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## Sales force impact on B-to-B brand equity: Conceptual framework and empirical test

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# **ARBEITSPAPIERE DER NORDAKADEMIE**

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## **Sales Force Impact on B-to-B Brand Equity Conceptual Framework and Empirical Test**

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# **Sales Force Impact on B-to-B Brand Equity**

## **Conceptual framework and empirical test\***

by

Carsten Baumgarth  
Lars Binckebanck

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## **Abstract**

**Purpose** – To develop and empirically test a conceptual framework explaining the influence of the sales force and two elements of the marketing mix on brand equity, in the context of business-to-business marketing.

**Design/methodology/approach** – A conceptual framework of four drivers of B-to-B brand equity was built from a review of the relevant literature and various other theoretical sources. Six research hypotheses were generated, and tested by partial least squares analysis of a sample of 201 respondents in B-to-B firms in Germany.

**Findings** – The results confirm the high relevance of the sales force to the building and maintenance of a strong B-to-B brand. The most important driver of brand equity in this environment is the salesperson's behaviour, followed by the salesperson's personality, product quality and non-personal marketing communications, in that order.

**Research limitations** – The sample size permits only a general analysis and conclusions. The choice of PLS analysis and formative scales limits the rigorousness of scale evaluation. The decision to interview one manager per company may have introduced informant bias.

**Practical implications** – Effective management of a B-to-B brand is impossible without the support of the sales force. The study furthermore confirms that brand equity can also be influenced by the two elements of the marketing mix investigated: the product and marketing communications. It also offers an alternative approach to the measurement of brand equity in B-to-B marketing.

**Originality/value** – This is the first study to test empirically the widely claimed influence of the sales force on B-to-B brand equity, developing a simple but powerful framework to integrate sales management and brand management in this context.

**Keywords:** Brand equity, B-to-B branding, sales force, salespeople's personality and behaviour, conceptual framework.

**Paper type:** Research paper

## **1. Introduction**

The statement made to a recent b-to-b conference that “B-to-B brands have feet” emphasises a widely-held belief that the human factor features strongly in business-to-business (B-to-B) marketing. According to many practitioners, it is the personal interaction between buying and selling centres that makes the difference that matters in markets characterised by products that are increasingly commoditized. It is thus reasonable to assume that the perception of B-to-B brands will be strongly influenced by the quality of personal communication, and the emotions that result from human interaction. From this perspective, it is people, rather than products, that generate B-to-B brand equity.

However, it seems that marketing scholars do not necessarily agree with practitioners in this respect, and the importance of B-to-B brands is not universally taken for granted. For instance, Kotler and Pfoertsch (2007) have observed that, in industrial marketing, “things are different – branding is not meant to be relevant”. More specifically, Lynch and de Chernatony (2004) asserted that “the limited work on business branding has largely ignored the role of emotion and the extent to which organisational purchasers, like final consumers, may be influenced by emotional brand attributes”. Despite the sales-dominant nature of the industrial marketing environment, the brand-driving capabilities of the sales force have not yet been examined empirically.

Against this background, we examine the influence of the sales force on brand equity in a B-to-B context.

## **2. Literature review and research questions**

While there is a long-standing academic interest in personal selling and a quickly growing body of literature on B-to-B brand strategy, no attention has been paid in the literature to the interdependence of these two management disciplines.

## *2.1 Literature Review*

### *2.1.1 B-to-B branding*

In business-to-consumer marketing, there is little doubt that the brand is a strong, enduring and differentiating asset that influences behaviour. However, there is a belief that brands have little significance when dealing with a corporate unit that makes buying decisions related to ‘serious’ industrial products on a strictly rational basis (Rosenbröijer, 2001).

Products in commodity businesses or speciality markets are chosen through an objective decision-making process based on hard facts, such as functionality, price, or quality, while such soft attributes as reputation or trust are of no interest. But Kotler and Pfoertsch (2007) question this received wisdom: “Is this true? Does anybody really believe that people can turn themselves into unemotional and utterly rational machines when at work? We don’t think so.”

Lynch and de Chernatony (2004) define brands as clusters of functional and emotional values that promise a unique and welcome experience in the buyer-seller transaction. This was found to be valid in B-to-B markets early in the development of a research stream on ‘industrial’ branding (Gordon et al., 1991; Lehmann and O’Shaughnessy, 1974; Mudambi et al., 1997; Saunders and Watt, 1979).

Since those studies, it can generally be assumed that branding is a relevant aspect of B-to-B marketing even if its importance may vary (Mudambi, 2002). B-to-B brands have a facilitator function whereby they make it easier to identify and differentiate businesses (Anderson and Narus, 2004). A strong brand can secure a place for the company name on the bid list, and help to sway the bidding decision in very close contests (Wise and Zednickova, 2009). Thus, B-to-B brand managers must relentlessly concentrate on developing and communicating points of difference as the basis for creating differentiation and providing superior value (Davies et al., 2008).

In a rare acknowledgment of the relevance of the organisational sales function to successful B-to-B branding, Lynch and de Chernatony (2004) have pointed out the high importance of effective interpersonal communication of the brand's values, both within the organization and in the marketplace. Furthermore, the most recent of the studies available for review demonstrates a clear link between the internal and external brand equity in B-to-B markets (Baumgarth and Schmidt, 2010).

### *2.1.2 Personal brand communication*

A company's salespeople are one channel for the communication of a brand's attributes, especially in service industries. Their interactive and persuasive capabilities thus have a significant effect on brand strength. Studies of branding in services marketing have devoted considerable attention to the influence of the service provider's employees on customers' evaluation of the service (Berry, 2000; Farrell et al., 2001).

Other research reported in the services marketing literature has addressed such aspects of interpersonal communication style, and its effects on customers' responses, as non-verbal communication (Hennig-Thurau et al., 2006), customer orientation (Bettencourt and Gwinner, 1996; Sparks et al., 1997), employee satisfaction (Hartline and Ferrell, 1996; Homburg and Stock, 2004), and perceived effort (Mohr and Bitner, 1995; Specht et al., 2007). Beyond the services marketing literature, Wentzel (2009) has analysed the effects of different facets of employees' communication on consumers' perceptions of brand image and their attitudes to the brand, in various product categories.

All studies in this research stream underpin the relevance of employee-customer interpersonal communication to successful branding, and hence to brand equity in general, but not in the B-to-B context.

### *2.1.3 Personal selling*

Relevant research studies have been centred on the determinants of direct sales success and apparently unconcerned with long-term and brand-related effects. The literature discusses

three groups of determinants (Churchill et al., 1985; Taylor and Woodside, 1982; Weitz et al., 1986): *personality traits* such as age, motivation, gender, demographic similarities between salesperson and customer; *social competences and skills*, such as verbal and non-verbal communication, flexibility, friendliness, teamwork; and such *professional competences and skills* as economic knowledge and product knowledge, plus adaptation of selling style to buyers' needs (Spiro and Weitz, 1990).

However, salespeople today are expected not only to meet sales targets but also to build long-term, profitable business relationships. Thus, relationship selling behaviour is important from a branding point of view (Ahearne et al., 2007). Its primary goal is securing, building and maintaining long-term relationships with profitable customers (Johnston and Marshall, 2005).

The literature suggests that, after the initial sale, relationship selling should enhance customer satisfaction and trust (Doney & Cannon, 1997; Dwyer et al., 1987; Ganesan, 1994), as well as commitment (Morgan and Hunt, 1994). There is no research, however, connecting these measures with branding in the B-to-B context.

## 2.2 Research questions

The goal of our research study is to develop a conceptual framework capable of explaining the impact of the sales force on B-to-B brand equity, closing an important gap in the B-to-B branding literature.

The central research question thus addresses the relative impact of the sales force on brand equity in that context, compared with the other elements of the marketing mix. Four specific research questions need to be answered:

- How can *B-to-B brand equity* be measured?
- Does the *sales force* influence B-to-B brand equity?



- How important is *personal selling* for B-to-B brand equity compared with the other elements of the marketing mix?

### **3. Conceptual Framework**

#### *3.1 The sales force and the Four Ps as drivers of B-to-B brand equity*

According to Michell et al. (2001), brand equity is a consequence of customers' perceptions of the brand. Vargo & Lusch (2004), discussing the "service-dominated logic" of B-to-B marketing, asserted that brand image is dynamically constructed by social interaction. Following their lead, Grönroos (2007) has suggested that

"a brand is created in continuously developing brand relationships where the customer forms a differentiating image of a physical good, a service or a solution including goods, services, information and other elements, based on all kinds of brand contacts that the customer is exposed to".

The literature takes two broad perspectives on the role of the sales force. First, practitioner-focused publications tend to concentrate on so-called 'sales techniques' that are supposed to conclude a deal, thus accentuating the short-term and transactional aspects. The relationship marketing paradigm, however, emphasizes the need for long-term management of customer relationships (Gordon, 1998; Gummesson, 1999; Peck et al., 1999). In that perspective, a more sustainable driver of sales success is the salesperson's own qualities: personality, and social and professional competence and skills (Homburg et al., 2007).

The second broad perspective is to be found in the extensive literature dealing with the nature of customer relationships, in particular from the viewpoint of institutional economics (Williamson, 1985) and behavioural research (Seth and Parvatiyar, 1995). According to the classic theory propounded by Macneil (1980), a 'relational contract' is based upon a state of trust between two parties. Complementing the explicit terms of a contract, there are implicit

terms and understandings that determine the behaviour of the parties, placing even simple transactions in a wider social and economic context.

Based on these considerations, the driver labelled ‘salesperson’ can be divided into two constructs, *personality* and *behaviour*. Despite the strong focus on selling in many B-to-B markets, sustained customer relationships are still based on some necessary prerequisites. First, brand awareness, as promoted through such classic marketing communication initiatives as advertising, publicity and corporate image campaigns, is often the first step in the buying process. Second, regardless of sales excellence, there will be no re-purchasing if product quality is not at least competitive. Therefore, our study also considers two of the Four Ps of the marketing mix: *Product* and *Promotion*.

### *3.2 B-to-B brand equity*

Generally speaking, brand equity is the differential effect that brand knowledge has on customer response to the marketing of the brand (Keller, 1993). This additional effect can be measured by individual behavioural effects, such as brand loyalty, or by aggregated financial measures, such as ‘brand value’.

The depth of the discussion about the proper conceptualization of brand equity is legendary. Thorough overviews are provided by Christodoulides and de Chernatony (2010) and Salinas and Ambler (2009). The conceptual models formulated by Aaker (1991) and Keller (1993) have provided the most influential frameworks in that debate, and have often been used as a theoretical base in the B-to-B literature (Gordon et al., 1993; Kim et al., 1998; Michell et al., 2001). Yet both in fact concentrate on different, more or less independent, dimensions.

An alternative view of the brand equity concept is offered by the ‘brand funnel’ or ‘buying funnel’ approach (e.g. Kotler et al., 2006; Riesenbeck and Perrey, 2009; see also Rozin and Magnusson, 2003), both of which suppose a sequence of separate stages of brand

effect and brand equity. This fundamental hierarchical principle is often encountered elsewhere in marketing, for example in numerous models of advertising effect (summarized by Vakratsas and Ambler, 1999) and branding (e.g. Chaudhuri and Holbrook, 2001). Some studies of branding in the B-to-B environment also apply that principle (Mudambi et al., 1997; Munoz and Kumar, 2004; Thompson et al., 1997; Yoon and Kijewski, 1995).

What remains unclear is the number and the type of separate stages. Our proposed model incorporates three stages, similar to those in the ‘iceberg’ model by icon, e.g. Musiol et al., 2004; Zimmermann et al., 2001). The first of the three is short-term, more flexible and easier to influence by marketing. Typical constructs are brand imagery, the mental picture of a brand (Ruge, 1988) and first impressions. We call this stage *brand perception*.

The next stage is long-term oriented, more stable and only indirectly influenced by marketing. Relevant constructs are brand attitudes, brand trust or brand sympathy. We use the term *brand strength* to sum up these branding effects. At the final stage, stored brand equity influences behavioural intentions or real behaviour. *Brand loyalty*, measured by intention-to-buy or actual purchase is thus the pivotal outcome of our stepwise model of brand equity.

### 3.3 Framework and hypotheses

The first set of research hypotheses concerns the influence of the sales force and the two key elements of the marketing mix on B-to-B brand equity.

Theoretical descriptions of personal selling and several empirical studies underpin the strong influence of the salesperson’s *personality* and *behaviour* on a customer’s evaluation, in general. The B-to-B branding furthermore supposes a positive influence on B-to-B brand equity (Lynch and de Chernatony, 2004; Kim et al., 1998; Mudambi, 2002; van Riel et al., 2005). An integration of the two research streams in combination with the proposed model of B-to-B brand equity is the theoretical basis for the first two hypotheses in this first set.

Thus:

**Hypothesis 1.** The *salesperson's personality* has a positive influence on the *brand perception*, in a B-to-B setting.

**Hypothesis 2.** The *salesperson's behaviour* has a positive influence on the *brand perception*, in a B-to-B setting.

Moreover, the literature of customer satisfaction and its related body of empirical research support a positive link between subjective perceived product quality and several aspects of brand equity (Szymanski and Henard, 2001). This link has been confirmed by empirical studies in various B-to-B markets (Baumgarth, 2008; Bennett et al., 2005; Cretu and Brodie, 2007; Kim et al., 1998; van Riel et al., 2005). Classic branding theory furthermore identifies non-personal communication as one of the central building blocks of a strong brand (Yoo and Donthu, 2000). This argument is also supported by some B-to-B branding papers (Hutton, 1997; Webster and Keller, 2004).

Thus:

**Hypothesis 3.** *Product quality* has a positive influence on *brand perception*, in a B-to-B setting.

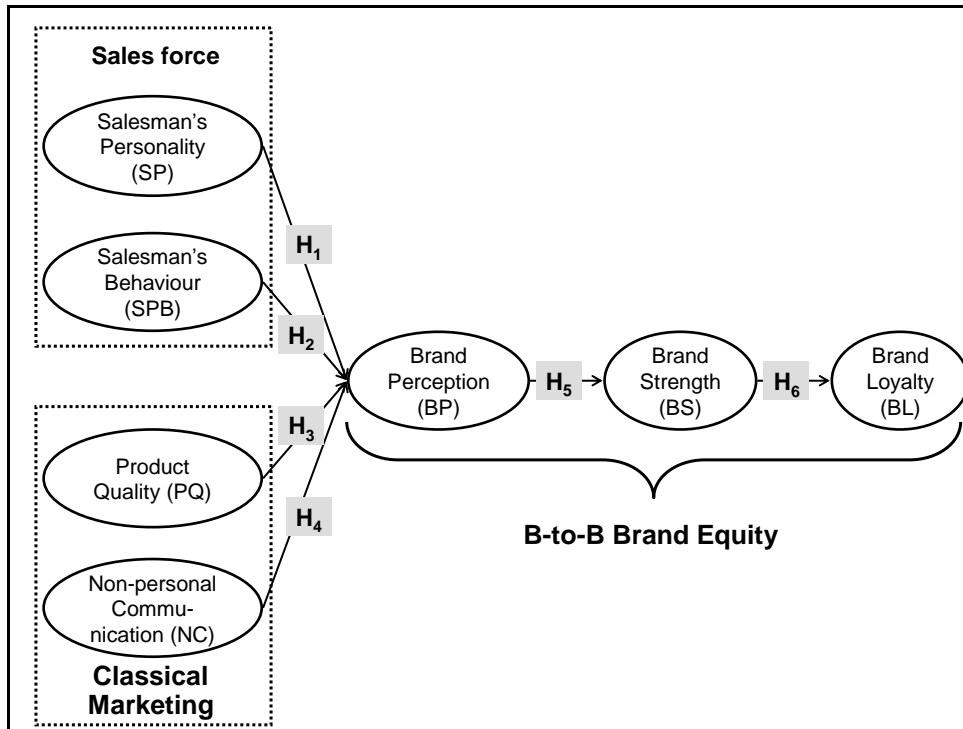
**Hypothesis 4.** *Non-personal communication* has a positive influence on the *brand perception* in a B-to-B setting.

The second set of research hypotheses relate to the internal structure of B-to-B brand equity. First, we hypothesize that the short-term and more flexible *brand perception* has a positive impact on the long-term and stable *brand strength*. Second, brand equity, more knowledge-based and attitude-based, is the driver of future behaviour whereas *brand loyalty* is the pivotal behavioural outcome.

Thus:

**Hypothesis 5.** *Brand perception* has a positive effect on *brand strength*, in a B-to-B setting.

**Hypothesis 6.** *Brand strength* has a positive effect on *brand loyalty*, in a B-to-B setting.



**Figure 1: A model of sales force impact on business-to-business brand equity**

Figure 1 presents the proposed model of the impact of the sales force on business-to-business brand equity, linking the six hypotheses in causal paths from the four marketing antecedents via *brand perception* and *brand strength* to final outcome of brand equity, the *brand loyalty*.

## 4. Methodology

In combination with the conceptual framework presented earlier, the empirical study reported next will help to close an important gap in the literature of branding in B-to-B marketing.

### 4.1 Research design

Input data were collected by computer-assisted telephone interviewing (CATI) of 201 business-to-business firms in Germany, conducted by a professional market research company. The average duration of an interview was about 22 minutes. The sampling frame

and sample profile are described in section 4.2. In order to reduce order-effect bias, the sequence of the single items of the constructs was rotated.

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

The number of questionnaires in our study was the key factor in the choice of partial-least-squares as the method for testing the model. This “soft modelling” approach (Chin and Newsted, 1999) was selected because the sample size was considered too small for the alternative “hard” procedures. Further considerations were that: the measurement scales and the model itself are new and untested; the majority of the variables do not fulfil the assumption of multinormality; and the modelling of formative and reflective constructs in a single model is better suited to the distribution-free partial-least-squares method. The data were analysed by the SmartPLS software (Ringle et al., 2006), and the causal model judged on the basis of explained variances ( $R^2$ ) and the Stone-Geisser test ( $Q^2$ ), following Chin (1998) and Hulland (1999). The covariance-based AMOS software was nevertheless used in the particular case of evaluating the quality of the reflective measurement models.

Missing values were replaced by estimated values in SPSS via the expectation maximization (EM) algorithm.

#### *4.2 Sample*

In order to cover a broad range of the B-to-B world, we chose the quota sampling procedure.

The market research company was provided with a sampling frame setting the following selection criteria:

*Company size:*

- 80% SMEs, defined as fewer than 500 employees; 20 % large companies.
- *Respondent's role in the buying centre:*
- 50 % top management; 50 % purchasing management.
- *Type of business-to-business-transaction, as defined by Backhaus and Voeth (2007):*
- 25% product business; 25 % system business; 25 % plant and engineering business; 25% derived-demand supplying business.
- *Quality of the supplier-buyer-relationship:*
- 50 % judged 'top supplier'; 50 % 'bad supplier'

After a briefing and a pre-test, the market research company conducted the interviews over a period of around one month. The demographic profile of the final sample in Table 1 shows that it does not meet the quota perfectly, but does cover a broad range of the B-to-B market.

		N	%
Sample size		201	100.0
Company size	SMEs (< 500 employees)	182	90.5
	Large firms (500 or more employees)	19	9.5.
Buying centre role	Top management	78	38.8
	Purchasing management	123	61.2
Type of business-to-business transaction	product business	58	28.9
	System business	62	30.8
	Plant and engineering business	43	21.4
	Derived-demand supplying business	38	18.9
Quality of the supplier-buyer-relationship	Top supplier	119	59.2
	Bad supplier	82	40.8

**Table 1: Demographic profile of the sample**

#### 4.3 Measurements

As far as possible, we relied on construct measures available in the literature that could be adapted to the context of the study, but supplemented those with others identified in interviews with branding and sales experts. Appendix 1 lists the 45 specific items generated. Respondents' answers were recorded on 11-point Likert scales and percentage scales. Because of the two scaling formats, a z-standardization of all manifest variables was conducted (Tenenhaus et al., 2005).

The construct *salesperson's personality* was newly developed for this study. The 16 items were selected on the basis of our screening of the literature on the personality traits of salespeople (Badovick et al., 1992; Churchill et al., 1985; Homburg et al., 2007), on social skills (McBane, 1995) and on professional skills (Homburg et al., 2007; Spiro and Weitz, 1990; Weitz et al., 1986). A formative scale was constructed to measure them.

The measurement of the second construct, *salesperson's behaviour*, is drawn from relational contract theory (Macneil, 1980), supplemented by inputs from Dwyer et al. (1987).



The two scales, adapted for use in German, were derived from Beutin (2000) and Ivens (2002). The nine factors, representing three items, were measured by multi-item scales, for each of which an index was calculated. The nine indices were the basis for the formative scale.

The two marketing-mix variables *product quality* and *non-personal communication* were measured by reflective scales. The four items for capturing product quality were based on scales proposed in the literature (Vickery et al., 1994; Garvin, 1987), adapted to suit the German B-to-B environment in a series of workshops with marketing professionals. Non-personal communication was measured by four items, and based on the work of Stadelmann et al (2001).

The three scales for measurement of the B-to-B brand equity were also reflective. *Brand perception* measured short-term brand equity by four scale items, capturing the notions of mental imagery via personal assessments of the vividness and attractiveness of the brand (Marks, 1973; Ruge, 1988). *Brand strength* captured the longer-term and more stable brand equity dimension, and was measured by three items. The final construct, *brand loyalty*, measured the outcome of a strong B-to-B brand via five items.

## **5. Results**

### *5.1 Measurement model analysis*

Our 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 "guidelines" and "recommended thresholds" proposed by Churchill (1979), Bagozzi et al. (1991) and Gerbing and Anderson (1988).

Because rigid criteria for checking the validity of the formative constructs were not available, their validity was assessed by weights and t-values, using a bootstrapping routine (n = 1,000 cases), and also by the usual tests for multicollinearity. Table 2 summarizes the descriptive statistics, item loadings (reflective constructs) or weights (formative constructs), and the global fit criteria.

	Mean (standard deviation)	Loading/Weight (t-value)
<b>Salesperson = 'SP'</b> (formative, max VIF = 4.93)		
SM1	7.35 (2.48)	0.15 (1.21)
SM2	7.58 (2.22)	0.34 (1.87)
SM3	6.78 (2.23)	0.09 (0.74)
SM4	7.63 (1.98)	0.13 (1.22)
SM5	7.69 (2.13)	-0.06 (0.54)
SM6	7.60 (2.20)	-0.04 (0.35)
SM7	6.69 (2.17)	0.28 (1.93)
SM8	8.12 (2.05)	-0.35 (2.20)
SM9	7.51 (2.26)	-0.03 (0.29)
SM10	7.39 (2.04)	-0.12 (1.02)
SM11	7.15 (2.07)	0.09 (0.80)
SM12	8.21 (1.97)	0.16 (1.12)
SM13	7.61 (2.12)	0.40 (2.15)
SM14	7.68 (1.98)	0.04 (0.34)
SM15	6.84 (1.98)	-0.16 (1.28)
SM16	7.19 (2.14)	0.19 (1.33)
<b>Salesperson Behaviour = 'SPB'</b> (formative, VIF = 3.73)		
SMB1*	7.32 (1.75)	0.49 (4.71)
SMB2*	8.21 (1.72)	0.00 (0.05)
SMB3*	6.38 (2.15)	0.94 (0.44)
SMB4*	7.22 (1.89)	0.12 (1.09)
SMB5*	7.60 (1.60)	-0.03 (0.53)
SMB6*	5.77 (2.20)	0.26 (2.82)
SMB7*	8.09 (1.73)	0.21 (1.44)
SMB8*	7.00 (1.89)	0.12 (1.32)
SMB9* <sup>r</sup>	6.43 (2.18)	0.12 (1.61)
<b>Product Quality = 'PQ'</b> (reflective, $\alpha = .64$ , $\chi^2/\text{df} = 2.33$ , NFI = .962, CFI = .977, SRMR = .037)		
PQ1	8.36 (1.87)	0.77 (13.82)
PQ2	7.56 (2.27)	0.80 (21.22)
PQ3	8.68 (1.57)	0.59 (7.18)
PQ4	7.11 (2.67)	0.53 (4.77)

continued...

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<b>Non-personal Communication = 'NC'</b> (reflective, $\alpha = .75$ , $\chi^2/\text{df} = 5.00$ , NFI = .949, CFI = .958, SRMR = .046)		
NC1	6.77 (3.04)	0.76 (15.81)
NC2	7.56 (1.82)	0.83 (28.19)
NC3	4.01 (3.14)	0.68 (9.77)
NC4	4.43 (2.99)	0.70 (10.02)
<b>Brand Perception = 'BP'</b> (reflective, $\alpha = .70$ , $\chi^2/\text{df} = 3.68$ , NFI = .946, CFI = .959, SRMR = .038)		
BP1	73.78 (21.86)	0.76 (18.27)
BP2	65.50 (21.91)	0.66 (11.30)
BP3	7.30 (2.41)	0.69 (12.65)
BP4	7.15 (2.16)	0.78 (23.06)
<b>Brand Strength = 'BS'</b> (reflective, $\alpha = .80$ ; calculation of further fit indices is not possible for constructs with three items)		
BS1	7.08 (2.28)	0.86 (24.74)
BS2	7.30 (2.28)	0.77 (15.74)
BS3	7.65 (2.78)	0.90 (57.25)
<b>Brand Loyalty = 'BL'</b> (reflective, $\alpha = .90$ , $\chi^2/\text{df} = 1.73$ , NFI = .987, CFI = .995, SRMR = .023)		
BL1	7.79 (2.51)	0.91 (40.92)
BL2	7.27 (2.83)	0.84 (22.73)
BL3	7.12 (3.05)	0.73 (13.46)
BL4	8.46 (2.21)	0.86 (27.26)
BL5	8.01 (2.31)	0.92 (55.53)
<b>Notes:</b> Reflective constructs: Cronbach's Alpha: $\alpha \geq 0.7$ ; Chi-Square/Degrees of Freedom ( $\chi^2/\text{df}$ ) $\leq 5$ ; Normed Fit Index (NFI) $\geq 0.9$ ; Comparative Fit Index (CFI) $\geq 0.9$ ; Standardized Root Mean Residual (SRMR) $< 0.1$ . Formative constructs: max. Variance Inflation Factor (VIF) $\leq 10$ ; max. *: index of three reflective items; r: reversed coding.		

**Table 2: Measurement model**

The results for the measurement model show satisfactory results for the reflective constructs *non-personal communication*, *brand perception*, *brand strength* and *brand loyalty*, all meeting the Cronbach's alpha threshold of 0.7. Confirmatory factor analysis yields acceptable fit indices: only the reflective construct *product quality* fails to achieve the Cronbach threshold value, at 0.64. But the result of confirmatory factor analysis (CFI = 0.977; NIF = 0.962) supports the selected measurement, and the scale is therefore accepted.

Analysis of the weights of the two formative constructs *salesperson's personality* and *salesperson's behaviour* results in some items exhibiting a quite low weight and others a negative sign. These variables contribute only very little to the explanation of the variance in the latent variables. In the literature, there is debate as to whether such variables should be eliminated (Jöreskog and Wold, 1982) or should not be (Rossiter, 2002); we have accepted the arguments of the critics of elimination. This decision is justified by the additional calculation of the structural model after an elimination of these critical items. The results for the structural model by the use of modified scale are very similar to the results with the original scales. We therefore accepted all measurement models and used them in the empirical test of the structural model.

## *5.2 Structural model analysis*

Following the satisfactory evaluation of the quality of the measurement model, the six research hypotheses were tested. The data were analysed by the SmartPLS software, and the hypothesis tested by means of bootstrapping ( $n = 1,000$  cases). For the dependent brand-related variables, the explained variances ( $R^2$ ) and predictive power ( $Q^2$ ) were calculated. Table 3 displays the results of those hypothesis tests.

Hypothesis	Path	Coefficient	t-Value	Acceptance
H <sub>1</sub>	SP → BP	0.244	3.42	✓✓✓
H <sub>2</sub>	SPB → BP	0.423	5.78	✓✓✓
H <sub>3</sub>	PQ → BP	0.142	2.33	✓✓✓
H <sub>4</sub>	IC → BP	0.090	1.84	✓
H <sub>5</sub>	BP → BS	0.740	22.39	✓✓✓
H <sub>6</sub>	BE → BL	0.781	25.24	✓✓✓
<b>Note:</b> ✓ = hypothesis confirmed (p < 0.1); ✓✓✓ = hypothesis confirmed (p < 0.01) <b>Key:</b> SP = Salesperson's personality SPB = Salesperson's behaviour PQ = Product quality NC = Non-personal communication BP = Brand perception BS = Brand strength BL = Brand loyalty				

**Table 3: Estimated effects within the causal models**

Almost all coefficients are strongly significant ( $p < 0.01$ ) and in the expected direction, which confirms the nomological validity of the constructs, and supports Hypotheses 1, 2, 3, 5 and 6. Hypothesis 4 is only partially supported by the results of the empirical test, at  $p < 0.1$ . The variables in the model collectively explain 59% of the variance in *brand perception*, 55% with respect to *brand strength* and 61% in the case of *brand loyalty*. The model was moreover found to have good predictive power, the 'blindfolding' procedure yielding a  $Q^2$ -value of .30 for *brand perception*, .39 for *brand strength* and .44 for *brand loyalty*, all of which are above zero.

To sum up, all four hypothesized drivers have a significant and positive influence on brand perception, in the B-to-B context, and ultimately on *brand strength* and *brand loyalty*. But the two sales force variables, *salesperson's personality* and *salesperson's behaviour*, explain about three quarters of B-to-B brand equity: *personality* = 27%; *behaviour* = 47%. On

the other hand, the two elements of the marketing mix share only about a quarter: *product quality* = 16%; *non-personal communication* = 10%.

## 6. Discussion

### 6.1 Summary and research- related implications

Previous conceptual and empirical studies have emphasized the increasing importance of branding in business-to-business marketing. Many researchers and practitioners assume that, in contrast to the business-to-consumer context, the sales force is an important building block of a strong B-to-B brand. Our own empirical study confirms this assumption for the first time. Furthermore, our data clarify that *salesperson's behaviour* is more important than *salesperson's personality*. Though both sales force dimensions are more relevant than the two elements of the marketing mix, *product quality* and *non-personal communication* have a positive influence on B-to-B brand equity. Future models of B-to-B branding should therefore include the sales force as a dependent variable. Our proposed conceptual framework is a first step, which can be used as the basis for the development of more sophisticated models.

Moreover, both the framework and the empirical findings demonstrate that successful management of a B-to-B brand should be based on a combination of sales force management and deployment of the classic marketing mix. That alignment is, in this context, a frequently controversial topic: for example, Kotler et al. (2006). Future research should take into account findings related to the sales-marketing interface, such as that by Homburg et al. (2008).

In addition to these main results and conclusions, our study has validated a scale for the measurement of B-to-B brand equity, incorporating three dimensions, which are arranged in sequence, and 12 items. In particular, integration of imagery into the measurement of brand perception could be a fruitful direction for further research.

## *6.2 Management-related implications*

Our findings suggest that managers should acknowledge the special role of the sales force in B-to-B brand management. The salesperson should not be seen as just an element of the distribution process, but rather should be integrated into the processes of product (or service) positioning and marketing communication. As sales management and brand management (=marketing) are often separate organizational divisions, practical action against resistance to integration, in both functions, is vital. The B-to-B brand can be used as a device to bring the two together for the common good: superior differentiation of the offering in a competitive environment.

The results of our study suggest the need for systematically interactive brand management, which can be defined, in the B-to-B context, as the management process of planning, implementing and controlling relationship-shaping interactive processes with current or potential customers through sales operations, with the objective of anchoring an identity-matching image in the minds of relevant buying-centre members (Binckebanck, 2006). Interactive brand management is thus fundamentally about using the sales function as the drive-shaft for the communication of differentiating company values, integrating sales into brand management and implementing a strategy of 'relationship leadership'.

## *6.3 Limitations and further research*

As with all empirical research, several methodological limitations of the study have to be considered. First, the sample size is sufficient for statistical analysis, but inadequate as a representative cross-section. An increase in a future study would permit the analysis of group effects. The geographic restriction to Germany is also limiting. It would be interesting to compare the influence of the sales force on the brand in different cultural contexts.

The study had an overtly exploratory objective. With hindsight, the scales seem to have been too long. In particular, those relating to the sales force need further purification for future applications. Another problem to be acknowledged is informant bias. It is recommended that future studies should involve two or more respondents per firm, and that drivers and brand equity should be measured independently of each other.

Our conceptual framework is a relatively simple one which, for example, implies independence of the four drivers. Further research should allow for interdependence among the four drivers and also the effect of the level of integration on them.

Finally, we feel that such associated management topics as the sales-marketing interface, or the effect of corporate culture and corporate brand orientation, are interesting issues for further consideration.



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## Appendix: Scales and items

<b>Salesperson's personality = 'SP'</b>	
SP1	... enjoy direct customer contact.
SP2	... always tackle their tasks with healthy optimism
SP3	... have at the ready a great deal of empathy (can put themselves in the customer's place, can take the customer's perspective etc.)
SP4	... have a healthy sense of self-esteem (feel sure of their own competence and abilities etc.)
SP5	... are competent in oral communication (can express themselves in a straightforward and precise manner, can pose well-directed questions etc.)
SP6	... can listen to their customers actively
SP7	... have also mastered non-verbal communication (can use body language professionally, are able to detect signals in the body language of their customers etc.)
SP8	... are always friendly towards their customers
SP9	... are flexible (adapt themselves and their selling behaviour to different customer types and situations)
SP10	... are able to work in a team (can fit into team structures, enjoy team work etc.)
SP11	... can manage themselves well (time management, punctuality, priority setting etc.)
SP12	... have a great deal of product knowledge (both of their own and competitive products)
SP13	... know and understand their customers very well (their needs, value chains, usage of product/service etc.)
SP14	... have a great deal of market knowledge (the position of the supplier or trends in the market)
SP15	... have a great deal of knowledge on business aspects (can assess the consequences of their decisions on costs, can conduct economic feasibility studies etc.)
SP16	... are able to adapt to any customer on the basis of their experience
<b>Salesperson's behaviour = 'SPB'</b>	
SPB1*	a) The supplier is interested in improvements that advance the relationship as a whole rather than being just to its own advantage b) The supplier would help us in problematic situations as much as his possibilities would allow for c) The supplier has no problem with us owing them something
SPB2*	a) It is important to this supplier to cultivate a long-term relationship with us b) The supplier has long-term objectives in its relationship with us c) The supplier assumes that its relationship with us will be profitable in the long run
SPB3*	a) The supplier proactively provides all information (on new products/services, trends etc.) that might be helpful to us b) The supplier normally updates us in good time on all relevant changes c) The supplier also provides sensitive information, for example on its cost situation

SPB4*	a) The supplier reacts flexibly to requests for change b) Complaints are well managed and handled by this supplier c) In the event of an unforeseen situation, the supplier would be prepared to deviate from pre-existing agreements in order to come to a new understanding
SPB5*	a) The supplier in question precisely monitors the punctuality and accuracy of monetary transactions b) The supplier always sees to it that we keep agreements (obtaining information, arranging contacts etc.) c) If we failed to keep an agreement with this supplier, it would immediately bring that to our attention
SPB6*	a) This particular supplier is obviously planning for the future of our business relationship b) This particular supplier sets explicit objectives for the future of our business relationship c) The supplier discusses questions with us that are important for the strategic development of our business relationship
SPB7*	a) The supplier is interested in both parties gaining from the relationship in the long run b) The supplier always behaves fairly in negotiations with us c) The supplier always shows appropriate respect
SPB8*	a) The supplier looks at each conflict separately, irrespective of who we are and the total volume of our business b) The supplier reflects on the reasons behind conflicts c) In conflicts, the supplier looks for specific solutions that help our business relationship along
SPB9*	a) The supplier frequently mentions the sources of power at his disposal to get his own way b) The supplier does not hesitate to place pressure on us in situations of conflict c) The supplier uses instruments of power only if that does not threaten the future of our business relationship
<b>Product Quality = ‘PQ’</b>	
PQ1	The product/service supplied is very important for our firm
PQ2	The supplier normally delivers the relevant product/ service in excellent quality
PQ3	The price of this supplier’s product/service is very important to us
PQ4	This supplier’s product/service is highly geared to our needs
<b>Non-personal Communication = ‘NC’</b>	
NC1	This supplier has positioned itself in the market as a brand
NC2	This supplier has a positive image in the market
NC3	This supplier receives frequent press coverage
NC4	This supplier’s advertising is easy to remember

<b>Brand Perception = ‘BP’</b>	
BP1	Just as for people, houses and other objects, we also have inner images of brands, firms and shops. Please call to mind your inner image of this specific supplier. How clear and vivid is it in your mind?
BP2	Inner images can be attractive or unattractive, regardless of how clear and vivid they may be. How attractive or unattractive is this supplier’s image in your mind?
BP3	I frequently hear of or see the supplier
BP4	This supplier makes an impression because of its clear positioning
<b>Brand Strength = ‘BS’</b>	
BS1	I like this supplier
BS2	I trust this supplier
BS3	If this supplier were to leave the market, I would strongly regret it
<b>Brand Loyalty = ‘BL’</b>	
BL1	We firmly intend to keep up the business relationship with this supplier as long as possible
BL2	I gladly recommend this supplier in talks with colleagues
BL3	I would be willing to serve as a reference for this supplier
BL4	We will repurchase from this customer in the future
BL5	We expect to continue the business relationship for a long time