Influence of Sales Force on B To B Brand Equity in Iranian Industrial Oil and Gas Companies

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ABSTRACT: It has been recognized that brands play a role in industrial markets, but to date a comprehensive model of business-to-business (B2B) branding does not exist, nor has there been an empirical study of the applicability of a full brand equity model in a B2B context. Furthermore, it could have hardly found a conceptual framework explaining the influence of the sales force on brand equity relative to the product and promotion elements of the marketing mix, in the context of business-to-business marketing. In this paper, Six research hypotheses, relating to the effects of four key drivers of B-to-B brand equity identified in a review of the relevant literature, were empirically tested with a sample of 150 respondents in B-to-B Iranian oil and gas Iranian firms using partial least squares analysis. The results delineate the high importance of the sales force to the creating and maintenance of a strong B-to-B brand. The most important factor of brand equity is the salesperson’s behavior, followed in sequence by his or her personality, product quality and non-personal marketing communications. The findings are relevant for marketing practitioners, researchers and managers as a starting-point for their B2B brand equity research.

Key words: Brand equity, B-to-B branding, Sales force behavior, Sales force personality.

INTRODUCTION

Powerful brands create meaningful images in the minds of customers (Keller, 1993). A strong brand image and reputation enhance differentiation and has a positive influence on buying behaviour (Gordon et al., 1993; McEnally and de Chernatony, 1999). While the power of branding is widely acknowledged in consumer markets, the nature and importance of branding in industrial markets remain under-researched. Many business-to-business (B2B) strategists have claimed that brand-building belongs in the consumer realm. According to many practitioners, it is the personal interaction between buying and selling centers that makes the difference that matters in markets characterized by increasingly commoditized products. It is thus reasonable to assume that the perception of B-to-B brands will be strongly influenced by the quality of personal communication with customers and the emotions that result from human interaction. From this perspective, it is people rather than products that generate B-to-B brand equity. B-to-B brands, in turn, have been found to be of increasing value in industrial markets (Mudambi, 2002; Ohnemus, 2009).

However, marketing scholars have not always taken the importance of B-to-B branding as a given. For instance, Kotler and Pfoertsch (2007) have recently observed that, in industrial marketing, “things are different – branding is not meant to be relevant”. As decision making is widely seen as a predominate rational process (Rosenbro, 2001), the emotional aspects of branding are perceived as being inappropriate. 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 organizational purchasers, like final consumers, may be influenced by emotional brand attributes”. The sales function plays a highly important role in this respect: salespeople do not just explain product features and negotiate prices, they also shape brand perceptions as part of the interpersonal communication process. Thus, this paper investigates the impact of sales force on brand equity in B-to-B markets.

Brand equity in business markets

Different sources of brand equity have been proposed. Aaker (1996), for example, proposes brand awareness, associations, other proprietary assets, perceived quality and loyalty; though, there is no distinction made between consumer and industrial brands. The differences between consumer buyer and organizational buyers have been found to differ in their type of purchase and decision processes (Thompson et al., 1998; Wilson and Woodside, 2001; Mudambi, 2002). It would seem reasonable that what makes a brand valuable in a B2B context will differ from that in a consumer environment. The
most comprehensive brand equity model available in the literature is Keller’s model (1993). Keller claimed that the customer-based brand equity (CBBE) model can be applied in a B2B context, but no empirical evidence available.

According to the CBBE model, building a strong brand involves four steps: (1) establishing the proper brand identity, that is, establishing breadth and depth of brand awareness, (2) creating the appropriate brand meaning through strong, favorable, and unique brand associations, (3) eliciting positive, accessible brand responses, and (4) forging brand relationships with customers that are characterized by intense, active loyalty. Achieving these four steps, in turn, involves establishing six brand-building blocks—brand salience, brand performance, brand imagery, brand judgments, brand feelings, and brand resonance.(Keller, 1993).

Lynch and de Chernatony (2004) defined 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 (Lehmann and O’Shaughnessy, 1974; ; Saunders and Watt, 1979; Gordon et al.,1991; Mudambi et al.,1997). 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, which makes 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). Given the importance of the sales function, however, it is surprising that salespeople and their emotional potential are seldom seen as a starting point for differentiation. In a rare acknowledgment of the relevance of the organizational 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. Emotions are not conveyed via advertising, but rather through personal interaction between selling and buying centers. 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).

**Sales force**

A company’s salespeople are one channel for the communication of a brand’s attributes, especially in service oriented industries. Their interactive and persuasive capabilities translate into emotions, such as trust, and thus have a significant effect on brand equity. 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).

Another 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 analyzed the effects of different aspects 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. Given the underestimated role of emotions in industrial markets, there is no compelling argument to suggest that such causal relationships should not apply to B-to-B brands as well.

**Hypothesis development**

Previous studies suggest that there are relationships between marketing activities and brand equity (Madhavaram, Badrinarayanan, and McDonald, 2005; Volckner and Sattler, 2006); and how brand equity relates to business performance (Kim and Kim, 2005).

In this paper, four research hypotheses concern 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 behavior 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 following hypotheses:

H1. The salesperson’s personality has a positive influence on the brand perception in Business sector.

H2. The salesperson’s behavior has a positive influence on the brand perception in Business sector.

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, 2001). This argument is also supported by some B-to-B branding papers (Hutton, 1997; Webster and Keller, 2004). So:
H$_3$. Product quality has a positive influence on a brand perception in Business sector.

H$_4$. Non-personal communication has a positive influence on a brand perception in Business sector.

The final set of two hypotheses relates 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 behavior whereas brand loyalty is the pivotal behavioral outcome (Chaudhuri and Holbrook, 2001).

H$_5$. Brand perception has a positive effect on brand strength, in a Business sector.

H$_6$. Brand strength has a positive effect on a brand loyalty, in a Business sector.

Figure 1 delineates the described model of the influence of the sales force on business-to-business brand equity connecting the six hypotheses from the four marketing antecedents via brand perception and brand strength to final outcome of brand equity, brand loyalty.

![Figure 1. Conceptual Model](image_url)

**MATERIALS AND METHODS**

Sampling and data collection: The study was carried out in the 50 oil and gas firms in Iran (Tehran) such as Tehran refinery, Jam petrochemical, Abadan refinery and data were collected from marketing/sales managers and sales/marketing experts of mentioned company. The total of 250 questionnaires was distributed electronically. After eliminating those who completed incorrectly or missing too many questions, Totaling 150 usable questionnaires were collected.

Given the need to test a structural equation model with unobservable constructs, the methodological choice is between a covariance-based approach, such as 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 have been turning to the latter (Fornell, 1992; Hennig-Thurau et al., 2006; Hulland, 1999).

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 them with others identified in interviews with branding and sales experts. Questionnaire lists the 45 specific items generated. Respondents’ answers were recorded on 11-point Likert type 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 relating to the personality traits of salespeople (Badovick et al., 1992; Churchill et al., 1985; Homburg et al., 2007), on social skills (McBane, 1995) and to professional skills (Homburg et al., 2007; Spiro and Weitz, 1990; Weitz et al., 1986). A formative measurement scale was custom-constructed.

The measurement of the second construct, “salesperson’s behavior”, is drawn from relational contract theory (Macneil, 1980), supplemented by inputs from Dwyer et al. (1987). The two scales, adapted for use in Iran, were derived from Beutin (2000) and Ivens (2002). The nine factors were measured by multi-item scales, for each of which an index was calculated. The nine indices were the basis for this 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 by Vickery et al. (1994) and Garvin (1987),
adapted to suit the Iranian Business environment in a series of workshops with marketing professionals. Non-personal communication was measured by four items, 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 (Chaudhuri and Holbrook, 2001; Musiol et al., 2004). The final construct, brand loyalty, measured the outcome of a strong B-to-B brand via five items (Baumgarth, 2008; Homburg et al., 2003).

RESULTS

In this paper, generated data relating to both formative and reflective constructs were examined. 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” for confirmative factor analysis (proposed by Churchill (1979), Bagozzi et al. (1991), and Gerbing and Anderson (1988).

Table 1. Measurement model

<table>
<thead>
<tr>
<th>Salesperson = “SP” (formative, max VIF 5 4.93)</th>
<th>Non-personal communication = “NC” (reflective, a 5 0.75, x2/df 5 2.33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>SP1</td>
<td>7.35</td>
</tr>
<tr>
<td>SP2</td>
<td>7.58</td>
</tr>
<tr>
<td>SP3</td>
<td>6.78</td>
</tr>
<tr>
<td>SP4</td>
<td>7.63</td>
</tr>
<tr>
<td>SP5</td>
<td>7.69</td>
</tr>
<tr>
<td>SP6</td>
<td>7.60</td>
</tr>
<tr>
<td>SP7</td>
<td>6.69</td>
</tr>
<tr>
<td>SP8</td>
<td>8.12</td>
</tr>
<tr>
<td>SP9</td>
<td>7.51</td>
</tr>
<tr>
<td>SP10</td>
<td>7.39</td>
</tr>
<tr>
<td>SP11</td>
<td>7.15</td>
</tr>
<tr>
<td>SP12</td>
<td>8.21</td>
</tr>
<tr>
<td>SP13</td>
<td>7.61</td>
</tr>
<tr>
<td>SP14</td>
<td>7.68</td>
</tr>
<tr>
<td>SP15</td>
<td>6.84</td>
</tr>
<tr>
<td>SP16</td>
<td>7.19</td>
</tr>
</tbody>
</table>

Notes: Reflective constructs: Cronbach’s Alpha: a >= 0.7; Chi-Square/ Degrees of Freedom (x2/df) <= 5; Normed Fit Index (NFI) >= 0.9; Comparative Fit Index (CFI) >= 0.9; Standardized Root Mean Residual (SRMR) < 0.1; Formative constructs: max. Variance Inflation Factor (VIF) <=10
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 \(\frac{1}{4}\) 1,000 cases), and also by the usual tests for multicolinearity. Table 1 summarizes the descriptive statistics, item loadings (reflective constructs) or weights (formative constructs), and the global fit criteria. 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 yielded 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 \(\frac{1}{4}\) 0.977; NIF \(\frac{1}{4}\) 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 behavior resulted in some items exhibiting a fairly low weight and others a negative sign. These variables contributed 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 (Jo¨reskog and Wold, 1982) or should not (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.

### Table 2. Estimated effects within the causal models

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Coefficient</th>
<th>T-value</th>
<th>Acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>0.244</td>
<td>3.42</td>
<td>Fully accepted</td>
</tr>
<tr>
<td>H2</td>
<td>0.423</td>
<td>5.78</td>
<td>Fully accepted</td>
</tr>
<tr>
<td>H3</td>
<td>0.142</td>
<td>2.33</td>
<td>Fully accepted</td>
</tr>
<tr>
<td>H4</td>
<td>0.090</td>
<td>1.84</td>
<td>Partially accepted</td>
</tr>
<tr>
<td>H5</td>
<td>0.740</td>
<td>22.39</td>
<td>Fully accepted</td>
</tr>
<tr>
<td>H6</td>
<td>0.781</td>
<td>25.24</td>
<td>Fully accepted</td>
</tr>
</tbody>
</table>

Notes: H1,H2,H3,H5,H6 hypothesis confirmed (p < 0.01); H4 hypothesis; Confirmed (p <0.1)

The data were analyzed by the Smart PLS software, and the hypotheses tested by means of bootstrapping (n \(\frac{1}{4}\) 1,000 cases). For the dependent brand-related variables, the explained variances (R2) and predictive power (Q2) were calculated. Table 2 displays the results of those hypothesis tests.

Almost all coefficients were strongly significant (p <0.01) and in the expected direction, which confirms the nomological validity of the constructs, and supports H1, H2, H3, H5, and H6. H4 is only partially supported by the results of the empirical test, at p <0.1. The variables in the model collectively explained 59 per cent of the variance in brand perception, 55 per cent with respect to brand strength and 61 per cent in the case of brand loyalty. The model was moreover found to have good predictive power, the “Stone-Geisser test” (Chin, 1998) yielding a Q2-value of 0.30 for brand perception, 0.39 for brand strength and 0.44 for brand loyalty, all of which were above zero.

To sum it up, all four hypothesized drivers had a significant and positive influence on brand perception, in the B-to-B context, and ultimately on brand strength and brand loyalty.

The two sales force variables, salesperson’s personality and salesperson’s behavior, explained about three quarters of B to-B brand equity; personality \(\frac{1}{4}\) 27 per cent; behavior \(\frac{1}{4}\) 47 per cent. On the other hand, the two elements of the marketing mix shared only about a quarter: product quality \(\frac{1}{4}\) 16 per cent; non-personal communication \(\frac{1}{4}\) 10 per cent.

### DISCUSSION AND CONCLUSION

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. This study confirms these assumptions. Furthermore, our data clarify that salesperson’s behavior 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 an independent variable.

The above 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; see, 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, arranged in sequence, and 12 items. In particular, integration of brand imagery into the measurement of brand perception could be a fruitful direction for further research.
Limitation and recommendation

This study had an overtly exploratory objective. With hindsight, somehow the scales may have been too long. In particular, the scale for the measurement of the sales behavior needs further purification for future applications. In addition, the formative character of both sales force constructs lowers the possibility to evaluate the quality of the scales. In future studies, the conduct of an expert validation (Anderson and Gerbing, 1991) or the combined use of a formative and a reflective scale (Diamantopoulos and Winklhofer, 2001) can improve the quality of the measurement model concurrently.

Our conceptual framework is a relatively simple one which, for example, implies independence of the four considered drivers. Further research should allow for interdependence among the four drivers and also the effect of the level of integration on them. For example, the concept of integrated marketing communication (Schultz et al., 1993) recommends a fit among the various communication instruments. Here, the integration of non-personal marketing communications and the personal communication of the sales force could be an important driver of B-to-B brand equity.

Furthermore, we feel that such associated management topics as the sales-marketing interface, or the moderating effect of corporate culture and corporate brand orientation on the causal relationships, are interesting issues for further consideration for Iranian industrial firms especially oil and gas field.

REFERENCES


