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Industrial brand value and relationship performance in business markets — A general structural equation model

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Abstract in Korean

본 연구는 브랜드자산 구성요소에 대한 기존 문헌의 고찰을 통해 그동안 그 중요성에도 불구하고 산업재 시장에서는 거의 다루어지지 않고 있는 브랜드 자산형성 요인의 일반적 구성모델을 제시하고 있다. 구조방정식모델을 통해 브랜드 태도형성 요인인 브랜드 인지/연상, 브랜드 가치, 브랜드 전환비용, 브랜드만족, 브랜드 충성도 및 관계몰입과 기업성과 및 구매자가치에 미치는 영향을 분석하였다.

기업성과 및 구매가치에 영향을 미치는 8 가지의 브랜드 자산요인들에 초점을 두고 있다. 실증분석은 산업재 구매자를 대상으로 설문조사하였는데 구조방정식에 의한 모델분석 결과, 브랜드에 대한 태도를 형성하는 요인인 브랜드 인지/연상, 브랜드 가치, 서비스 품질은 브랜드 충성도에 유의한 영향을 미치는 것으로 나타났으며 브랜드에 대한 행동을 형성하는 요인인 브랜드 전환비용, 브랜드만족 또한 브랜드 충성도에 유의한 영향을 미치는 것으로 나타났다. 그리고 각 영향요인들이 브랜드 충성도에 미치는 정도를 파악해 보았을 때 주요 영향요인들은 브랜드에 대한 태도를 형성하는 요인들 보다는 브랜드에 대한 행동을 형성하는 요인들인 것으로 나타났다. 이와 더불어 브랜드 충성도가 클수록 공급자-조직구매자 간의 관계몰입과 기업성과 및 구매가치가 더 높은 것으로 나타났으며 관계몰입은 브랜드 충성도와 구매가치, 기업성과에 더 중요한 매개적인 역할을 하는 것으로 나타났다.

ABSTRACT

This paper develops a general model of industrial brand value and relationship performance in business-to-business markets from the perspectives of consumer and industrial marketing literature. The structural equation model integrates the analysis of industrial brand value and relationship performance. The model describes the extent to which supplier–buyer transaction performance is influenced by the eight important factors: supplier competence, purchasing value, customer satisfaction, switching cost, brand trust and loyalty, relationship quality, commitment, and transactional performance.

The general model is applied to organizational buyer groups of comprehensive industrial markets (Electronics, Chemicals, Equipment, etc). The analysis finds that supplier competence directly affects purchasing value and customer satisfaction, and via purchasing value and customer satisfaction, it indirectly affects commitment, switching cost, brand trust and loyalty. The managerial implications of the study results are also discussed.

1. Introduction

While brands and their management have dominated the marketing of goods and services to consumers, industrial brands have been slow to take hold in business-to-business marketing area. This issue results in part from the belief that because brands are irrational, they have little significance when dealing with an organizational buyer (OB) that makes buying decisions on a rational basis (Bendixen, Bukasa, & Abratt, 2004). Discussions of marketing in technical fields have largely focused on the performance characteristics of products or on the manner in which products address buyer needs (Doney & Cannon 1997; Lages & Lages, 2005). However, it has been noted that

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the price and tangible attributes of a physical product cannot always fully explain purchasing decisions, as intangibles such as overall supplier reputation matter even in rational and systematic decision making (Mudambi, Doyle, & Wong, 1997).

The question that arises is whether rational, well-trained professional industrial buyers who normally operate within buying centers can be influenced by brand images that are based on nonfunctional and subjective attributes. According to Gorden, Calantone, and di Benedetto (1993), business-to-business product and service providers stand to gain sustainable competitive advantages through the development and strategic use of brand equity, particularly when competing in today's global economy. By investing in a brand image that is likeable, strong, and positive among all stakeholders, industrial marketers may reap, albeit to a lesser degree, the same benefits that consumer marketers enjoy.

Industrial brand loyalty and trust are the main brand-value-generating variables. Two lessons may be derived from this fact. First, a loyalty and trust claim can only be effective if there is substance to the claim. Industrial marketers have to make sure their efforts to build a positive brand value are not undermined by poor supplier competence, purchasing value, and organizational buyer satisfaction. Second, simply creating a brand value is not enough. Industrial marketers have to translate brand value into supplier–buyer relationship performance. Industrial customers deliberately make it difficult for suppliers to determine who actually makes buying decisions. Therefore, industrial marketers must create a brand value that is seen as positive by all stakeholders associated with the company. To achieve this, the supplier company must look beyond marketing communication and develop a total corporate communication program to augment the corporate brand.

This study tests a general construct model that describes the extent to which transactional performance in the industrial market is influenced by supplier competence, purchasing value, organizational buyer satisfaction, switching cost, brand trust, brand loyalty and relationship commitment, and relationship quality. More generally, this study investigates the effect of brand values on business relationships between industrial buyers and suppliers. Factors hypothesized to influence values in a brand include brand characteristics (supplier competence, purchasing value, organizational buyer satisfaction, switching cost, brand trust and loyalty), relationship commitment, relationship quality, and transactional performance.

This study aims to fill gaps in the largely fragmented field of industrial brand value research by offering an empirically verified general theory. Some related studies sought to determine the basic antecedent variables to increase brand value (Hocutt, 1998). Other studies, such as those of Bitner, Booms, and Tetreault (1990) and Price, Arnould, and Tierney (1995), have considered either a single incident or critical encounters, as well as the longitudinal interactions or relationships between these variables.

Despite the fact that research in this area largely relies on stochastic and deterministic approaches to industrial brand value, few comprehensive, empirically tested, structural models of the customer retention process are evident in the marketing literature. Even the understanding of the inter-relationships between brand value perceptions, or how these relate to overall supplier–buyer relationships, appears unclear. Furthermore, a customer behavior modl that holistically defines the processes by which customers choose between several competing brands or providers is still to be developed. Some progress has been made to this end by evaluating the known alternatives that are factored into customer assessments and disconfirming expectations (Boulding, Kalra, Staelin, & Zeithaml, 1993). While this approach measures the difference between pre and post consumption assessments, it provides only a partial explanation of how industrial customer retention mechanisms might operate (Bagozzi, Gopinath, & Nyer, 1999; Price et al., 1995).

This paper examines the following industrial brand value issues within the general supplier–buyer environments of the comprehensive industrial market:

- What is the impact of industrial supplier competence on purchasing value and organizational buyer satisfaction in the industrial market?
- How does purchasing value impact organizational buyer satisfaction?
- What is the effect of purchasing value and organizational buyer satisfaction on brand trust and loyalty?
- How does organizational buyer satisfaction relate to switching costs?
- How does brand trust and loyalty impact relationship quality and commitment?
- What is the impact of transactional performance on relationship quality and commitment?
- How does supplier competence contribute to industrial supplier–buyer commitment?
- What is the effect of relationship quality and commitment on transaction performance?

2. The research model

Several researchers have found satisfaction and attitude to be major antecedents of brand value (Innis, 1991; Roest & Pieters, 1997). In this context, OB satisfaction and purchasing value reflects the overall level of industrial customer pleasure and contentment that results from experience with supplier competence. Attitude is the customer's positive, neutral or negative learned disposition (often as a result of past evaluative experiences), with respect to the good or service, company, or brand value under consideration (Roest & Pieters, 1997). However, the precise relationship between brand value constructs and transactional performance for industrial transactions remains unclear. In the literature, different terms have been used for similar or closely related brand value constructs.

Examples of terms used are, buyer satisfaction (Fornell, Johnson, Anderson, Cha, & Bryant, 1996), brand choice (Manrai, 1995), loyalty (Elena & Jose, 2001), value (Crosby & Stephens, 1987), competence (Lerner & Almor, 2002), brand preference (Mantel & Kardes, 1999) and brand trust (Elena & Jose, 2001).

This paper purports that a separate and distinct evaluation of alternatives (brand value) must precede an understanding of supplier–buyer relationship performance (Doney & Cannon 1997; Ganesan & Shanker, 1994; Kalwani & Narayandas, 1995). Thus, the major antecedents to relationship performance, as developed for the conceptual model presented herein, are: supplier competence → purchasing value → OB satisfaction → brand trust and loyalty → relationship performance:

The research model, shown in Fig. 1, delineates the key factors that precede industrial brand value and relationship performance. The model components are defined as follows:

- *Transaction performance*. An industrial buyer's perception of the economic and managerial performance of a specific transaction relative to past transactions with the same supplier, taking into account the current situation and likely circumstances.
- *Commitment*. An exchange partner's belief that an ongoing relationship with another partner warrants maximum efforts related to its maintenance.
- *Relationship quality*. The amount of information sharing, quality of communication, long-term relationship orientation and satisfaction associated with a relationship.
- *Switching cost*. An industrial buyer's estimate of the personal loss or sacrifice in time, effort and money associated with changing suppliers.
- *Brand loyalty*. The degree to which an industrial buyer has repeatedly purchased a particular supplier's brand during recent

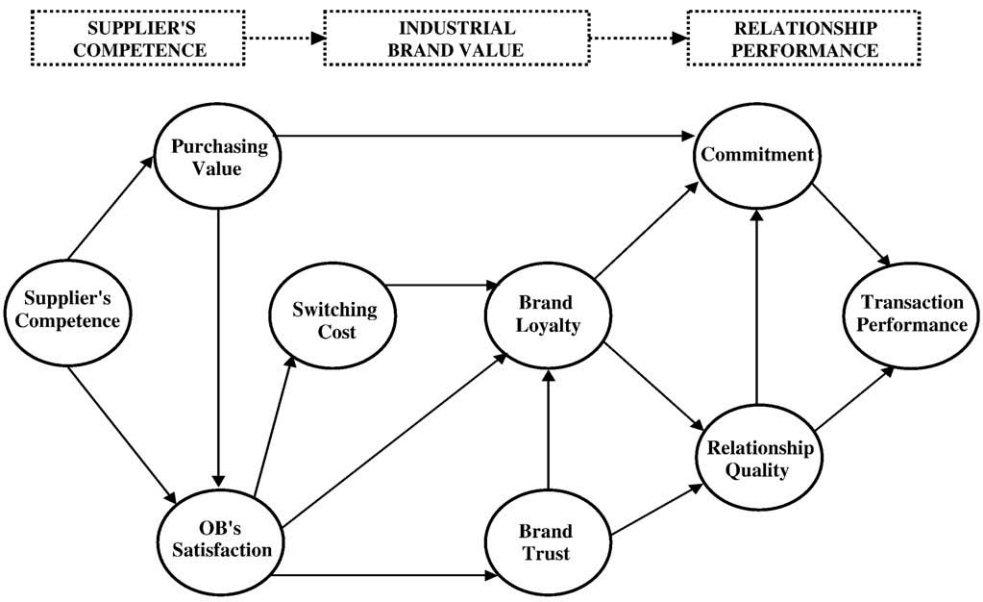


Fig. 1. The conceptual model.

years, tempered by the significance of that expenditure in terms of the buyer's total outlay for that type of product.

- *Brand trust*. A confident, positive and reliable expectation regarding a particular supplier's brand.
- *Industrial buyer satisfaction*. An industrial buyer's overall sense of pleasure or contentment that is derived from the fulfillment of desires, expectations and needs related to a transaction.
- *Purchasing value*. An industrial buyer's overall appraisal of the net worth of a particular transaction, based on the buyer's assessment of what is received (benefits provided by the transaction) and given (costs of acquiring and utilizing the transaction).
- *Supplier competence*. An industrial buyer's overall assessment, in terms of established standards, of the delivery process, product quality, price, technology, and supply management ability.

The theoretical basis for the research model presented herein has been derived from several industrial marketing and service marketing literatures.

The model is developed from Oliver's (1981) interpretations of OB satisfaction, purchasing value and supplier–buyer relationships, and from the analyses of customer perceptions of performance by Cronin and Taylor (1992) and Zeithaml (1988). The model also incorporates the defensive factors related to switching that were identified by Fornell et al. (1996).

The inter-relationships between industrial customer retention factors can be analyzed at the micro- or macro-transaction level. The model presented herein adopts a macro framework, for it acknowledges brand value as being formed by a general assessment of a supplier and of multiple historical transactions with said supplier (Liljander & Strandvik, 1995).

Supplier competence is an important antecedent to industrial customer satisfaction (Cronin & Taylor, 1992; Fornell et al., 1996). Purchasing value is also an important determinant of OB satisfaction and supplier competence has been identified as an antecedent to purchasing value.

The factors that influence buyer satisfaction have been measured in numerous ways (Erevelles & Leavitt, 1992). The performance compared to expectations approach (expectations-disconfirmation) has often been used in the analysis and measurement of service quality and satisfaction (Parasuraman, Zeithaml & Berry, 1991). However, Cronin and Taylor (1994) found that for cross-sectional studies, measures based solely on performance may better reflect long-term supplier competence. Zeithaml, Berry, and Parasuraman (1996) maintain that the performance–expectations difference measure adequately diagnoses service shortfalls. However, the perception approach is more appropriate when competence is measured primarily to explain the variance in some dependent construct. Accordingly, the antecedents to satisfaction are modeled herein by taking the perceived performance approach.

Factors that influence brand loyalty and trust may also be measured and defined through multiple approaches (Bettman, Luce, & Payne, 1998; Manrai, 1995). A literature survey and an exploratory analysis conducted prior to the primary study identified several factors as antecedents to brand loyalty and trust. These factors are: purchasing value; satisfaction (Oliver, 1981); and the defensive factors, past loyalty and expected switching cost (Roselius, 1971). In addition, brand loyalty and trust have been found to contribute to supplier–buyer relationship quality (Lages & Lages, 2004) and commitment (Morgan & Hunt, 1994). The aforementioned factors are integrated by the model developed herein.

2.1. Supplier's competence

In the industrial market, a competent supplier maintains the ability to solve the problems or meet the needs of an organizational buyer. Ability refers to skills and characteristics that enable a party to have influence within a domain (Butler, 1991). Supplier competence may be experienced directly by an industrial customer, or may be related to an industrial customer by those with a relevant transactional history. Regardless of how, an industrial customers confidence must be won before he or she will rely upon a supplier. Swan, Trawick, and Silva (1985) found that industrial salespeople are better trusted when perceived as competent.

An industrial buyer's perception of purchasing value can be positively influenced by supplier competence and negatively influenced by perceived price (Chang & Wildt, 1994). There is not necessarily a positive relationship between perceived ability or competence and perceived value; lower ability or competence may sometimes result in a greater value for customers because the shortfall is tempered by a low overall price (McDougall & Levesque, 2000). Still, many studies have established positive relationships between perceived supplier ability and perceived value. Given the above, it is hypothesized

that, if other factors are held constant, an increase (decrease) in supplier competence will be accompanied by an increase (decrease) in perceived purchasing value. That is:

H1-1. In the industrial market, supplier competence is positively related to perceived purchasing value.

Several studies have found that perceptions of supplier competence affect customer satisfaction following a purchase transaction (Erevelles & Leavitt, 1992). Accordingly, overall buyer satisfaction is often understood by market researchers to be a consequent variable of ability and other processes (Szymanski & Henard, 2001).

The research literature also supports the view that dissatisfied customers who successfully obtain redress (procedural, distributive and interactional justice) are likely to experience improved overall satisfaction with the transaction. The relationship between supplier ability and satisfaction is not universally agreed upon at either the transaction-specific or global level of analysis (Taylor & Baker, 1994). Some analysts treat supplier ability or competence as a relatively stable variable that embodies a buyer's perception of transactions through time, which is influenced as buyers experience satisfaction or dissatisfaction with specific transactions over time (Athiyaman, 1997). Other researchers represent the relative attributes of supplier competence (product quality, delivery, price, technology, spares lead time, need recognition) as antecedents, rather than results, of satisfaction (Fornell et al., 1996).

Furthermore, some studies, upon examining the causal order between organizational buyer perceptions of overall supplier competence and customer satisfaction, find it difficult to empirically establish that one precedes the other (Taylor & Cronin, 1994). Even where supplier competence is understood to be antecedent to satisfaction, some researchers indicate that there increases in competence yield diminishing returns in satisfaction. It has also been argued that supplier competence (quality, delivery, technology, need recognition) may not be a significant determinant of OB supply assessments when the service has high credence attributes. This paper tests the view that supplier competence is a direct positive antecedent to organizational buyer satisfaction. That is:

H1-2. In the industrial market, supplier competence has a positive effect on buyer satisfaction.

2.2. Purchasing value

Recently, conceptual frameworks have been developed that integrate industrial buyer purchasing value and satisfaction (Liljander and Strandvik, 1995; Woodruff, 1997). To date, however, only a small number of studies have provided empirical evidence of the causal links between purchasing value and satisfaction (Cronin, Brady, & Hult, 2000).

The proposed relationship between purchasing value and industrial buyer satisfaction is supported by value disconfirmation experiences. When a single purchase of a product or service is made, the customer expects to receive a benefit greater than the cost; that is, the customer expects to receive value. Any unexpected reductions or increases in the cost incurred or benefit received constitute alterations in the purchasing value. Alterations in purchasing value cause increases or decreases in OB satisfaction, which in turn influence subsequent customer value expectations, purchasing behavior and overall customer satisfaction (Voss, Parasuraman, & Grewal, 1998; Woodruff, 1997). Thus, OB perception of overall service values positively impacts overall satisfaction with customer service.

The proposed purchasing value–OB satisfaction relationship is also supported by the argument that in situations where a particular supplier comprises multiple choice options, customers do not simply consume value. That is, industrial customers select options that best create value for themselves (i.e. added value) and increase their purchasing satisfaction (Rosen & Surprenant, 1998). In line with this discussion, we contend that purchasing value should be a direct antecedent of satisfaction and therefore, we hypothesize:

H2-1. In the industrial market, purchasing value has a positive effect on the organizational buyer satisfaction.

The proposition that value has a direct positive effect on buyer–supplier commitment is consistent with the early works of Jacoby and Kaplan (1972), which established that financial risk is the major risk perceived by customers purchasing life insurance. Since then, few studies have examined aspects of the value-commitment association (Sinha & DeSarbo, 1998).

However, recent evidence by Erdem and Swait (1998) provides direct support for the causal link between buyer purchasing value and supplier–buyer commitment. In accordance with these arguments and those put forward in the previous section, we propose hypothesis H2-2:

H2-2. Purchasing value has a positive effect on supplier–buyer commitment in the industrial market.

2.3. Organizational buyer satisfaction

Opportunity cost analysis suggests that satisfaction has a positive causal effect on the expected disadvantage or cost associated with switching suppliers. That is, *ceteris paribus*, the opportunity cost associated with switching one's supplier increases with increasing levels of organizational buyer satisfaction.

However, the positive relationship between satisfaction and switching cost may be confounded in the short term when companies adopt defensive marketing strategies that utilize switching costs in the retention of dissatisfied buyers (Fornell et al., 1996). In the long-term, however, the efficacy of retaining dissatisfied buyers through switching cost barriers is probably quite limited (Jones et al., 2000):

H3-1. Organizational buyer satisfaction has a positive effect on expected switching cost.

A direct positive relationship between buyer satisfaction and brand trust is supported by a wide variety of product and service studies (Bolton, 1998). These studies establish that overall customer satisfaction with a transaction is strongly associated with the behavioral trust to return to the same service provider. However, it must be kept in mind that the direct positive relationship between satisfaction and brand trust is a simplification of the matter. While buyer satisfaction is a major factor, it is only one of the many variables that can impact brand trust (Mittal & Lassar, 1998; Sharma & Patterson, 2000).

OB satisfaction can influence attitudinal change (e.g. service and supplier preference), which can in turn affect brand trust (Stauss & Neuhaus, 1997). A high level of satisfaction is likely to increase the probability that the brand in question will be retained in the industrial buyer's consideration set and will increase the buyer's trust for the brand:

H3-2. Organizational buyer satisfaction has a positive effect on industrial brand trust.

It has been argued that supplier–buyer relationships are built one interaction at a time (Bitner, 1995). A series of very positive encounters will increase organizational buyer satisfaction, trust, relationship commitment and continuity (Morgan & Hunt, 1994). However, the positive relationship between satisfaction and loyal behavior has been challenged in the literature (Stauss & Neuhaus, 1997).

In general, it is argued that the buyer is influenced by a mixture of positive and negative bonds. Negative bonds (e.g. buyer inertia, brand promotion, buyer information processing limitations, supplier monopoly) tie the OB to the industrial supplier, despite potentially low OB satisfaction with that supplier.

It has also been found that while dissatisfaction encourages switching, satisfaction does not ensure customer commitment and loyalty (Danaher & Mattsson, 1994). Bloemer and de Ruyter (1998),

and Bloemer and Kasper (1995) have established that the positive relationship between satisfaction and loyalty is moderated by the extent to which industrial buyers undertake brand expectation–performance comparisons. This paper tests whether there is a positive causal link between overall buyer satisfaction with a supplier and past patronage with that supplier:

H3-3. Organizational buyer satisfaction has a positive effect on industrial brand loyalty.

2.4. Switching cost

Switching cost makes changing providers more expensive (Grunhaug & Gilly, 1991). As this cost increases, customers are less likely to change suppliers (Sharma & Patterson, 2000).

This is why some suppliers expend considerable effort in building switching costs into their marketing strategies. That is, an industrial buyer's loyalty to a particular industrial supplier or supplier's brand will be greater with greater switching costs. Therefore:

H4-1. Organizational buyer satisfaction has a direct positive effect on switching cost.

2.5. Brand trust

The consideration of trust in the brand domain derives some important and interesting implications. First, the adaptation of an inherent quality of interpersonal relationships (i.e. trust) between the brand and the customer implies that the brand possesses some characteristics that afford it consideration as more than a mere product. This idea is far from new, as the perspective of the brand as a person has already been proposed by authors such as Aaker (1991), Fournier (1998), and qualitative researchers working for advertising agencies and consulting firms. Second, viewing the brand as the customer's partner in a long-term relationship implies that, at a broader level of abstraction and as a logical extension of the research on impression formation, the everyday execution of marketing plans and tactics can be considered as behaviors performed by the brand to maintain its relationship role (Fournier, 1998). That is, all decisions and activities carried out constitute a set of behaviors enacted on behalf of the brand. Finally, brand trust represents the recognition that brand value can be created and developed with the management of some aspects that go beyond a customer's satisfaction with the functional performance of the product and its attributes (Aaker, 1997).

According to the commitment-trust theory (Morgan & Hunt, 1994), trust is a key variable in the development of an enduring desire to maintain a long-term relationship with a brand. Thus, by not controlling for the effect of brand trust, excessive importance could be attributed to satisfaction when developing a customer base committed to the brand. In this sense, Garbarino and Johnson (1999) have demonstrated that satisfaction and trust play different roles in the prediction of future intentions for low and high relational customers.

The analysis of this dimension alone is not enough to explain trust when it is used to characterize the relationships developed from the psychological arena, especially in the business to business context. That is, in business to business interactions, there exists a certain dependence on delivering expected outcomes and performing activities. This different nature has led to the distinction of a second dimension in the concept that is related to the ability and capacity of a business to perform activities and fulfill obligations. Various concepts, such as ability (Mayer, Davis, & Shoorman, 1995), credibility (Ganesan & Shanker, 1994) and reliability have been applied to this dimension.

Among the many contacts with a brand, purchasing experience emerges as an especially relevant and important source of trust. This is because, according to Dwyer, Schurr, and Oh (1987), purchasing experience generates associations and feelings that are more self-relevant and certain. Thus, overall satisfaction generates trust (Ganesan & Shanker, 1994) because it indicates a brand's consistency in the fulfillment of its commercial promise and its maintenance of the industrial customer's welfare and interest. The preceding literature review demonstrates that little attention has been paid to 'brand trust' trust' despite the empirical and theoretical evidences supporting its relationship with satisfaction and loyalty (Morgan & Hunt, 1994).

The lack of such works, according to Hess (1995), can be explained by the newness of research characterizing customer–brand interactions as long term-relationships and by the lack of accepted brand trust metrics. In any case, the lack of significant studies of brand trust exists in sharp contrast with the variety of opinions (Fournier, 1998; Morgan & Hunt, 1994) that support trust as a contributor to positive attitudes and the commitment to a certain brand, which may be the maximum expression of a successful relationship between the customer and the brand. We hypothesize, then, that:

H5-1. Industrial brand trust has a positive effect on industrial brand loyalty.

Concerning the consequences of trust, Morgan and Hunt (1994) contend that trust is a central construct of any long-term relationship. Therefore, in the customer–brand context, trust may be an important contributor to the kind of emotional customer commitment that leads to long-term loyalty. Therefore, it seems reasonable to expect that greater feelings of trust in a brand will result in greater customer commitment to that brand. By accounting for customer involvement, on may postulate on the effect of brand trust on relationship quality.

The logical reasoning explaining this effect is that in situations of high involvement, brand trust will be a significant variable guiding the subsequent intentions of a customer. That is, brand trust moderates the perception of risk associated with situations of high involvement in the purchase and consumption process. Consequently, in situations of high customer involvement, brand trust may aid in the prediction of customers' future intentions even more significantly than overall satisfaction. If this were not the case, brand trust would not be as central a key intermediate construct in the brand loyalty model.

Improvements in supplier–buyer relationship quality yield, among other things, increases in the buyer's price tolerance (Aaker, 1997). Thus, trust is a key variable contributing to brand relationship maintenance, quality and commitment. The corresponding relationship hypothesized for the industrial customer's trust in a brand is:

H5-2. Industrial brand trust has a positive effect on relationship quality in the industrial market.

2.6. Brand loyalty

Brand value is derived from the overall brand image created by the totality of brand associations, perceived by industrial customers (Michell, King, & Reast, 2001). Therefore, the attainment of a positive image based on core values and any other values that differentiate the brand should be of the highest priority to any company. Aaker (1997) identified four major sources of brand value as brand loyalty, brand awareness, perceived quality, and brand associations, while Keller (1998) combines the sources of brand value into brand awareness and brand image.

The competitive advantage of firms that have brands with high value include the following: premium pricing; high customer demand; ease of brand extension; rapid acceptance of communications; improved trade leverage; increased margins; and the company will be less vulnerable to competitive marketing actions (Aaker, 1997; Keller, 1998).

The high dependence on price suggested a low effectiveness of manufacturers' brand management strategies. More recent studies show that branding in business-to-business has been successful. Shipley and Howard (1993) attempted to gain insights into the use of brand names, the nature of brand-name strategy, and the perceived

importance among industrial companies. They concluded that industrial customers perceive a benefit from using brand names, and that large firms valued the benefits of brand names more highly than small firms. In a study published in 2001, Michell et al. (2001) found that industrial companies believed branding to be important and provided competitive benefits and increased brand equity. Hutton (1997) studied professional buyers in the personal computer, copier, fax machine, and computer floppy disk industries. This study found brand equity to exist in industrial markets, as well as a brand equity "halo effect," or transfer of brand evaluations from one category to another. Due to this transfer, buyers were prepared to pay a premium for their favorite brand.

Brand loyalty is defined as "the degree to which an industrial buyer has repeatedly purchased a supplier's particular brand during recent years, tempered by the significance of that expenditure in terms of the buyer's total outlay for that type of product." Trust is more likely to be affective concept whereas brand loyalty is more close to the behavioral construct. In business-to-business market studies, many researchers (e.g. Dwyer et al., 1987; Doney & Cannon 1997) showed that trust is built upon the cumulation of customer satisfaction and similarly, we suggest that brand loyalty is made through the cumulation of trust in the specific brand. Shipley and Howard (1993) supports our hypothesis of brand loyalty and they showed the guide toward the measurement operationalization of industrial brand loyalty.

In 1993, Gordon et al. studied the U.S. electrical circuit breaker market and showed that brand value was quite relevant in the business-to-business sector. When an industrial customer places his or her loyalty in a brand, and shows a willingness to rely on that brand, that industrial customer is also likely to establish positive relationship quality with the supplier. Therefore:

H6-1. Industrial brand loyalty has a positive effect on relationship quality.

Brand loyalty exists in business-to-business markets in the form of buyers' willingness to pay a price premium for their preferred brand (Hutton, 1997). Benefits from brand-loyal industrial buyers include their willingness to recommend the brand to peers and to give special consideration to another product with the same brand name (Hutton, 1997). Brand loyalty has been identified as the primary brand-equity-generating variable (Michell et al., 2001).

The primary sources of information for building brand awareness are exhibitions and trade shows (Abratt, 1986). Different groups of decision-making unit role players attach different levels of importance to brands and prefer different communication channels (Ghinghold & Wilson, 1998). Thus, an industrial customer who places loyalty in a specific brand is likely to commit that particular relationship. We hypothesize, then, that:

H6-2. Industrial brand loyalty has a positive effect on commitment in the industrial market.

2.7. Relationship quality

The relatively recent emergence of the relationship-marketing paradigm in modern marketing thought consolidates the increasing importance given by marketing academics to managing, developing and evaluating relationships (Berry, 1995). Within this paradigm, the topic of relationship quality has stimulated a profuse production of scientific publications. Previous literature has measured relationship quality between service firms and their customers, between manufacturers/suppliers and distributors/resellers (e.g., Kumar, Scheer, & Steenkamp, 1995) and between salespeople and customers (e.g., Bejou, Wray, & Ingram, 1996).

Relationship quality (before, during and after transactions) can build or destroy relationships. Hence, it is crucial to develop a measure of relationship quality in an industrial context so that both researchers and practitioners might better understand and, consequently, handle relationships more efficiently. Moreover, because many academic and managerial resources are invested in better understanding relationships, it is essential to develop ways of evaluating their quality before ultimately assessing their impact on other key variables, such as performance.

In this study, relationship quality consists of the assessment of various episodes within an association (cf. Jap, Manolis, & Weitz, 1999), reflecting the overall strength of the relationship (cf. Smith, 1998). Relationship quality reflects the intensity of information sharing, communication quality, long-term orientation and satisfaction with the relationship between the supplier and buyer.

H7-1. Relationship quality has a positive effect on customer–supplier commitment.

This study builds on validated and reliable measurement scales from the strategy (Menon, Bharadwaj, & Howell, 1996; Menon, Bharadwaj, Adidam, & Edison, 1999) and relationship-marketing literatures (Cannon & Homburg, 2001; Ganesan & Shanker, 1994) to propose a multidimensional scale to assess relationship quality in an industrial context. This new multidimensional scale comprises four dimensions: (1) amount of information sharing in the relationship, (2) communication quality of the relationship, (3) long-term relationship orientation and (4) satisfaction with the relationship.

Our study furthers previous research by adapting and testing the four scales in a new relationship quality context, the customer–supplier relationship. More importantly, our study proposes the existence of an underlying commonality among the four different dimensions. Therefore, it tests an integrated approach to studying the relationship quality phenomenon by integrating the previously isolated measures into a unique multidimensional scale.

H7-2. Relationship quality has a positive effect on transaction performance in the industrial market.

2.8. Commitment

Commitment has typically been defined as someone's intention to continue a relationship. In this paper, we consider relationship commitment to be an exchange partner's belief that an ongoing relationship with another is important enough to warrant maximum efforts to maintain it. Our definition corresponds almost exactly with that developed by Moorman, Zaltman, and Deshpande (1992): "Commitment to the relationship is defined as an enduring desire to maintain a valued relationship." Their "valued relationship" corresponds with our belief that relationship commitment exists only when the relationship is considered important. Similarly, their "enduring desire to maintain" corresponds with our view that a committed partner wants the relationship to endure indefinitely and is willing to work at maintaining it. Thus:

H8-1. The strength of customer–supplier commitment has a positive effect on transaction performance.

3. Survey method

The data used to test the research hypotheses were gathered in a seven-page mailed and interviewed, random-sample survey of organizational buyers of industrial products (for example electronics, chemicals, and equipment). The questions were mainly answerable by seven-point Likert scales.

Of the 300 questionnaires dispatched, 279 usable responses were received. The response covered all geographical data and included a broad range of industries, sizes of firms, and respondent job titles, and no sources of non-response bias could be detected. The sample profile is shown in the Table 1. The research model contains nine factors. The Appendix lists the variable questions constituting each measurement factor. The indicators of each construct in the study were from a variety of sources. Some were established measures while others were modified or developed for this study.

Construct validity may be threatened when factors in a proposed relationship are not linearly related along the whole continuum of the independent factor. Scatter plot analysis of preliminary data prior to the primary study indicated that confounding constructs and the levels of constructs would not likely compromise the validity of the study. The internal consistency method (using Cronbach coefficient alpha and SMC-Squared Multiple Correlation) was used to examine the reliability of the scales. The coefficients for the variables are shown in Table 2.

Inspection of the inter-constructs correlation matrix and results from an AMOS 6.0 confirmatory factor analysis for all the items revealed no problems with convergent and discriminant validity. And inter-constructs belonging to the same scale-items had lower correlations (coefficients ranged from 0.13 to 0.77). Prior to testing the hypotheses, a confirmatory factor model was tested to assess measurement methods and to refine the metrics. Confirmatory factor analysis was carried out to determine the construct validity of the measures. Items meant to measure the same construct were clustered together, suggesting that they measured the same conceptual space. The coefficients for the variables are shown in Table 2.

The relationship between industrial brand values and relationship performance was then tested using structural equation modeling and a chi-square difference test. The brand value constructs (supplier competence, purchasing value, organizational buyer satisfaction, switching cost, brand trust and loyalty) changed in accordance with each of the other indicators, either remaining static or decreasing as shown in the table.

The resulting goodness-of-fit statistics showed a RMR of 0.05, GFI and AGFI greater than 0.90, and a chi-square statistic of more than 40.00. RMR and RMSEA were of an acceptable range, being lower than 0.05.

The indicators of each of the constructs were very good measures of variables and had high convergent validity, as evidenced by reliability indicator values of greater than 0.90. Also, the industrial relationship performance constructs (relqual, commitment, performance) changed in accordance with each of the other indicators and remained static or reduced as shown in the table. Tests showed an RMR of less than 0.05, GFI and AGFI greater than 0.900, and a chi-square statistic of more than 40.00. Some items were deleted, leaving those that reflected the cognitive dimension of importance rather than the dimension alone. The indicators were very good measures and had convergent validity as evidenced by a reliability indicator value of 0.90. These results indicate that for all constructs, the measurement adequately agrees with the sample data and is appropriate for use (Table 3).

Table 1
Sample framework

Sample characteristics		Frequency (N=242)	Percent (%)
Respondent age	21–30	102	42.1
	31–40	76	31.4
	41–50	40	16.5
	51–60	24	9.9
Range of industries	Electronics	36	14.9
	Electricity	53	21.9
	Engineering	32	13.2
	Chemicals	73	30.2
	Plastics	25	10.3
	Equipment	23	9.5
Respondent job title	Manager	115	47.5
	Director	55	22.7
	Managing director	39	16.1
	Chief officer	30	12.4
	Other	3	1.2
Transaction period	Less than one year	5	3.1
	1–2	94	38.8
	3–5	90	37.2
	6–10	41	16.9
	Above 10 years	12	5.0

Table 2
Inter-construct correlation

Construct	Mean score	Std. dev.	Inter-construct correlation								
			1	2	3	4	5	6	7	8	9
1. S.C.	3.42	.63	1.00								
2. P.V.	3.39	.85	.53	1.00							
3. B.S.	3.45	.65	.62	.25	1.00						
4. B.L.	3.51	.52	.15	.25	.48	1.00					
5. B.T.	3.44	.73	.22	.33	.59	.77	1.00				
6. S.C.	3.58	.87	.16	.18	.53	.14	.19	1.00			
7. R.C.	3.39	.71	.22	.23	.39	.59	.33	.26	1.00		
8. R.Q.	3.81	.79	.26	.18	.13	.54	.37	.24	.51	1.00	
9. T.P.	3.81	.97	.36	.28	.23	.44	.47	.34	.50	.49	1.00

Notes: S.C. – Supplier's Competence, P.V. – Purchasing Value, B.S. – Buyer's Satisfaction, B.L. – Brand Loyalty, B.T. – Brand Trust, S.C. – Switching Cost, R.C. – Relationship Commitment, R.Q. – Relationship Quality, T.P. – Transaction Performance.

4. Structural equation model analysis

A structural equation model was applied to the research model using AMOS 6.0. The scale for each factor was set by fixing the factor loading to one of its indicator variables and then applying the maximum likelihood estimation method. The resulting parameter estimates for the unstandardized solution are shown in Fig. 2.

Despite the statistical significance of the path coefficients, they should be interpreted with caution due to the use of the industrial survey response method. It should also be noted that the data are cross-sectional, so the directions of the effects in the model are ultimately supported by the theory underpinning the causal linkages of the model.

The SEM (Structural Equation Modeling) normed fit index for the research model was 0.966, GFI was 0.931, RMR was 0.035, RMSEA was 0.077, AGFI was 0.938, and CFI was 0.943, indicating that the model showed good agreement with the data. All the factor fit indexes to the indicator variables were highly significant, which supports the overall factor structure of the model. All except one path parameter between the factors were significant at α=0.05. However, the link between brand loyalty and commitment was not significant, and the Wald test suggested that the model fit could be improved by removing this path.

Once the brand loyalty–commitment path was omitted, the resulting model was applied to the data sets for the different companies and to data for respondents of different experience levels. In doing this, some limitations were found in relation to the direct path between commitment and brand loyalty. In particular, paths to and/or from loyalty were either not significant or were very weak for individual companies and when respondents were grouped by level of experience. In addition, the indicator variables for loyalty were narrowly defined in terms of past customer behavior (see discussion in the Research findings, managerial implications, and future research directions section).

The path between commitment and brand loyalty was removed from the model, as it was found that the direct brand loyalty–commitment path was not significant for the whole group. The SEM test indicated that the model fit could not be improved by removing this path. The path estimates and t-values for the model incorporating the aforementioned changes are shown in Table 4. A summary of the model parameters for these respondents is provided in this table. The first column in Table 4 shows the computed unstandardized path coefficient estimate, and the standard error of the estimate is shown in the final row.

Several minor changes to the model were also tested. The fit indices were approximately the same for these variations, indicating that a distinction between models could not be made on statistical grounds. For example, the application of the model to respondent data

Table 3
Evaluation of reliability and validity

Variable	Item	Reliability		Validity			Item size	
		SMC	Cronbach alpha	Estimate	Standard error	C.R. (*t*-value)	Early	Finally
Supplier's competence	sc1	0.871	0.966	1	–	–	6	5
	sc2	0.859		0.97	.034	28.71		
	sc3	0.810		0.99	.038	25.87		
	sc4	0.828		1.04	.039	27.62		
	sc5	0.884		0.98	.035	28.19		
Buyer's satisfaction	bs1	0.831	0.961	1	–	–	4	4
	bs2	0.797		1.01	.043	23.20		
	bs3	0.821		1.10	.045	22.29		
	bs4	0.827		1.04	.044	23.72		
Purchasing value	pv1	0.880	0.973	1	–	–	6	5
	pv2	0.884		0.92	.033	28.05		
	pv3	0.803		0.94	.037	25.68		
	pv4	0.810		0.96	.039	24.88		
	pv5	0.904		0.88	.045	19.66		
Switching cost	st1	0.795	0.964	1	–	–	5	5
	st2	0.866		0.91	.036	24.98		
	st3	0.865		1.00	.039	25.75		
	st4	0.814		0.88	.037	23.43		
	st5	0.857		0.84	.026	30.72		
Brand loyalty	bl1	0.872	0.972	1	–	–	4	4
	bl2	0.900		0.85	.033	25.96		
	bl3	0.881		1.03	.039	26.63		
	bl4	0.822		1.00	.035	28.31		
Brand trust	bt1	0.884	0.976	1	–	–	5	5
	bt2	0.896		1.05	.035	29.92		
	bt3	0.869		1.07	.040	26.73		
	bt4	0.893		1.05	.035	30.46		
	bt5	0.883		1.02	.036	28.64		
Commitment	rc1	0.829	0.967	1	–	–	5	5
	rc2	0.851		1.00	.040	24.97		
	rc3	0.871		1.08	.043	25.15		
	rc4	0.895		1.21	.043	28.11		
	rc5	0.884		1.03	.038	25.63		
Relationship quality	rq1	0.890	0.985	1	–	–	14	11
	rq2	0.923		1.03	.035	29.67		
	rq3	0.912		1.08	.038	28.49		
	rq4	0.905		0.84	.027	30.73		
	rq5	0.915		0.88	.028	31.12		
	rq6	0.890		0.85	.029	29.69		
	rq7	0.841		0.80	.032	25.20		
	rq8	0.793		1.08	.038	28.35		
	rq9	0.872		0.83	.027	30.68		
	rq10	0.827		0.79	.032	25.17		
	rq11	0.807		1.01	.039	25.13		
Transaction performance	tp1	0.789	0.970	1	–	–	8	7
	tp2	0.831		1.05	.053	19.72		
	tp3	0.812		0.88	.045	19.66		
	tp4	0.837		1.02	.048	21.37		
	tp5	0.834		0.96	.048	20.04		
	tp6	0.837		1.00	.053	18.76		
	tp7	0.778		1.18	.053	22.21		

Notes: Reliability – Cronbach's alpha above 0.90, SMC (Squared Multiple Correlation) above 0.70. Validity – unstandardized estimates above 0.25, C.R. (*t*-value) above 1.96 / $p<0.001$.

found that the perceived brand loyalty–commitment path coefficient, although significant for the total data set, was not significant for the industrial sample. The model with the path removed was retested with the full data set, but the fit index was not affected. Thus, the full model was retained as the best analytical model.

5. Research findings, managerial implications, and future research directions

Brands are important in the consumer market. They are the interface between consumers and companies, and consumers may develop loyalty to brands. Also, the recent development of industrial marketing explains the near absence of research on brand values in business-to-business relationships. Recently, industrial companies have refocused their efforts on customers rather than production and thus, the concept of the industrial brand is developing quite rapidly. In this paper, we tried to show that brand value is strategically meaningful even in the relationship-based industrial markets.

The purpose of this research is to develop an integrated model for the measurement of industrial brand value with relational performance based on researches from the industrial field. A comprehensive model consisting of brand value components is presented, and then a research model based on prior studies of relationships among industrial brand value components is proposed. This research proposed 15 hypotheses related to 9 latent variables, and the hypotheses were tested through structural equation modeling. Nine alternative measurements were compared through tests of the statistical significance of research model paths. The overall fit of the structural equation model was shown to agree well with sample data.

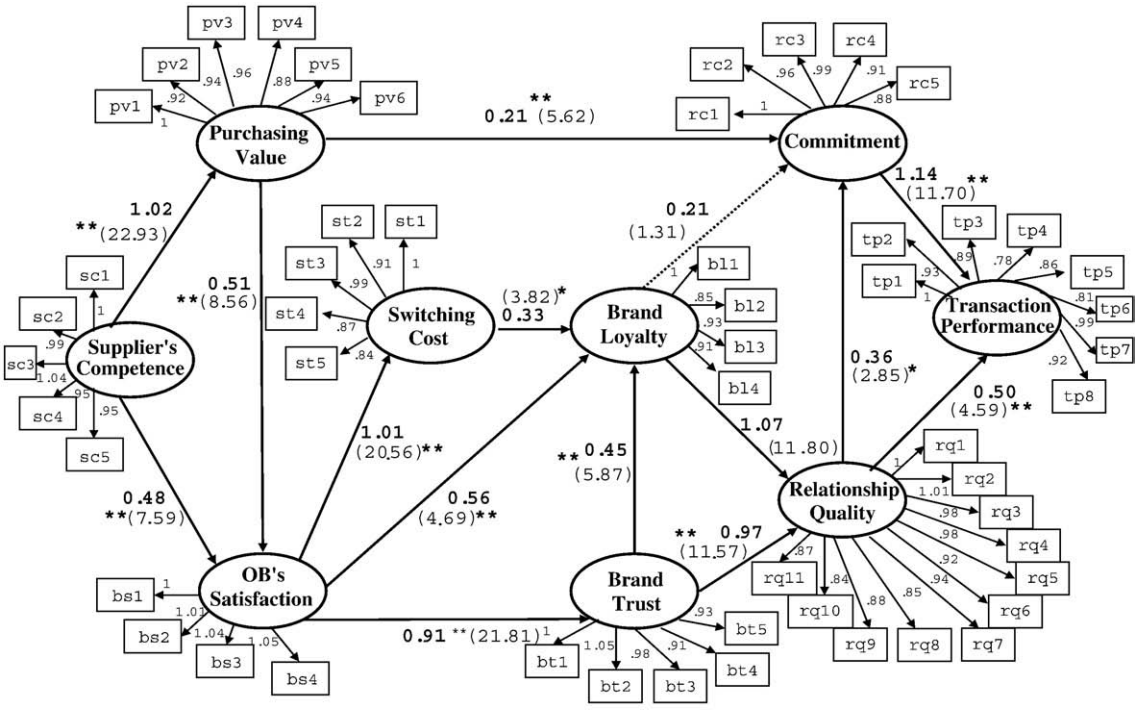
The results of this research analysis are as follows. Industrial brand values were positively related with a number of industrial brand characteristics and relationship commitment, relationship quality, and performance. This research newly proposed the concept of "industrial brand value affecting the business relationship between industrial buyers and suppliers."

This study supports the view that industrial supplier competence, purchasing value (except for effect on commitment), and OB satisfaction do not influence relationship performance (relationship quality, commitment, transaction performance) directly, but indirectly via switching cost, brand trust and loyalty. Perhaps this is to be expected as the perception-based measurement of industrial brand value, unlike the disconfirmation measure, may be less likely to include an assessment of other industrial brand (supplier) alternatives. Consistent with the work of Manrai (1995), and Storbacka, Strandvik, and Gronroos (1994), the study finds brand trust and loyalty to be an intervening variable between supplier ability (competence, purchasing value, OB satisfaction) and relationship performance. This is in contrast to recent studies that see the assessment of alternatives only as a moderator of the satisfaction–performance relationship (Sharma & Patterson, 2000).

Overall, the study found that industrial supplier competence exerts more control than switching cost over purchasing value and OB satisfaction, as confirmed by a significantly higher path coefficient in the model for all companies combined. In addition, purchasing value perceptions influence brand trust and loyalty both directly and indirectly via OB satisfaction.

The study also finds that for some respondents, past brand loyalty had little direct effect on current supplier–buyer commitment. This could be due to the high credence characteristics of the industrial markets studied. Consistent brand loyalty exists in part for its ability to reduce the risk of purchase loss. However, purchase risk is often not reduced by maintaining a current supplier for industrial transactions. The paths to and from switching cost were significant for industrial market respondents. This study provides some support for the view that for industrial market buyers, switching costs can be an important barrier to switching, or conversely, can increase preference for the current brand. The effect of switching cost may be limited because of the large number of companies that offer similar industrial supply services. Respondents anticipated such a similar level of satisfaction that that the opportunity costs associated with brand switching were insignificant, even when respondent satisfaction with the initial company was high. For the industrial markets examined, the study supports the hypothesis that supplier's brand trust and loyalty influences respondent transaction performance indirectly, via perceptions of relationship quality and commitment.

Possible implications of the study findings for the operation and management of industrial organizations are also discussed. This study suggests that, in general, supplier competence, purchasing value, and OB satisfaction may well have a greater direct or indirect effect on brand trust and loyalty or switching cost. There is a critical role for



* Indicates significant at the p<0.05 level. ** Indicates significant at the p<0.001level.

Fig. 2. Structural model with unstandardized parameter estimates.

management to determine the items and the weighting of the items that industrial buyers perceive as value. This study finds that for most respondents the direct or indirect effect of supplier competence on purchasing value and OB satisfaction is very strong, as is the effect of brand trust and loyalty on relationship performances (relationship quality, commitment, transaction performance). Similarly, brand value factors appeared to strongly affect supplier–buyer relationship performance of experienced respondents in the industrial market. This suggests that industrial brand managers would be wise to determine the presence of these considerable brand value factors that may negatively impact supplier–buyer relationship performance, as well as take such factors into account when offering a value package to organizational buyers.

The study suggests that management can focus on brand trust and switching cost to ensure current brand loyalty and supplier–buyer relationship quality and commitment. This study also suggests that management cannot rely on a strategy of increasing the costs of switching to retain industrial customers. For industrial companies, switching cost had either a significant or a positive effect on brand loyalty. Industrial buyers were likely to lose money if they switched to another industrial company. The switching cost expected by OBs was a major factor determining the industrial brand loyalty of respondents.

The study indicates the relative importance of customer–supplier relationship quality for the industrial market. Relationship quality impacted transaction performance directly and/or indirectly via the perception of supplier–buyer commitment. The implication is that an industrial customer's assessment of relationship quality and commitment standards for industrial transactions, as well as of problem and complaint handling processes, is an important contributor to the organizational buyer's perception of transactional performance.

Management should also be aware that the strength of perceptions of customer relationships may vary with supplier competence, purchasing value, and satisfaction, and as the industrial buyer becomes more experienced with the supplier. For more experienced respondents, brand trust and loyalty was shown to more directly influence relationship performance (relationship quality, commitment, and transaction performance). This suggests that as industrial supplier–buyer relationship performance increases, assessment of the standard of the industrial brand value becomes a more important antecedent to industrial customer assessments of transaction fairness and justice.

In summary, this study suggests that industrial organizations need to orientate their transactional relationship strategies towards brand value. The implication is that when programs are being developed to attract potential long-term industrial customers, management needs to identify exactly what industrial customers do value and how to continuously create net worth for them. To retain customers, management strategies also need to concentrate on, and improve, the brand value of industrial customers in the industrial market.

Table 4
Path coefficients for the structural model

Path			Estimate	S.E.	C.R.	*P*
Supplier's competence	→	Purchasing value	1.02	.044	7.59	.000
Supplier's competence	→	OB's satisfaction	0.48	.063	7.59	.000
Purchasing value	→	OB's satisfaction	0.51	.059	8.56	.000
Purchasing value	→	Commitment	0.21	.037	5.62	.000
OB's satisfaction	→	Switching cost	1.06	.049	20.56	.000
OB's satisfaction	→	Industrial brand loyalty	0.56	.120	4.69	.000
OB's satisfaction	→	Industrial brand trust	0.91	.042	21.81	.000
Switching cost	→	Industrial brand loyalty	0.33	.085	3.82	.002
Industrial brand trust	→	Industrial brand loyalty	0.45	.247	5.87	.000
Industrial brand trust	→	Relationship quality	0.97	.084	11.57	.000
Industrial brand loyalty	→	Relationship quality	1.07	.090	11.80	.000
Industrial brand loyalty	→	Commitment	0.21	.160	1.31	.145
Relationship quality	→	Commitment	0.36	.126	2.85	.007
Relationship quality	→	Transaction performance	0.50	.109	4.59	.000
Commitment	→	Transaction performance	1.14	.097	11.70	.000

Notes: All except one path parameter were significant at the $\alpha = 0.05$ level (t-value > 1.96). The path between brand loyalty and commitment was not significant (t-value = 1.31 < 1.96, $p > 0.05$).

We tried to analyze the meaning and effects of brand in the relationship-based industrial markets. This study suggests a need for further inquiry into a number of areas. Analysis of a broad range of industrial markets using cross-sectional and longitudinal data is needed to test the extent to which the structural equation modeling employed for this research is applicable to other markets. Because of the characteristics of industrial markets, customer–supplier long-term relationship is the most underlying factor of the successful business transactions and it is not easy to evaluate the product brand only without company name. In a sense, brand effect may be inevitably a little bit correlated with the company name effect and the future study needs to elaborate this issue further.

Studies are needed to refine the general research model components, particularly supplier competence and purchasing value, and to confirm the importance of purchasing value perceptions in influencing organizational buyer retention (Day & Crask, 2000). Further research is required to extend structural equation modeling to provide a much richer description of the satisfaction-brand loyalty-transactional performance relationship for different types of markets.

Future research should test the weak direct effect of brand loyalty on buyer–supplier commitment. This needs to be undertaken in a variety of transactional situations, and from relationship- and transaction-based perspectives. Such research should include the on-going relationship influence of internal transaction encounters on external commitment.

The research of McGahan and Ghemawat (1994) and Zahorik and Rust (1992) indicate that increases in long-term relationship rates can have a significant positive effect on market share. Furthermore, studies by Hallowell (1996) indicate that an increase in long-term relationship orientation can have a positive effect on a company's net operating cash flow and profit. To enable the development of a comprehensive theory of industrial brand management, further research is required to determine the effect of studies of industrial value and relationship performance in the industrial market.

Appendix A. Scale Items of Research Constructs

Supplier competence

(1) The supplier tells me exactly when products and services will be performed
(2) The supplier gives us prompt and correct delivery
(3) The supplier gives us high qualitative products
(4) The supplier invests time and energy in their R&D
(5) The supplier's supply management ability is very excellent
(6) The supplier understands our specific needs

Purchasing value

(1) The premium cost for the supplier's product and service is high, compared to other industrial companies
(2) The flexibility of the supplier's product and service is sufficient to meet our needs
(3) The supplier's transaction policy provides additional benefits and assistance OR our transaction fund provides us with a high investment return
(4) We can readily understand the exclusions in the transaction policy document OR we can readily understand the transaction policy document
(5) We regard the policy premium as acceptable OR we regard the supplier's charges as acceptable
(6) We consider [supplier name] product and service to be a good buy OR we consider the transaction to be a good investment

OB satisfaction

(1) Our decision to purchase a product and service from the supplier was a wise one
(2) We feel good about our decision to purchase the supplier's product and service
(3) We are pleased that we purchased product and service from the supplier
(4) We would positively recommend the supplier's product and service to other people

Switching cost

(1) Level of costs we feel would be incurred in switching to another supplier
(2) Amount of inconvenience we feel would be incurred in arranging to switch to another supplier
(3) Amount of time we feel would be involved in arranging to switch to another supplier
(4) Likelihood that we will lose money if we switch to another supplier

Brand trust

(1) We trust this supplier brand
(2) This industrial brand cannot be counted on to do its job
(3) We feel that we can trust this brand completely
(4) We can rely on this industrial brand
(5) We feel secure when we buy this brand because we know that it will not let us down

Brand loyalty

(1) We intend to keep buying this brand
(2) If another brand is having a sale, we will generally not buy the other brand instead of this one
(3) If someone makes a negative comment about this brand, we would defend it
(4) We would recommend this brand to someone who cannot decide which brand to buy in this product class

Relationship quality (Relqual)

(1) This supplier frequently discussed strategic issues with us.
(2) This supplier openly shared confidential information with us.
(3) This supplier rarely talked with us about its business strategy.
(4) The parties involved had continuous interaction during implementation of the strategy.
(5) The strategy's objectives and goals were clearly communicated to involved and concerned parties.
(6) Team members openly communicated while implementing the strategy.
(7) There was extensive formal and informal communication during implementation.
(8) We believe that over the long run, our relationship with the supplier will be profitable.
(9) Maintaining a long-term relationship with this supplier is important to us.
(10) We focus on long-term goals in this relationship.
(11) We are willing to make sacrifices to help this supplier from time to time.
(12) Our association with this supplier has been a highly successful one.
(13) This supplier leaves a lot to be desired from an overall performance standpoint.
(14) Overall, the results of our relationship with the supplier fell far short of our expectations.

Commitment

(1) We maintain commitment in maintaining relationship with this supplier.
(2) Our relationship with this supplier is important
(3) We plan to maintain relationship with this supplier
(4) Intention to continue transaction in the industrial market.

Transaction performance

(1) Our negotiation cost, information searching cost, and internal work processing cost has been reduced due to the transaction with this supplier
(2) The cost to maintain our orders and inventory has been reduced due to transactions with this supplier
(3) Our product price has been reduced due to transactions with this supplier
(4) Transactions with this supplier have contributed to our sales growth
(5) Our total sales would be reduced without transactions with this supplier
(6) Our total profit would be reduced without transactions with this supplier
(7) This supplier maintains the ability to manage the transaction delivery time
(8) Our product quality has increased due to transactions with this supplier

Note: All measures are anchored: 1 = Strongly disagree, 7 = Strongly agree, unless otherwise specified.

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