

## **Consumer-Based Brand Equity: A literature review**

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### **Abstract**

The concept of brand equity has gained in popularity since the 1980s, and since then, the field has undergone significant development. The concept of consumer-based brand equity has become a central marketing concept due to the increasing scientific and business interest in brands, since the approach according to which brands constitute one of the most valuable intangible assets of the companies is becoming increasingly widespread.

The paper offers an updated literature review of this important research topic, providing a classification of brand equity models focusing on consumer based models. The most important models are critically reviewed from the perspective of model structure, methodology used and validity.

**Keywords:** brand, brand equity, brand valuation, structural equation modeling

### **Introduction**

The concept of brand equity became widely used at the beginning of the eighties mainly in agency measures (Interbrand, Coopers & Lybrand, Arthur Young Australia). Since the conference organized by the Marketing Science Institute in 1988, the concept has been more precisely defined. An article by Farquhar, frequently quoted

in the brand equity literature that appeared a year later (Farquhar 1989), greatly contributed to the scientific acceptance of the concept.

The latest comprehensive literature review appeared in 2010 (Christodoulides and Chernatony).

The spread of the brand equity concept in the marketing scientific environment was greatly determined by the publications of Aaker (1991, 1994 and 1996) and Keller (1993, 2003).

In order to distinguish between consumer-based brand equity and brand equity expressed in financial terms, the English literature uses consumer-based brand equity (Keller 1993, Vázquez et al. 2002) instead of brand equity, this latter used without a distinctive epithet in the case of brand equity measures expressed in financial terms (Ailawadi et al. 2003, Srinivasan et al. 2005). Brand equity expressed in financial terms is sometimes mentioned as brand value, both having the same translation in Hungarian (Srivastava and Shocker 1991, Salinas and Ambler 2009, Interbrand).

Brand equity was traditionally measured at the level of consumer goods (Netemeyer et al. 2003, Yoo and Doonthu 2001, Vázquez et al. 2002, Lehmann et al. 2008, Martensen and Gronholdt 2004), but lately financial services (Chernatony et al. 2004), online services (Christodoulides et al. 2006, Chau and Ho 2008) and models suitable for measuring B2B brands (Jensen and Kjastrup 2008).

### **Brand Equity. Definition of the concept**

According to Farquhar (1989), brand equity is the added value endowed by the brand to the product. This definition stood at the basis of several further instruments measuring brand equity (Park and Srinivasan 1994, Srinivasan et al. 2005).

Aaker (1991) defines brand equity as a set of brand assets or liabilities that add to or subtract from the value provided by a product or service.

In Keller's interpretation (1993), brand equity is "the differential effect of brand knowledge on consumer response to the marketing of the brand", given by the difference between consumer response to the marketing of the branded and unbranded product. Consumers give a more favorable response to marketing mix in the case of brands with high brand equity, than in those with low equity. As a consequence, relative marketing costs decrease as the efficiency of marketing activities increase.

Srivastava and Shocker (1991) defined brand equity as consisting of two components, and their definition already entails the attempts of later approaches to associate consumer-level brand measurement and brand equity (Park and Srinivasan 1994, Srinivasan et al. 2005, Kartono and Rao 2006). According to the definition given by Srivastava and Shocker, brand equity consists of two components, brand strength and brand value, and while the former is based on consumer level measurements, the latter determines the financial benefit provided by the brand strength. Vázquez et al. (2002) defines brand equity as the utility that the consumer associates to the use and consumption of the brand. Srinivasan et al. (2005) defines brand equity as the difference between the choice probability for a certain brand and that of the base brand. In Simon and Sullivan's definition (1993), brand equity means the future cash flows that accrue to branded products over the sum which would result from the sale of unbranded products.

#### **The impact of brand equity on financial performance**

Owing to Aaker's publications (1991, 1996), there has been a great interest in the problem of financial returns generated by valuable brands (Fehle et al. 2008).

A company's protection against competitive attacks increases as the more differentiated brands result in lower price elasticity (Boulding et al. 1994), the company is more protected against competitive attacks (Srivastava and Shocker 1991), can apply premium pricing (Farquhar 1998), and can achieve a more successful brand extension (Keller 2003). Simon and Sullivan (1993) confirmed that stock exchange evolution contains information referring to brand equity as well.

There is also a positive relationship between new products and stock return, which is a strong one only when a company has introduced a great number of new developed products into the market (Chaney 1991).

Companies of high brand equity can expect significant market share increase if they cut prices, while their share decrease would be insignificant if they increased their prices (Ailawadi et al. 2003). However, this latter result is shaded by the fact that Ailawadi et al. defines brand equity in revenue premium, and we may rightfully presume that higher equity is achieved by companies with given asymmetrical price elasticity.

Several empirical researches have investigated the positive relationship between agency-based brand equity measures (BAV, Interbrand and Equitrend) and financial returns, as well as stock returns (Barth et al. 1998, Verbeeten and Vijn 2006, Fehle et al. 2008, Mizik and Jacobson 2008).

Investigating the brands valued by the Financial World, Barth et al. found that the financial brand equity has an explanatory power regarding the net income of stock returns. Based on the data of Techtel Corporation, Aaker and Jacobson (2001) confirmed that changes in attitude can predict financial performance by one or two quarters and they are positively related to current stock returns. The data of BAV (Brand Asset Valuator) have revealed similar connections. Investments in brand equity can determine financial performance in the long term (Verbeeten and Vijn), and brands carry information based on which investors update their future cash flow expectations (Mizik and Jacobson).

With the help of Total Research Corporation's EquiTrend database, Aaker and Jacobson (1994) investigated the impact of quality-related information on stock returns. They could not prove that changes in quality perception can generate changes in share prices, but they managed to prove that information influencing significantly long-term returns of investors contains quality-related information as well.

The portfolio consisting of 111 firms on Interbrand's most valuable brands list between 1994 and 2006 had better performance than the overall market (Madden et al. 2006, Fehle et al. 2008). The brands on the Interbrand list generated a definitely higher net income than that of the market on average or the benchmark portfolio used as reference. The most valuable brands on Interbrand's list have not only outperformed the market average net income, but they also assure lower risk (Madden et al. 2006). Despite the fact that Fehle et al. managed to prove that financial brand value contains additional information, they could not reveal the nature of brand-share price relationship with the Fama-French methodology<sup>1</sup>.

Kallapur and Kwan (2004) investigated firms on whose balance sheets brands appeared as intangible assets, when the value of the brand investigated was determined by managers rather than outside parties.

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<sup>1</sup> Fama and French (1992) completed the classical CAP (Capital Asset Pricing Model) model with the Three Factor Model (Nagy and Ulbert 2007)

The assessment of bought brands is biased because of the managers' incentives to overvalue the brand equity recognized in books. These incentives to overvalue are the result of the fact that capitalized brands increase net asset values; thus managers can avoid having to ask for the London Stock Exchange's permission to realize their transactions. Despite managers' incentives to overvalue, the research has shown positive association between brand equity appearing on balance sheets and market value after having controlled numerous firm-specific and market factors. Their research has also confirmed the existence of a positive association between positive share price change and brand capitalization announcement.

Rao et al. (2004) analyzed branding strategies in the following categorization: corporate branding, house of brands or mixed branding (Laforet and Saunder's 1994). The benefit of corporate branding for the investor community can be cost-effective functioning, as the firm's marketing expenses are shared among its products. The house-of-brands strategy gives a firm the opportunity to enter several business fields, position itself in a different way, develop brand equity for every brand, demand more shelf space; at the same time, risk is shared among several brands, which presupposes high costs.

Investors attribute the highest brand equity to corporate branding and the lowest to the mixed one, so financial market actors undervalue the market segmentation resulting from the house-of-brands strategy and the benefits of the risk shared among brands (Rao et al. 2004). In contrast to this, Bahadir et al. (2008) found that acquirer firm managers prefer the brands of firms that possess a rich brand portfolio.

The contradiction can be explained by the different focuses of financial investor and manager: because of the lower perceived risk, investors place a higher value on corporate brands, while managers give higher valuation to the high brand portfolio diversity assuring various positioning opportunities.

The increasing popularity of brand valuation in the eighties is strongly associated with the acquisition wave (Farquhar 1988) starting to gain ground. One of the most important implementations of brand valuation appeared in the field of mergers and acquisitions (M&A), as the acquirer or merger firm has to assess the value of the intangible assets, including the brands of the target firm.

The estimated financial value of the target brands is influenced in different ways by the abilities and brand portfolio of the firms

participating in the transaction. Marketing capability is the ability of a firm to efficiently combine marketing resources, in order to attain its marketing goals (Bahadir et al.).

Firms with stronger marketing capability tend to attribute higher value to the brand portfolio of the acquired or merged firm; doing to their capabilities, they expect high returns. Firms with high brand portfolio diversity can adapt to different market demands more easily. Firms with a narrow branding strategy will attribute lower value to the acquired brand and abandon some of the acquired brands, because managing numerous brands would generate extra high costs to the firm.

In some cases, firms also abandon popular brands to assure efficiency (following the merger between AT&T and SBC Communications, AT&T abandoned the popular Cingular brand) or avoid cannibalism - when acquiring Gillette, Procter and Gamble divested its Right Guard brand (Bahadir et al.).

A comprehensive analysis of the marketing activity - stock returns relationship was carried out by Srinivasan and Hanssens (2009). The summary of the scientific debate generated by Srinivasan and Hanssens' article can be read in Kimbrough et al. (2009).

### **A comprehensive characterization of empirical non-consumer based brand equity models**

The most commonly known and frequently referred-to brand equity measure categorization belongs to Keller and Lehman (2001). In their system, we can speak about three large categories: customer mind-set measures; product market measures and financial measures.

*Customer mind-set measures* mostly assess awareness, associations, loyalty and perceived quality (Aaker 1991, Keller 1993, Yoo and Donthu 2000, Christodoulides et al. 2006, Vázquez et al. 2002). Their advantages are that they assess brand equity sources, can predict brand equity changes and predict a brand's potential (Ailawadi et al. 2003).

*Product market measures* assess brand equity in the brand's market performance. The most common product-market measure is price premium (Randall et al. 1998, Aaker 1991, Sethuraman 2000). Further product-market measures use market share (Chaudhuri and Holbrook 2001) or revenue premium (Ailawadi et al.) to define brand equity. The advantage of these measures is that they can evaluate the result of the process by which the brand name adds value to the product;

that is, they quantify the performance due to the brand name. Their deficiency lies in data providing and analyzing methods. Revenue premium measures often refer to hypothetical situations, conjoint analyses are costly and they do not make continuous measures possible due to the difficulties of data collection and the complicated statistical methods used in the analyses.

Financial market measures assess the value of a brand as a financial asset, establishing a financial value of a brand. Measures often use the discounted cash flow model to assess financial value (Interbrand). The advantage of the financial value is that it can quantify future cash flow.

### **Product market measures**

Before a detailed presentation of the product market measures, we will present the most important product market brand equity models and the complex models combining the advantages of customer mind-set measures with those of the product-market ones.

The results of product-market measures can often be deceiving. A brand whose brand equity was estimated high based on its market share will have a higher estimated value than if this share has been achieved through severe price cuts. If high brand equity is assessed on the basis of price premium, while measuring, we underestimate brands not applying price premium, but representing value to price-sensitive consumers and firms, for example, Southwest Airlines (Ailawadi et al. 2003). Product market measures can indicate cases when a brand faces difficulties or even gets stronger, but they cannot explain these phenomena. Ailawadi et al. qualified product market measures as an attractive middle ground and worked out a revenue premium model to measure brand equity. The revenue premium assures a better measurement in comparison to others (price premium, volume premium), since it gives a more comprehensive picture. There might be cases when a brand assures price premium as opposed to a private label, but private label sales may exceed brand sales, which can result in a negative income.

**Table no. 1:** Product-market measure models

	Brand equity measure basis	Method / Model	Measure level
<b>Ailawadi et al. (2003)</b>	Revenue premium	Revenue premium	Brand
<b>Srinivasan (2005)</b>	Brand choice probability Product-related and non-product-related attributes	Conjoint/Logit	Individual
<b>Kartono and Rao (2006)</b>	Perceived quality Satisfaction Profit Profit premium Revenue premium	Structural	Firm
<b>Srivastava and Shocker (1991)</b>	Brand strength Brand's financial value	-	Individual Firm
<b>Jourdan (2002)</b>	The difference between subjectively and objectively assessed preferences	Conjoint	Individual
<b>Kamakura and Russel (1993)</b>	Brand utility	Logit	Segment
<b>Srinivasan et al. (2005)</b>	Brand choice probability Product-related and non-product-related attributes	Conjoint Logit	Individual
<b>Sriram et al. (2007)</b>	Brand intercept ( $\beta_0$ )	Logit	Segment

Ailawadi et al. used the private label as a basis of comparison in measuring brand equity. The widespread use of private label might be problematic since it is difficult to be found in several industries, and we cannot affirm that numerous private labels do not have brand equity.

One of the most complex models of brand equity research was introduced by Park and Srinivasan (1994), and its developed version was published in 2005 (Srinivasan et al.). Their research is based on the brand equity measures of cellular telephone brands. Srinivasan defined brand choice probability taking a multi-attribute model as a starting point. They also define brand equity with the help of the incremental choice probability, that is, brand equity is the difference between the choice probability of a certain brand and that of the base product. In



their model, the base product is neither a private label, nor a fictive brand. At individual consumer level, the model compares a certain brand to one in the sample in whose case the difference between product-related or awareness-related associations and objective measures is the smallest. Finally, brand equity in financial terms is given by the product of brand choice probability and its contribution margin.

Christodoulides and Chernatony (2010) considers it a deficiency that Srinivasan et al. did not decompose the non-attributes component, but this is not possible in the Srinivasan model since they calculated this component as the difference between brand preference and multi-attribute preference measured on the basis of product-related attributes.

A further deficiency of the Srinivasan is that the objective brand measure is based on a survey of experts, and the objectivity of expert opinions should be treated with reservation as a brand name may also have an impact on experts. We might assume that mobile telephone test results might have been a more reliable objective measure. The spread of the Srinivasan model will assumable be hindered by its complexity, just like other, similarly complex models that are not so popular.

The econometric model devised by Kartono and Rao (2006) is also linking the demand function measuring consumer mind-set and the supply function measuring firm-level brand equity. Similarly to the Srinivasan et al. model, it combines the advantages of consumer mind-set measures with those of the product market measures. The difference lies in the fact that in the Kartono and Rao's model, one element of the firm-level measure is represented by the revenue premium introduced by Ailawadi et al. (2003), which they associated with a profit premium element as well.

In the Srivastava and Shocker (1991) brand equity model, similarly to the previous one, brand equity is made up of two elements: brand strength and the brand's financial value. The Srivastava and Shocker model also combines consumer mind-set measures with product market measures; brand strength comes into existence based on consumer mind-set measures, while the second component, brand value defines the financial benefit for the firm.

Jourdan (2002), similarly to Srinivasan et al. (2005), used a multi-attribute model as a starting point in devising his brand equity model (Christodoulides and Chernatony 2008). Jourdan developed his own brand equity model from Srinivasan and Park's (1994) model.

Jourdan also measured brand equity as the difference between objective and subjective preferences, but their data collection referring to objective measures was not based on expert survey. Jourdan used one sample instead of two, and throughout the data collection built on the conjoint method, the members of the sample first had to assess attributes without knowing the brand name, later they re-assessed the attributes, this time in knowledge of the brand name.

### Financial brand equity measures

Simon and Sullivan's (1993) model measures brand equity at macro and micro levels, at the levels of company brand and individual product. Owing to macro level measures, brand equity can be defined, while micro level measures help in defining the impact of various marketing activities on a brand. Simon and Sullivan define brand equity as the incremental cash flow which accrues to branded products over and above the cash flow resulting from the sale of unbranded products. The Simon and Sullivan model defined the intangible assets of a company with the help of Tobin's Q ratio<sup>2</sup>. They defined the impact of marketing activities on brand equity according to the logic of experiments, that is, they measured brand equity both before and after the experiment, and investigated the role of the factors causing changes in brand equity.

**Table no. 2:** Financial market measure models

Brand equity measure basis		Method Model	/ Measure level
<b>Simon and Sullivan (1993)</b>	Decomposing intangible assets Age of the firm Share of voice	Tobin's Q	Corporate brand
<b>Interbrand</b>	DCF Net present value	DCF Subjective assessment	Firm Brand

<sup>2</sup> The ratio of the market value of the firm to the replacement cost of its tangible asset. Here, a value of Tobin's ratio greater than 1 indicates that the firm has intangible assets.

The assessment of the financial value is mostly necessary in the case of acquisitions and mergers, when the acquired or merged firm's brand equity also has to be evaluated and registered. The FASB (Financial Accounting Standards Board) offers three methods to evaluate the equity of a brand as an intangible asset: market-based, income-based and cost-based approaches. According to the results of the qualitative partial research done by Bahadir et al. (2008) that is mostly based on interviews with experts, the most widespread method is the income-based brand equity assessment. This method consists of three stages. First, the acquirer or merger defines the present values of future cash flows and then this value is multiplied by a royalty rate estimated by setting up a hypothetical situation. In fact, they answer the question what the royalty rate for the brand would be if the brand were subject to a licensing deal. To determine royalty rate, similar brands are used as the benchmark, which have the same market share in the same category, under similar market conditions. In the third stage, based on the valuation made in the first two stages, an independent counseling firm (e.g. Intangible Business) assesses the brand's financial value. It is important to know that it strongly depends on the acquirer or merger firm's marketing capabilities and intentions, whether it retains-develops or abandons it.

Among the business models, the Interbrand's brand equity measuring method has become the most popular one, owing to the fact, among others, that it was the first to appear on the market in this field (Madden et al. 2006, Fehle et al. 2008).

Interbrand uses publicly accessible financial data in evaluating brands, based on which it determines the cash flow that can be attributed to the brand use. The result is weighted according to industry particularities, taking into account the fact that in the case of luxury products, a brand has an essentially greater impact on cash flow than in the heavy industry. As a next step in brand valuation, they determine the discounted cash flow value, then, considering the risk represented, they calculate the net present value of the future cash flow generated by the brand.

The brand strength index is calculated by considering seven factors: market, leadership, trend, diversification, support, stability, protection. The above factors are considered in every brand valuation. The final value of the brand is also weighted with brand strength.

One great deficiency of the Interbrand's method is the subjective assessment of multipliers (Fernandez 2002, Ailawadi et al. 2003). In evaluating the factors, it is difficult to measure the differences existing on different markets. For example, the Pepsi market share can vary from 1% to 100% on different markets.

#### **Consumer mind-set measures**

Through a consumer survey, measure concepts such as brand awareness, brand-related associations constitute the dimensions of a multidimensional brand equity in certain models (Yoo and Donthu 2001, Atilgan et al. 2009) and illustrate brand equity effects by investigating the relationships between them (Vázquez et al. 2002).

#### **Conceptual brand equity models**

Aaker (1991) defined brand equity as a multidimensional construct. The model is set up by the following dimensions: Brand loyalty, Brand name awareness, Perceived brand quality, Brand associations and other proprietary brand assets. The model defines the basic characteristics of brand equity: it is a set of brand assets and liabilities; is linked to the brand's name and symbol; can subtract from, as well as add to, the value provided by a product or service; provides value to customers, as well as to a firm

Keller (1993) defines consumer-based brand equity at individual level, taking brand knowledge as a starting point, which is conceptualized as an associative network, where the associations are nodes. In his interpretation, brand equity comes from the response difference owing to the brand, that is, brand equity is given by the difference between consumers' response to the marketing activities of a branded and an unbranded product.

A problem of Keller's consumer-based brand equity model is that he does not operationalize the concept of brand equity, in this sense we cannot speak about a real brand equity model. In his article published in 1993 he sets up the conceptual model of brand knowledge determining brand equity, but he does not give a clue how to measure the relationship between brand awareness and consumer-based brand equity. Despite the fact that Keller's model has become the most referred-to conceptual model, the author did not develop it further, and in his later publications he described brand equity with a different model without discussing the relationship between them.

Keller's model has brand knowledge in its focus. In the association network model, brand knowledge is the central node of the net, the other nodes and associations connecting to it. Brand knowledge is made up of two components: brand awareness and brand image.

### A critical analysis of consumer-based brand equity measures

We present the most important consumer-based brand equity models, in the table below.

**Table no. 3:** Consumer mind-set measures

	Brand equity dimensions	Model/ Software
<b>Vázquez et al. (2002)</b>	Product functional utility Product symbolic utility Brand name functional utility Brand name symbolic utility	Structural equation (EQS)
<b>Yoo and Donthu (2001)</b>	Awareness/ Associations Perceived quality Brand loyalty	Structural equation (Lisrel)
<b>Netemeyer et al. (2003)</b>	Perceived quality Perceived value for cost Uniqueness Willingness to pay a price premium	Structural equation (Lisrel)
<b>Erdem and Swait (1998)</b>	Brand credibility Clarity Consistency Perceived quality Perceived risk Information cost Expected utility	Structural equation (Proc Calis - SAS)
<b>Erdem et al. (2006)</b>	Brand credibility Perceived quality Lower perceived risk Information costs saved Product consideration and purchase	Structural equation (Amos)
<b>Martensen and Gronholdt (2004)</b>	Rational evaluations Emotional evaluations Customer-brand relations	Structural equation (PLS)
<b>Chernatony et al. (2004)</b>	Brand loyalty Satisfaction Reputation	Factor analysis
<b>Christodoulides et</b>	Affective relationship	Structural

<b>al. (2006)</b>	Online experience Willingness to bilateral communication Trust Satisfaction	equation (Lisrel)
<b>Chau and Ho (2008)</b>	Trialability Personalisation	Structural equation (Lisrel)
<b>Lehmann et al. (2008)</b>	Comprehension Comparative advantage Interpersonal relations History Preference Attachment	Factor analysis Structural equation
<b>Atilgan et al. (2009)</b>	Perceived quality Brand associations Brand trust Brand loyalty	Structural equation (Lisrel)
<b>Boo et al. (2009)</b>	Destination brand awareness Destination brand experience Destination brand image Destination brand quality Destination brand value Destination brand loyalty	Structural equation (Amos)
<b>Kim and Hyun (2010)</b>	Awareness /Associations Perceived quality Loyalty	Structural equation (Amos)

*Source:* Own systematization

Vázquez et al. (2002) identified four dimensions of the consumer-based brand equity: product functional utility, product symbolic utility, brand name functional utility, brand name symbolic utility. Vázquez et al. defines brand equity as the utility associated to the use and consumption of the brand. In this sense they lay stress on the ex-post (after consumption) utility of the brand, in contrast with other researches that stress the ex-ante (before consumption) utility of it (Erdem and Swait 1998, Erdem et al. 2006). The basis of the dimensions created by Vázquez is the differentiation between functional and symbolic utility. The model includes both, brand-related abstract associations and concrete product attribute-related associations.

The advantages of the four-dimensional model developed by Vázquez et al. are that it can be easily applied, sheds light on the

sources of brand equity and makes individual-level measures possible (Christodoulides and Chernatony 2010).

The deficiency of the Vázquez et al. model is that it was developed for a concrete product category (training shoes), thus it can only be used as a basis of comparison with limitations. Christodoulides and Chernatony considers it a further deficiency that the model lays stress on the ex-post (after consumption) utilities, thus ignoring the ex-ante ones. Mention must be made here of the fact that the researches focusing on ex-ante (before consumption) utilities (Erdem and Swait 1998, Erdem et al. 2006) have a significantly different logics and theoretical basis, therefore we cannot expect a consumer-based brand equity model to meet the requirements of both approaches.

Kocak et al. (2007) repeated the research of Vázquez et al. in Turkey, but they could only retain 16 out of the original 22 questions. They drew the conclusion that the differences between the results of the two researches can be explained by the cultural differences. However, they did not support this conclusion with any empirical result.

Yoo and Donthu (2001) developed their consumer-based brand equity model based on Aaker's (1991) conceptual model, which they called MBE (Multidimensional Brand Equity) and introduced the OBE concept (Overall Brand Equity) developed to measure the validity of multidimensional brand equity.

The MBE is built on the four dimensions introduced by Aaker (1991). Yoo and Donthu did not find the fifth dimension (Other proprietary brand assets) relevant from the point of view of measuring consumer-based brand equity, since with the fifth dimension Aaker comprises patents, trade mark and channel relationships. As a consequence, the MBE includes the dimensions of Perceived Quality, Brand Loyalty, Brand Awareness and Brand Associations.

In Christodoulides and Chernatony's evaluation, Yoo and Donthu's model have the most strength and the fewest deficiencies. They consider one of the greatest values of the model the fact that it can be generally used, that is, it does not depend on product category, it is culturally valid, it can be measured at individual level and it can be applied easily.

Washburn and Plank (2002) also qualified the classification of brand awareness and brand associations into one dimension as a problematic question, although in their research repeating Yoo and

Donthu's (1997)<sup>3</sup> research they had the most acceptable data reduction solution when they classified brand awareness and brand associations into one dimension.

One of the main problems with the Yoo and Donthu (1997) model, namely that brand awareness and brand associations fell into the same dimension, could have been caused by the fact that the questions measuring Brand Awareness and Brand Associations were not properly chosen (Washburn and Plank). From the two dimensions, the items of Brand associations might have caused most of the problems, since they were formulated in a way to measure brand awareness rather than brand associations (e.g. *I can easily recall the logo of X brand; I have difficulty in imagining X (brand) in my mind.*)

Netemeyer et al. (2004) identified four dimensions of the consumer-based brand equity which they held most important: Perceived quality – PQ; Perceived value for cost – PVC; Uniqueness; Willingness to pay premium price. They could not treat the two constructions (PQ - PVC) as separate dimensions, because the lack of external validity unambiguously signaled that the two constructions measured the same phenomenon. The explanation might lie in the fact that the perceived value for cost may be determined as the antecedent of brand equity, rather than part of it. From among the advantages of the Netemeyer et al. research, we must emphasize the strict investigation of the model's validity, the fact that, unlike other researches, it was not done among students and that they set up a model easy to apply. According to the simple and intuitive logic of the Netemeyer et al. model, PQ/PVC and uniqueness positively determine the willingness to pay price premium, which in its turn determines willingness to purchase.

In the signaling theory approach, Erdem and Swait (1998) stress the brand's ex-ante advantages and regard the decrease of the perceived risk and information cost saved as the antecedents of brand equity. In fact, they claim that we can only speak about brand equity when risk and information cost have decreased. Further on, they consider brand loyalty an important component of Aaker's (1991) model, as a consequence of brand equity, as opposed to Aaker's.

Erdem and Swait discuss it as another important characteristic of the signaling theory approach that it does not compulsorily connect

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<sup>3</sup> We consider it as the antecedent of Yoo and Donthu (2001)



brand equity with high quality brands. Brand equity is not primarily determined by high quality but by the authentic information referring to high quality, that is, the greatest utility to the consumer is provided by the brand communicating in a reliable way, the one that always offers what it promises.

The structural equation model estimated by Erdem and Swait describes the following process: due to the investments and consistency, the brand will be authentic and its message unambiguous, which positively influences the perceived quality, reduces risk and information cost which, in their turn, positively contribute to the utility expected by the consumer.

The importance of measuring cultural factors has recently appeared in the branding literature. In the brand extension literature, concerning Hofstede's (1980) cultural dimensions, there are significant differences at the level of various cultures in what concerns the success of extension (Henseler et al. 2010). In the consumer-based brand equity literature, Erdem et al. (2006) confirmed the cultural validity of brand equity. Erdem et al. extended their research to seven countries, owing to which they successfully proved the cultural validity of the Erdem and Swait (1998) model, and they found that the uncertainty avoidance index amplified the effect of credibility on brand choice, while in the case of the power distance index this effect could not be detected.

Martensen and Gronholdt (2004) distinguished between two ways of brand equity development, the rational and emotional approaches, and they also investigated the combination of these two. The independent variable, the brand-consumer relationship is determined by two dimensions, the rational and the emotional evaluation of the brand. In the structural model, the brand's rational evaluation is determined by product quality, service quality and price, while the emotional evaluation (feelings associated to the brand) is determined by differentiation, promise and trust. The applicability, reliability and validity of the model were controlled in later researches (Martensen and Gronholdt 2006).

Jensen and Klastrup (2008), leaning on Martensen and Gronholdt's brand equity model, made an attempt to develop a model suitable for investigating the brand equity of the brands present on business-to-business markets. By applying the Martensen and Gronholdt model for measuring business brands, they also wanted to find out the role the emotional dimension plays in B2B branding. They investigated

the model on two different samples, industrial original equipment manufacturer customers and consulting engineers. In both cases, the model had a high explanatory force, but in neither case could they prove the external validity of the model. They could not significantly differentiate between the brand's rational evaluation and customer-brand relationship dimensions either, both constructions measuring the same reality in fact.

Jensen and Klastrup (2008) could not unambiguously answer what role the emotional dimension plays in the case of B2B brands. On the one hand, from the model they considered valid, the two dimensions of rational and emotional evaluations from the Martensen and Gronholdt (2004) model had to be left out. On the other hand, in data collection, the responses to the questions meant to measure the emotional dimensions confirmed the arguments according to which B2B branding is primarily built on rational elements. While brand equity models were developed for products for a long time, in the past years several brand equity models referring to online or business markets, appeared.

Chernatony et al. (2004) developed a three-dimensional model for financial services. The model found brand loyalty, satisfaction and reputation as the most suitable measures for measuring the brand equity of financial services, and eventually these came to be the three dimensions of the measure.

Christodoulides et al. (2006) developed a measure suitable for online brand measurement. The authors find the following five dimensions as the most suitable for measuring online brands: affective relationship, online experience, willingness to bilateral communication, trust, satisfaction.

We can consider it as an important characteristic of the Christodoulides et al brand equity model, that they planned the dimensions of their model following Vargo and Lusch's (2004) approach. In the interpretation of Vargo and Lusch's dominant logic, a consumer is not a passive actor any more, but an active participant in production. By consuming a product, the consumer can acquire several experiences that can help the producer make spectacular, useful developments. In the case of online services, the active consumer's concept is unambiguously grounded, since the consumer's active participation is much more likely in setting up online services, than in the case of products. Measuring active consumer participation might

have several exciting results in brand equity research, which will surely be discovered in the future.

Berry's (2000) model seems to be a little random. He identifies two dimensions of the service brand equity, namely brand awareness and brand meaning, but we do not find out the way he would operationalize these dimensions. However, the model presented by him proves to be a salient visual aid and an introduction to the practical examples written in an enjoyable and convincing way.

Chau and Ho (2008) also developed a brand equity measure, applicable in services. More specifically, they investigated the opportunities of service brand building via the Internet. They built their model on two independent factors, triability and personalization, and successfully confirmed their influence on brand equity (in the author's formulation, Consumer-based Service Brand Equity). The triability and personalization dimensions, besides their direct influence on the CSBE, have an indirect influence on it as well through the dimensions of information-gathering and information-processing cost savings and the perceived benefits of the brand.

It is important to present here the result of the Lehmann et al. (2008) research despite the fact that the authors do not claim their work to belong to the brand equity literature, and they do not call the result fitted into the structural model a brand equity model, but a brand performance model.

Lehmann et al. investigated several models developed for measuring brands. They considered the scientific models of Aaker (1996), Fournier (1998), Keller (2002, 2008), Keller and Lehmann (2003) and Ambler (2003) as their starting point and they included in their research the dimensions of the agency models of BAV developed by Young & Rubicam, BrandZ developed by Millward Brown and the Equity Engine model developed by Research International. They used a construct measuring 27 brands in total, and in order to control the cultural factor, they did the research in the USA and China.

Despite the fact that in the factor analysis, most of the 27 constructs sat on only one factor, they found the following six-factor solution the best, with the respective dimensions:

1. Comprehension: presence, awareness, knowledge.
2. Comparative advantage: differentiation, esteem, performance, advantage and acceptability.
3. Interpersonal relations: caring, prestige, service, innovation.

4. History: heritage and nostalgia.
5. Preference: bonding, loyalty, willingness to purchase, value for money, attitude and extension potential.
6. Attachment: persistence and attitude.

The components of the brand performance model developed by Lehman et al. were investigated with a structural equation model. The model fitted in a hierarchy of effects structure similar to the AIDA model, and follows the logic below: Brand Awareness positively determines the three dimensions (advantage, relations and history) describing brand image and associations, which build brand preference that, in its turn, builds brand attachment.

#### **Agency-based brand equity models**

##### **Young & Rubicam - Brand Asset Valuator**

BAV (Brand Asset Valuator) developed by the Young & Rubicam agency is the consumer-based brand equity measure with the greatest data base on the world. Young & Rubicam have carried out measures on 19,500 brands along 55 parameters since 1993, asking approximately 350,000 consumers. One of the results of these measurements is the BAV consumer-based brand equity model popular with both, the business and scientific community.

BAV is a relative brand equity measure, that is, it establishes the equity of brands in relation to each other; the measurement is an output rather than an absolute value as in the case of the Interbrand. The BAV cannot explain the differences between industries (Verbeeten and Vijn 2006), but the measurement was devised to measure brand equity at a global level, independent from industries.

BAV is made up of four dimensions: Differentiation, Relevance, Esteem and Knowledge.

*Differentiation:* It measures the brand's perceived differentiation that Aaker (1996) declared to be the most important synthesizing measure of associations. Thanks to it, a brand is able to stand out among competitors.

*Relevance:* measures the extent to which a brand is relevant to a customer. With this level in fact BAV estimates the probability of the consumer's willingness to purchase a certain brand. The Relevance dimension must be regarded as one completing Differentiation, since a brand's uniqueness cannot assure firm success in itself.

*Esteem*: Esteem measures associations related to perceived quality, reliability and brand leadership.

*Knowledge*: It measures familiarity with a brand.

The four dimensions eventually summarize the information related to the brand in two second-rank dimensions. Multiplying Differentiation by Relevance we get Brand Vitality (or Brand Strength). The importance of this new dimension lies in the fact that Differentiation cannot determine brand equity in itself; a brand which is unique (e.g. Jaguar) but without relevance or willingness to purchase has low brand equity. Multiplying Esteem by Knowledge we get Brand Stature whose development has its starting point in the fact that the two dimensions can only determine brand equity together, since brands with knowledge (Exxon) but less esteem will have low brand equity.

BAV is basically a tool suitable for measuring consumer-based brand equity, but starting with 2004, the Landor agency, the parent company of the Y&R, has prepared the Breakaway Brands research, which, combining the methods of the BAV and that of the Stern Stewart Economic Added Value (EVA), selects the financially most performing brands out of the 2,500 investigated brands from the BAV data base and publishes the list of the top ten. The research, however, does not end with the assessment of a brand's financial value with the help of the EVA, but they also research, involving the students of the Wake Forest University's Babcock School of Business, the most important factors of the selected brands' success.

### **Milward Brown – BrandZ**

BrandZ is the brand of brand equity measures developed by the Milward Brown agency. Milward Brown is a member of the Kantar and WPP groups.

BrandZ illustrates brand equity in a hierarchical structure assuming that brand equity is the result of the consumer's following the stages below: presence, relevance, performance, advantage, bonding.

The presence dimension measures familiarity, brand knowledge, that is, the extent to which a brand is present in the consumer's mind. Relevance measures the extent to which a brand is relevant to the consumer's needs from the point of view of price and offer, that is, if it is included in the product category considered. Performance measures whether a brand's performance meets the consumer's expectations, while Advantage investigates the advantages of a brand over other

brands. Bonding is on top of the pyramid and it measures the attachment to the brand to the exclusion of other brands. (<http://www.brandz.com>).

### **Research International –Equity Engine**

The Equity Engine brand equity measure developed by Research International is one of the most popular agency-based brand equity models that functions similarly to the logic of the consumer-based brand equity model, i.e. it measures the sources of brand equity.

Numerous scientific articles refer to that model (Ailawadi et al. 2003, Lehmann et al. 2008, Keller and Lehmann 2003, Christodoulides et al. 2009), or the scales it developed are used by them (Lehmann et al. 2008).

Similarly to the Martensen and Gronholdt (2004) model, Equity Engine defines two large dimensions of brand equity: affinity, performance

The model also shows similarities with the Vázquez et al. (2002) model in the sense that the Vázquez et al. model attempted the separation of functional and symbolic advantages.

At present, this model is not available on the market. Research International developed the model and introduced its brand equity solutions under the Brand Action umbrella brand. The so-called Energy Diagnosis Engine, which developed from the original Equity Engine, was part of this umbrella brand. The difference between the two models lay in the fact that, while preference was the dependent variable in Equity Engine, the so-called Brand Energy came to be the dependent variable in Energy Diagnosis Engine, which measured present status and future development potential.

Research International, which developed the model, merged into TNS<sup>4</sup> that does not make available the brand equity measures developed by Research International, but offers its own solutions marketed under such brand names as NeedScope, Conversion Model, BPO (<http://www.tnsglobal.com/>).

### **Conclusions**

Brands stand out of the other marketing mix elements owing to the fact that they are capable of incorporating the positive effects of all

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<sup>4</sup> Both agencies are members of the Kantar group, which is the information and counselling division of the WPP group in its turn.

marketing activities and by this they become effective signals of quality (Erdem et al. 2006), and they are able to stay on the market in the long term until products transform or disappear (Kapferer 1992), that is why it is worth investing in developing brands.

Research related to brand management is included among the research priorities indicated by the Marketing Science Institute (MSI 2010) for the 2010-2012 period, which shows the great importance the prestigious institute attributes to brands, since brand and brand equity related research was equally determined as research priorities in the past two periods.

In light of the foregoing, brand equity appears as a concept with the help of which we are able to measure the equity of the brands becoming increasingly important to companies. Two great fields of measuring brand equity are constituted by measuring financial value and measuring consumer-based brand equity, from which the present paper focuses on the latter.

There is a widespread supposition in the literature according to which consumer-based brand equity is a multidimensional construct. We propose as further research to test the multidimensionality of this concept, as several empirical findings suggests a simpler structure. We also propose the development of new models. The development of a new consumer-based brand equity model is justified by the fact that the models developed till now are either conceptual (Aaker 1991, Keller 1993, Keller 2003), or they could be applied to a certain product category only (Vázquez et al. 2002), or they did not prove stable enough when repeated (Yoo and Donthu 1997, Yoo and Donthu 2001, Washburn and Plank 2002, Vázquez et al. 2002, Kocak et al. 2007). The models of Erdem and Swait (1998), Erdem et al. (2006) have proved to be repeatable and culturally valid, but they did not operationalize brand equity as a concept. Several brand equity models were developed for a certain market only (Chau and Ho 2008, Christodoulides et al. 2006, Chernatony et al. 2004, Jensen and Klastrup 2008), thus they are not able to generally explain the opportunities hidden in the brand name in the way the agency-based brand equity models (BAV, BrandZ, EquityEngine) do, about whose scientific fastidiousness and details of methods we know a little.

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