How strong is the business-to-business brand in the workforce? An empirically-tested model of 'internal brand equity' in a business-to-business setting

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ABSTRACT

In the business-to-business sector, the brand-owner's employees are increasingly playing a key role in the representation of individual and corporate brands at the interface with actual and potential customers. Consequently, 'internal branding' has recently emerged as an important issue in industrial markets. This article proposes and empirically validates a theoretically structured framework for the measurement of a new construct, internal brand equity, and identifies its determinants and consequences. The findings offer evidence for the powerful impact of a brand-oriented corporate culture on internal brand equity, and demonstrate its relationship to external brand equity. Conclusions are drawn for management practice and future research.

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1. Introduction

Although the Internet has dramatically changed the communication strategy of many companies in different industries, personal selling is still the dominant sales and communication strategy in the business-to-business sector (Deeter-Schmelz & Kennedy, 2004). While in the business-to-consumer sector personal interaction between employees and customers often does not play an important role, such special characteristics of industrial products and services as high price and high complexity, for example, often demand further explanation and face to face discussion. Though the branding practiced by business-to-business marketers may seem to be less overt than that typical of their business-to-consumer counterparts, a strong brand image and identity are clearly important drivers of corporate success in the business-to-business context.

It follows that the behavior of employees should be as consistent as possible with the brand identity and expressed brand values. This is not simply a matter of appropriate self-presentation and communication, but also of personal identification with the brand, emotional attachment to it, and motivation to become involved with the branding strategy in direct interaction with customers and influencers. In our study of this process, we define the strength of workforce internalization of brand identity, in support of branding at the customer interface, as the company's *internal brand equity*.

The broader concept of brand equity is well established in the marketing literature (de Chernatony & McDonald, 1998; Keller, 2008; Riezebos, 2003), and is generally defined as the incremental value added to a product or product portfolio that is attributable to a brand name, brand logo or other branding devices (Aaker, 1991; Farquhar, 1989; Keller, 1993; Yoo & Donthu, 2001). By analogy, internal brand equity is conceptualized as the incremental effect of branding on employee behavior. It describes and measures the impetus provided by brand-esteem among the brand-owner's own staff toward brand-supportive behavior, in their organizational roles and more generally, at present and in future. Thus, internal brand equity is strong when employee behavior is aligned with brand identity and individuals are predisposed to communicate the brand consistently and enthusiastically to internal and external stakeholders. An example of a strategy to achieve this particular form of synergy, drawn from case studies by Lamons (2005) and Walton and Greyser (2004) will demonstrate the potential impact of internal brand equity in business-to-business practice.

In the early nineteen-nineties, Caterpillar Inc., the world's largest manufacturer of construction and mining machinery, diesel engines and gas turbines, set up a decentralized world-wide organizational structure of 13 profit centers. This re-structuring improved corporate flexibility and the level of customer orientation, but simultaneously led to a confused brand identity. Every decentralized unit developed its own logos and brand names, varied colors and layouts in corporate communications, and transmitted potentially conflicting brand messages. When the consequent identity problem was recognized, the response was to establish the *One Voice* program, with the aim of building and nurturing a uniform corporate brand identity. In addition to such classical initiatives as the production of a written-down brand

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vision and a 'brand book', a series of interactive workshops was set up. The objective was to ensure that employees who had direct contact with customers, distribution-chain partners or stakeholders of other kinds shared a common understanding of the brand, felt equally enthusiastic about it, and projected it in a uniform way. Between 1994 and 2003, more than 10,000 staff of the company and its advertising agencies took part. By 2009, Caterpillar had risen from not being listed at all (2001) to 66th place in Interbrand's annual ranking of the 'Best Global Brands'. Though cause and effect cannot be proved, it is hard to resist the inference that the internal *One Voice* approach to branding strategy had played a major part in strengthening Caterpillar's internal brand equity, which had in turn reinforced its external brand equity.

Other case studies of the Hilti group (construction tools and systems) by Meehan and Baschera (2002) and of the TNS transportation and logistics group by Kraus, Seifert, and Blankenfeldt (2007), likewise illustrate the emphasis placed by brand-oriented business-to-business companies on this internal 'anchorage' of their brands. Empirical evidence for the key role of internal brand equity in external brand performance has been provided, across various sectors characterized by the high intensity of interpersonal communication between employee and customer, by Burmann, Zeplin, and Riley (2009), Franzen, Kumbartzki, and Burkhardt (2005), and Henkel, Tomczak, Heitmann, and Herrmann (2007). In the business-to-business sector specifically, Binckebanck (2006) found that the personality of salespeople and the nature of personal relationships were more important drivers of brand equity than the characteristics of the product or service itself, or the content of non-personal marketing communication.

The purpose of the study reported here was thus to build a comprehensive conceptual framework for internal branding in the business-to-business setting. We continue with a literature review and a statement of our research questions, followed by discussion of the determinants and the outcomes of internal brand equity, and a summary of its theoretical foundation. We then describe a study of 93 companies and 481 employees, report the results, summarize the findings, and discuss their managerial implications. Lastly, the limitations of the study are identified, and suggestions are made for future studies.

2. Literature review

Though there has been little published research relating explicitly to internal branding in the business-to-business context, relevant concepts and empirical findings are available for transfer from other research areas. In particular, studies of business-to-business branding, interpersonal communication, and brand identity have been the starting points for the development of our conceptual framework. A full review of the literature of these topics is well beyond the scope of this article. The following subsections therefore focus on key contributions in each area, indicating their relevance to our study.

2.1. Business-to-business branding

A growing stream of research has recently explored the brand concept in a business-to-business setting. Useful overviews are offered by Bengtsson and Servais (2005), Beverland, Napoli, and Lindgreen (2007), Mudambi (2002), and Ward, Light, and Goldstine (1999). Specific studies have investigated such aspects as brand characteristics (Webster & Keller, 2004), brand relevance and branding effects (Bendixen, Bukasa, & Abratt, 2004; Bennett, Härtel, & McColl-Kennedy, 2005; Mudambi, 2002), brand management (Bengtsson & Servais, 2005; Beverland et al., 2007; Kalafatis, Tsogas, & Blankson, 2000), and brand control (Munoz and Kumar, 2004). Many of these researchers have emphasized that interpersonal communication between employees and customers is very important for business-to-business brands. The previous research in this area has focused primarily on the identification of the high relevance of personal communication. For instance, Lynch and de Chernatony

(2004) have pointed out the high importance of effective personal brand communication both within the organization as well as externally through the industrial sales force, while Webster and Keller (2004) have integrated the 'internal anchorage' of the brand into their proposed management guidelines. While this work provides insights, ultimately there is little conceptual or empirical research that explores the nature and impact of personal communication in the context of business-to-business branding.

2.2. Personal communication

Personal communication, as the second research stream, has implications for our study to the extent that it is concerned with interpersonal persuasive communication. Studies have investigated the influence of interpersonal communication on brand strength, or similar customer-oriented outcomes. Studies of branding in services marketing in particular have devoted considerable attention to the influence of the service provider's employees on customers' evaluation of the service. Examples are the work of Berry (2000) and Farrell, Souchon, and Durden (2001). Other research reported in the service marketing literature has addressed such aspects of the employee communication style, and its effects on customer evaluation, as employees' non-verbal communication (Hennig-Thurau, Groth, Paul, and Gremler, 2006); 'adaptive selling' and customer orientation (Bettencourt & Gwinner, 1996; Sparks, Bradley, & Callan, 1997); employee satisfaction (Hartline & Ferrell, 1996; Homburg & Stock, 2004); and customer perception of employee effort (Mohr & Bittner, 1995; Specht, Fichtel, & Meyer, 2007). Beyond the services marketing literature, Wentzel (2009) has analyzed the effects of different facets of employee communication on consumer's perceptions of brand image and attitudes to the brand in various product categories. All studies in this research stream underpin the relevance of interpersonal communication between employees and customers to successful branding, and hence, to the importance of internal brand equity in general. It is intuitively reasonable to transfer their findings to the business-to-business context. However, this research stream has focused primarily on the direct interface between employee and customer. A deep analysis of the creation and formation of brand supporting personal communication is missing.

2.3. Brand identity

One of the most recent and best-known brand conceptualization approaches in the marketing literature is the brand identity concept, initially developed by Aaker (2002) and Keller (1992). Its fundamental assumption is that a strong brand identity allows a sustainable differentiation of the offering and helps to enhance customers' identification with the brand. A specific element of this concept is, by analogy with personal identity, integration of the company's internal brand identity with its external brand image. The rational for this strategic alignment is that the image established in the mind of the consumer is determined by the identity emanating from the brand-owner. The particular significance to our own study lies in the explicit consideration of internal identity-building as an important driver of overall brand equity (Burmann, Benz, & Riley, 2009).

This conceptualization has brought increased attention to internal branding (e.g., Boone, 2000; Punjaisri & Wilson, 2007; Punjaisri, Wilson & Evanschitzky, 2008; Vallaster & de Chernatony, 2006). One of the first studies to explicitly integrate the brand identity concept into an internal branding framework, by Burmann and Zeplin (2005), has served as a main building block for the development of our conceptual framework.

2.4. Brand equity

Studies of brand equity have typically taken one of two perspectives. On the one hand there are customers' cognitive and affective

responses to the brand and on the other there are 'hard' measures such as the brand-owner's subsequent financial performance. The focus in our study is on the former.

The customer-behavior perspective has been applied to business-to-business branding in particular by Bendixen et al. (2004), Gordon, Calantone, and di Benedetto (1993), Hutton (1997), Kim, Reid, Plank, and Dahlstrom (1998) and Van Riel, de Mortanges, and Streukens (2005). All previous research, however, has conceptualized brand equity as a customer-based construct. In our model we use this construct also for the internal view, the employees. In our model and empirical study we seek to extend the business-to-business branding and the personal communication research by addressing the identified gaps in explaining a brand supportive personal communication. The research stream of brand identity and the transfer of the external brand equity concept to the internal view guide the development of our model.

The conceptual framework of our study proceeds from a working assumption that the internal perspective on cognitive and affective responses is of fundamental importance to the understanding and managing of business-to-business brands. Specifically, managers need the capacity to understand, quantify, and manage *internal brand equity*. Since it is a significant challenge to control personal interactions between employees and customers, by means of centralized management overview or the imposition of strict rules, the ideal solution is that all employees feel personally responsible for the transmission of the branding strategy whenever they interact with consumers and stakeholders.

In the next section, we discuss key studies and papers relating to three research questions derived from the previous analysis of the literature, and refine them into a series of testable research hypotheses.

3. Research questions and hypotheses

3.1. Research questions

To our knowledge no study has sought to analyze empirically the internal strength of the brand. The goal of our research therefore is to develop, based on the preceding definition and conceptualizations, a model that can measure, analyze and predict internal brand equity. As well as testing a proposed scale to measure the level of that equity, it should also be able to test the extent to which the proposed determinants could explain the internal brand equity. And finally, the positive influence of the internal brand equity on the external brand equity should be analyzed. This relationship, which is often empirically supported in the research stream of personal communication, helps to validate the new construct internal brand equity.

The central research question thus concerns the choice of measures to be used as indicators of internal brand equity, the level of which determines the predisposition of a brand-owner's employees to express brand values in their working relationships with customers and stakeholders. Until now, however, there has been no consistent understanding of what such brand-consistent behavior might actually comprise (Henkel et al., 2007). In order to close that gap in the body of knowledge, the following specific research questions will be addressed:

- How can we measure *internal brand equity* in the business-to-business sector?
- Which are the determinants or drivers of internal brand equity?
- Does internal brand equity influence external brand equity?

3.2. Measuring internal brand equity

At a general level, the literature of organizational behavior and internal branding identifies three main patterns of individual behavior that can contribute positively to organizational and brand performance. Katz (1964) in a seminal contribution to the literature of

motivation supported by Motowidlo and Van Scotter (1994), first identified those behavior patterns as remaining with the organization over a period of time, operating in a way consistent with a functional role, and exhibiting appropriate behavior in organizational life beyond that specific role. Morhart, Herzog, and Tomczak (2009), Henkel et al. (2007) and Zeplin (2006) differentiated in the context of internal branding between retention, extra-role and intra-role behavior.

For the purposes of our study, such 'appropriate' and 'consistent' behavior is that which directly or indirectly affects external brand equity — by implication, positively. Thus, Katz's and Morhart, Herzog & Tomczak's three dimensions become "loyalty to the brand", 'brand-consistent intra-role behavior' (functional behavior consistent with the brand ethos), and 'brand-supportive extra-role behavior' (general behavior in the workplace and beyond that supports the brand image).

An influential textbook on brand equity (Aaker, 1991) asserts that brand loyalty is a basic element of brand equity, while a recent research study by Wheeler, Richey, Tokkman, and Sablynski (2006) has found a significant connection between employees' positive perceptions of the corporate brand and their intention to remain with the company. Thus, one measurable manifestation of internal brand equity is the intention to remain loyal to the brand and the company.

Brand-consistent intra-role behavior is defined in this study as personal communication that supports branding objectives. However, Watzlawick and Beavin (1967) contended that it is "impossible not to communicate" (p.5), and Henkel et al. (2007) have argued that routine communication among employees will therefore always include some brand-relevant dialogue. For the measurement of internal brand equity, the key is that it should be brand-supportive as well as brand-relevant.

Research studies of service delivery and organizational behavior have found that, when employees exhibit positive extra-role behavior (Podsakoff, MacKenzie, Paine, & Bachrach, 2000), the outcomes are likely to be explicitly beneficial to their companies' overall performance (Bell & Menguc, 2002; Koys, 2001; Podsakoff & MacKenzie, 1994). It is intuitively logical to suppose that internal brand equity is partly expressed by this willingness to engage in what Burmann and Zeplin (2005) have called 'brand citizenship behavior'. In other words, the level of brand-supportive extra-role behavior is a third measure of internal brand equity.

Ours is not the first attempt to analyze branding within the company, but the construct internal brand equity is novel. Table 1 compares it with five somewhat similar constructs, discussed in the literature and shows that it is distinct from them in terms of target group focus on the brand, or intended outcomes.

3.3. Determinants of internal brand equity

We contend, from first principles, that four attributes of organizational and individual behavior determine the level of internal brand equity in an organization. These behaviors are brand orientation, internal brand commitment, internal brand knowledge, and internal brand involvement.

Brand orientation is usually described in the literature as a specific type of strategic orientation or corporate culture, characterized by high relevance of the brand as the basis of the business model. The 'founding father' of this concept has described it as a special mindset within the company (Urde, 1994, 1999). Brand orientation is characterized by a dominance of the brand in corporate strategic thinking and a branding strategy that is relatively constant, consistent, relevant to the customer/consumer, and clearly differentiated from the competition (Hankinson, 2001; Baumgarth, 2009). It is accordingly treated as a special type of corporate culture in our proposed model, which is consistent with the work of Schein (1992), and Homburg and Pflesser (2000), although they present "step-wise linear cause-and-effect models" while we conceptualize brand orientation as a unidimensional summary measurement of all 'layers' of the construct (see a similar approach in regard to the corporate culture construct (Hatch, 1993)).

Table 1
Comparison of internal brand equity and related concepts.

	Internal brand equity	Brand citizenship behavior	Organizational citizenship behavior	Job satisfaction	Employer brand equity	External brand equity
Main sources	This study	Burmann and Zeplin (2005)	Podsakoff et al. (2000)	Brown and Peterson (1993)	Cable and Turban, 2003; Backhaus and Tikoo, 2004; Cardy, Miller, and Ellis, 2007	Aaker, 1991; Keller, 1993
Main target group	Employees	Employees	Employees	Employees	Potential and current employees	Customers
Focus on the brand?	Yes	Yes	No	No	Yes	Yes
Expected effects	Loyalty; intra-role and extra-role behavior[a]	Extra-role brand-strengthening behavior in personal interactions	Extra-role behavior[a]	Cognitive evaluation	Awareness; image; job satisfaction; retention. ("Great place to work")	Awareness, image, loyalty

[a] These terms are defined and discussed in Section 3.

Whereas brand orientation is a collective employee attribute, the remaining three determinants are conceptualized as functions of individual behavior within the organizational setting. Burmann and Zeplin (2005) and Burmann, Zeplin, and Riley (2009), adapting the concept of 'organizational commitment' (Mowday, Steers, & Porter, 1979; O'Reilly & Chatman, 1986), have defined *internal brand commitment* as an employee's psychological attachment to the brand, the degree of which moderates willingness to behave in a brand-consistent way, and to invest significant effort in attaining goals set by the branding strategy.

In the context of *internal brand knowledge*, learning processes are clearly of primary importance. One of the most familiar brand equity models (Keller, 1993) casts brand knowledge in a decisively value-generating role, and the behavior of customers depends significantly on the extent to which they are knowledgeable about the brand. In our study of internal brand equity, we are concerned with the degree of employees' brand-relevant knowledge, because that provides them with the wherewithal to behave in the way their company's brand identity requires. That will in turn depend on internal and external brand communication, brand values, and brand benefits.

Internal brand involvement has been defined as an activating state resulting from the personal relevance of the brand (Celsi & Olson, 1988; Zaichkowsky, 1985). Activation theory posits, in effect, that the effect of branding can be that an individual will absorb stimuli as well as information from the brand. In short, he or she will be more open to brand-relevant information. Internally, this will be especially likely when the brand holds special relevance for employees, and when they are convinced that it significantly contributes to the company's overall success (Hoeffler & Keller, 2003).

3.4. External brand equity as outcome of internal brand equity

The third and final research question asks if a significant outcome of successfully established internal brand equity would be an effect on 'external brand equity'. This is the phenomenon that is normally described as simply 'brand equity', and can be defined as the brand's attitudinal and behavioral relevance to actual and potential customers. Its fundamental basis is the comprehension that determines brand equity via brand awareness and brand image (Keller, 1993): that is, the extent to which a brand is capable of creating differentiation and preference in the minds of customers.

3.5. Research hypotheses

The first group of research hypotheses concerns the influence of the collective determinant *brand orientation* on the internal brand equity framework.

This culture-oriented perspective was adopted for our study because corporate culture is generally considered to be one of the most important drivers of employee attitudes and behavior (Williams & Attaway, 1996), and should therefore be strategically aligned with brand values (Hatch & Schultz, 2001; Piercy & Peattie, 1988; Scholz,

1987). Where the consumer audience is concerned, it has been argued that corporate culture can be even more influential in forming brand perceptions than the associated marketing communications (Wilson, 2001). The higher relevance of corporate brands in the business-to-business sector strengthens this link between brand-oriented culture and internal brand equity. It is therefore assumed that brand orientation will play a key role, in this context, in determining the degree of brand-consistent behavior among individual employees, and thereby the degree of internal brand equity.

Hence:

Hypothesis 1. Brand orientation has a positive effect on internal brand equity.

Hypothesis 2. Brand orientation has a positive effect on internal brand commitment.

Hypothesis 3. Brand orientation has a positive effect on internal brand knowledge.

Hypothesis 4. Brand orientation has a positive effect on internal brand involvement.

Several research studies have shown that organizational commitment is a strong driver of employee attitudes and behaviors (Allen & Meyer, 1996; Jaramillo, Mulki, & Marshall, 2005; Mathieu & Zajac, 1990; Mowday et al., 1979; Riketta, 2002). Internal brand commitment is accordingly considered an equally strong factor in employees' brand-oriented attitudes and behaviors (Burmann & Zeplin, 2005; Thomson, de Chernatony, Arganbright, & Khan, 1999). It is thus proposed that:

Hypothesis 5. Internal brand commitment has a positive effect on internal brand equity.

Internal brand knowledge describes the cognitive representation of the brand within an employees' mind, which can be interpreted as 'schemata' (Fiske & Linville, 1980). These are structures of organized prior knowledge, which evolve by the abstraction of experiences and exert a strong behavioral influence (Marcus & Zajonc, 1985). We therefore expect a positive link between internal brand knowledge, as brand-oriented schemata, and internal brand equity.

A pioneering study by Keller (1993) identified brand knowledge as the central driver of brand equity. Other studies have found that employees working for companies with strong brands normally exhibit clearer and more consistent brand knowledge (Webster & Keller, 2004; de Chernatony & Cottam, 2006), and vice versa (Aaker, 2002). The inference is that they need to know about the identity and values expressed by the brand in order to behave in a brand-consistent manner. Such internal brand knowledge can be taken as a prerequisite for a strong internal brand, which in turn contributes to overall brand performance, and hence to brand equity.

Thus:

Hypothesis 6. Internal brand knowledge has a positive effect on internal brand equity.

Cognitive processes generally require some initial psychological impetus, the strength of which determines how alert an individual is, how ready to react, and how capable of action. The 'Lambda hypothesis' advanced by Malmo (1959) postulated that the stronger the activation, the higher is the cognitive performance, until a certain level is attained, at which point the effect begins to weaken. One form of psychological impetus is attention, defined in this context as a temporary enhancement of activity leading to sensitization to specific stimuli. Attention can be expected to be high when the brand has definite relevance for an employee and where there is a high level of brand involvement (Celsi & Olson, 1988).

Thus, it can be hypothesized that internal brand involvement both positively affects internal brand equity and is a direct prerequisite for internal brand knowledge:

Hypothesis 7. Internal brand involvement has a positive effect on internal brand equity.

Hypothesis 8. Internal brand involvement has a positive effect on internal brand knowledge.

In order to reason the link between internal and external brand equity we use balance theory and emotional contagion theory:

Balance theory (Heider, 1958) proposes that every individual in an organization will strive for inner balance, and that any triadic system comprising two individuals and an object will be balanced when both individuals (employees and customers) have the same attitudes toward the object (the brand).

The theory of 'emotional contagion' (Hatfield, Cacioppo, & Rapson, 1993), which explains how affects and emotions are transmitted among individuals, supports the presumption of a direct link between internal and external brand equity. Barsade (2002) has argued that one person will compare his or her mood with another's and will adopt that 'emotive level' when it seems appropriate to do so. In the context of our study, this suggests that customers will adapt their brand-specific emotions to those that they infer in the behavior of the brand-owner's employees with whom they interact. If the employee represents a strong sense of the brand's value the customer is likely to internalize attitudes that amount to a high degree of brand equity. That is:

Hypothesis 9. Internal brand equity has a positive effect on company's external brand equity.

Fig. 1 presents the proposed model of internal brand equity, linking the nine hypotheses in causal paths from corporate brand orientation via internal brand equity to external brand equity.

4. Methodology

In order to test the model, an extensive survey was conducted among business-to-business companies in Germany.

4.1. Research design

Input data were collected by a self-completion questionnaire, distributed to employee and management respondents in 350 business-to-business firms in Germany, and analyzed by partial-least-squares structural equation modeling. The sampling frame and sample profile are described in Section 4.2.

Data for the tests of Hypotheses 1–8, concerning the determinants of internal brand equity, were gathered from the employee survey.

Answers to the manager questionnaire provided second-source test data for Hypothesis 9, which concerns the causal link between internal brand equity and external brand equity. For the test of this Hypothesis 9, we averaged all employee evaluation scores collected with one of companies in the survey, and combined the resultant data with those provided by answers from participants in the management survey. To reduce bias in the employee answers, we restricted the input data only to those collected from companies returning three or more employee questionnaires. External brand equity (what most commentators mean by 'brand equity') is in our study the measure of the significance and effectiveness of an internal brand-supporting strategy.

To test a structural equation model with unobservable constructs, the methodological choice is between a covariance-based approach (e.g., AMOS, LISREL), and partial-least-squares regression analysis. Comparisons of these alternatives are to be found in Chin and Newsted (1999), Falk and Miller (1992) and Fornell and Bookstein (1982). Historically, the first of these choices has been the dominant method for solving causal models of this type, but marketing and management researchers turning to the second: for example, Fornell (1992), Hennig-Thurau et al. (2006) or Hulland (1999).

The number of usable questionnaires in our study was the key factor in the choice of partial-least-squares as the method for testing our model. This so-called "soft modeling" approach (Chin & Newsted, 1999) was selected because the sample size in the case of Hypothesis 9, was considered too small for the alternative "hard" procedures. Further considerations were that the measurement scales and the whole model itself are new and untested; that the majority of the variables do not fulfill the assumption of multi-normality; and that the modeling of formative and reflective constructs in one model is better suited to the distribution-free partial-least-squares method. Nevertheless, the covariance-based approach and the software AMOS were additionally used in the particular case of evaluating the quality of the reflective measurement models. The remainder of the data were analyzed by the SmartPLS software (Ringle, Wende, & Will, 2006), and the causal model judged on the basis of explained variances (R^2) and Stone–Geisser tests (Q^2), following Chin (1998) and Hulland (1999).

4.2. Sample selection and data collection

We initiated the surveys by sending a preliminary notification letter and follow-up telephone call to a single member of the top management team in each target company. If the reply was favorable, employee and management questionnaires were sent to that person, who was asked to answer the management questionnaire personally, and hand on the employee questionnaire to at least five members of staff in various roles in various functional divisions, and at various levels. The input to the design and the development of the survey questionnaires were precedents and leads in the literature reviewed in the construction of the model, plus ten 'think-aloud' pre-tests. All items were measured by five-point scales of agreement-disagreement with statements, anchored by 1 = agree/satisfied and 5 = disagree/dissatisfied.

The design of the study demanded a high degree of willingness to cooperate among targeted companies, and personal contacts were therefore critical. The sample selected was consequently non-random, but systematic and purposive. Of 350 individuals in 350 German companies contacted between January and April 2008, 170 agreed to take part in the surveys and duly received the two versions of questionnaires by mail. After reminders and the exclusion of incomplete questionnaires, cases with more than 10% of missing values were eliminated. These comprised nine questionnaires returned by employees and none completed by top managers. Any missing values in the remainder were replaced by estimated values in SPSS, via the EM-Algorithm. The final sample contained 93 usable companies, containing at least one completed top-management questionnaire and at least one employee questionnaire each, for a total in the latter category of 481. The effective response rate was 24.9%.
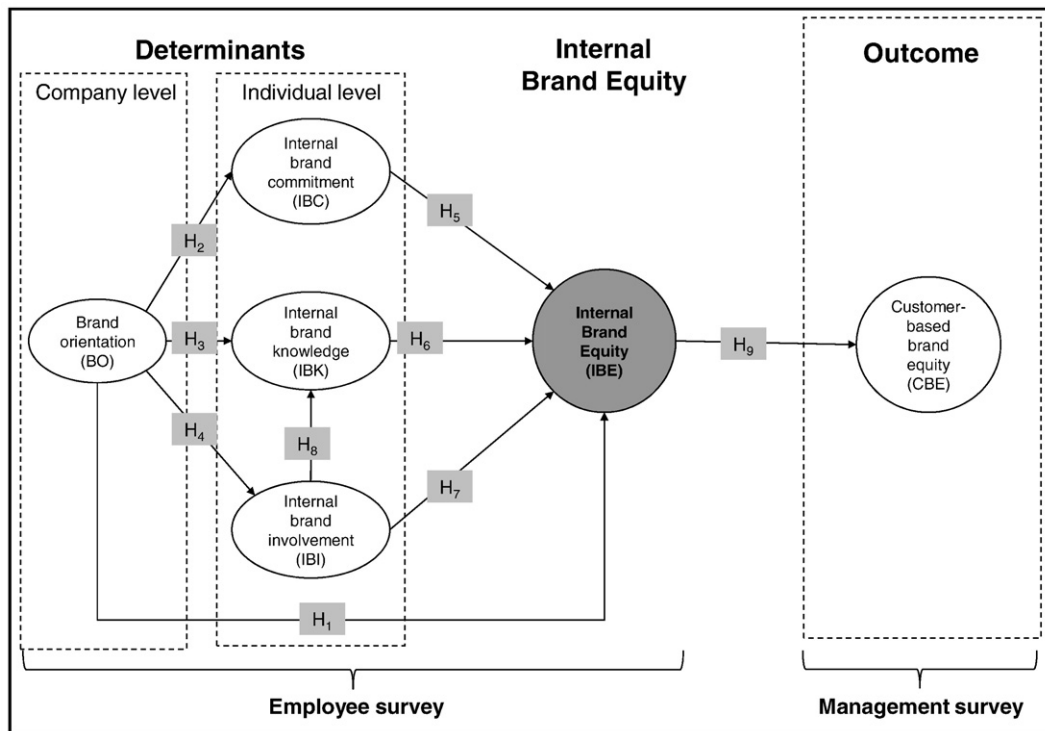
Fig. 1. A model of internal brand equity.

Almost two thirds of the sample represented three industry sectors: metal production and processing (23.6%), electrical and electronic engineering (21.3%), and plant and machinery (20.2%). The balance of large to small companies was also unrepresentative. Nearly half (41.5%) had 500 or more employees, versus the German average of only 3.7%, while about one in ten (11.2%) had 50 or fewer against a national average of 51.5% (Statistisches Bundesamt Deutschland, 2007). Respondents in the management survey were predominantly in the top-management category. Of those, 44% were at director level, 34% were board directors, and 15.7% were owner-directors.

4.3. Measurements

As far as possible, our study relied on construct measures available in the literature that could be adapted for the study's context. The Appendix A lists the 40 specific items generated.

Because the central construct, internal brand equity, was newly developed for this study, no existing measures were available for application. A reflective single-item measure was used for *intention to remain with the brand*. A new elaborated scale of reflective items was used to measure *brand-consistent intra-role behavior*, on the grounds that *personal brand communication* in the business-to-business sector, to be brand-supportive, must be relatively constant, consistent, relevant to the buyer, and clearly differentiated from the competition. To measure *brand-supportive extra-role behavior*, the 'organizational citizenship behavior' construct (Podsakoff et al., 2000) was transferred from its original context. 'Brand citizenship behavior' was defined as comprising two factors: 'brand enthusiasm' and 'willingness to support brand development'. To measure this compound dimension, eleven reflective items were selected from a scale adapted from the Podsakoff study by Burmann, Zeplin, and Riley (2009), on the basis that those were judged to be explicitly brand induced, while others related to general human characteristics, such as altruism.

Among the determinants of internal brand equity, *brand orientation* was measured by a reflective scale first used by Baumüller and Baumgarth (2008). *Internal brand commitment* was measured by another derived from the work of Burmann, Zeplin and Riley (2009),

which has in turn been adapted from an earlier organizational commitment scale (O'Reilly & Chatman, 1986). Since *internal brand involvement* and *internal brand knowledge* are newly developed constructs, a list of formative indicators was developed from theoretical first principles. These assessed the employee's conviction that branding had a positive impact on corporate performance, as an indicator of involvement with the brand, and measured the brand knowledge they had gained from, for example, magazine advertising or the company's web presence.

The key outcome, *external brand equity* was measured by a reflective four-item scale transferred from a previous study by Baumüller and Baumgarth (2008).

5. Results

5.1. Measurement model analysis

The study generated data relating to both formative and reflective constructs. Evaluation of the reflective measurement sub-models was carried out by such conventional methods as Cronbach's alpha and exploratory factor analysis, in accordance with the "paradigm for developing better measures of marketing constructs" proposed by Churchill (1979), and also by the more advanced confirmatory factor analysis procedure advocated by Bagozzi, Yi, and Phillips (1991) and Gerbing and Anderson (1988). With respect to the threshold values of different criteria for adequate measurement properties, the recommendations of Bagozzi and Yi (1988) and Bagozzi et al. (1991) were followed.

Because rigid criteria for checking the validity of the formative constructs were not available, the responses of an expert panel of twelve marketing Ph.D. students were analyzed by a procedure originated by Anderson and Gerbing (1991). Their validity was further assessed by weights and *t*-values, following a bootstrapping routine at $n = 1000$, and also by the usual tests for multicollinearity.

Table 2 shows the descriptive statistics, item loadings (reflective constructs) or weights (formative constructs), and global fit criteria.

Initial exploratory factor analysis of the internal brand equity model found that all indicators loaded on the *a priori* assumed factors.

Table 2
Measurement model.

	Mean (standard deviation)	Loading/Weight (t-value)
Internal Brand Equity = 'IBE' (reflective, α = .89, χ²/df = 4.47 , NFI = 0.953, CFI = 0.963, SRMR = 0.04)		
IBE1	2.02 (0.80)	1
IBE2	2.02 (0.74)	1.18 (12.58)
IBE3	2.12 (0.94)	1.54 (12.76)
IBE4	2.18 (0.92)	1.57 (13.15)
IBE5	2.07 (0.93)	1.58 (13.13)
IBE6	1.82 (0.83)	1.24 (12.05)
IBE7[a]	2.37 (0.78)	1.30 (12.95)
IBE8[a]	2.53 (0.78)	0.94 (10.34)
Brand Orientation = 'BO' (reflective, α = .89, χ²/df = 6.56, NFI = 0.92, CFI = 0.94, SRMR = 0.04)		
BO1	2.07 (0.89)	1
BO2	1.84 (0.91)	1.05 (14.49)
BO3	1.82 (0.93)	1.18 (15.81)
BO4	2.34 (0.99)	1.19 (15.11)
BO5	2.26 (1.08)	1.05 (12.30)
BO6	1.74 (0.95)	0.99 (13.17)
BO7	2.40 (1.04)	1.25 (15.08)
BO8	2.59 (0.96)	0.97 (12.80)
Internal Brand Commitment = 'IBC' (reflective, α = .90, χ²/df = 6.19, NFI = 0.94, CFI = 0.95, SRMR = 0.04)		
IBC1	2.11 (0.99)	1
IBC2	1.93 (0.93)	0.94 (15.44)
IBC3	1.91 (0.91)	0.97 (16.43)
IBC4	1.85 (0.98)	0.82 (12.86)
IBC5	2.16 (1.06)	1.04 (15.19)
IBC6	2.64 (1.16)	1.11 (14.62)
IBC7	2.25 (1.06)	1.26 (18.10)
IBC8	2.30 (1.10)	1.23 (17.17)
Internal Brand Knowledge = 'IBK' (formative, VIF = 2.96, CI = 11.47)		
IBK1	1.72 (0.87)	−0.10 (1.01)
IBK2	1.57 (0.78)	0.37 (2.93)
IBK3	1.68 (0,86)	0.35 (2.47)
IBK4	1.52 (0.75)	0.24 (2.71)
IBK5	2.16 (1.22)	0.02 (0.26)
IBK6	1.81 (0.95)	0.12 (1.08)
IBK7	1.53 (0,76)	0.15 (1.45)
Internal Brand Involvement = 'IBI' (formative, VIF = 1.96, CI = 8.66)		
IBI1	1.54 (0.76)	0.31 (4.65)
IBI2	2.10 (1.05)	−0.15 (2.12)
IBI3	2.50 (1.13)	0.23 (3.63)
IBI4	2.08 (0.96)	0.33 (4.60)
IBI5	2.02 (0.87)	0.49 (7.66)
*External Brand Equity = 'CBE' (reflective, α = .761**)*		
EBE1	2.47 (1.16)	1
EBE2	1.90 (0.84)	0.62 (4.72)
EBE3	2.03 (0.80)	0.65 (5.03)
EBE4	1.91 (1.02)	0.89 (5.20)

Notes:
Reflective constructs: Cronbach's Alpha: $α ≥ 0.7$; Chi-Square/Degrees of Freedom ($χ²/df$) $≤ 5$; Normed Fit Index (NFI) $≥ 0.9$; Comparative Fit Index (CFI) $≥ 0.9$; Standardized Root Mean Square Residual (SRMR) < 0.1.
Formative constructs: max. Variance Inflation Factor (VIF) $≤ 10$; max. Conditional Index (CI) $≤ 30$.
** Management survey ($n = 93$); no calculation of a confirmatory factor analysis.
[a] Index of five or six reflective items.

No Cronbach's alpha coefficients were below the .80 threshold. Subsequently, confirmatory factor analysis was carried out for every factor with reflective items in the internal brand equity model. After items were eliminated on account of negative variance from the quality criteria, a one-dimensional eight-item construct resulted, for the measurement of the construct. Within that scale, both of the brand citizenship factors were integrated as indices after confirmatory factor analysis assured their adequacy as measures (Homburg & Pflesser, 2000). The overall statistics for the new one-factor model show that the measurement model exhibits an acceptable fit to the data.

Exploratory factor analysis of the two reflective constructs, *brand orientation* and *internal brand commitment*, next showed that all items loaded on the a priori intended constructs. Cronbach's alpha scores for both constructs were satisfactory, with no values below .80; confirmatory factor analysis found good overall reliability, with AVE values of .50 and .55. The overall-fit statistics demonstrate an adequate fit to the data.

The results for analysis of *internal brand knowledge* and *internal brand involvement* as formative constructs are shown in Table 2 above, and indicate no necessity for elimination of any item, even though some do show a very low or even negative weight (Rossiter, 2002).

The final step in the analysis was to assess the validity and reliability of the construct of *external brand equity*. Exploratory factor analysis showed that all indicators loaded on the same expected factor. The loadings were consistent, and the Cronbach's alpha coefficient was above the recommended threshold. Confirmatory factor analysis demonstrated an acceptable fit to the data.

5.2. Structural model analysis

Following evaluation of the quality of the measurement model contains the testing of the nine research hypotheses. Each conceptual model, internal brand equity and its determinants as well as the link between internal and external brand equity are tested separately by the partial least squares procedure. The data collected in the survey of employees were applied to the testing of the model of internal brand equity and its determinants. To test the hypotheses relating to the consequence of internal brand equity, indices were computed from the same data set and combined with the data collected in the parallel survey of top managers. Table 3 displays the results of these hypotheses tests.

Almost all coefficients are significant ($p < 0.01$) and in the expected direction, which confirms the nomological validity of the constructs, and supports Hypotheses 1-5 and 7, 8. The variables in the model collectively explain 55% of the variance in internal brand equity. Similarly, the model explains 34%, 32% and 26% respectively of the variances in internal brand involvement, internal brand knowledge, and internal brand commitment. It is noteworthy that internal brand equity is mainly determined by brand orientation, the results show that it is the central driver of the other determinants. Contrary to expectations, the results contradict one of the eight hypothesized causal links.

Testing of Hypothesis 6, which posits that internal brand knowledge will have a direct positive effect on internal brand equity, yielded a non-significant impact, and it was duly rejected.

Table 3
Estimated effects within the casual models.

Empirical basis	Hypothesis	Path	Coefficient	t-value	Acceptance
Employee survey ($n = 481$)	H_1	BO→IBE	0.484	9.209	✔
	H_2	BO→IBC	0.515	11.987	✔
	H_3	BO→IBK	0.271	4.783	✔
	H_4	BO→IBI	0.583	15.293	✔
	H_5	IBC→IBE	0.226	5.190	✔
	H_6	IBK→IBE	0.032	0.928	
	H_7	IBI→IBE	0.135	2.656	✔
	H_8	IBI→IBK	0.362	6.696	✔
Employee and top management survey ($n = 73$)	H_9	IBE→EBE	0.399	4.961	✔

Note:
✔ = hypothesis confirmed ($p < 0.01$).
Key:
IBE = Internal Brand Equity.
IBK = internal brand knowledge.
IBC = internal brand commitment.
IBI = internal brand involvement.
BO = brand orientation.
EBE = external brand equity.

Otherwise, the model was found to have good predictive power, the 'blindfolding' procedure yielding a Q^2-value of .31 for internal brand equity, which is significantly above zero.

Turning to the consequence of internal brand equity, the results in Table 3 further support Hypothesis 9 at a significant level, though the value of the explained variance is low, at 15.9%.

6. Discussion

6.1. Research-related implications

Earlier conceptual papers and case studies have emphasized the importance of the role of employees in the success of a brand in the business-to-business sector. In contrast to typical business-to-consumer branding strategy, external brand equity is not so dependent on external media but rather on personal communication between brand owner's employees and the customers. Neither a direct creation of brand supportive personal communication nor a strict control of the interactions between employees and customers are possible. Therefore, the 'anchorage' of the brand in the hearts and minds of the workforce is one important building-block for a strong business-to-business brand.

Very little empirical research has been carried out, however, with respect to this 'internal branding' in the business-to-business environment. In order to reduce that deficit, this article has explored the notion of internal brand equity. Drawing on published conceptualizations and empirical studies, it has proposed a comprehensive conceptual framework, which comprises the components, determinants, and outcome of internal brand equity. It has also presented the findings of an empirical study of business-to-business branding in Germany, the results of which support the measurement model and all but one of the nine hypotheses relating to the causal model shown in Fig. 1. It is, to the best of our knowledge, the first study to investigate the internal anchorage and equity of a business-to-business brand, at the employee level as well as among top management.

The research findings underline the important part played in the building of internal brand equity by a brand-oriented corporate culture, which furthermore exerts a strong direct influence on the co-determinants internal brand knowledge, internal brand commitment, and internal brand involvement. The study thus contributes significantly to the body of knowledge relating to branding strategy in general and business-to-business branding in particular. In practical terms, it offers marketing practitioners, strategists, planners and scholars a comprehensive and manageable 17-item scale for the measurement of internal brand equity. It also suggests a starting point for future research projects (covered further below).

6.2. Managerial implications

The proposed model and the empirical results have several important implications for branding strategy and brand management in business-to-business companies. First, the internal view broadens the frame of reference. In the business-to-business sector, brand building is not just a task for marketing managers or brand managers and their teams, but a shared responsibility of all employees at all levels, because internal brand equity is a significant driver of the business-to-business brand.

If effective business-to-business branding depends on a *brand-oriented corporate culture*, as this study has found, then a solid analysis of the corporate culture in question, and of the anchorage of the brand in that milieu, is an essential prerequisite for the building and nurturing of a strong brand.

The proposed conceptual framework clarifies starting points for a strategy to strengthen the brand. In addition to corporate-level brand orientation, company-wide involvement in branding and commitment to the brand are important drivers of the internal brand equity. Consequently, brand managers must encourage and facilitate *internal brand involvement* and *internal brand commitment*, by such means as incentive systems, training programs, targeted internal communication, leadership, and recruitment of the 'right' people. Typically, a company's HR department is responsible for the implementation of such initiatives, so an open channel for close collaboration between brand management and HR is essential.

Lastly, the study suggests the value of integrating internal brand equity with the four key determinants in brand management control systems. As well as monitoring the external brand image and brand equity, such a control system can support management by providing early warning of weaknesses in the branding, by means of regular employee surveys and summarizing scorecards.

6.3. Limitations and further research

The sample size and the possibility of sampling bias are significant constraints on the generalizability of the empirical findings, as is the fact that the fieldwork was conducted in one European country. Furthermore, because all constructs were measured at a single point in time, variations in internal brand equity and the hypothesized causalities could not be assessed. Any future replication of this study should aim for greater geographical diversity, larger samples, and longitudinal studies. Because the research design was based on subjective measures of the constructs, their validity is generally open to question. Further research should employ a combination of subjective and objective measures.

In addition to these methodological limitations, it would be useful to expand the framework in future research. For instance, the focus of this study has been the corporate brand. Though that type of branding is typical of the business-to-business sector, many companies combine it with individual product branding strategies. Possible differences between the internal brand equity of corporate and product brands have not been captured in the proposed model. Another useful expansion would be to broaden the focus beyond the employee inputs investigated here, to the effects on internal and external brand equity of specialized, externally-focused branding initiatives. For example, Gilly and Wolfinbarger (1998) studied the influence of brand advertising on employee behavior. Moreover, the existing framework focuses on the involvement and commitment of employees at the individual level. Analysis of the influence of such initiatives of training programs or incentive schemes could extend the scope of the conceptualization. Thus, future studies should combine these expanded, internally and externally focused aspects of brand management into a single framework.

The business-to-business sector is characterized by the heterogeneity of its products and services, and of its business models. Incorporation of moderating variables into the internal brand equity model would help scholars and practitioners to understand its genesis and development across the sector. Finally the study only considers the external brand equity as a performance outcome of internal brand equity. Further research should link the internal brand equity also with "hard" financial outcomes like turnovers, profits, and shareholder value.

Acknowledgements

Appendix A. Measures and items

A.1. Employee survey*

Internal Brand Equity (IBE)
Brand Loyalty (new scale)
IBE1: "My colleagues want to work for our brand respectively our company in future."

Intra-role behavior (new scale)

"In personal conversation with potential customers, my co-workers are willing to…

IBE2: …communicate the same brand value in the long term."

IBE3: …to appear personally consistent with other manifestations of our branding (e.g. advertising, exhibitions or the web site)."

IBE4: …to make no statements that are inconsistent with our brand communication in the media (e.g. magazines, Internet, etc.)."

IBE5: …to emphasize the objective-technical (e.g. quality, reliability, etc.) as well as emotional-symbolic (e.g. trust, friendliness, etc.) aspects of our brand."

IBE6: …to underline the advantages of our brand in comparison to our competitors' brands."

Extra-role Behavior (scale adapted from Zeplin, 2006)

IBE7 ** "My colleagues are aware of the fact that everything they say or do can affect the brand image."

"My colleagues behave consistently with the brand values, even when they are not controlled, nor rewarded for doing so."

"My colleagues work especially diligently and are concerned about quality when it positively affects our brand image."

"My colleagues would voluntarily work longer hours if that were to positively affect our brand image (e.g. to complete a customer order on time)."

"My colleagues would recommend our brand to friends or relatives in private conversation."

"My colleagues try hard to communicate our brand values to new colleagues (e.g. by way of informal chats, or by volunteering for a mentoring role)."

IBE8 ** "To better meet the customers' expectation of our brand…

…my colleagues actively ask customers for feedback."

…my colleagues practice voluntary self-education by reading manuals, guidebooks or professional journals."

…my colleagues participate in retraining exercises and skills workshops."

…my colleagues immediately forward customer feedback or reports of internal problems to the people in charge."

…my colleagues develop new ideas for our products or services, and make suggestions for improvements without being asked."

** The items IBE7 and IBE 8 were both summed to one index, and used in calculation of internal brand equity as single items.

Internal Brand Commitment (IBC)

Scale adapted from Burmann, Zeplin and Riley, 2009); O'Reilly and Chatman, 1986

IBC1: "In our company, I feel like a part of a family."

IBC2: "I am proud of our brand's success, and take bad news about the brand as a personal set-back."

IBC3: "I am proud to tell others that I work for the company that owns this brand."

IBC4: "I feel personally obligated to my superior to work even harder for our brand."

IBC5: "Our top management's commitment to the brand leads me to make an extra effort for the brand."

IBC6: "I would not enjoy working for another brand as much as I do for ours."

IBC7: "My attachment to this brand is based first and foremost on the similarity of my values to those represented by the brand."

IBC8: "The values represented by our brand are more than just words; they influence my day to day behavior."

Internal Brand Knowledge (IBK)
New scale

IBK1: "I am familiar with our brand communication (e.g. magazines, Internet, exhibitions, etc.)."

IBK2: "I am aware of the goals we try to achieve through the brand."

IBK3: "I am well informed about the values represented by the brand."

IBK4: "I understand how our customers can benefit from our brand."

IBK5: "I am familiar with our brand style guide."

IBK6: "I know which attributes of our brand differentiate us from our competitors."

IBK7: "I know how to comport myself so as to present our brand to customers positively."

Internal Brand Involvement (IBI)
New scale

IBI1: "I am aware that our brand significantly contributes to the overall success of our company."

IBI2: "I am convinced that our brand allows us to achieve a higher price for our products."

IBI3: "I believe that our customers buy higher quantities because of our brand."

IBI4: "I believe that our brand accounts considerably for the loyalty of our customers."

IBI5: "I am convinced that our customers recommend our brand to others."

Brand Orientation (BO)
Scale adapted from Baumüller and Baumgarth, 2008

BO1: "In our company, we have a clear idea of what our brand stands for; brand identity and brand promise are well defined."

BO2: "We use all our marketing activities to develop our brand and enhance its strength."

BO3: "We recognize our brand as a valuable asset and strategic resource, which we continually develop and protect in the best possible way."

BO4: "Brand equity (or brand strength) is a control factor in our company."

BO5: "In our company, product, brand, and/or marketing managers are competent and capable."

BO6: "The development of our brand is not the responsibility of a small group within the company, but also the business of top management."

BO7: "All business decisions are evaluated with respect to their impact on the brand."

BO8: "The great majority of our company's employees understands and lives the brand values."

*A.2. Management survey**

External Brand Equity (EBE)
Scale adapted from Aaker, 1991; Keller, 1993; Baumüller and Baumgarth, 2008

CBE1: "Our brand is better known than our most important competitor's."

CBE2: "The quality of our brand as perceived by our customers is higher than our competitor's."

CBE3: "Our brand seems more 'friendly' than our competitors' brands."

CBE4: "A high proportion of the products under our brand umbrella are leaders in their markets."

**Both questionnaires were in German. The translation of all items was checked by a native English speaker.

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