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Building industrial brand equity on resource advantage

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ABSTRACT

Based on resource advantage theory of competition, we attempt to identify industrial brand equity dimensions in today's competitive, high-technology, and global business-to-business environment. Through a quantitative study with 443 buying center members who are purchase decision makers, we find that industrial brand equity can be established in a number of dimensions: (1) functional advantage in products, (2) solution advantage in services, (3) analytical advantage in CRM, (4) omni-channel advantage in communication, (5) symbolic advantage in publicity, and (6) network advantage in resource sharing. The six dimensions have significant impacts on customer perceived value and brand loyalty. Furthermore, purchasers, managers, and users, who undertake major decision making roles in the buying center, weigh these dimensions differently during brand evaluations. The findings suggest that industrial brand managers focus on building brand equity through establishing key resource advantages in the different brand usage situations encountered by buying center members.

1. Introduction

In today's global business-to-business environment, successfully establishing prominent industrial brand equity has been considered a foundation for sustaining relational exchange (Backhaus, Steiner, & Lugger, 2011; Marquardt, 2013; Nyadzayo, Matanda, & Ewing, 2016). By definition, industrial brand equity represents total customer value a brand holds based on a set of salient brand associations in customers' eyes (Aaker, 1996; Bendixen, Bukasa, & Abratt, 2004; Mudambi, 2002). Although some useful guidelines for building industrial brand equity have been depicted, such as the capabilities-centric branding approach based on firms' entrepreneurship, learning, and innovation capabilities (Beverland, Napoli, & Lindgreen, 2007), a number of research gaps can be found in view of the shaping characteristics of today's competitive, high-technology, and global industrial marketplace.

Parallel to exploring consumer-based brand equity dimensions based on consumers' consumption process (Anselmsson, Johansson, & Persson, 2007; Christodoulides & Chernatony, 2010), current understanding of industrial brand equity dimensions is mainly based on a series of salient customer value elements identified in the core industrial reproduction process. These customer value elements are based on the features of industrial products and services a customer firm uses for enhancing productivity, such as quality, reliability, durability, delivery time, expertise, and so on (Bendixen et al., 2004; Beverland et al., 2007; Persson, 2010). Nonetheless, on the firm level, there are a variety of customer value elements beyond those associated with industrial reproduction (Leek & Christodoulides, 2012; O'Cass & Ngo, 2012). For example, social capital has been recognized as an important element of customer value (Eklinder-Frick, Eriksson, & Hallén, 2011). For this reason, a broader spectrum of industrial brand equity dimensions should be explored.

Moreover, existing conceptualization and measurement of industrial brand equity have not been aligned with the competitive nature of customer value in the industrial marketplace. In the industrial market, customer value is largely represented by “resonating focus,” which is the core points of difference against competitors in target customers' eyes (Anderson, Narus, & van Rossum, 2006). An industrial brand possesses little customer value and vanished brand equity in circumstances that customers choose to use an alternative brand with greater customer value (Bendixen et al., 2004; Riel, Montagnes, & Streukens, 2005). Thus, to better understand branding in business-to-business competitions, we need to closely examine the comparative nature of industrial brand equity beyond the general brand value concept.

Third, successful industrial brands should be built on the nuanced customer experience of a brand (Biedenbach & Marell, 2010; Zaichkowsky, Parlee, & Hill, 2010; Zhang, Jiang, Shabbir, & Du, 2015). Previous studies on customer experience with industrial brands either consider individuals in a customer firm having the same experience

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(e.g., Riel et al., 2005) or regard the experience of managers as the proxy for the rest of the customer firm's experience (e.g., Nyadzayo et al., 2016). Given that in a buying center, there are many decision making roles whose experiences fundamentally differ (Brown, Zablah, Bellenger, & Donthu, 2012), the relative importance of industrial brand equity dimensions for the different roles in the buying center must be clarified.

Additionally, customer relationship in the industrial market has never been as interactive as in today's environment (Bruhn, Schnebelen, & Schäfer, 2014; Leek, Canning, & Houghton, 2016). As Rust, Moorman, and Bhalla (2010, p. 96) point out, industrial suppliers have never had "…such powerful technologies for interacting directly with customers, collecting and mining information about them and tailoring offerings accordingly. And never before have customers expected to interact so deeply with companies…" Few studies have related brand equity to today's technology-savvy business-to-business environment. As the technological and social platforms have evolved to a new stage today, customer perception of industrial brand equity differs from the past (He & Wang, 2014). Thus, new ways of business communication must be taken into consideration when studying industrial brand equity.

Last but not least, in today's highly-standardized global industrial market (O'Donnell & Jeong, 2000), industrial brand equity has been only studied within a regional market (e.g., Bendixen et al., 2004) or involving a small number of target markets (e.g., Riel et al., 2005). As such, limited knowledge can be yielded for managing brand equity in a globalized industrial world. In the current study, we seek to extend the scope of brand equity onto a global level.

In order to shed light on how to build the delicate characters of customer-perceived brand equity in a global context of relational exchange, we attempt to craft a research framework incorporating customer-perceived brand equity dimensions beyond previous studies, and further examine how these dimensions contribute to customer value perception and brand loyalty for the different decision making roles in a customer firm's buying center. Accordingly, our research questions are two-fold: (1) What are the customer-perceived industrial brand equity dimensions in today's competitive, high-technological, and global environment? And (2) How do these brand equity dimensions influence brand evaluations by different decision making roles in the buying center? The rest of the study is organized as follows. The next section starts with a theoretical elaboration behind customers' industrial brand choice in the dynamic and competitive global market condition. A research framework with hypotheses is then articulated in detail. Subsequently, research methodology, including research instrument development and data collection process, is described. This is followed by statistical results, discussion of findings, limitations, and future research recommendations.

2. Theoretical background

Brand equity is understood as customer perception of the total benefits a brand carries (Aaker, 1996; Bendixen et al., 2004; Mudambi, 2002). Previous research has made clear that industrial brand equity has its unique facets: (1) Brand preference is based on value comparison (Bendixen et al., 2004; Riel et al., 2005); (2) Brand equity perception is multi-dimensional (Aaker, 1996; Coleman, Chernatony, & Christodoulides, 2011); and (3) Brand experience is role-specific and segmented (Beverland et al., 2007; Webster & Keller, 2004).

Taking these findings into consideration, we argue that the conditions for establishing customer-perceived brand equity among the various decision making roles can be explained by *resource advantage theory of competition* (commonly referred to as R-A theory) (Hunt, 1999; Hunt & Morgan, 1996). Combining heterogeneous demand theory with a resource-based view of the firm, R-A theory extends firms' competitive advantage into specific buying situations. The first part, heterogeneous demand theory, denotes that needs and preferences vary to a large extent across the decision making roles. The second part, resource-based view, holds that competitive advantage helps firms establish favorable market positions. Altogether, when a firm's resources attributes are more advanced than those of its competitors and are clearly better in fulfilling the needs of specific buyers, superior outcomes tend to occur. Such a view has been adopted in the study of industrial branding as a way to deter imitation and outperform competitors (Marquardt, 2013). As Hunt and Morgan (1996) further hold, firm resources include a variety of tangible and intangible elements – the resource advantages may arise from intellectual, relational, physical, organizational, and financial sources.

We think that the R-A theoretical paradigm offers an escalated understanding of customer-perceived industrial brand equity in a number of points: (1) Resource advantages that a supplier possess against its competitors are the basis for industrial brand equity perceived by the decision makers; (2) Resource advantages can be sensed by the decision makers based on a variety of customer value elements besides those related to industrial productivity; and (3) Resource advantages are viewed by different decision makers with varied weights based on personal relevance of customer value. In the next section, we articulate the key dimensions of customer-perceived industrial brand equity characterized by supplier firms' resource advantages point by point.

2.1. Research framework and hypotheses

In view of Hunt and Morgan (1996), we build a conceptual framework to describe the different supplier firm resource advantages as industrial brand equity dimensions. We focus on the extant business-to-business marketing literature in identifying tangible and intangible resource advantages. Key advantages identified in the literature are further elaborated using evidence from previous empirical findings. To illustrate the impact of customer-perceived brand equity on customer behavioral tendencies, we investigate customer-perceived value and customer loyalty as two subsequent stages. Customers who experience high customer value from their current supplier are likely to repurchase due to risk aversion associated with purchasing from new suppliers (Fornell, Johnson, & Anderson, 1996; Verhoef, 2003). Such customers are also willing to purchase more frequently and in larger volume, and are more likely to elevate the relationship with the supplier (Gustafsson, Johnson, & Roos, 2005). The research framework is described in Fig. 1. Overall, six customer-perceived brand equity dimensions are proposed.

2.1.1. Functional advantage in products

Creating and delivering functional customer value is the foundation for relational exchange with industrial customers (Anderson & Narus, 1998; Anderson & Wynstra, 2010; Ulaga & Reinartz, 2011). From the industrial buyers' perspective, they primarily assess customer value through evaluating the functional advantage of product features (Anderson & Wynstra, 2010; Ulaga & Chacour, 2001; Ulaga & Eggert, 2006). Across different buying situations, customer purchase decisions are typically featured by rational comparison of customer value offered by different suppliers (Moller, 2006; O'Cass & Ngo, 2012). The functional advantage of products can directly create the "points of difference" during product comparison, which indicate that a product is clearly and demonstrably better than the competitor's (Anderson et al., 2006). Conventionally speaking, the tangible advantages are viewed as a central aspect of supplier firm's key resource advantages (Anderson & Narus, 1998; Woodruff, 1997). An industrial brand may mentally represent the reputable functional features, such as speed, durability, reliability, or tough usage conditions (Bendixen et al., 2004; Beverland et al., 2007). Thus, the functional advantage in tangible market offerings carried by global industrial brands leads to superior results that customers appreciate over time.

H1. a: Industrial brands' functional advantage in products positively

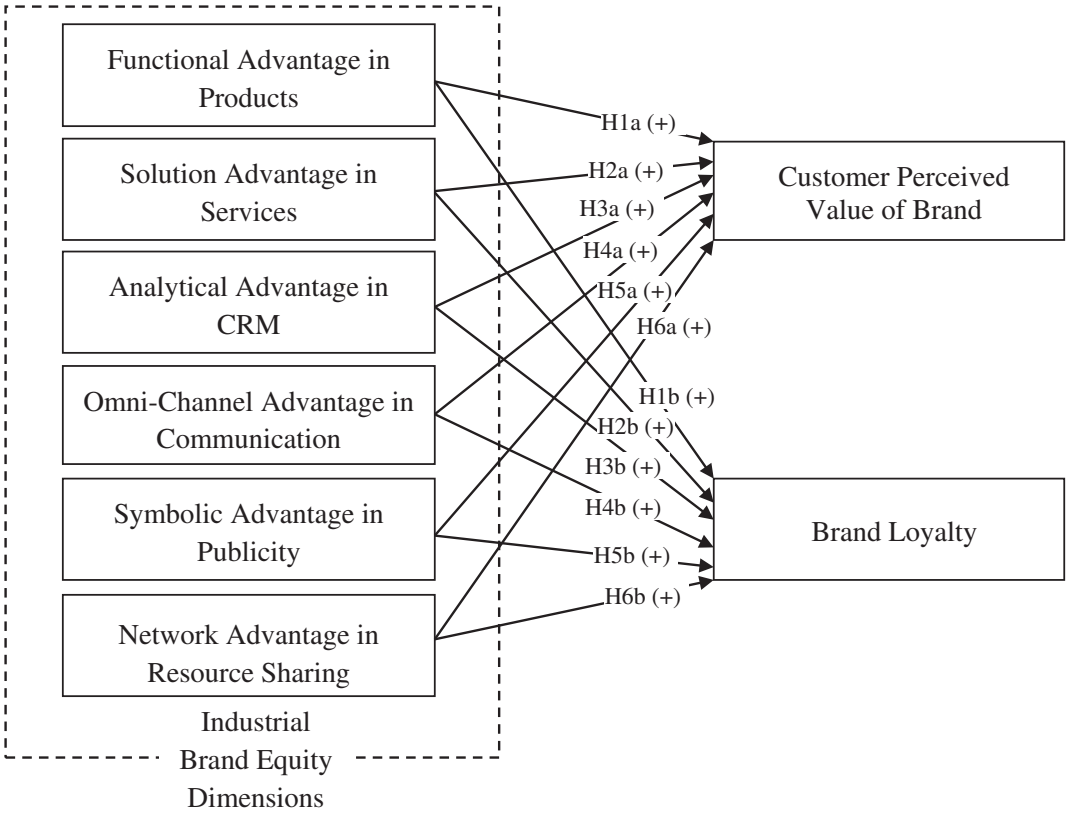

Fig. 1. Research framework.

influences customer-perceived value of the brand.

H1. b: Industrial brands' functional advantage in products positively influences brand loyalty.

2.1.2. Solution advantage in services

Service activities tremendously contribute to customer value that industrial customers may receive from suppliers (Grönroos, 2011; Kohtamäki, Partanen, Parida, & Wincent, 2013; Ulaga & Chacour, 2001). As an integral part of the value creation process, industrial services can bring to customers a broad array of benefits, including better meeting customer requirements, facilitating order fulfilment, system integration and customization, reducing customers' cost, and solving customers' technical problems, to name just a few (Jaakkola & Hakanen, 2013; Tuli, Kohli, & Bharadwaj, 2007). More recently, integrated solutions, the idea that integrating standalone tangible and intangible components into industrial solutions, have been considered offering greater potential for value creation beyond the traditional approaches such as product/service offerings or bundling (Evanschitzky, Wangenheim, & Woisetschläger, 2011; Jacob & Ulaga, 2008; Storbacka, 2011; Ulaga & Reinartz, 2011; Windahl & Lakemond, 2010). Thus, instead of providing products and services to customers, an industrial supplier becomes a value-adding source in improving customers' specific business processes (Keränen & Jalkala, 2013; Matthyssens & Vandenbempt, 2008). Ultimately, customers' productivity can be improved through the skills and expertise provided by the supplier's solutions (Ulaga & Reinartz, 2011). Leading suppliers are the pioneers in transforming technical resources and distinctive service capabilities into positional advantages in service solutions (Brady, Davies, & Gann, 2005; Ulaga & Reinartz, 2011). Global industrial brands are also known for maintaining superior human capital that are more talented, committed, and disciplined than companies with a local focus (Quelch, 1999). This advantage appears to be particularly valuable for customers seeking solutions through procurement, given that the majority of other suppliers remain focused on product offerings or providing combinations of general product and services. As a result, industrial customers are more likely to appreciate and attach to those global brands with expertise in customization and solution-specific ability in business problem solving.

H2. a: Industrial brands' solution advantage in services positively influences customer-perceived value of the brand.

H2. b: Industrial brands' solution advantage in services positively influences brand loyalty.

2.1.3. Analytical advantage in CRM

Advanced information technology systems have been utilized for the purpose of identifying, formalizing and managing existing customer relationships (Jean, Sinkovics, & Cavusgil, 2010). More specifically, Customer Relationship Management (CRM) systems are used as a strategic resource to gather, convert, and provide relevant customer information for all future transactions (Mithas, Krishnan, & Fornell, 2005). This includes the generation of a detailed profile for each customer indicating their core businesses, purchasing activities and volumes, credit history, past interactions with the supplier, relationships with other corporations, special requirements and as well as future buying potential. Such explicit analysis enables supplier firms to gain insights into customer tastes and evolving needs (Mithas et al., 2005). Furthermore, the systematic record of past interactions provides companies with a tool to analyze stages of relationships and estimates of best offers (Jayachandran, Sharma, Kaufman, & Raman, 2005; Payne & Frow, 2005). In a global setting, particularly, detailed customer knowledge represents a substantial advantage in the creation of virtual connectedness with international key accounts (Jean et al., 2010). As the rich information collected in the CRM system can be shared effortlessly among all relevant functions as well as subsidiaries, such as sales, customer service, and technical solutions, accurate prediction on

customer preferences can be achieved. As a result, customers can be notified with timely-sensitive analytical results, and served with customized offerings at the right time (Payne & Frow, 2006). Therefore, industrial customers often find a global industrial brand's CRM an aspect of resource advantage over other suppliers' due to accuracy and easiness in transactions and supply chain management.

H3. a: Industrial brands' analytical advantage in CRM positively influences customer-perceived value of the brand.

H3. b: Industrial brands' analytical advantage in CRM positively influences brand loyalty.

2.1.4. Omni-channel advantage in communication

A supplier's marketing structure needs to reflect the customer-centric philosophy in order to maintain strong customer relationships (Gaur, Vasudevan, & Gaur, 2011; Kirca, Jayachandran, & Bearden, 2005; Rigby, Reichheld, & Schefter, 2002). To provide customers with consistent information across all marketing channels and the opportunity to switch effortlessly between them, the cross-functional integration of processes, employees, and marketing capabilities is crucial (Cao & Li, 2015; Dholakia, Zhao, & Dholakia, 2005; Kumar & Venkatesan, 2005). Thus, a customer-focused supplier firm must be equipped with firm-wise customer interaction capabilities, not merely in the marketing department (Narver & Slater, 1990; Slater & Narver, 1994; Stone, Hobbs, & Khaleeli, 2002). To achieve this, supplier firms often adopt advanced, integrated communication systems to better meet today's sophisticated technological challenges (Ailawadi & Farris, 2017). Beyond traditional communication channels, supplier-customer interaction via various social media channels enhances perceived responsiveness and satisfaction by customers (Agnihotri, Dingus, Hu, & Krush, 2016). Customers also associate the usage of multi-channel marketing instruments with a higher perception of relationship quality as well as increased convenience (Neslin et al., 2006). Superior customer experience with a supplier can be produced when multiple communication channels are available for the execution of customer request and feedback (Verhoef, Neslin, & Vroomen, 2007). Moreover, utilizing the latest digital media, leading supplier firms can offer the advantage of a seamless spectrum across offline and online communication channel platforms. This advantage is referred to as the omni-channel experience for customers (Ailawadi & Farris, 2017). As such, data tracking and analysis allow global industrial brands to obtain valuable customer input from multiple contact points, and engage with the customer at every possible touch point (Ailawadi & Farris, 2017; Kushwaha & Shankar, 2013; Payne & Frow, 2006). This advantage allows gathered information on customers' request and feedback to be instantly shared among all account serving units in order to offer customized instead of routinized service (Day, 2000; Reinartz, Krafft, & Hoyer, 2004; Rigby et al., 2002). Consequently, the resource advantage based on offering omni-channel experience to customer firms promotes engaged business relationship, leading to increased customer value and stronger brand loyalty.

H4. a: Industrial brands' omni-channel advantage in communication positively influences customer-perceived value of the brand.

H4. b: Industrial brands' omni-channel advantage in communication positively influences brand loyalty.

2.1.5. Symbolic advantage in publicity

When customers make a purchase decision in a business-to-business context, such as buying capital equipment or entering a strategic partnership, brand image plays a vital role (Brown et al., 2012; Michell, King, & Reast, 2001; Morgan, Deeter-Schmelz, & Moberg, 2007). Elite industrial brand image often represents expertise, reliability, trust, and responsibility (Bendixen et al., 2004; Mudambi, 2002; Webster & Keller, 2004). Previous research highlights the social benefits of purchasing high-end industrial brands for the purpose of buyers' public relations management. Public appearance captured with using prestigious global industrial brands helps customer firms improve corporate reputation, and establish a favorable image in the marketplace (Backhaus et al., 2011; Lynch & de Chernatony, 2007; Mudambi, 2002). Compared to other brands, a global brand possesses a worldwide identity and a consistent positioning advantage (Sichtmann & Diamantopoulos, 2013). As a result, customers who choose global brands over domestic ones are commonly viewed as possessing higher status and greater prestige, and even deemed more socially responsible and culturally global (Dimofte, Johansson, & Bagozzi, 2010; Holt, Quelch, & Taylor, 2004; Özsomer, 2012). The symbolic value of industrial brands is often considered an intangible advantage (Brown et al., 2012; Kotler & Pfoertsch, 2006; Zablah, Brown, & Donthu, 2010). Therefore, global industrial brands present lofty brand cues that can improve customers' social status, leading to positive brand evaluations and customer loyalty. Such an advantage cannot be easily acquired by other brands.

H5. a: Industrial brands' symbolic advantage in publicity positively influences customer-perceived value of the brand.

H5. b: Industrial brands' symbolic advantage in publicity positively influences brand loyalty.

2.1.6. Network advantage in resource sharing

The performance of industrial firms strongly depends on their capabilities to effectively establish, develop, and maintain global relational exchange (Skarmeas, Katsikeas, Spyropoulou, & Salehi-Sangari, 2008). A global brand benefits from the economies of scale because of its global business network (Wiersema & Bowen, 2008). Global network capabilities may not be found in smaller suppliers. Network capabilities allow firms to effectively utilize business relationships to access and share resources in a cross-boundary manner (Smirnova, Naudé, Henneberg, Mouzas, & Kouchtch, 2011; Walter, Auer, & Ritter, 2006). As a resource advantage, the network capabilities enable a global brand and its affiliates to be more sufficient in building and managing global business network through a variety of practices, including network coordination, network integration, and network communication activities (Kandemir, Attila, & Cavusgil, 2006; Kohtamäki et al., 2013). The business network brings in tangible and intangible benefits to industrial customers when vertical and horizontal business relationships in the supply chain are aligned. For example, based on this advantage, an international customer can utilize the supplier's existing global supply chain to achieve quality improvement and cost reduction. It also creates opportunities for a customer to share knowledge and industry information with other customers in the network, particularly global industry leaders. The network capabilities of a supplier is considered an important source of customer value (Kim & Kim, 2009; Mitrega, Forkmann, Ramos, & Henneberg, 2012), and positively affect customer relationships (Kohtamäki et al., 2013). Consequently, industrial customers can receive extra benefits from a global brand's network offerings, which are the evidence of a supplier's value and prestige. Therefore, in return, customers are more inclined to continue the established relationships with the global industrial brand.

H6. a: Industrial brands' network advantage in resource sharing positively influences customer-perceived value of the brand.

H6. b: Industrial brands' network advantage in resource sharing positively influences brand loyalty.

2.1.7. Decision making roles in buying center

At the center of R-A theory, an industry consists of different segments, or different types of buyers in a buying situation (Hunt & Morgan, 1996). The R-A logic implies that suppliers' resource advantage needs to be aligned with specific needs and preferences of the target customer segments for better outcomes. Situational factors such

as purchase importance and purchase complexity heavily influence decision makers' brand choices in a business-to-business context (Brown et al., 2012; Webster & Keller, 2004). Along the same vein, a decision maker's positive experience with a supplier's resource advantages depends on if the resource advantage can be effectively utilized for better results in his or her brand usage situation. For example, if a supplier's functional advantage in products is what an engineer relies on in his or her field work, other resource advantages such as those associated with CRM or publicity may matter less in his or her workplace. If this engineer helps making purchase or repurchase decisions in a buying center, his or her perception of the current supplier brand is primarily based on his or her experience with the functional advantage in products. Thus, perceptions of customer-perceived value are largely shaped by personally-relevant dimensions of brand equity, and the personal relevance is based on decision makers' brand usage situation. At the decision making level, those personally-relevant brand equity dimensions characterized by a supplier's resource advantages may have stronger impacts on the behavioral tendencies of a decision maker.

H7. : In a buying center, the influence of industrial brands' resource advantages depends on decision makers' brand usage situation.

In summary, we found six key resource advantages in the extant industrial marketing literature. In a competitive, high-technology, and global environment, we expect customer-perceived industrial brand equity can be framed on the basis of the six resource advantages. When decisions are made by a buying center, these dimensions affect customer-perceived value and brand loyalty at varied degrees based on decision makers' brand usage situation.

3. Methodology

3.1. Research instrument and measures

We use the survey approach as the data collection method for soliciting response. Prior to primary data collection, guidelines in developing valid measurement constructs are carefully followed (Churchill, 1979). Existing measures and concepts are sought as the foundation for the development of the measurement items in the research instrument.

The four items for the *functional advantage in products* measure are created based on previous instrument evaluating industrial buyers' perceived functionality and quality of offerings (Leek & Christodoulides, 2012; Riel et al., 2005). Concepts found in the extant literature on integrated solutions in services (Matthyssens & Vandenbempt, 2008; Storbacka, 2011; Windahl & Lakemond, 2010) are utilized to build the *solution advantage in services* measure, which contains four items measuring customer evaluation of a supplier's strengths in service solutions in the business process. Jean et al.'s (2010) measure of electronic CRM is used as the basis for developing the *analytical advantage in CRM* measure. Four items are used to measure customer evaluations of a supplier's analytical advantage. The measure of buyer-seller information reciprocity developed by Jayachandran et al. (2005) is used as the basis for constructing the measure of *omni-channel advantage in communication*, which includes five items concerning customer evaluation of multiple contact points in an inter-organizational context. Three items measuring customers' *symbolic advantage in publicity* are created based on Sichtmann and Diamantopoulos' (2013) perceived brand globalness measure. Kohtamäki et al.'s (2013) measure of supplier coordination for business-to-business network capabilities provides a foundation for the development of the *network advantage in resource sharing* measure. Four items are designed to measure customer evaluation of a supplier's advantage in sharing and aligning its network resources. Following Ulaga and Eggert (2006), we ensure that verbiage in all the independent measures reflects the meaning of resource advantage in a competitive context. For the dependent measures, *customer-perceived value of brand* is measured by four items adapted from Eggert and Ulaga's (2010) customer value assessment in industrial marketing. *Brand loyalty* is measured by three items used by Bruhn et al. (2014) to measure industrial customers' brand loyalty. The eight measures are assessed by five-point Likert-type scale, with "1″ being "strongly disagree" and "5″ being "strongly agree."

The preliminary questionnaire is presented to six experienced corporate executives affiliated with a university research center. The selected experts are asked if the questions reflect the concepts being measured, and if the verbiage is ambiguous or hard to understand. They are also requested to check if the relevant concepts are in accordance with latest marketing practices in business-to-business marketing. After modifications are made based on the feedback, the modified questionnaire is then pretested with 57 MBA students, all of whom have at least five years of business-to-business marketing experience. No one reports any difficulty in understanding the questions. Their responses also indicate satisfactory reliability of the measures. The measures in the final questionnaire are described in the statistical analysis section.

3.2. Data collection

We focus on a typical industrial market segment, the construction equipment market, for data collection. The construction equipment market is expected to grow from US $121 billion in 2015 to US$ 181 billion in 2021 with a 7% annual growth rate (Markets and Markets, 2017), making it an important industrial segment to study. The group of industrial brands competing in the construction equipment market ranges from top-tier global brands, such as Caterpillar (US), Bosch (Germany), Volvo (Sweden), Liebherr (Switzerland), Komatsu (Japan), to many regional, smaller industrial brands. Compared to the various commodity goods markets, the construction equipment market creates a desired situation to investigate how industrial brands are evaluated by customers based on product features, solutions, order fulfilment, customer relationships, brand image, and many other factors due to the high level of complexity (Brown et al., 2012).

We attempt to obtain insightful data from purchase decision makers who are actively involved in brand evaluations and brand decisions at the time of survey. To capture a global base of industrial decision makers from different countries and regions, we target one of the largest worldwide construction equipment trade shows that takes place in a city located in Midwest United States. This trade show presents over 300 brands from different countries for various mechanical, electrical, hydraulic, and pneumatic types of construction equipment, and attracts an estimated 10,000 business visitors. Survey respondent recruitment for this study utilizes a random intercept method at the trade show that is akin to the mall intercept method suggested by Bush and Hair (1985). Trained instructors randomly intercept trade show visitors during different periods in a day (i.e., morning, noon, and evening) in order to reduce the sampling bias associated with using this method. To allow the decision makers to evaluate the various aspects of resource advantages from different brands before taking the survey, visitors are intercepted after they walk out of the trade show.

To ensure we obtain usable data from qualified decision makers, planned steps are carried out before the respondents take part in the survey. We first give a brief introduction of the study to request research participation, and ask if the purpose of the trip is related to possible purchase of any construction equipment in the near future. Confirmed individuals are further examined in a number of questions: (1) If they are from an equipment distributor firm; (2) If they are currently in any purchase decision making role for their company or work unit; (3) If they have prior experience in using any construction equipment brand; and (4) If they are familiar with the business concepts such as integrated solutions. After disqualifying individuals who are distributors, non-decision makers, brand novices, or lacking fundamental business knowledge, remaining individuals are invited to fill in the questionnaire.

When starting the questionnaire, the respondents are asked to select one category of construction equipment they have primarily interested

in during the trade show. They are then asked to evaluate one supplier brand among their current equipment suppliers in this category. Using these planned steps, we hope it enables qualified purchase decision makers to deliberately evaluate the industrial brand equity of the current supplier based on their knowledge of differential resource advantages learned during the trade show. To obtain personal examples on industrial brand equity, we further request the respondents to verbally describe the advantages of their current supplier's brand after they complete the questionnaire.

In a three-day period, 443 usable questionnaires are collected. Questionnaires collected in the different days as well as in the different periods in a day are compared and no major difference is found based on respondent demographics. In addition, among the 443 responses, 102 further provide usable personal examples.

3.3. Sample characteristics

In the questionnaire, the respondents are asked to self-identify their purchase decision making role in the buying center of their company or working unit. They are given four options, namely, purchasers, managers, users, or other. Each option is accompanied by a description of the role with examples of work title. Purchasers are in a decision making role related to managing equipment purchasing procedures, with job titles such as buyer, purchasing manager, contract manager, procurement manager, or supply chain manager. Managers are those in a general management role such as chief executive officer, general manager, managing director, or business manager. Users include job titles such as project manager, projector coordinator, technician, engineer, or inspector, who manages various working processes when the purchased equipment is used in the field. Lastly, the respondents may self-identify as a role other than the three mentioned above and then specify the role. Possible roles we expect are accountant, legal counsel, office manager, or inventory manager. However, no respondent falls in this category. The sample characteristics are described in Table 1.

3.4. Statistical analysis

All the statistical analyses are performed using SPSS 23. First, common method bias is examined because the questionnaire only captures the subjective evaluations from one source (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Following Harmon's single factor test, an exploratory factor analysis is performed with all the measurement items for the independent and dependent measures. The extracted factors explains a total of 81.65% of the variance and the largest factor only accounts for 26.04% of the variance, indicating low threat of common method bias (Podsakoff et al., 2003).

Next, in order to assess if the six resource advantage measures represent the underlying theoretical structure of brand equity dimensions that are antecedent to customers' value perception, another exploratory factor analysis is performed with the 24 resource advantage items (Child, 1990). The Bartlett test of sphericity shows that factor analysis with the 24 measurement items is attainable due to overall significance of the correlation matrix ($\chi^2 = 8384.29$, $df = 276$, $p < 0.01$). In addition, Kaiser-Meyer-Olkin Measure of Sampling Adequacy generates a value of 0.84, confirming the feasibility to perform factor analysis. The Kaiser criterion (eigenvalue > 1) is used to determine the number of factors to retain (Kaiser, 1960), with maximum likelihood extraction method and Oblimin rotation.

The Kaiser criterion suggests six factors. The eigenvalues for the six factors are 5.41 (*analytical advantage in CRM*, $R^2 = 0.23$), 4.10 (*network advantage in resource sharing*, $R^2 = 0.17$), 3.40 (*solution advantage in services*, $R^2 = 0.14$), 2.76 (*omni-channel advantage in communication*, $R^2 = 0.11$), 2.08 (*symbolic advantage in publicity*, $R^2 = 0.09$), and 1.68 (*functional advantage in products*, $R^2 = 0.07$), respectively. The 24 measurement items all load on appropriate factors with factor loadings above 0.70, indicating expected attachment to the factors they are supposed to measure (Spector, 1992). Overall, the six factors account for 81.96% of the total variance, establishing high construct validity of the six resource advantage measures (Spector, 1992).

To assess the reliability of the measures, we use Cronbach alpha and item-to-total correlation as two criteria (DeVellis, 1991). The Cronbach alpha values all exceed the 0.70 threshold (Nunnally, 1978). Furthermore, the measurement items all have item-to-total correlations above 0.50, indicating that they shared sufficient amount of variance with other items in the measure (DeVellis, 1991). Further, construct validity

Table 1
Sample characteristics.

Variable	Full sample (N = 443)		Purchasers (N = 119)		Managers (N = 155)		Users (N = 169)	
	N	%	N	%	N	%	N	%
Decision making role								
Purchasers	119	26.9						
Managers	155	35.0						
Users	169	38.1						
Age								
20–29	58	13.1	20	16.8	6	3.9	32	18.9
30–39	184	41.5	60	50.4	50	32.3	74	43.8
40–49	112	25.3	24	20.2	48	31.0	40	23.7
50–59	65	14.7	9	7.6	35	22.6	21	12.4
60 and above	24	5.4	6	5.0	16	10.3	2	1.2
Education								
No college degree	34	7.7	3	2.5	15	9.7	16	9.5
College degree	409	92.3	116	97.5	140	90.3	153	90.5
Gender								
Male	432	97.5	115	96.6	150	96.8	167	98.8
Female	11	2.5	4	3.4	5	3.2	2	1.2
Location								
North America	108	24.4	27	22.7	37	23.9	44	26.0
South America	66	14.9	16	13.4	30	19.4	20	11.8
Asia Pacific	123	27.8	31	26.1	40	25.8	52	30.8
South Asia	16	3.6	5	4.2	6	3.9	5	3.0
Middle East	30	6.8	10	8.4	11	7.1	9	5.3
Africa	3	0.7	1	0.8	1	0.6	1	0.6
Eastern Europe	10	2.3	4	3.4	3	1.9	3	1.8
Western Europe	87	19.6	25	21.0	27	17.4	35	20.7
Years in current position								
1–5	170	38.4	48	40.3	51	32.9	71	42.0
6–10	196	44.2	52	43.7	73	47.1	71	42.0
11–15	72	16.3	17	14.3	29	18.7	26	15.4
16 and above	5	1.1	2	1.7	2	1.3	1	0.6
Company/unit size for decision making								
< 50	85	19.2	37	31.1	18	11.6	30	17.8
50–499	173	39.1	46	38.7	63	40.6	64	37.9
500–999	116	26.2	24	20.2	48	31.0	44	26.0
1000–9999	47	10.6	10	8.4	16	10.3	21	12.4
2000 and above	22	5.0	2	1.7	10	6.5	10	5.9
Years of relationship with current brand								
1–5	136	30.7	35	29.4	60	38.7	41	24.3
6–10	198	44.7	54	45.4	64	41.3	80	47.3
11–15	78	17.6	27	22.7	19	12.3	32	18.9
16 and above	31	7.0	3	2.5	12	7.7	16	9.5

Table 2
Summary of measures.

Measures	Cronbach's alpha	AVE	Factor loading[a]
Functional advantage in products	0.89	0.66	
1. This brand offers some of the best product features we can find in the market.			0.85
2. Among all brands, this brand offers products that can bring us the highest utility in the field.			0.85
3. The products of this brand are the most advantageous in the market.			0.80
4. This brand provides certain product features that are most crucial in the completion of our tasks.			0.74
Solution advantage in services	0.93	0.76	
1. This brand offers best service solutions based on their specialized knowledge and skills.			0.88
2. Compared to competing brands, this brand provides better services integrated with the products we purchase that facilitate our working process and performance.			0.89
3. Compared to other brands, this brand's service solutions are better at solving the problems in our business process.			0.90
4. This brand's service solutions enhance our productivity in the best way.			0.82
Analytical advantage in CRM	0.94	0.78	
1. This brand has the most advanced CRM system in processing orders and invoices.			0.88
2. This brand offers the most advanced analytical tool in collaborating for future purchases through our information system.			0.87
3. This brand exchanges product price and market information with us electronically through the most advanced CRM system we know.			0.91
4. This brand coordinates maintenance with us using the most advanced analytical tool.			0.88
Omni-channel advantage in communication	0.93	0.72	
1. Compared to other brands, this brand better enables our company to engage in interactive communication with their various functional departments.			0.88
2. Among all brands, this brand provides our company with highest number of channels to contact them whenever and wherever we need to talk.			0.87
3. This brand focuses on communication through all the possible contact points conveniently available to us.			0.80
4. This brand actively manages all the online and offline channels in communication with our different departments.			0.86
5. This brand is the best in integrating customer information from different communication channels.			0.82
Symbolic advantage in publicity	0.91	0.76	
1. This brand represents a well-known global company.			0.82
2. This brand is respected all over the world.			0.88
3. This brand has a prestigious image worldwide.			0.91
Network advantage in resource sharing	0.93	0.75	
1. Among all brands, this brand helps us most in gaining access to its global network resources.			0.88
2. Compared to other brands, this brand is more active in coordinating its global network to find new resources for us.			0.91
3. This brand's global network is the most useful one when we seek global business relationships.			0.86
4. This brand fully supports the communication between our company and the companies in its global network.			0.82
Customer-perceived value of brand	0.96	0.84	
1. Compared to other brands, this brand adds more value to us overall.			0.88
2. Compared to other brands, we gain more value with this brand.			0.97
3. Compared to other brands, the relationship with this brand is more valuable.			0.96
4. Compared to other brands, this brand creates more value for us when comparing all costs and benefits.			0.86
Brand loyalty	0.94	0.84	
1. I will buy the brand the next time when we need.			0.90
2. I intend to keep purchasing the brand.			0.96
3. I am committed to this brand.			0.88

[a] Generated by confirmatory factor analysis.

is examined using confirmatory factor analysis. High factor loadings with significant t values are good indicators of construct validity of the measures (Anderson & Gerbing, 1988). Based on the factor loadings, average variance explained (AVE) is calculated for each measure. The AVEs all far exceed the suggested threshold of 0.50 for establishing construct validity (Fornell & Larcker, 1981). The summary of measures, including results of validity and reliability tests, is provided in Table 2.

The summated mean scores of the measures are calculated for subsequent statistical analysis. The bivariate correlations of the summated mean scores are provided in Table 3.

4. Result

A series of multiple regression analyses are used to examine the relationship between the six industrial brand equity dimensions and the dependent variables, customer perceived value and brand loyalty,

Table 3
Bivariate correlation matrix.

	1	2	3	4	5	6	7	8
Independent variables								
1. Functional advantage in products	1.00							
2. Solution advantage in services	0.14[a]	1.00						
3. Analytical advantage in CRM	0.08	−0.15[a]	1.00					
4. Omni-channel advantage in comm.	−0.14[a]	−0.21[a]	0.33[a]	1.00				
5. Symbolic advantage in publicity	−0.01	−0.08	0.00	0.07	1.00			
6. Network advantage in resource sharing	0.03	0.03	0.01	0.07	0.41[a]	1.00		
Dependent variables								
7. Customer perceived value of brand	0.32[a]	0.16[a]	0.35[a]	0.27[a]	0.28[a]	0.28[a]	1.00	
8. Brand loyalty	0.31[a]	0.25[a]	0.27[a]	0.20[a]	0.27[a]	0.27[a]	0.87[a]	1.00

[a] Correlation is significant at the 0.01 level (two-tailed).

Table 4
Regression analysis results on customer perceived value of brand.

	Full sample		Purchasers		Managers		Users	
	β	t	β	t	β	t	β	t
Independent variables								
Functional advantage in products	0.30**	7.78	− 0.01	− 0.16	0.09*	2.37	0.43**	5.25
Solution advantage in services	0.23**	6.13	0.02	0.62	0.04	1.10	0.36**	4.42
Analytical advantage in CRM	0.28**	7.22	0.39**	5.56	0.14**	3.72	0.04	0.77
Omni-channel advantage in comm.	0.24**	6.03	0.58**	8.08	− 0.05	− 1.40	− 0.02	− 0.27
Symbolic advantage in publicity	0.22**	5.37	0.03	1.07	0.57**	8.80	− 0.03	− 0.50
Network advantage in resource sharing	0.17**	4.27	− 0.02	− 0.75	0.31**	4.85	0.05	0.98
Dependent variable: customer perceived value of brand								
Multiple R	0.64		0.95		0.90		0.75	
R^2	0.41		0.90		0.82		0.57	
Adjusted R^2	0.40		0.90		0.81		0.55	
Standard error	0.92		0.40		0.49		0.80	

** $p < 0.01$.
* $p < 0.05$.

Table 5
Regression analysis results on brand loyalty.

	Full sample		Purchasers		Managers		Users	
	β	t	β	t	β	t	β	t
Independent variables								
Functional advantage in products	0.28**	7.17	0.10*	2.08	0.06	1.11	0.36**	5.39
Solution advantage in services	0.31**	7.81	0.06	1.25	0.09	1.64	0.53**	8.03
Analytical advantage in CRM	0.23**	5.62	0.01	0.11	0.08	1.62	0.06	1.33
Omni-channel advantage in comm.	0.20**	4.82	0.84**	7.91	− 0.05	− 0.98	0.02	0.44
Symbolic advantage in publicity	0.21**	5.07	0.01	0.16	0.40**	4.42	− 0.05	− 1.07
Network advantage in resource sharing	0.17**	4.03	0.10*	2.13	0.39**	4.31	0.01	0.32
Dependent variable: Brand loyalty								
Multiple R	0.61		0.88		0.80		0.85	
R^2	0.37		0.78		0.64		0.72	
Adjusted R^2	0.36		0.77		0.62		0.71	
Standard error	0.91		0.48		0.75		0.63	

** $p < 0.01$.
* $p < 0.05$.

respectively (Cohen, Cohen, West, & Aiken, 2003). The regression analysis results on the two dependent variables are reported in Tables 4 and 5, respectively. Each table contains regression analysis results for the full sample as well as for the three subsamples (i.e., the three decision making roles). In each regression, the overall model based on simultaneous estimation indicates good model fit ($p < 0.05$). Standardized Beta coefficient (β) is used to estimate each independent variable's relative explanatory power on the dependent variable.

Based on the full sample, the six industrial brand equity dimensions all have positive influences on customer perceived value of the industrial brand (see Table 4). Beta coefficients range from 0.17 (network advantage in resource sharing) to 0.30 (functional advantage in products). The results support H1 through H6. After further examining the results for the subsamples, we find that the influences of the brand equity dimensions differ based on the decision making roles. For purchasers, *omni-channel advantage in communication* ($\beta = 0.58, p < 0.01$) and *analytical advantage in CRM* ($\beta = 0.39, p < 0.01$) show positive influences on customer perceived value of brand, while other brand equity dimensions do not have significant influences ($p > 0.05$). For managers, four dimensions, symbolic advantage in publicity ($\beta = 0.57$, $p < 0.01$), network advantage in resource sharing ($\beta = 0.31$, $p < 0.01$), analytical advantage in CRM ($\beta = 0.14$, $p < 0.01$), and functional advantage in products ($\beta = 0.09$, $p < 0.05$), have positive influences on customer perceived value, and the other two do not. For users, only functional advantage in products ($\beta = 0.43, p < 0.01$) and solution advantage in services ($\beta = 0.36, p < 0.01$) appear to be determinants of customer perceived value of brand. The main duty for the purchaser role is to ensure orders are accurate and can fulfil the needs of the firm and the working units. It seems reasonable that a supplier brand's omni-channel advantage in communication and analytical advantage in CRM are indicators of customer value considered by purchasers. For managers, the benefits of brand prestige (i.e., symbolic advantage in publicity) and network capabilities (i.e., network advantage in resource sharing) are some of the top concerns at the executive level. Unlike purchasers or managers, users primarily care about if a supplier's products (i.e., functional advantage in products) and services (i.e., solution advantage in services) can help them best in the field. Altogether, the results across the subsamples show strong support for H7, which argues that the influence of global industrial brands' resource advantages depends on decision makers' brand usage situation.

Regression results in Table 5 display a similar pattern to those in Table 4. The six industrial brand equity dimensions all have positive influences on brand loyalty, offering support for H1 through H6. Beta coefficients for the brand equity dimensions range from 0.17 (network advantage in resource sharing) to 0.31 (solution advantage in services). In addition, the subsample results confirm the support for H7, showing that the influence of industrial brand equity dimensions on brand loyalty depends on decision makers' brand usage situation. Due to the different brand usage situations experienced by purchasers, managers, and users, some industrial brand equity dimensions appear to be more important than others. In a buying center, purchasers, managers, and users highly regard different brand equity dimensions based on how an industrial brand is used in their decision making situations at work.

5. Discussion

Brand equity not only brings together a set of brand associations to customers in marketing communications, but also provides simplified reasons to buy (Aaker, 1996). In the business-to-business market, industrial brand equity has been considered a priceless asset for suppliers because value attributes such as quality and reliability can be tied to a brand name (Bendixen et al., 2004; Mudambi, 2002). Compared to previous branding frameworks focused on a narrower industrial reproduction process, this study extends the scope of brand equity by identifying a wide-ranging set of customer value elements for industrial customer firms. Our framework includes six key industrial brand equity dimensions: (1) functional advantage in products, (2) solution advantage in services, (3) analytical advantage in CRM, (4) omni-channel advantage in communication, (5) symbolic advantage in publicity, and (6) network advantage in resource sharing. Only the first dimension has been discussed in the previous industrial branding literature. Taken together, various functional attributes such as speed, durability, reliability, or toughness found in industrial products are an important aspect for industrial branding, but *functional advantage in products* only accounts for 7% of the variance in industrial brand equity in the exploratory factor analysis. We have further identified another five dimensions that jointly account for 74% of the variance in industrial brand equity. The results highlight some of the brand associations perceived by customers doing business in today's technology-based business-to-business platforms. For example, *analytical advantage in CRM* accounts for 23% of the total variance, and *omni-channel advantage in communication* accounts for 11%.

Thus, the findings contribute to an in-depth understanding of brand equity for researchers and practitioners in business-to-business marketing. To reiterate, the identified dimensions are not merely based on customer input from one geographical region. With data collected from a global customer base, we hope the discovered pattern can shed light on industrial branding in a standardized, global context. As resource advantage arises from a variety of sources (e.g., intellectual, relational, physical, organizational, and financial sources), brand equity may appear with many facets in today's industrial world, regardless of location. Besides industrial brand equity based on product experiences, customers' experiences in ordering, communication, public relations, and networking are substantial bases of perceived brand equity. Thus, the different relational, social, intellectual, technological, and physical dimensions of brand equity together offer comprehensive customer value.

Compared to previous studies, our findings also contribute to an enhanced understanding of how brand equity is mentally constructed in the industrial market. In today's business-to-business market environment, customer value is regarded as the cornerstone for industrial suppliers (Anderson & Narus, 1998; Keränen & Jalkala, 2013). A high-equity industrial brand is one that captures and signifies superior customer value. The results of this study indicate that an industrial brand must be built upon critical resource advantages in the competition to establish the superior brand position in customers' usage experience. The specific resource advantages against competitors' brands form a solid foundation for establishing brand equity perceived by customers in the industrial world. Thus, the findings indicate that the formation of industrial brand equity in customers' eyes is closely related to the “points of difference” or the “resonating focus” of a supplier's brand (Anderson et al., 2006). Furthermore, industrial brand equity accumulated through customer brand usage experience become reasons for brand loyalty. Brand equity becomes a resilient motive for industrial customers to pursue relational exchange with a supplier. If someday a customer realizes the supplier brand's resource advantages no longer exist, it may be the moment for the customer firm to explore new supplier relationships.

Most importantly, our major contribution lies in the linkage between brand equity perception and brand usage situation of decision makers, with theoretical and empirical evidence. We argue and find that the importance of different brand equity dimensions depends on brand usage situations of buying center decision makers, such as purchasers, managers, and users. Customer experiences of superior value a brand delivers are crucial in establishing perceived brand equity (Zhang et al., 2015), but the customer experiences of buying center members differ significantly. For purchasers, managers, and users, the relative importance of the brand equity dimensions is determined by personal relevance in the work settings. Therefore, it is worthwhile to point out that managers' brand equity perceptions can be tremendously different from the angle used by the rest of the firm's. The findings offer real time insights regarding how a buying center makes purchase decisions involving brands choices.

5.1. Theoretical implications

To build the conceptual framework, we seek resource advantage theory of competition (R-A theory) as a theoretical paradigm (Hunt, 1999; Hunt & Morgan, 1996). A supplier's resource advantages that are aligned with specific customer needs and preference are likely to be recognized and valued by customers, who will in turn contribute to the superior financial outcomes of the supplier. Theoretically speaking, the steps suggested by Hunt and Morgan (1996) in actualizing and executing resource advantages for customers may be used as the basis for managing the process of business-to-business branding. In Fig. 2, we propose a three-step process for business-to-business branding based on Aaker's (1996) brand identity planning model.

According to R-A theory (Hunt & Morgan, 1996), firms that desire to be competitive with resource advantages must be innovative and entrepreneurial. To understand what resource advantages to brand, these firms must be engaged with organizational learning, both proactively and reactively. Proactive learning usually happens in the form of innovation. Through intensive market research, firms can be pioneers in gaining certain resource advantages in the marketplace. On the other hand, reactive learning is often a result of using competitive intelligence on competitors. Through benchmarking with competitors' offerings and continuously improving value attributes, firms can re-gain resource advantages against competitors. Meanwhile, Hunt and Morgan (1996) insisted that firms focus on how to establish resource advantages within specific customer segments, not in the entire marketplace. Firms should understand that different decision making roles weigh the resource advantages differently according to their brand usage situations. Consequently, firms can create appropriate brand associations and superior brand positions as a result of effective learning and matching, and then use brand building programs to communicate the brand associations and brand positions with different decision makers.

5.2. Managerial implications

The findings provide business-to-business brand managers at least three important managerial implications beyond previous findings. First, in crafting industrial brand strategy, the findings direct brand managers' attention to the differentiation factors represented by resource advantages. Previous findings suggest industrial brand equity be built on the intangible benefits a brand is associated with (Herbst & Merz, 2011; Leek & Christodoulides, 2012; Mudambi, 2002; Persson, 2010). In the light of theory, it is rather the “points of difference” benefits than the “points of parity” benefits carried by an industrial brand that can significantly impact perceived customer value and brand loyalty. Thus, to make their branding efforts worthy of return on investment, brand managers should carefully examine the various differentiators against competitors and brand these benchmarks as driving forces of customer value.

Second, brand managers should further seek differentiation factors for branding from a variety of domains such as intellectual, relational, physical, organizational, and financial domains, to name just a few. Advanced features of industrial products and services should not be

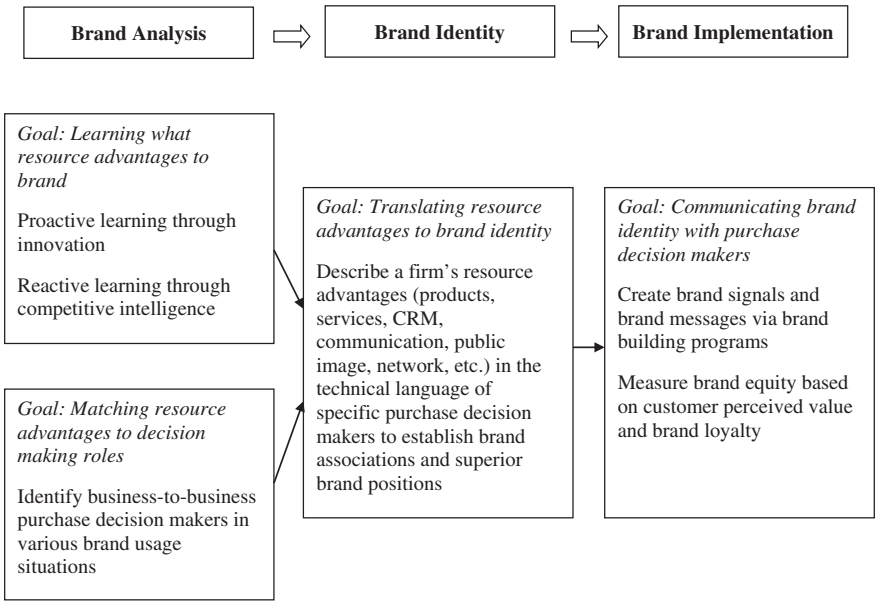

Fig. 2. Business-to-business branding process.

regarded as the only edge of firm resources for industrial branding in today's business-to-business environment. This study provides brand managers a broader spectrum of competencies and know-hows to guide capabilities-centric branding. On a global scale, worldwide industrial brands possess certain resource advantages that are hard for regional brands to obtain. For example, some industrial brands possess global reputation due to multi-country presence, which can help create superior customer value. Such advantage cannot be easily obtained by smaller, local brands. Similarly, the global network owned by a multi-country industrial brand provides customers with strategic access to cross-border resources through relational affiliation. Using our research model as a basis, brand managers should be able to calculate customer-perceived brand equity through a total count of the resource advantages that matter to all purchase decision makers.

Last but foremost, brand managers need to lay emphasis on the specific decision making roles in a buying center, in order to determine which brand equity dimensions best create value and brand loyalty in real time. In business-to-business brand communications, there may not be the "one size fits all" type of brand perception for different decision making roles in a buying center. Brand managers need to determine each decision maker's brand usage situation, which essentially shapes the individual's personal experience with a brand. By focusing on the specific brand equity dimensions that are relevant to a decision maker's work tasks, brand managers can develop a more effective brand position strategy for the targeted decision maker.

The purchasing function in a customer firm is responsible for sorting well-timed supplies while keeping cost under control. The purchasing function also works to ensure questions raised by all other units are answered as quickly as possible by various suppliers, whether it is about the invoice or the user's manual. Therefore, analytical advantage in CRM and omni-channel advantage in communication are some of the desired brand equity dimensions for purchasers due to their brand usage situation. Managers need to make decisions for the entire firm or unit. Although managers need to be attentive to all issues, they may leave professional decisions with product features and order fulfilment for users or purchasers to make. Since building relationships with clients and expanding strategic business network are of top priority in managers' brand usage situation, it indicates that a supplier's symbolic advantage in publicity and network advantage in resource sharing are the critical brand equity dimensions determining their brand evaluations. They may even sacrifice other brand attributes for the symbolic and network advantages. Users are the ones getting the field work done. Rather than other brand equity dimensions, a supplier brand's functional advantage in products and solution advantage in services will provide them the superior brand experience. If they find at a trade show that there is a potential brand better at these, users are likely to see lower value offered by the current brand, regardless of other brand equity dimensions. The identified patterns can guide brand managers in communication with different decision making roles in a customer firm's buying center.

Brand managers may also extend the concept of brand usage situations to market segments. The different industrial market segments may also differ in their brand evaluations based on brand usage situation. Taking the construction industry segments as an example, supply chain management-oriented construction firms (e.g., construction firms focused on public utility maintenance and repair) rely on accurate ordering and fast delivery of supplies and thus, would value analytical advantage in CRM and omni-channel advantage in communication. Market-oriented firms (e.g., construction firms focused on high end real estate) are more likely to value symbolic advantage in publicity and network advantage in resource sharing due to marketing needs. Last but not least, technology-oriented firms (e.g., construction firms focused on hydraulic drilling rigs) would consider functional advantage in products and solution advantage in services the core when selecting a supplier brand. Using specific brand building programs that spotlight the critical resource advantages, brand managers may find it more effective to position an industrial brand in different market segments. Definitions, usage situations, and customer-generated personal examples for the six industrial brand equity dimensions are summarized in Table 6. The selected examples for the industrial brand equity dimensions are provided by the respondents at the end of data collection.

5.3. Limitations and future research recommendations

Through intensive literature review in business-to-business marketing, we have identified six key resource advantages for industrial brands. Future research may explore additional brand equity dimensions through field investigation or theoretical elaboration. For example, Korean construction equipment supplier Doosan and Chinese telecommunications equipment supplier Huawei are both global industrial brands with price advantages. Could price advantage be a separate brand equity dimension? Also, firms' resource advantage may arise from the market entry perspective, as time to market is an important customer value differentiator (Ulaga & Eggert, 2006). Such

Table 6
Summary of brand equity dimensions with examples.

Brand equity dimension	Definition	Usage[a]	Examples
Functional advantage in products	An industrial brand provides superior technical specifications and outputs in its industrial products, preferably over competing brands.	User Manager Purchaser	"We use Brand X because this is the best product that can be used to drill an underground tunnel in the soft soil without possible debris flow. We tried some domestic brands and the effect was not as good as that." – *a civil engineer (user)* "Brand Y is known for its highest reliability of crawler in the industry. We don't afford any delay if our crawler excavator doesn't function well." – *a general manager (manager)*
Solution advantage in services	An industrial brand provides prompt, customer-centric services to solve product and application problems the customer firm encounters in the business process.	User	"Brand X responds to us very quickly when we have any technical question. They have all the needed knowledge to help us out. They always examine our working situation in order to give the best solution. Other brands can't offer this level of service." – *a project manager (user)* "It is very convenient to use Brand Y's drilling system because after purchase, they come here to adjust every machine for us free of charge. They know how to let the machine perform optimally in our working condition to avoid unnecessary maintenance." – *a technician (user)*
Analytical advantage in CRM	An industrial brand provides advanced information system integrated with the customer firm's ordering and operation processes, helping the customer firm summarize purchasing activities, track technical issues, and analyze financial costs and benefits so that future decisions can be made more easily and more accurately.	Purchaser Manager	"It is so easy to work with Brand X because all the data I need from them for the next purchase is on my computer. I even receive financial analysis from them. I don't have to bother the accountant anymore." – *a purchasing manager (purchaser)* "It is almost care-free using Brand Y's machineries. Their system reminds us when we need any sort of maintenance." – *a general manager (manager)*
Omni-channel advantage in communication	An industrial brand provides seamless channels and media to enable ubiquitous connection with and fast reaction to the customer firm and its various functional departments.	Purchaser	"If we have billing question, Brand X' account manager is able to explain to our accountants directly about billing issues. Their engineers not only talk to our engineers very often, but also can be reached by our purchasing department about orders and billings." – *a purchasing manager (purchaser)* "If I need to talk to Brand Y's district manager, I just call or e-mail him. Even if he is not there, I can call the sales manager. I just need to find one person. They always react fast to me." – *a contract manager (purchaser)*
Symbolic advantage in publicity	An industrial brand carries a lofty global brand image that can enhance the customer firm's brand image in the marketplace.	Manager	"Our clients will trust us more if we use products such as Brand X'. In the construction industry, the brand indicates high quality in our clients' eyes." – *a general manager (manager)* "We want to be an international company. Using Brand Y can help us create a global image in the markets home and abroad." – *a CEO (manager)*
Network advantage in resource sharing	An industrial brand enables the customer firm to actively share its global database, information system, business network, and supply system so that the customer's network capabilities are enhanced.	Manager Purchaser	"No company but Brand X offers us their great people network. Our CEO was very happy to attend their global meeting last year to meet some important people in our industry." – *an assistant manager (manager)* "I feel our company is like part of Brand Y because we always use their supply information system to buy parts. We have saved a lot of money." – *a supply manager (purchaser)*

[a] The usage situations are based on significant statistical results of the two regression analyses.

resource advantage has been named market pioneer advantage in market entry, and can help create customer value through enabling customer firms to implement innovative ideas, systems, and solutions before others do (Niu, Wang, & Dong, 2013). This advantage may not have been explained by variances from functional advantage in products or solution advantage in services. In addition, as another aspect of resource advantage, the duration of supplier-buyer relationship may serve as relational advantage that can positively influence customer perceived value and brand loyalty (Pedeliento, Andreini, Bergamaschi, & Salo, 2016). Additional brand equity dimensions can help researchers and brand managers gain deeper insight into business-to-business branding.

In the current study, we have examined three decision making roles in the buying center. We have not included the gatekeeping or influencing roles in the sample. Future research may explore additional decision making roles, such as accountants or sales managers, to describe a more inclusive pattern of brand evaluations by the buying center. Price advantage and relationship advantage of a supplier brand may be more important for these decision making roles. Furthermore, the different roles may overlap. For example, in a customer firm, a manager may be a purchaser at the same time, or a manager used to be a user. To overcome this limitation, future research should specify the decision making roles in a greater detail. This also creates opportunities to study how previous experience in multiple brand usage situations affects brand evaluations.

References

Aaker, D. A. (1996). *Building strong brands: Building, measuring, and managing brand equity.* New York, NY: The Free Press.
Agnihotri, R., Dingus, R., Hu, M. Y., & Krush, M. T. (2016). Social media: Influencing customer satisfaction in B2B sales. *Industrial Marketing Management, 53*(1), 172–180.
Ailawadi, K. L., & Farris, P. W. (2017). Managing multi- and omni-channel distribution: Metrics and research directions. *Journal of Retailing, 93*(1), 120–135.
Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*(3), 411–423.
Anderson, J. C., & Narus, J. A. (1998). Business marketing: Understand what customers value. *Harvard Business Review, 76*(6), 53–65.
Anderson, J. C., Narus, J. A., & van Rossum, W. (2006). Customer value propositions in business markets. *Harvard Business Review, 84*(3), 90–99.
Anderson, J. C., & Wynstra, F. (2010). Purchasing higher-value, higher-price offerings in business markets. *Journal of Business-to-Business Marketing, 17*(1), 29–61.
Anselmsson, J., Johansson, U., & Persson, N. (2007). Understanding price premium for grocery products: A conceptual model of customer-based brand equity. *Journal of Product & Brand Management, 16*(6), 401–414.
Backhaus, K., Steiner, M., & Lugger, K. (2011). To invest or not to invest in brands?

Drivers of brand relevance in B2B markets. *Industrial Marketing Management, 40*(7), 1082–1092.
Bendixen, M., Bukasa, K., & Abratt, R. (2004). Brand equity in the business-to-business market. *Industrial Marketing Management, 33*(5), 371–380.
Beverland, M., Napoli, J., & Lindgreen, A. (2007). Industrial global brand leadership: A capabilities view. *Industrial Marketing Management, 36*(8), 1082–1093.
Biedenbach, G., & Marell, A. (2010). The impact of customer experience on brand equity in a business-to-business setting. *Journal of Brand Management, 17*(6), 446–458.
Brady, T., Davies, A., & Gann, D. M. (2005). Creating value by delivering integrated solutions. *International Journal of Project Management, 23*(5), 360–365.
Brown, B. P., Zablah, A. R., Bellenger, D. N., & Donthu, N. (2012). What factors influence buying center brand sensitivity? *Industrial Marketing Management, 41*(3), 508–520.
Bruhn, M., Schnebelen, S., & Schäfer, D. (2014). Antecedents and consequences of the quality of e-customer-to-customer interactions in B2B brand communities. *Industrial Marketing Management, 43*(1), 164–176.
Bush, A. J., & Hair, J. F. (1985). An assessment of the mall intercept as a data collection method. *Journal of Marketing Research, 22*(2), 158–167.
Cao, L., & Li, L. (2015). The impact of cross-channel integration on retailers' sales growth. *Journal of Retailing, 91*(2), 198–216.
Child, D. (1990). *The essentials of factor analysis.* London, UK: Cassel Educational Limited.
Christodoulides, G., & Chernatony, L. (2010). Consumer-based brand equity conceptualisation and measurement: A literature review. *International Journal of Market Research, 52*(1), 43–65.
Churchill, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research, 16*(1), 64–73.
Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences.* Mahwah, NJ: Lawrence Erlbaum Associates.
Coleman, D., Chernatony, L., & Christodoulides, G. (2011). B2B service brand identity: Scale development and validation. *Industrial Marketing Management, 40*(7), 1063–1071.
Day, G. S. (2000). Managing market relationships. *Journal of the Academy of Marketing Science, 28*(1), 24–30.
DeVellis, R. F. (1991). *Scale development: Theory and applications.* Newbury Park, CA: Sage Publications.
Dholakia, R. R., Zhao, M., & Dholakia, N. (2005). Multichannel retailing: A case study of early experiences. *Journal of Interactive Marketing, 19*(2), 63–74.
Dimofte, C. V., Johansson, J. K., & Bagozzi, R. (2010). Global brands in the United States: How consumer ethnicity mediates the global brand effect. *Journal of International Marketing, 18*(3), 81–106.
Eggert, A., & Ulaga, W. (2010). Managing customer share in key supplier relationships. *Industrial Marketing Management, 39*(8), 1346–1355.
Eklinder-Frick, J., Eriksson, L. T., & Hallén, L. (2011). Bridging and bonding forms of social capital in a regional strategic network. *Industrial Marketing Management, 40*(6), 994–1003.
Evanschitzky, H., Wangenheim, F. V., & Woisetschläger, D. M. (2011). Service and solution innovation: Overview and research agenda. *Industrial Marketing Management, 40*(5), 657–660.
Fornell, C., Johnson, M. D., & Anderson, E. W. (1996). The American customer satisfaction index: Nature, purpose, and findings. *Journal of Marketing, 60*(3), 7–18.
Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.
Gaur, S. S., Vasudevan, H., & Gaur, A. S. (2011). Market orientation and manufacturing performance of Indian SMEs: Moderating role of firm resources and environmental factors. *European Journal of Marketing, 45*(7), 1172–1193.
Grönroos, C. (2011). A service perspective on business relationships: The value creation, interaction and marketing interface. *Industrial Marketing Management, 40*(2), 240–247.
Gustafsson, A., Johnson, M. D., & Roos, I. (2005). The effects of customer satisfaction, relationship commitment dimensions, and triggers on customer retention. *Journal of Marketing, 69*(4), 210–218.
He, J., & Wang, C. L. (2014). The intellectual structure in brands and branding research: A scientometric analysis. In C. L. Wang, & J. He (Eds.). *Brand management in emerging markets: Theories and practices* (pp. 1–35). Hershey, PA: IGI Global.
Herbst, U., & Merz, M. A. (2011). The industrial brand personality scale: Building strong business-to-business brands. *Industrial Marketing Management, 40*(7), 1072–1081.
Holt, D. B., Quelch, J. A., & Taylor, E. L. (2004). How global brands compete. *Harvard Business Review, 82*(9), 68–75.
Hunt, S. D. (1999). The strategic imperative and sustainable competitive advantage: Public policy and resource advantage theory. *Journal of the Academy of Marketing Science, 27*(2), 144–159.
Hunt, S. D., & Morgan, R. M. (1996). The resource-advantage theory of competition: Dynamics, path dependencies, and evolutionary dimensions. *Journal of Marketing, 60*(4), 107–114.
Jaakkola, E., & Hakanen, T. (2013). Value co-creation in solution networks. *Industrial Marketing Management, 42*(1), 47–58.
Jacob, F., & Ulaga, W. (2008). The transition from product to service in business markets: An agenda for academic inquiry. *Industrial Marketing Management, 37*(3), 247–253.
Jayachandran, S., Sharma, S., Kaufman, P., & Raman, P. (2005). The role of relational information processes and technology use in customer relationship management. *Journal of Marketing, 69*(4), 177–192.
Jean, B., Sinkovics, R. R., & Cavusgil, S. T. (2010). Enhancing international customer-supplier relationships through IT resources: A study of Taiwanese electronics suppliers. *Journal of International Business Studies, 41*(7), 1218–1239.
Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement, 20*(1), 141–151.
Kandemir, D., Attila, Y., & Cavusgil, S. T. (2006). Alliance orientation: Conceptualization, measurement, and impact on market performance. *Journal of the Academy of Marketing Science, 34*(3), 324–340.
Keränen, J., & Jalkala, A. (2013). Towards a framework of customer value assessment in B2B markets: An exploratory study. *Industrial Marketing Management, 42*(8), 1307–1317.
Kim, H. S., & Kim, Y. G. (2009). A CRM performance measurement framework: Its development process and application. *Industrial Marketing Management, 38*(4), 477–489.
Kirca, A. H., Jayachandran, S., & Bearden, W. O. (2005). Market orientation: A meta-analytic review and assessment of its antecedents and impact on performance. *Journal of Marketing, 69*(2), 24–41.
Kohtamäki, M., Partanen, J., Parida, V., & Wincent, J. (2013). Non-linear relationship between industrial service offering and sales growth: The moderating role of network capabilities. *Industrial Marketing Management, 42*(8), 1374–1385.
Kotler, P., & Pfoertsch, W. (2006). *B2B brand management.* Berlin, Germany: Springer.
Kumar, V., & Venkatesan, R. (2005). Who are the multichannel shoppers and how do they perform: Correlates of multichannel shopping behavior. *Journal of Interactive Marketing, 19*(2), 44–62.
Kushwaha, T., & Shankar, V. (2013). Are multichannel customers really more valuable? The moderating role of product category characteristics. *Journal of Marketing, 77*(4), 67–85.
Leek, S., Canning, L., & Houghton, D. (2016). Revisiting the task media fit model in the era of web 2.0: Twitter use and interaction in the healthcare sector. *Industrial Marketing Management, 54*(1), 25–32.
Leek, S., & Christodoulides, G. (2012). A framework of brand value in B2B markets: The contributing role of functional and emotional components. *Industrial Marketing Management, 41*(1), 106–114.
Lynch, J., & de Chernatony, L. (2007). Winning hearts and minds: B2B branding and the role of the salesperson. *Journal of Marketing Management, 23*(1), 123–135.
Markets and Markets. Heavy construction equipment market global forecast. (2017). Available at http://www.marketsandmarkets.com/top-market-reports.asp (last accessed on March 31, 2017).
Marquardt, A. J. (2013). Relationship quality as a resource to build industrial brand equity when products are uncertain and future-based. *Industrial Marketing Management, 42*(8), 1386–1397.
Matthyssens, P., & Vandenbempt, K. (2008). Moving from basic offerings to value-added solutions: Strategies, barriers and alignment. *Industrial Marketing Management, 37*(3), 316–328.
Michell, P., King, J., & Reast, J. (2001). Brand values related to industrial products. *Industrial Marketing Management, 30*(5), 415–425.
Mithas, S., Krishnan, M. S., & Fornell, C. (2005). Why do customer relationship management applications affect customer satisfaction? *Journal of Marketing, 69*(4), 201–209.
Mitrega, M., Forkmann, S., Ramos, C., & Henneberg, S. C. (2012). Networking capability in business relationships: Concept and scale development. *Industrial Marketing Management, 41*(5), 739–751.
Moller, K. (2006). Role of competences in creating customer value: A value-creation logic approach. *Industrial Marketing Management, 35*(8), 913–924.
Morgan, F., Deeter-Schmelz, D., & Moberg, C. F. (2007). Branding implications of partner firm-focal firm relationships in business-to-business service networks. *Journal of Business and Industrial Marketing, 22*(6), 372–382.
Mudambi, S. M. (2002). Branding importance in business-to-business markets: Three buyer clusters. *Industrial Marketing Management, 31*(6), 525–533.
Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing, 54*(3), 20–35.
Neslin, S., Grewal, D., Leghorn, R., Shankar, V., Teerling, M., Thomas, J., & Verhoef, P. (2006). Challenges and opportunities in multichannel customer management. *Journal of Service Research, 9*(2), 95–112.
Niu, Y., Wang, C. L., & Dong, L. C. (2013). Firm resources and entry-related advantages: An empirical study in China. *Industrial Marketing Management, 42*(4), 595–607.
Nunnally, J. C. (1978). *Psychometric theory.* New York, NY: McGraw-Hill.
Nyadzayo, M. W., Matanda, M. J., & Ewing, M. T. (2016). Franchisee-based brand equity: The role of brand relationship quality and brand citizenship behavior. *Industrial Marketing Management, 52*(1), 163–174.
O'Cass, A., & Ngo, L. V. (2012). Creating superior customer value for B2B firms through supplier firm capabilities. *Industrial Marketing Management, 41*(1), 125–135.
O'Donnell, S., & Jeong, I. (2000). Marketing standardization within global industries. *International Marketing Review, 17*(1), 19–33.
Özsomer, A. (2012). The interplay between global and local brands: A closer look at perceived brand globalness and local iconness. *Journal of International Marketing, 20*(2), 72–95.
Payne, A., & Frow, P. (2005). A strategic framework for customer relationship management. *Journal of Marketing, 69*(4), 167–176.
Payne, A., & Frow, P. (2006). Customer relationship management: From strategy to implementation. *Journal of Marketing Management, 22*(1), 135–168.
Pedeliento, G., Andreini, D., Bergamaschi, M., & Salo, J. (2016). Brand and product attachment in an industrial context: The effects on brand loyalty. *Industrial Marketing Management, 53*(1), 194–206.
Persson, N. (2010). An exploratory investigation of the elements of B2B brand image and its relationship to price premium. *Industrial Marketing Management, 39*(8), 1269–1277.
Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903.
Quelch, J. A. (1999). Global brands: Taking stock. *Business Strategy Review, 10*(1), 1–14.

Reinartz, W., Krafft, M., & Hoyer, W. D. (2004). The customer relationship management process: Its measurement and impact on performance. *Journal of Marketing Research, 41*(3), 293–305.

Riel, C. R., Montagnes, C. P., & Streukens, S. (2005). Marketing antecedents of industrial brand equity: An empirical investigation in specialty chemicals. *Industrial Marketing Management, 34*(8), 841–847.

Rigby, D. K., Reichheld, F. F., & Schefter, P. (2002). Avoid the four perils of CRM. *Harvard Business Review, 80*(2), 101–109.

Rust, R. T., Moorman, C., & Bhalla, G. (2010). Rethinking marketing. *Harvard Business Review, 88*(1), 94–101.

Sichtmann, C., & Diamantopoulos, A. (2013). The impact of perceived brand globalness, brand origin image, and brand origin: Extension fit on brand extension success. *Journal of the Academy of Marketing Science, 41*(5), 567–585.

Skarmeas, D., Katsikeas, C. S., Spyropoulou, S., & Salehi-Sangari, E. (2008). Market and supplier characteristics driving distributor relationship quality in international marketing channels of industrial products. *Industrial Marketing Management, 37*(1), 23–36.

Slater, S. F., & Narver, J. C. (1994). Market orientation, customer value, and superior performance. *Business Horizons, 37*(1), 22–28.

Smirnova, M., Naudé, P., Henneberg, S. C., Mouzas, S., & Kouchtch, S. P. (2011). The impact of market orientation on the development of relational capabilities and performance outcomes: The case of Russian industrial firms. *Industrial Marketing Management, 40*(1), 44–53.

Spector, P. E. (1992). *Summated rating scale construction.* Thousand Oaks, CA: Sage Publications.

Stone, M., Hobbs, M., & Khaleeli, M. (2002). Multichannel customer management: The benefits and challenges. *Journal of Database Marketing, 10*(1), 39–52.

Storbacka, K. (2011). A solution business model: Capabilities and management practices for integrated solutions. *Industrial Marketing Management, 40*(5), 699–711.

Tuli, K. R., Kohli, A. K., & Bharadwaj, S. G. (2007). Rethinking customer solutions: From product bundles to relational processes. *Journal of Marketing, 71*(3), 1–17.

Ulaga, W., & Chacour, S. (2001). Measuring customer perceived value in business markets: A prerequisite for marketing strategy and implementation. *Industrial Marketing Management, 30*(6), 525–540.

Ulaga, W., & Eggert, A. (2006). Value-based differentiation in business relationships: Gaining and sustaining key supplier status. *Journal of Marketing, 70*(1), 119–136.

Ulaga, W., & Reinartz, W. (2011). Hybrid offerings: How manufacturing firms combine goods and services successfully. *Journal of Marketing, 75*(6), 5–23.

Verhoef, P. (2003). Understanding the effect of customer relationship management efforts on customer retention and customer share development. *Journal of Marketing, 67*(4), 30–45.

Verhoef, P., Neslin, S., & Vroomen, B. (2007). Multichannel customer management: Understanding the research-shopper phenomenon. *International Journal of Research in Marketing, 24*(2), 129–148.

Walter, A., Auer, M., & Ritter, T. (2006). The impact of network capabilities and entrepreneurial orientation on university spin-off performance. *Journal of Business Venturing, 21*(4), 541–567.

Webster, F., & Keller, K. L. (2004). A roadmap for branding in industrial markets. *Brand Management, 11*(5), 388–402.

Wiersema, M. F., & Bowen, H. P. (2008). Corporate diversification: The impact of foreign competition, industry globalization, and product diversification. *Strategic Management Journal, 29*(2), 115–132.

Windahl, C., & Lakemond, N. (2010). Integrated solutions from a service-centered perspective: Applicability and limitations in the capital goods industry. *Industrial Marketing Management, 39*(8), 1278–1290.

Woodruff, R. (1997). Customer value: The next source for competitive advantage. *Journal of the Academy of Marketing Science, 25*(2), 139–153.

Zablah, A. R., Brown, B. P., & Donthu, N. (2010). The relative importance of brands in modified rebuy situations. *International Journal of Research in Marketing, 27*(3), 248–260.

Zaichkowsky, J. L., Parlee, M., & Hill, J. (2010). Managing industrial brand equity: Developing tangible benefits for intangible assets. *Industrial Marketing Management, 39*(5), 776–783.

Zhang, J., Jiang, Y., Shabbir, R., & Du, M. (2015). Building industrial brand equity by leveraging firm capabilities and co-creating value with customers. *Industrial Marketing Management, 51*(1), 47–58.