposes.

associated with *value-creating and communicating* activities (e.g., 4P-related activities such as advertising, trade show, publicity, package design, product design, etc.) and other activities (e.g., marketing research expenses) engaged in to improve their effectiveness belong to marketing costs. Costs associated with 4P-related activities designed to *remove transaction barriers* should also be a part of marketing costs. Thus, costs associated with activities that remove time (a brand must be available at the right time), place (a brand must be available in the right place), ownership (a brand must be designed and priced to facilitate its ownership), and intimacy barriers (aesthetic aspects of a brand and services associated with buying, using, and disposing of a brand) should be considered as part of marketing costs. Costs associated with various activities that remove these transaction barriers such as logistics, personal selling, sales promotion, and warehousing, belong to marketing costs. In general, variable costs incurred to facilitate the transaction between the customer and the brand (variable costs associated with activities at the before-purchase, during-purchase, during-use, and/or the disposal stages) should be included in unit marketing costs.*

Since 4P-related activities are designed to address the needs of customers and directly affect customers' perceptions of a brand value and their purchase and repeat purchase decisions, their costs and the marketing costs defined above are consistent with each other. However, identifying marketing costs in accordance with this perspective is not as straightforward as it initially appears. This difficulty arises from the fact that various activities for brand management and their associated costs need to be reclassified because many costs related to these activities have traditionally been assigned to other cost categories, but not to the marketing cost category. In addition, there is conceptual confusion about the definition of the term product as one of the 4Ps. These two issues are discussed below.

To illustrate the need to reclassify existing costs, consider for example the following costs: order handling and processing costs (relevant at the during-purchase stage), call center operating costs (relevant at the before-purchase stage), and customer service center operating costs (relevant at the post-purchase stage). These costs are not traditionally considered to belong to marketing costs. To illustrate another cost that is not traditionally assigned to marketing costs, consider a patients : nurses ratio in the hospital brand. This ratio may matter a great deal to patients because it affects the quality of the service (relevant to the during-use stage). Notably, current accounting practices do not assign such costs to marketing.

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* When a firm has multiple product lines or share the same production or distribution resources together, activity-based cost accounting is needed to accurately reflect each brand's marketing costs.

The reclassification of marketing costs that are recommended in this paper is based on the theoretical notion that marketing activities occur across four transaction stages: before-purchase, during-purchase, during-use, and disposal. Therefore, any costs that incur at any one of these four transaction stages should be considered to be marketing costs. While this approach to marketing costs maps well to the traditional classification of the 4Ps, there is one thorny issue that needs to be resolved. It pertains to the definition of product as one of the 4Ps. While activities related to price, promotion, and place are relatively clear, the same may not be argued for product. It is important to define the term product and activities associated with it in order to specify marketing costs relevant to product.

In this chapter we propose that the term product as one of the 4Ps should be understood in terms of its raw materials, functions, and its form design and specification. According to this view, raw materials costs, costs incurred to develop product functions (a portion of R&D costs), and product design development costs (a portion of R&D) should be reflected in marketing costs. Activities associated with these product-related costs are highly relevant to customers' decisions to choose a brand. For example, raw materials (steel versus plastic, organic versus nonorganic, silk versus synthetic fiber, etc.) matter a great deal to customers. According to this view, any other part of R&D costs, production costs, labor costs, administrative costs, and financial costs (depreciation, interest charges, etc.) should not be included in marketing costs. These costs are internal to a firm and do not bear any relevance to customers' brand preference and loyalty.

One may argue that there may be other internal costs that should be considered to be marketing costs when following the above classification logic. For example, there may be value-added production costs (e.g., hand-made versus machine-made) that are internal to the firm, yet relevant to the customers' brand preference and loyalty. They are not, however, included in marketing costs since it is difficult to judge a priori what constitutes value-added production activities. While acknowledging the possibility that the marketing costs classification proposed in this chapter may not fully represent *true* marketing costs defined in this chapter, we nevertheless follow the common denominator approach.

Note that the definition and specification of marketing costs proposed in this chapter are an improvement over traditional perspectives that include total costs when measuring brand value. Moreover, the incorporation of the marketing costs identified here provides a more comprehensive view of marketing's contribution to the brand value creation and fortification. Incorporating communication costs and those that remove transaction barriers better reflect marketing's role in creating and sustaining brand value.

Using MARKSURE to Assess Marketing Activities

The value of the brand, derived from customers' response (i.e., revenue) to the firm's marketing effort (i.e., marketing costs), not only represents the value of a brand to the firm. It also serves as an accountability metric for marketing expenditures. Specifically, the metric can also be used to track the brand's health vis-à-vis competitors and over time. Information about marketing surplus and marketing efficiency offers diagnostic benefits to a firm. This information may be examined in two ways: one is based on the absolute level, and the other one is based on the relative changes over time. We suggest that the effective way to examine the contribution of marketing and the brand's health over time is to examine changes in brand equity from one point in time to the next. These changes would reflect marketing accountability, which may be used in turn to diagnose brand health, and evaluate and reward employees responsible for brand management.

The relative changes of marketing surplus and efficiency, as opposed to their absolute level, would resolve the thorny issue involved in assessing customers' response to a firm's marketing effort for its brand. One may argue that the way marketing costs are measured does not fully include the contributions made by other departments of a firm for the brand's market performance. For example, a reliable production process with few defects, motivated employees, and their market sensing and responding capabilities may also directly or indirectly influence the effect of marketing costs on the market performance of a brand. We recognize this potential, and suggest that relative change is a way to resolve this problem. Since these other contributions are relatively stable over time, relative changes in marketing surplus and efficiency would reflect the contribution by marketing more accurately than the absolute level measure. The positive, negative, or no change would be useful information for the brand management control.

Including Lag Effects

The MARKSURE measure does not incorporate a time lag between some marketing investments (costs) and their revenue return. While considerable research (Dekimpe & Hanssens, 1995; Mela, Gupta, & Lehmann, 1997 Pauwels, Hanssens, & Siddarth, 2002) suggests that outputs of marketing efforts are observed only after a time lag, we exclude a lag for several reasons. First, the time lag varies, depending on the types of investment (e.g., advertising, package design, sales promotions, etc.). Since different types of marketing investments have different return horizons, a different time lag must be specified for each type of marketing investment. Estimating the magnitude of the lag effect over time is equally challenging as it is not only affected by the nature of marketing investments (the goodwill

or demand-stimulating advertising) but also by the effectiveness of the marketing investment (e.g., how good the advertising campaign is). Lag effects may also be highly dependent on market and competitive factors, which may change over time. We avoid use of multiple time lags for different investments by suggesting that brand equity be measured on a one-year time horizon. This horizon is sufficiently long to incorporate short- and moderate-term time horizons. By measuring brand equity over a relatively longer time interval (longer than one year), lag effects should also be minimized to the extent that the longer time horizon should reflect short-, medium-, and long-term lag effects.

Practitioner Appeal

The Marketing Science Institute (MSI, 1999) identified operational issues relevant to practitioners in the assessment of brand equity. Such metrics would have more widespread appeal to the extent that they provide (1) ease of measure, (2) ease of use, (3) diagnostic value, and (4) intuitive appeal. Existing brand equity metrics vary considerably on these operational criteria. The MARKSURE has distinctive advantages over other metrics on these criteria.

With respect to ease of measurement and use, the MARKSURE metric does not require new data. The three variables that it includes are based on available brand information. Moreover, the variables are objectively identifiable, reliable, and tractable. The metric also involves ease of use by virtue of its computational simplicity. The measure provides diagnostic value as the marketing surplus and efficiency components provide independent information regarding the brand's health. Finally, the measure's intuitive appeal has hopefully been elucidated in the discussion of the marketing surplus and marketing efficiency components.

The MARKSURE metric is also easy to operationalize and use as it does not require data from a referent brand. Conceptually, brand equity is driven by the brand's ability to create strong *marketing surplus* and *efficiency*, not by its ability to outperform specific competitors. Operationally, the omission of information about competing brands makes the input required to compute the brand equity metric less onerous, facilitating its use for internal and accounting-based purposes. While comparisons can be made between brands in terms of their relative equity, these comparisons are not endemic to the measure of brand equity itself and are made for diagnostic (not value assessment) purposes.

Notably, the proposed metric can be used to diagnose brand health independent of a referent brand. The magnitude of marketing surplus and the level of marketing efficiency individually offer critical information about the relationship among the price level, demand, and marketing costs $((P_t - MC_t) * Q_t)$. Each entity carries critical information about the status of a brand's value. By plotting a brand's value on two axes (one axis
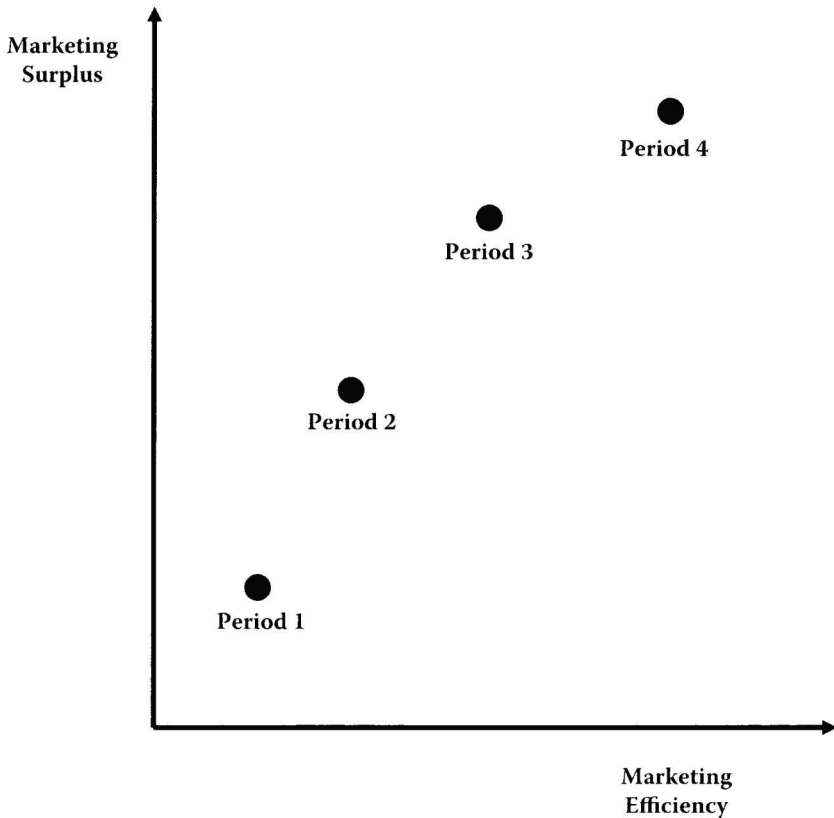
FIGURE 8.1
Illustration of the use of two dimensions of brand equity.

representing marketing surplus and the other axis representing market-ing efficiency) one can locate the status of a brand's value (see Figure 8.1). This assessment may then be compared with value attained at a previous period or with the values of the competing brands. The former suggests the information about how the marketing investment in a brand performs over time. The latter offers information about the relative competitive advantages in the brand's marketing effort.

The MARKSURE metric may also be used with other performance indica-tors to augment a firm's diagnosis of improvement potential. Specifically, the metric may be compared with brand profit so as to examine changes from the previous period (see Figure 8.2). This comparison would offer information about the source of potential discrepancies between brand value and profit. For example, if brand value improves from the baseline period while profit decreases, one can conclude that the decrease in profit from the baseline

Profit

	better	same	worse
better			Operational efficiency problem
same			
worse	Brand management problem		

(left axis: **Brand Equity**)

FIGURE 8.2
Brand equity as an independent key performance indicator.

period is due to problems in internal operations such as inefficiency with the manufacturing and/or other administrative costs. On the other hand, if the reverse occurs, the problem exists with the brand's marketing effectiveness.

The proposed metric also enables the additional diagnostic assessments. Specifically, information on the speed at which the marketing investment is reflected in the brand's revenue offers important information about the marketing effectiveness. Highly effective marketing will realize returns on marketing investments sooner as opposed to later. Moreover, such information may aid a firm in its decision to increase its marketing investments for further revenue growth.

Discussion

While the proposed measure is a move toward an accounting- and marketing-relevant metric, it should be evaluated in the context of the boundary conditions described below that may limit its usefulness.

The Boundary of Marketing Functions

As noted earlier, marketing costs in the proposed measure are defined and measured in a manner that differs from traditional conceptualizations. Marketing functions are described as those activities (performed by various departments) designed to facilitate customer acquisition and retention. They include costs associated with deriving and communicating

brand value and removing transaction barriers between the firm and its customers. This expanded view of marketing (and hence marketing costs) is justified by the fact that when customers assess the value of a brand for purchase or repurchase, they do not consider the performance of different departments of the organization. They simply consider the brand's performance, symbolic, aesthetic, and acquisition benefits and costs of the brand relative to competing brands. Their endowment to a brand is heavily influenced by all the activities required for customer acquisition and retention. Marketing functions and costs should thus be understood and measured accordingly.

Potential Inflation of Measured Brand Equity

No measure, including the MARKSURE metric, is immune to the misuse or the undesirable manipulation of the measure by brand holders. With the MARKSURE metric, for example, brand holders may be tempted to reduce marketing costs so as to increase brand equity. Brand holders may engage in aggressive short-term sales promotions, creating short-term revenue spikes. Notably though, these tactics come at the expense of long-term brand equity. These temptations and effects may also be minimized if brand equity is assessed on a yearly basis—when short-term effects may have settled out. Comparisons across years should also minimize temptations to game the measure so as to look optimally strong in the long run. To discourage a short-term orientation, one might also recommend a relatively long-term basis (e.g., 3 years) on which a brand manager's performance can be judged.

Incorporating Expected Future Earning

Unlike other measures (e.g., Interbrand), MARKSURE does not incorporate expected future earnings as part of the brand equity metric. Their inclusion would violate criteria of objectivity and reliability that are critical to an accounting-based metric. Estimates of future earnings potential involve both subjective judgment and uncertainty (Ailawadi et al., 2003), which negatively impact agreement on assessment. Nevertheless, those who are interested in the future earnings potential of a brand (e.g., financial analysts) could incorporate future values *after* the MARKSURE metric has been derived. As is true with the use of an unnamed or referent brand, future earnings potential may be considered as an operational adjustment to the proposed brand equity measure, not endemic to its conceptualization or operationalization.

Brand Equity of Not-For-Profit Brands

The proposed MARKSURE measure considers only the equity of profit-oriented firms. Clearly, however, there are numerous respected and trusted brands in the nonprofit sector, including Amnesty International, World Wildlife Fund, Greenpeace, International Red Cross, Human Rights Watch, Oxfam, and CARE (Quelch & Laidler-Kylander, 2005). Development of a brand equity measure for not-for-profit brands is clearly warranted.

The Unit of Analysis for Brand Equity

The unit of analysis for the proposed measure is a branded product. We recommend that variations (e.g., line extensions) of the initial brand should be treated as part of the initial brand. However, a new product (e.g., brand extensions) that extends from this existing brand would therefore have its own equity. Hence, we distinguish the equity of the original brand from that of its extension. Thus, for example, the equity of Heinz pickles and the equity of Heinz ketchup are estimated separately. Assessing equities separately is justified since they differ in ways that affect brand equity (differences in markets and the firm's relative emphasis on resource investment, etc.).

It is also possible to measure brand equity at the higher level of aggregation. Specifically, brand equity may also be measured at the product line level, SBU level, or the corporate level. Specifically, there are two different ways in which one can estimate brand equity at the higher level of aggregation. One way is to measure the equity of the corporate brand, for example, Gap, based on total sales revenue and total marketing costs using the MARKSURE formula. Here, brand equity is not the sum of the equity of its individual product brands but rather the equity of the overall company. This is because while the marketing surplus component of the MARKSURE-based brand equity measure can be aggregated up from a single brand to a complete line of products (i.e., the marketing surplus of a product line is the sum of the marketing surpluses of each product), the marketing efficiency multiplier cannot be aggregated so readily. Another way is to multiply the sum of the marketing surplus of each product brand of a corporation by a weighted average of the marketing efficiency of each product. The marketing efficiency of a corporate brand (or a whole product line) is a weighted average of all the individual product-level marketing efficiencies where the weight associated with each product is its dollar share of the whole corporation (or a whole product line).

To illustrate, let us compare the marketing efficiency of a whole product line to the marketing efficiency of each of its individual products. The marketing efficiency of a product line is

$$ME_{Line} = 1 - \frac{\text{Total Marketing Costs}}{\text{Total Revenues}} = 1 - \frac{\sum_{i=1}^{N} mc_i q_i}{\sum_{i=1}^{N} p_i q_i} .$$

The marketing efficiency of product *i* in the product line is

$$ME_i = 1 - \frac{mc_i q_i}{p_i q_i}$$

We can thus express the marketing efficiency of the product line as a weighted average of the efficiency of each of its products, as follows:

$$ME_{Line} = \sum_{i=1}^{N} w_i ME_i = \sum_{i=1}^{N} w_i \left(1 - \frac{mc_i q_i}{p_i q_i} \right) = \sum_{i=1}^{N} w_i - \sum_{i=1}^{N} w_i \frac{mc_i q_i}{p_i q_i} = 1 - \frac{\sum_{i=1}^{N} mc_i q_i}{\sum_{i=1}^{N} p_i q_i}$$

The last equality is true only if we set the weights to be equal to the share of each product in the product line:

$$\text{i.e., } w_i = \frac{p_i q_i}{\sum_{i=1}^{N} p_i q_i} .$$

In short, the marketing efficiency of a product line is equal to the sales weighted average of the marketing efficiency of each of its products.

Finally, measuring brand equity at the individual firm level may offer important implications for assessing royalty fees to be charged by a conglomerate to its subsidiaries for use of its brand name. For example, many conglomerates such as GE, Sony, Samsung, Nestle, Hitachi, etc., have their own subsidiary firms that use their names. Since each subsidiary firm's equity directly and indirectly influences the conglomerate's brand equity, it is important for the conglomerate to ensure that each subsidiary strives

for improving its own brand equity. Therefore, conglomerates may have to envision compensation systems (e.g., royalty fee assessment) that reward CEOs of individual subsidiary firms based on their performance on their brand equity. For example, those who performed well in the previous year may be charged less royalty fee than those who did not.

Appendix

Two illustrative examples using the MARKSURE metric are shown below. The information in Table 8.3 (A and B) shows the internal financial data for an individual brand (readily available to a firm). In these examples brand-equity-related metrics are used to assess the total value of a brand, as well as how a firm performs its marketing operations (Table 8.3C).

Referring to Table 8.3A, consider the internal financial data about the brand Cruise. From this information, it is quite difficult to readily identify whether or not there is a problem (opportunity) with respect to the brand's operations and value. Several key statistics draw our attention. First, the continuous revenue increase over the 5 years is a good sign. So is the continuous increase in margin before marketing during the same period. The brand's profit, ROI, and marketing/sales have been steady over the 5-year period. On the other hand, the continuous decrease in ROS (return on sales) is somewhat troublesome. One may certainly identify the decreasing

TABLE 8.3A

Illustrative Examples for Assessing Brand Equity and Marketing Performance

Assessment (in $1,000)	Cruise				
	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	$1,320	$1,385	$1,463	$1,557	$1,670
Margin before marketing	$198	$208	$219	$234	$251
Marketing	$173	$183	$194	$209	$226
Profit	$25	$25	$25	$25	$25
Margin (%)	15%	15%	15%	15%	15%
ROS	1.9%	1.8%	1.7%	1.6%	1.5%
Year-on-year revenue growth	—	5%	6%	6%	7%
Invested capital	$500	$501	$503	$505	$507
ROI	5.0%	5.0%	5.0%	5.0%	4.9%

Note: Farris, Bendle, Pfeifer, Reibstein (2006). Philadelphia: Wharton School Publishing.

TABLE 8.3B

Illustrative Examples for Assessing Brand Equity and Marketing Performance

Assessment (in $1,000)	Boom				
	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	$183	$1,167	$1,700	$2,553	$3,919
Margin before marketing	$125	$175	$255	$383	$588
Marketing	$100	$150	$230	$358	$563
Profit	$25	$25	$25	$25	$25
Margin (%)	15%	15%	15%	15%	15%
ROS	3.0%	2.1%	1.5%	1.0%	0.6%
Year-on-year revenue growth	—	40%	46%	50%	53%
Invested capital	$500	$520	$552	$603	$685
ROI	5.0%	4.8%	4.8%	4.1%	3.6%

Note: Farris, Bendle, Pfeifer, Reibstein (2006). Philadelphia: Wharton School Publishing.

ROS figures as a possible cause for concern. But how should one interpret these figures in terms of the marketing performance of a brand and its value? Do these decreasing figures necessarily mean the decreasing marketing performance and its value?

The analyses become even more complicated when Cruise is compared with another brand, Boom. Boom's financial statements are shown in Table 8.3B. Boom's revenue growth is quite substantial while profit remains both steady and identical to that of Cruise. However, its ROS and ROI have declined over time. Given this information, it is difficult to assess which brand is better in their equity management and marketing performance. By applying marketing surplus and efficiency indicators, one may be readily able to make such assessments.

Table 8.3C contains information about marketing surplus, marketing efficiency, and brand equity (value) for Cruise and Boom. Considering the conflicting information between the two brands, the verdict is quite clear when one compares the two in terms of marketing surplus, marketing efficiency, and the brand equity. While the two are rather similar in marketing efficiency, Boom is much stronger in marketing surplus and thus brand equity (more than twice in brand equity at the end of year 5). Moreover, the Boom brand manager is doing a much better job than his counterpart at Cruise as revealed by changes in brand equity over time. The magnitude of increase in brand equity over the 5-year period clearly shows far greater potential for Boom than for Cruise.

TABLE 8.3C

Illustrative Examples for Assessing Brand Equity and Marketing Performance

Assessments	Cruise					Boom				
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 1	Year 2	Year 3	Year 4	Year 5
Total revenue	1,320	1,385	1,463	1,557	1,670	183	1,167	1,700	2,553	3,919
Total marketing cost	173	183	194	209	226	100	150	230	358	563
Marketing surplus	1,147	1,202	1,269	1,348	1,444	83	1,017	1,470	2,195	3,356
Marketing efficiency	86.9%	86.8 %	86.7 %	86.6%	86.5%	46.0%	87.1 %	86.5 %	86.0 %	
Brand equity	997	1,043	1,101	1,167	1,249	38.18	886	1,271	1,887	2,874

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