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Explicating Brand Equity in the Information Technology Sector in Vietnam

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Abstract: Vietnamese IT businesses have expanded internationally and have reached a turning point with opportunities and challenges typical when establishing a global brand. To assist Vietnamese IT firms in the development of branding strategies, this study investigated the direct influences of various firm competencies, such as innovation, marketing, networking, and dynamic capabilities, on brand equity in the business-to-business (B2B) information technology (IT) industry. In addition, the study examined whether the enterprise's capabilities indirectly affected B2B brand equity via value co-creation and customer value. By employing PLS-SEM to analyze a sample of 182 questionnaire responses from IT firms in Ho Chi Minh City, Vietnam, the study found that innovative, networking, and dynamic capabilities had a direct, positive effect on brand equity. The mediating effect of value co-creation and customer value on the association between marketing capability and brand equity was also reported. The research also recommended branding strategies for enterprises that seek to improve their internal competencies and abilities to innovate and respond swiftly to market dynamics. In a successful marketing strategy, all stakeholders must be involved in the value co-creation and brand equity building process, and this is particularly critical in a knowledge-intensive industry such as IT.

Keywords: brand equity; innovation capability; dynamic capability, networking capability; IT industry

1. Introduction

Marketing thought has evolved to demonstrate that just being market-focused is not enough for businesses to guarantee profit and sustainable development in the marketplace. The competition for customers is intensifying as the world gets closer to globalization and digital transformation. In addition to delivering quality products and services, companies must compete for purchasing intention and brand loyalty of their customers as well as their own long-term brand equity (Cavusgil and Knight 2015). Brand equity has a considerable impact on financial success despite not being a tangible or entirely quantitative factor. Brands are among the most valuable assets that a company can develop, and they require plenty of resources, effort, and patience over a long period. Sustainable brand equity is determined by how customers perceive the brand's value and is influenced by elements such as brand awareness, perceived quality, and market-sector brand image (Myers 2003; Pike et al. 2010). The ability of a brand to increase the long-term profitability of a company is also referred to as brand equity (Farquhar 1989; Bonamigo et al. 2020).

Business-to-business (B2B) firms have elevated marketing as a strategic priority. As brand equity can be built through marketing efforts and customer education, developing these capabilities can assist businesses in achieving sustainable development and branding success (Leek and Christodoulides 2011; Xie and Zheng 2019). For knowledge-intensive B2B organizations, innovation, marketing, and networking are critical for brand development and sustainability (Zhang et al. 2015). Excelling at these key strategies enables businesses to remain competitive in their industries and establish mutually beneficial relationships with relevant stakeholders, which serves as an antecedent for brand equity (Wang and Sengupta 2016).

Value co-creation has become one of the most revolutionary business concepts today as it engages customers in the value creation process alongside the business or service provider (Saha et al. 2020). Franklin and Marshall (2019) suggested that "co-creation is the active participation, interactions, and collaboration of the buyer and seller and other actors in the marketing exchange to develop a deeper understanding of the customer problem-solving context." Value co-creation refers to the collaboration of providers and customers in the industrial service context (Bonamigo et al. 2020). This collaborative approach necessitates a fundamental shift in business thinking. Companies can empower the end user to participate in the production process by expressing their needs and sharing their expertise and, thereby, establish a mutually beneficial relationship while also enhancing brand equity (Sales-Vivó et al. 2020). Despite these benefits, value co-creation in the IT sector still faces some hurdles, such as a lack of awareness of the benefits, resistance to sharing information, and unnecessary actions to hurt the customer relationship.

A large body of literature has discussed brand equity and its importance for business successes for several decades (Leek and Christodoulides 2011; Han et al. 2015; He et al. 2020). Strong, sustainable brand equity allows companies to reach more customers, increase purchase intention, and build customer loyalty (Michell et al. 2001; Vázquez et al. 2002; Frías Jamilena et al. 2017). Therefore, businesses should aim to create value through nurturing their relationships with their customers and collaborating with them in the product development process. Brand studies have been focused on understanding the impact brand equity can have on customers' purchasing intention in a business-to-consumer (B2C) market. However, there has been little research on this in the B2B market, which is problematic for the IT sector and its influence in emerging markets.

Among the modest number of studies examining brand equity within the B2B context, only a few have investigated the link between brand equity and a firm's resource-based capabilities (Leek and Christodoulides 2011; Rahman et al. 2018). B2B customers have a greater incentive to purchase, repurchase, recommend, and even pay more for a product or service from a provider who has good brand equity (Asamoah 2014; Hirvonen et al. 2016). Value co-creation in the B2B market expands the partnership and collaboration process for sustainable development (Bamm et al. 2018; Zhang et al. 2015). Each firm can leverage its resource-based advantages to build trust, establish long-term relationships, and improve overall performance (Wong and Merrilees 2006; Bharadwaj et al. 2015). Moreover, the value co-created by B2B vendors and their customers can mediate the link between various firm capabilities and brand equity (Zhang et al. 2015).

As businesses invest in new and innovative strategies to enhance their brand equity, the costs involved continue to increase. To buffer these investments, firm capabilities can serve as strategic resources for building and enhancing brand equity. Besides their direct impact, firm capabilities can indirectly support and promote brand equity via the value co-creation process. Each organization's capabilities are unique and, therefore, present their own benefits and challenges (Wernerfelt 1984). However, while we know that firm capabilities and value co-creation have essential roles in shaping and improving brand equity, the evidence is limited due to the lack of pertinent research (Mingione and Leoni 2020; Zhang et al. 2015). Although value co-creation appears to influence how various firm capabilities promote brand equity, the importance and strength of their relationship has yet to be fully examined.

Given the massive investments made into digital transformation and technology acceleration by both global and domestic IT firms, they have successfully positioned their brands in the market. Vietnamese IT companies have recently developed internationally recognized products and caught up with the latest global trends in developing new technology, such as big data, artificial intelligence (AI), the Internet of things (IoT), and blockchain, to name a few. There is no doubt that Vietnam's IT industry is at a turning point, with both opportunities and challenges yet to come. In recent years, Vietnam's IT industry has expanded significantly in local and international markets, which accounts for a considerable amount of its economic growth. By integrating digital transformation strategies, Vietnam has become one of the most appealing regional markets in the IT industry (Lam et al. 2021).

Dynamic capabilities can help integrate, build, and reorganize internal and external resources to reshape an organization's structure and meet new business and market demands (Borch and Madsen 2007; Teece 2016). Dynamic and other resource-based capabilities are incorporated when businesses must restructure and regenerate resources to promote their brand equity over time (Wang and Sengupta 2016). IT firms are known as knowledge-intensive organizations that require a well-trained and adaptative workforce. As a result, human capital that possesses innovative and dynamic capabilities is the key driving force of the B2B IT sector, but its full value has yet to be appreciated due to the lack of research.

This study aims to expand our understanding of brand strategies used by IT enterprises and make theoretical contributions to the current brand equity literature. We evaluated the roles that innovation, marketing, networking, and dynamic capabilities play when it comes to value co-creation, customer value, and brand equity improvement, particularly in the B2B sector of the IT industry. Our primary focus was to investigate whether a firm's capabilities could be employed as catalysts to build sustainable brand equity through value co-creation within the context of current IT B2B practices. Besides other resource-based capabilities, dynamic capabilities were also examined to see how this internal advantage might facilitate a collaboration process where value could be co-realized and co-created (Brodie et al. 2017). Therefore, this study first explored the direct influence of firm capabilities on brand equity in the B2B IT industry, such as innovation, marketing, networking, and dynamic capabilities, which are unique and essential in the knowledge-intensive IT sector. In addition, this paper investigated the indirect effects of firm capabilities on brand equity via joint supplier–client value co-creation and customer value. Based on our results, we provided practical recommendations for building sustainable, long-term B2B IT brand equity.

2. Literature Review

2.1. B2B Brand Equity

Brand equity has been conceptualized in various ways in the marketing literature (Myers 2003; Leek and Christodoulides 2011). Consumer-based branding research indicates that brand equity can be defined as brand value created by consumer perceptions, attitudes, knowledge, and behavior (Pike et al. 2010). In contrast, firm-based branding research considers both product features and financial factors informed by brand performance in the marketplace, and then defines brand equity by its predicted ability to generate profit and cash flow (Belo et al. 2014). The primary function of branding is to promote the value and perception of a product or service to its audience and all stakeholders (Chow et al. 2017). As introduced by Farquhar (1989), brand equity is considered the ability of an organization to increase its long-term profitability. Moreover, it is also referred to customer knowledge of a brand when looking at it from the customer's perspective (Moradi and Zarei 2012). In the broadest sense, brand equity can be achieved in various ways: The notion of brand equity plays a crucial role in intangible value creation, especially in terms of financial health. Theoretically, brand equity should also apply in a B2B context as well as in a B2C context. To determine the differences between B2C and B2B branding, strategic and tactical branding values must be assessed, such as in transactions (Leek and Christodoulides 2011). When businesses invest effort and resources into their brand equity, they usually succeed in getting better financial and marketing results over time; in addition, brand equity is more valuable in the B2B context (Myers 2003; Leek and Christodoulides 2011; Gil-Saura et al. 2013). To provide an operational definition, Shocker and Aaker (1993) defined brand equity as all the assets and liabilities associated with a brand, such as visibility, association, and loyalty, which can determine that brand's current or future value based on the product or service it characterizes.

Brand equity is becoming an increasingly important part of B2B transactions (Rahman et al. 2018). There is strong evidence for successful brand equity established in the IT sector, where the world's most valuable B2B brands belong to the likes of IBM, Cisco, Oracle, and Intel (Leek and Christodoulides 2011). There is no doubt that business clients in this knowledge-intensive sector are willing to pay a premium for name-brand services or recommend brands they consider prestigious (Chow et al. 2017). Within the B2B context, overall brand equity of a company or manufacturer is more important than the individual products or product lines. Therefore, B2B relationships are based on the nature of the products as well as the trust and the interaction among relevant stakeholders (Leek and Christodoulides 2011). Overall, B2B brands use product attributes and customer service quality to differentiate themselves from other brands. While there are exceptions, B2B purchase decisions are typically based on rational factors, rather than emotional ones.

According to contemporary perspectives, B2B brand equity is continuously affirmed and expanded via interactions, partnerships, and collaborations between the firms and their stakeholders (Wang and Sengupta 2016; Mingione and Leoni 2020). This cooperative stakeholder perspective addresses how firms, consumers, and other groups co-create brand value simultaneously and promote the sustainable development of brand equity (Hanaysha and Hilman 2015). This has recently been used to explore whether value co-creation between providers and customers matters for B2B brand equity (Mingione and Leoni 2020; Zhang et al. 2015). Stakeholder cooperation enables the participants to co-explore new concepts of brand representation, expression, strategy negotiation, and resource allocation as well as co-develop new products and services (Mingione and Leoni 2020). The current literature on branding investigated the relationship between brand equity and its prerequisites. From the perspective of resource utilization, brand equity was enhanced and catalyzed via value co-creation when a B2B scenario possesses a higher level of marketing, innovation, and networking capabilities (Zhang et al. 2015). While we agree that these capabilities play crucial roles in evolving and improving brand equity, we endeavor to show that dynamic capabilities are also essential.

It has been widely accepted that firms see themselves as members of networks, interacting with business clients and other actors to yield collective benefits (Borch and Madsen 2007; Wang and Sengupta 2016; Brodie et al. 2017). This study, however, combined a dynamic-capabilities view with a resource-based view in recognizing and applying adaptative and managerial skill sets to match specific market demands and shifts. The resource-based view (RBV) contends that organizations should optimize their competitive advantages by mobilizing internal tangible and intangible resources and capabilities rather than focusing on the external business environment (Wernerfelt 1984). Therefore, proponents of RBV have argued that the efficient utilization of existing resources to enhance firm performance is far more feasible than acquiring new resources or learning new skills (Zhang et al. 2015). In terms of intangible resources, brand equity, trademarks, intellectual properties, and capabilities have accumulated over time and cannot be easily recruited or purchased by other businesses (Wernerfelt 1984). However, from the perspective of dynamic capabilities, Teece et al. (1997) have proposed that because maintaining a competitive advantage is infinite and dynamic, firms must develop specific capabilities and engage in continuous learning to stay competitive.

Teece (2016) elaborates on the relationship between different stakeholders by pointing out that "the business enterprise must be able to leverage cooperation between stakeholders to deliver value to customers". The author also stressed the importance of this ability as the base of dynamic capability. The central theory indicated that the success of establishing brand equity was determined by the dynamic capabilities held by marketing professional who already has connections within a relevant network (Wang and Sengupta 2016; Brodie et al. 2017). By permitting actors to collaborate and foster a brand identity, the dynamic capabilities of the lead actor enable them to create meaning and value within their network. Dynamic capabilities are based on a complex understanding of a market as well as its culture and its demands, which can be difficult for competitors to duplicate (Teece et al. 1997; Teece 2016). For a marketing agency, their dynamic capabilities in integrative branding can help secure long-term strategic advantages (Wong and Merrilees 2006).

2.2. Value Co-Creation and Customer Value in the B2B Industry

Mingione and Leoni (2020) defined value co-creation as the interactions between a firm and its customers, which involve dialogue and the integration of resources and capabilities that result in mutually beneficial outcomes. On the other hand, Zhang et al. (2015) describe this co-creation process as the integration of a firm's resources to develop their capabilities and expand their potential outside of stand-alone businesses. Partners in the co-creation process may view it from radically different perspectives. Despite its recent popularity, the concept of value co-creation is not novel to branding professionals (Brodie et al. 2009). Stakeholders engage and build meaning for the brand based on their experience with the brand, especially now in the digital age (Mingione and Leoni 2020). The question then becomes, how do large, established corporate brands co-create value with their stakeholders? Different answers have been suggested in industry literature. However, some of them have realized the value of the co-creating mechanism and adapted accordingly. Biraghi and Gambetti (2017) suggested that a brand should focus on leveraging value. The firm must first examine how their stakeholder partners have contributed to the brand value, and then, they can standardize that process so that it can be tested, refined, and employed to develop long-term, sustainable brand equity. Furthermore, Fuchs and Schreier (2011) presented two ways for firms to co-create value with their customers: provide them with customizable features and options for a service or product, or collaborate with them to develop a unique solution.

Customer value is a fundamental of marketing and management (Lindgreen et al. 2012), with demonstrable benefits and serving as a base for firm differentiation (Maarit Jalkala and Keränen 2014). An excellent, long-term value a firm can offer is to create superior customer value, i.e., satisfy their demands (Flint et al. 1997; Makkonen and Sundqvist-Andberg 2017). Because the customer value proposition has been described as, essentially, "the trade-off between benefits and sacrificed costs" in industry research by such authors as Ulaga and Eggert (2006); Makkonen and Sundqvist-Andberg (2017), and Leroi-Werelds et al. (2014), this suggests that the costs and benefits are subject largely to customer perception, which can make understanding the customer value of a product or service quite complex.

One barrier that prevents businesses from developing a good relationship with their customers is that the customers may expect more from their purchase and the provider than what they receive (Samudro et al. 2018). To overcome this barrier, businesses need to establish trust with their customers, which is often best accomplished through more than one interaction (e.g., the purchase), which in turn will require them to expand their offerings and improve their customer service. Samudro et al. (2018) suggested two different aspects from which to examine the customer's perceived value. The first one was the product or service itself, which is its core and most fundamental value. The second one was the "added value" perception of the brand, which included product reliability, quality assurance, mutual empathy, and service responsiveness. By developing "added value" for their brand and offerings, businesses are able to differentiate themselves from the market and provide an experience consumers are unable to find elsewhere. However, from a managerial perspective, this requires a conversion phase, wherein stand-alone products or services are shifted to broader, customizable solutions with long-term service options and personalized support. This is key to enhancing brand equity, as well.

The added value in the information technology area may refer to service quality provided to the end-user, which is an overall perceived judgment. Zeithaml (1988) stated the same opinion but with more detail, suggesting that perceived value is the measurement by the user of the value or superior quality of a product or service. Therefore, the quality of an offering is considered a measurement of how it increased customer loyalty in a business, product, or brand. In addition, customer value as well as customer awareness about other brands or products have a strong impact on purchasing bias.

2.3. Firms' Capabilities and Their Impacts on Brand Equity

Firm capabilities are defined as organizational patterns of behavior and complex skill bundles as well as the accumulated knowledge about an organization's various processes that work together to make optimal use of a firm's assets (Teece et al. 1997; Xie and Zheng 2019). Zhang et al. (2015) described corporate capabilities as a sequence of actions that create a value set. The three most common competencies in enhancing B2B brand equity are marketing, networking, and innovation, which have been explored by recent studies (e.g., O'cass and Ngo 2012; Shou et al. 2014; Zhang et al. 2015).

In response to B2B market dynamics, suppliers need to leverage their position as a source of value creation for customers by demonstrating their innovation, networking, and marketing capabilities (O'cass and Ngo 2012; Shou et al. 2014). The role of innovation capability in building brand equity and driving business performance has attracted considerable attention among researchers (Xie and Zheng 2019; Zhang et al. 2015). The integration of a company's knowledge, skills, and resources for both technical and non-technical innovation has been referred to as innovation capability (O'cass and Ngo 2012; Xie and Zheng 2019). However, other researchers consider a company's marketing capabilities to be just as important (Hutchinson et al. 2007; Zhang et al. 2015). Marketing capability has been defined as planning and cost-effectively implementing competitive marketing strategies (Morgan et al. 2009; Leek and Christodoulides 2011). Networking ability has been associated with enhancing brand equity through access to new markets and collaborating on value co-creation, and, therefore, yielding a competitive advantage (Kelley et al. 2009; Zhang et al. 2015). The most recent addition to these core capabilities is that of the aforementioned dynamic capabilities. Teece (2016) has been particularly interested in the concept of dynamic capabilities, which enable a business to identify new opportunities, allocate resources, and modify the way it performs to facilitate value co-creation and enhance brand equity. These four firm capabilities, i.e., innovation, marketing, networking, and dynamic capabilities, and their involvement in value co-creation and brand equity will be discussed individually to provide a more comprehensive picture.

2.3.1. Innovation Capability, Value Co-Creation, and Brand Equity

Innovation capability refers to a business's ability to generate new products and improve processes by transforming accumulated knowledge and ideas into practices as well as utilizing the existing organizational and social capital (Xie and Zheng 2019). Most business leaders and scientific scholars would agree that innovation capability is critical to building brand equity and stimulating a company's growth (O'cass and Ngo 2012; Hanaysha and Hilman 2015; Xie and Zheng 2019; Zhang et al. 2015). Firms that possess innovation capability can integrate their fundamental capabilities and resources to increase profits (Leek and Christodoulides 2011). In addition, the concept of innovation capability has been positively linked to a firm's longevity and brand performance over time, particularly in changing and knowledge-intensive markets (Zhang et al. 2018). This is necessary so a firm can adapt their offerings and raise consumer brand awareness.

Innovation capability involves mobilizing and allocating resources in response to external changes (Wang and Sengupta 2016). Compared to dynamic capability, innovation capability emphasizes a firm's ability to change its offerings. Thus, innovation capability has been measured using different factors, such as a firm's R&D capacity, adaptive strategies for customer service and retention, willingness to invest in niche markets, breakthrough ideas to implement firm's strategies, and a willingness to test new methods to improve customer satisfaction (Wang and Ahmed 2004).

The innovative capability has been considered the most critical factor that directly contributes to brand equity with its distinctive value in product or service offerings

(Zhang et al. 2015). It improves the tangible value of a product through the evolution of its function and features and has even been referred to a brand identity catalyst (Hanaysha and Hilman 2015). Indeed, any production line is the combination of two fundamental parts. Firstly, the physical product or service includes value-added factors, which have been mentioned in previous research as resource utilization and transformation. These value-added factors are the result creating a functional, distinctive product that cannot be replicated by competitors and successfully contributes to the firm's value chain. This ability, often considered a firm's signature offering, can lead to and maintain their brand equity and sustainable competitiveness. It also directly influences the buyer–supplier relationship when a firm strategically focuses on innovation (Jajja et al. 2017).

Businesses know that market orientation is not the sole factor for a successful brand in a knowledge-intensive industry such as the IT sector. Innovative ideas and practices that maintain and improve the satisfaction, the harmony, and the relationships between market stakeholders are crucial (O'Cass and Ngo 2007). Recent findings have indicated that innovation capability can have a strong positive impact on brand equity (O'cass and Ngo 2012; Zhang et al. 2015). It also defines an organization's strengths and weaknesses (Rajapathirana and Hui 2018), making it a key factor in brand orientation (Odoom and Mensah 2019), which is an antecedent of brand equity (Zhang et al. 2016). Therefore, our first hypothesis is proposed as follows.

Hypothesis 1 (H1). *Innovation capability positively contributes to successful brand equity.*

Prior research has shown that innovation capability can fuel the integrative process among relevant stakeholders by which brand equity can be established using the firm's collective knowledge, skills, and resources (Hanaysha and Hilman 2015). In B2B markets, managers must determine a competitive strategy for delivering customer value (Brodie et al. 2009). Most executives would agree that innovation is critical for long-term branding success because it allows an organization to adapt to changing market demands as well as to understand and interact with customers to enhance the value co-creation process (Resnick et al. 2016). In addition, the collaboration with customers to develop novel solutions also requires a considerable amount of innovation capability (Maarit Jalkala and Keränen 2014). Undoubtedly, innovation capability is critical for pursue long-term customer relationships and facilitating the value co-creation process.

In knowledge-intensive markets, business clients need to minimize information asymmetry and may require access to data typically unavailable to end-users within the B2C context (Wang and Sengupta 2016). The knowledge- and information-sharing between IT service providers and customers allow them to actively participate in value co-creation such as creating new products, improving service offerings, and developing new solutions. This is a mutually beneficial relationship as both IT firms and their clients can have direct access to technical, managerial expertise, and innovative capabilities (Steenkamp 2020).

Shorter product life cycles, technological advances, and dramatic shifts in customer expectations have challenged businesses' creativity and adaptability (Leek and Christodoulides 2011). Innovative capability can, therefore, contribute to value co-creation in new ways, such as the development of new products, solutions, and service offerings as well as the discovery of new channels in which to obtain feedback or engage with customers. In addition to directly impacting brand equity, innovation capability indirectly enhances value co-creation and improves customer value (Zhang et al. 2015). Thus, the second hypothesis is proposed as follows.

Hypothesis 2 (H2). *Innovation capability indirectly influences brand equity via the mediating effects of joint supplier–client value co-creation and customer value.*

2.3.2. Marketing Capabilities, Value Co-Creation, and Brand Equity

Marketing capabilities pertain to the ability of a company to raise brand awareness and increase customer loyalty by integrating various marketing strategies

(Leek and Christodoulides 2011; Zhang et al. 2015). Marketing capability has been measured according to various factors, such as the use of diverse marketing methods, the ability and resources to implement practical marketing activities, the employment of creative advertising campaigns, and an aptitude for public relations (Zhang et al. 2015). The multidimensionality of brand knowledge, along with a value chain framework, described by Keller (2003) emphasizes the importance of understanding how much a customer knows about their brand and how loyal they are to it. Increased brand presence in customers' minds and well-established brand equity have been attributed to solid marketing capabilities (Im et al. 2012), a multi-channel marketing strategy (Boo et al. 2009), and overall brand image, quality, and loyalty (Pike et al. 2010).

Chow et al. (2017) described the four stages of establishing brand awareness in a market: the brand is completely unknown, the brand is identified, the brand is recalled, and the brand is known. Marketing capabilities allow businesses to guide customers on the journey of brand awareness, which has been considered an antecedent of brand equity (Sürücü et al. 2019). Many branding experts have suggested that one of the most important goals of marketing activities should be to increase brand equity (Guenther and Guenther 2019; Xie and Zheng 2019; Zhang et al. 2015). In addition, others argue that a company's ability to create superior customer value depends on its marketing skills (Bharadwaj et al. 2015). By examining the concepts of marketing capability and marketing mixed-strategy implementation, O'cass and Ngo (2012) emphasized the role of marketing capability in marketing management and brand building. Marketing capabilities are critical for launching a new product, providing exceptional customer experience, and enhancing brand equity (Kim and Hyun 2011). Thus, the third hypothesis is proposed as follows.

Hypothesis 3 (H3). *Marketing capability positively affects brand equity.*

On the other hand, marketing capability is also key for building trust and enhancing brand equity through supplier–customer value co-creation. It dramatically influences purchasing intention, preferences, and option selection as well as customers' willingness for pay more for a product or service and recommend it to others (Im et al. 2012). From the consumer-based brand equity perspective (CBBE), marketing capability improves customers' brand awareness and association, thereby facilitating value co-creation through active interactions and collaborations. Consequently, it promotes increased customer value and brand equity (Frías Jamilena et al. 2017). However, since B2B brand selection relies largely on rational factors, B2B loyalty may depend more heavily on long-term performance and an overall good impression company-wide of the brand (Han et al. 2015).

Recent research has revealed very little about value co-creation and its impact within either the B2B or B2C context (Mingione and Leoni 2020). The firm's stakeholders, including the suppliers, the customers, and the partners, should be considered when investigating B2B brand relationships (Zhang et al. 2015). Marketing capabilities are a fundamental driving force in the value co-creation process. Its focus on designing, positioning, promoting, pricing, and developing relationships is highly tied to customer value and engagement (Leek and Christodoulides 2011). Sánchez-Gutiérrez et al. (2019) reinforced the views surrounding "managerial capabilities", stressing that marketing-mix implementation and marketing capabilities may improve customer value. Since this study concerned the B2B sphere, marketing capabilities were defined as a firm's ability to promote their brand image, conduct successfully networking, expand their relationships, expand to more comprehensive client categories, and building confidence in business partnerships. Remarkably, Morgan et al. (2009) also suggested that a well-constructed relationship with customers is essential to increase market power and expand co-creation opportunities. Thus, the fourth hypothesis is proposed as follows.

Hypothesis 4 (H4). *Marketing capability indirectly influences brand equity via the mediating effects of joint supplier–client value co-creation and customer value.*

2.3.3. Network Capability, Value Co-Creation, and Brand Equity

Networking capability has been defined as a complex organizational skill that seeks strategic opportunities for inter- or intra-relationships with customers, suppliers, and other business partners (Kelley et al. 2009). Networking capability has been measured by several variables such as the ability to acquire business partnerships, the ability to assign specialized coordinators for individual customer relationships, the ability to employ every resource for business expansion opportunities, and the ability to consider a customer's perspective to reach a collaborative decision (Walter et al. 2006). A firm must expand to new markets, increase sale volume, co-create value with customers and all interdependent stakeholders, and, as a result, successfully build brand equity (Kelley et al. 2009; Zhang et al. 2015). Rahman et al. (2018) examined networking capabilities from three different angles: collaboration, relationship management, and market wisdom. Networking capabilities can also be a competitive advantage for developing a sustainable B2B brand in knowledge-intensive business sectors (Brodie et al. 2017; Guenther and Guenther 2019). Research has shown that dynamic businesses with solid networking capabilities are characterized by a high level of entrepreneurship and brand equity (Brodie et al. 2009).

Brand perception, performance, and, therefore, equity is determined and co-created through networking and social interactions among interdependent stakeholders (Brodie et al. 2017; Zhang et al. 2015). In a B2B knowledge-intensive market, networking capabilities are built and strengthened via knowledge and innovation networks, which allow firms to mobilize network resources in order to optimize partnerships and collaborations, buffer value co-creation, and enhance customer value (Kelley et al. 2009; Zhang et al. 2015). Based on the above arguments, the fifth hypothesis is proposed as follows.

Hypothesis 5 (H5). *Network capability positively affects B2B brand equity.*

One of the most important forms of value co-creation with customers is a business's overall networking capabilities, which include long-term partnerships, a focus on collaborative communication and design, the creation of cross-functional teams, and the involvement of value-chain actors (Zhang et al. 2015). Networking capabilities can foster collaborative business relationships between B2B firms and customers for mutually beneficial value co-creation (Wang and Sengupta 2016). Long-term strategic partnerships between B2B firms encourage the exchange and accumulation of knowledge, and they encourage investment in intangible assets such as networking and beneficial relationships (Xie and Zheng 2019). In addition, the inter-organizational actors involved in collaborative communication have more incentive to exchange facts, knowledge, and experience to improve collaborative problem-solving (O'Cass and Ngo 2007; Zhang et al. 2015).

Moreover, regular communication on strategic and operational issues builds trust, helps coordinate problem-solving efforts, and increases opportunities for inter-firm learning, which are essential foundations for value co-creation (Leek and Christodoulides 2011; Sürücü et al. 2019). When B2B firms focus on developing effective, efficient solutions instead of another new product or service, B2B customers can switch from the customer value proposition to the customer network value proposition (Loureiro and Sarmento 2018). Thus, the sixth hypothesis is proposed as follows.

Hypothesis 6 (H6). *Network capability indirectly influences brand equity via the mediating effects of joint supplier–client value co-creation and customer value.*

2.3.4. Dynamic Capabilities, Value Co-Creation, and Brand Equity

To understand how firms should deploy dynamic capabilities in marketing, we should first clarify the term "dynamic capabilities". Teece (2016) defined "dynamic capabilities" as a firm's ability to respond to a vast, fast-changing, demanding market with innovate solutions at a critical juncture and time. Dynamic capabilities include learning from previous mistakes, improvisation, and imitation as well as employing learning mechanisms that develop dynamic capacities, such as cumulative experience, knowledge articulation, knowledge codification, and repeated practice (Brodie et al. 2017). In this study, dynamic capabilities are measured according to multiple dimensions, such as the ability to mobilize resources, the ability to dynamically configure resources for a changing business environment, the ability to learn while managing new knowledge and skills, and the ability to apply the best practices in the industry (Protogerou et al. 2011; Yurtkoru et al. 2014; Girod and Whittington 2017; Mathivathanan et al. 2017).

Dynamic capabilities comprise creative strategies that involve acquiring, allocating, integrating, reuniting, and forming alternative value for the firm (Kuo et al. 2017). This creative skill set is a driving mechanism for organizational performance (Lawson and Samson 2001) that helps firms predict market changes and explore niches. According to the literature, there has been a focus on the latest rules and mechanisms that facilitate the creation of distinctive and difficult-to-imitate advantages (Borch and Madsen 2007; Rezazadeh et al. 2016). The acquisition of dynamic capabilities can advance company practices, routines, or industry presence and improve firm relationships with customers, which can result in improved brand equity as well (Brodie et al. 2017). Thus, the seventh hypothesis is proposed as follows.

Hypothesis 7 (H7). *Dynamic capability positively affects B2B brand equity.*

The ability to build brand equity is one of the dynamic capabilities of marketing related to processes, such as customer relationship management (Morgan et al. 2009) and new product development (Hanaysha and Hilman 2015). Similar to innovation capabilities, dynamic capabilities can fuel the process of integrative branding within a complicated network and value chain that no single actor completely understands (Michell et al. 2001; Wang and Sengupta 2016). Firms cannot fully integrate and coordinate resources without dynamic capabilities, especially when B2B customers co-create a new product or upgrade the existing product (Brodie et al. 2017). Dynamic capabilities are required to align resources and facilitate the activities of various parties or actors. Teece (2016) explored how dynamic capabilities impact a firm's strategic implementation, offering a lens through which to view how collaborative value co-creation can be affected by a firm's capabilities.

Dynamic capabilities typically emerge in processes that involve innovation, organizational learning, and knowledge integration, as well as those that engage stakeholders in decisions to increase their loyalty and, subsequently, the firm's brand equity (Brodie et al. 2009; Wang and Sengupta 2016; Brodie et al. 2017). Dynamic capabilities are not mentioned as frequently as the other three driving forces in brand performance; however, they bridge the gaps between innovative campaigns and practical applications. Market dynamism is an influential external factor (Teece et al. 1997). The service provider's dynamic capabilities allow effective collaboration within an established network and assist other stakeholders in the value chain build substantial brand equity (Teece 2016). Thus, the eighth hypothesis is proposed as follows.

Hypothesis 8 (H8). *Dynamic capabilities indirectly influence brand equity via the mediating effects of joint supplier–client value co-creation and customer value.*

The research model with eight suggested hypotheses is presented in Figure 1. This model included firm capabilities, value co-creation, customer value, and brand equity; it was used to investigate the mediating effects of value co-creation and customer value.

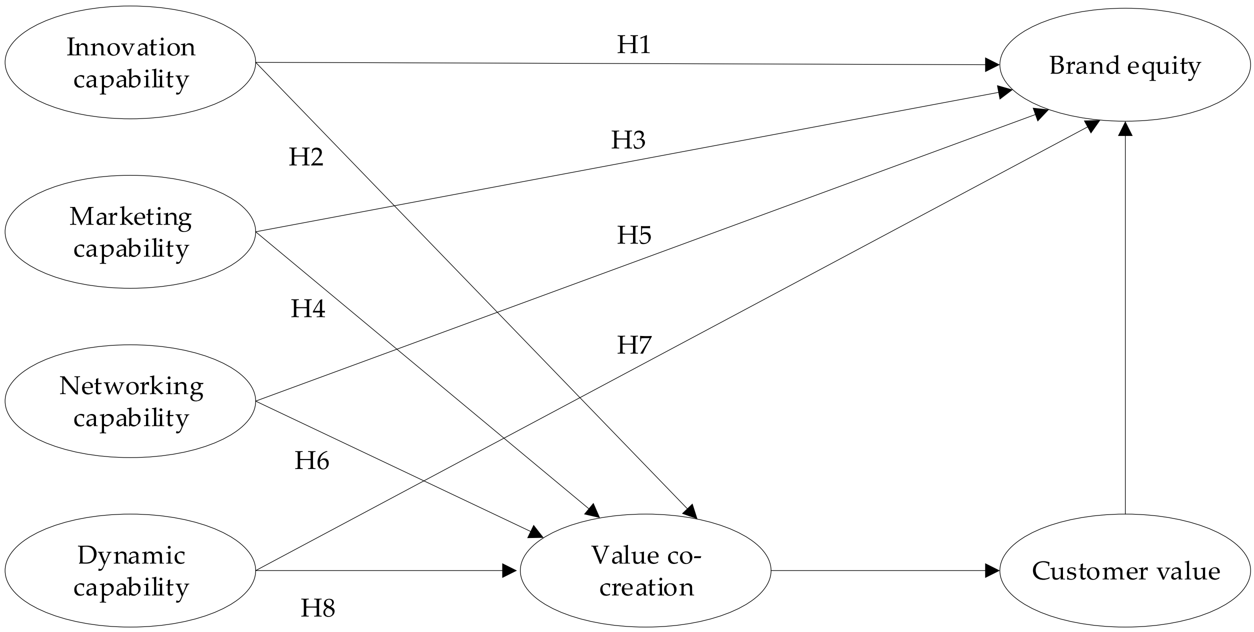

Figure 1. Research model.

3. Methodology

3.1. Sample and Procedures

This study explored brand association in the B2B IT industry. The headquarters of almost 85 percent of IT outsourcing firms are located in Ho Chi Minh City (HCMC). Therefore, science and technology parks in HCMC were chosen to survey IT firm's capabilities: brand link including Quang Trung Software City (QTSC); Vietnam National University Information Technology Park (VNU-ITP); and many other companies specializing in software development, hardware manufacturing, and network and cyber security. Specifically, QTSC is Vietnam's first and largest software park with roughly 200 companies of various sizes (Nguyen et al. 2021).

In accordance with prior research, a Likert scale was used to measured critical variables such as innovation capability, marketing capability, dynamic capability, networking capability, value co-creation, customer value, and brand equity. Thus, a systematic questionnaire was developed and randomly tested by respondents directly involved in IT outsourcing operations inside their organizations. Based on the results, necessary changes were made to reflect the reality of Vietnam's IT outsourcing sector. Following the preliminary testing and modification of the questionnaire, data were gathered through an online survey sent via email to prospective respondents, directors or vice-directors, project managers, team leaders, or department heads of IT outsourcing firms. The online survey was sent to over 270 email addresses of prospective respondents from small and medium-sized IT businesses. These email addresses were supplied by QTSC's management unit, which has developed Vietnam's largest IT ecosystem of corporate, academic, and research collaboration. Following the survey's conclusion, 182 valid samples were gathered, indicating a response rate of 67.4%.

3.2. Measurement

This investigation was performed not only to supplement the existing academic literature on brand association, but, first and foremost, to investigate the direct impact of various firm competencies on brand equity in the B2B IT industry, such as innovation, marketing, networking, and dynamic capabilities. Proposed items had been used in previous studies to assess latent variables that had been proposed in the literature reviews; each item was measured using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). When translated into Vietnamese, the language was adjusted to fit the domestic context and avoid confusion or ambiguity. Table 1 presents the results of the observed items for each latent variable, as adapted from previous studies.

Table 1. Questionnaire construction and latent variables.

Latent Variables	Observed Items	Mean	SD
Innovation capability Adapted from (Wang and Ahmed 2004)	ICA1. The company's R&D is fully capable of adapting to instantaneous market insights.	3.527	0.877
	ICA2. In recent years, the company has pursued new operations, resulting in increased customer interest and retention.	3.473	0.858
	ICA3. The company considers every opportunity and is willing to invest in niche markets.	3.566	0.965
	ICA4. The company applies breakthrough ideas in its marketing campaigns that have positive effects.	3.714	0.864
	ICA5. The company is willing to test new methods to improve customer satisfaction, even the risky ones.	3.412	0.940
Marketing capability Adapted from (Zhang et al. 2015)	MCA1. Compared to competitors, the company has a variety of marketing methods that improve customer awareness.	3.923	0.804
	MCA2. The company has the abilities and resources to implement practical marketing activities.	3.874	0.821
	MCA3. The company often applies creative ideas in advertising campaigns that achieve the best outcomes.	3.786	0.869
	MCA4. The company has developed public relation skills that increase customer satisfaction.	3.687	0.908
Networking capability Adapted from (Walter et al. 2006)	NCA1. The company finds it easy to enrich business partnerships.	3.962	0.692
	NCA2. The company assigns specialized coordinators for individual customer relationships.	3.995	0.762
	NCA3. The company employs every resource to increase opportunities for business expansion.	3.967	0.757
	NCA4. The company always observes its partners' processes/products/services in detail before reaching any collaborative decision.	3.907	0.741
	NCA5. The company considers the customer's perspective to reach agreement and avoid conflicts.	3.923	0.599
Dynamic capability Adapted from (Protogerou et al. 2011; Yurtkoru et al. 2014; Girod and Whittington 2017; Mathivathanan et al. 2017)	DCA1-The firm has the ability to mobilize resources effectively.	3.824	0.849
	DCA2-The firm is able to configure organizational resources to cope with different situations.	3.780	0.818
	DCA3-The firm's employees have the capability to learn new knowledge and skills quickly to meet job requirements.	3.874	0.736
	DCA4-The firm is very proactive in updating and applying industry best practices to improve performance.	3.934	0.791
	DCA5-The firm adapts to the rapid changes in the business environment.	3.912	0.789
Value co-creation Adapted from (Claro and Claro 2010)	VCC1. The company willingly partners with its consumers in addressing specific issues.	4.143	0.722
	VCC2. The company's responses are versatile and correspond to the manner of the customer relationship.	4.077	0.724
	VCC3. The company and its customers maintain mutual understanding, sharing, and support in achieving mutual objectives.	4.038	0.716
	VCC4. There are always backup plans for the situations that may arise in company–customer relationships.	3.962	0.731
	VCC5. The company is willing to share its long-term plan with partners for their feedback and to support each other.	3.973	0.754

Table 1. *Cont.*

Latent Variables	Observed Items	Mean	SD
Customer value Adapted from (Blocker 2011)	CV1. There appears to be superior value in the company's products/ services when compared with those from competitors.	3.940	0.829
	CV2. The company aims to make customers' benefits commensurate with their costs.	4.082	0.786
	CV3. The company supports customers in expanding their business relationships.	3.962	0.803
Brand equity Adapted from (Han and Sung 2008; Davis et al. 2009; Baumgarth and Schmidt 2010; Baumgarth and Binckebanck 2011)	BE1. Feedback has shown that customers appreciate the company's branded products/services.	3.978	0.821
	BE2. The company's brand name is easy for customers to recall.	3.923	0.831
	BE3. Customers report positive experiences with the products/services associated with the business brand.	3.995	0.824
	BE4. If receiving other benefits, the clients will pay more to coordinate with the company.	3.824	0.842
	BE5. It is a sign of brand loyalty when customers support branded goods.	3.846	0.963
	BE6. The customers are pleased to recommend the company's products/ services to others.	3.885	0.830
	BE7. Many customers are open to long-term business engagements with the company.	3.945	0.826

3.3. Assessment Method

The reflective measurement model was used to analyze the data and test the hypotheses. Covariance-based structural equation modeling (CB-SEM) and partial least squares structural equation modeling (PLS-SEM) were two primary approaches that have been used to estimate the multi-faceted connections in the structural equation model (Hair et al. 2010). Constructs are CB-SEM common variables that account for manifest indicator variability and relationships. The scores of these common variables were both unknown and redundant when computing model parameters. In contrast, PLS-SEM depicts constructs using proxies, a weighted combination of manifest indicators for a given construct (Hair et al. 2010; Lucy et al. 2017). The CB-SEM technique was unsuitable for assessing this data because of the small sample size of 182 observations. Therefore, this study employed a PLS-SEM technique by using SmartPLS 3 software to test the research model. The number of observations were large enough to ensure that the PLS algorithm's regressions did not produce singularities.

PLS path model parameters were applied for estimating the measurements model and the structural model in four steps: first, an iterative algorithm determined composite scores for each construct; second, a correction for attenuation for constructs that were modeled as factors (Dijkstra and Henseler 2015); third, parameter estimation; and finally, bootstrapping for inference testing.

In the measurements model, the test of model fit was the starting point of model assessment that included identifying how substantial the discrepancy was between the model-implemented and the observational correlation matrix by the metrics SRMR (the standardized root mean square residual) (Hu and Bentler 1998, 1999) and NFI (normed fit index) (Bentler and Bonett 1980). The metrics for evaluating the internal consistency and individual indicator reliability were Cronbach alpha (α) and composite reliability (CR), respectively. The convergent validity of the measurements model was confirmed by the average variance extracted (AVE). The discriminant validity metrics included the Fornell–Larcker criteria, cross-loadings, and, particularly, the HTMT ratio of correlation.

Then, causal and interacting relationships between the latent constructs were found by estimating the proposed structural model. The R^2 represented the percentage of variability that was accounted for by the precursor constructs in the model. The adjusted R^2 values assist in the comparison of various models or the model's explanatory power across different datasets since they consider model complexity and sample size. It was essential to quantify the magnitude of significant impacts, which had been conducted by calculating their effect size f^2.

4. Results and Discussions

4.1. Measurements Model

The first step in assessing results was to evaluate the measurement model, which was the relationship between observed items (indicators) and the latent constructs (Hair et al. 2013). Each indicator's Cronbach alpha had to be greater than 0.7 for reliability testing. In addition, all constructs' composite reliability had to be more than 0.7 to achieve internal consistency, and all variables' AVEs had to be greater than 0.5 to ensure convergent validity. To achieve consistent indication reliability, all items with outside loading less than 0.7 were removed, according to Henseler et al. (2012). Table 2 shows that all of the criteria were fulfilled.

Table 2. Summary of key indicators.

Latent Variables	Items	Loadings	Cronbach's Alpha	Rho_A	Composite Reliability	AVE
		≥0.7	**≥0.6**	**≥0.7**	**≥0.7**	**≥0.5**
Brand equity	BE2 BE3 BE4 BE5 BE6 BE7	0.797 0.800 0.826 0.854 0.802 0.795	0.912	0.914	0.930	0.656
Customer value	CV1 CV2 CV3	0.906 0.849 0.830	0.827	0.832	0.897	0.744
Dynamic capability	DCA1 DCA2 DCA3 DCA4 DCA5	0.770 0.787 0.821 0.854 0.872	0.879	0.886	0.912	0.675
Innovation capability	ICA1 ICA2 ICA3 ICA4 ICA5	0.892 0.810 0.837 0.840 0.846	0.900	0.907	0.926	0.715
Marketing capability	MCA1 MCA2 MCA3 MCA4	0.847 0.834 0.875 0.811	0.864	0.874	0.907	0.709
Networking capability	NCA1 NCA2 NCA3 NCA4 NCA5	0.840 0.842 0.871 0.835 0.833	0.900	0.904	0.926	0.713
Value co-creation	VCC1 **VCC2** **VCC3** **VCC4** **VCC5**	0.797 0.831 0.893 0.831 0.791	0.886	0.889	0.917	0.688

Following convergent validity, the square root of the construct's AVE had to be greater than the correlation coefficient of that variable with other variables, according to Fornell and Larcker (1981). The bolded square root of AVE in diagonal was greater than the values below that reflected the relationships with other constructs, as seen in Table 3. Furthermore, Fornell and Larcker (1981) suggested using HTMT criteria to assess the scale's discriminant validity, which is the ratio of the mean value of all indicators across constructs to the correlation between that construct's indicators (Clark and Watson 1995). As demonstrated in Table 4, all of the HTMT ratios did not exceed the 0.85 threshold.

Table 3. Fornell–Larcker criteria.

	BE	CV	DCA	ICA	MCA	NCA	VCC
BE	**0.810**						
CV	0.598	**0.862**					
DCA	0.577	0.495	**0.822**				
ICA	0.418	0.321	0.332	**0.846**			
MCA	0.364	0.338	0.210	0.265	**0.842**		
NCA	0.396	0.278	0.319	0.147	0.332	**0.845**	
VCC	0.638	0.605	0.599	0.423	0.432	0.388	**0.830**

Notes: Square root of AVEs are bold on diagonal.

Table 4. Heterotrait–Monotrait (HTMT) Ratio.

	BE	CV	DCA	ICA	MCA	NCA	VCC
BE							
CV	0.685						
DCA	0.635	0.571					
ICA	0.455	0.370	0.371				
MCA	0.404	0.390	0.238	0.297			
NCA	0.432	0.316	0.351	0.158	0.372		
VCC	0.706	0.704	0.676	0.470	0.488	0.430	

It was also feasible to evaluate the approximate model fit in addition to performing model fit tests. The significant discrepancy between the model-implied and empirical correlation matrix was answered using the approximate model fit criteria. This was a critical issue if the discrepancy was significant. The standardized root mean square residual (SRMR) is currently the approximate primary model fit criteria used in PLS path modeling (Hu and Bentler 1998, 1999). The SRMR is the square root of the sum of squared differences between the model-implied and empirical correlation matrices, i.e., the Euclidean distance between the two matrices, as its name implies. An SRMR number of 0 indicates a perfect fit while an SRMR value of less than 0.05 suggests an acceptable fit (Byrne 2013). According to recent simulation research, even well-described models have produced SRMR values of 0.06 and higher (Henseler et al. 2014). As a result, Hu and Bentler (1999) suggested a cut-off value of 0.08 for PLS path models, which seemed to be more appropriate. The estimated model SRMR was 0.062, which once again satisfied the reinforcement.

Kock (2015) recommended using the complete collinearity test to identify the common method variance. The full collinearity test is a comprehensive technique for evaluating both vertical (predictor-predictor collinearity) and lateral collinearity (predictor criterion collinearity) (Kock and Lynn 2012). The variance inflation factors (VIFs) were estimated in the full collinearity test for all latent variables in the research model using WarpPLS 7.0 software. According to the results in Table 5, all the VIFs were below the threshold value of 3.3. Hence, we concluded that collinearity did not reach critical levels and common method bias was not an issue for the estimation of the PLS path analysis in the research model.

Table 5. Full collinearity VIF.

Factors	Value
Brand equity	2.190
Customer value	1.820
Dynamic capability	1.771
Innovation capability	1.292
Marketing capability	1.320
Networking capability	1.285
Value co-creation	2.393

4.2. Structural Model

After analyzing the measurement model, the hypothesized structural relationships from various firm competencies, such as the ability to change innovation, marketability, networking, and dynamic capabilities, to brand equity were tested by estimating the structural model (Figure 2). We analyzed the structural model by using 4999 sample bootstrapping to get p-values for significant values (Caldeira and Kastenholz 2018). In terms of direct effects, the estimation result indicated that hypotheses H1, H5, and H7 have p-values of 0.05, equal to a 5% significance threshold, as shown in Tables 6 and 7, and Figure 2. Thus, all firm competencies except marketing capability had significantly positive relationships to brand equity (p-value < 0.05).

The analyst evaluated the structural model after the measurement model had been determined to be of appropriate quality. The R^2 values of the endogenous constructs were the starting point since OLS had been employed for the structural model. They showed how much of the model's variability had been accounted for by the predecessor structures. The adjusted R^2 values assist in the comparison of various models or the model's explanatory power across different datasets since they consider model complexity and sample size. The total R^2 of the research model was 52.9%, and the adjusted R^2 was 51.6%.

R^2 merely shows how many predictive factors can explain the variability of dependent variables. In this manner, the effect size f^2 could determine how much an explanatory or mediating variable contributes to the R^2 of dependent variables. Any f^2 values over 0.35, 0.15, and 0.02 are considered strong, moderate, and weak, respectively (Cohen 1988). The path coefficients are standardized regression coefficients that may be evaluated in terms of their sign and absolute magnitude. They should be viewed as a change in the dependent variable when one of the independent factors increases while the other independent variables stay constant. For mediation analysis (Zhao et al. 2010), indirect effects and associated inference statistics are essential, while total effects are helpful for success factor analysis (Albers 2010).

The mediating roles of value co-creation and customer value in the relationship among firm competencies, namely, innovation, marketing, networking, and dynamic capabilities, were analyzed using the Sobel test (Sobel 1982). Hair et al. (2013) recommended that researchers utilize the Sobel test to evaluate mediating effects' significance. The Sobel test compares the independent variable's direct impact on the dependent variable to the independent variable's indirect impact on the dependent variable with the presence of a specific mediator. As a consequence, the test result may suggest one of five possible outcomes (see Table 8).

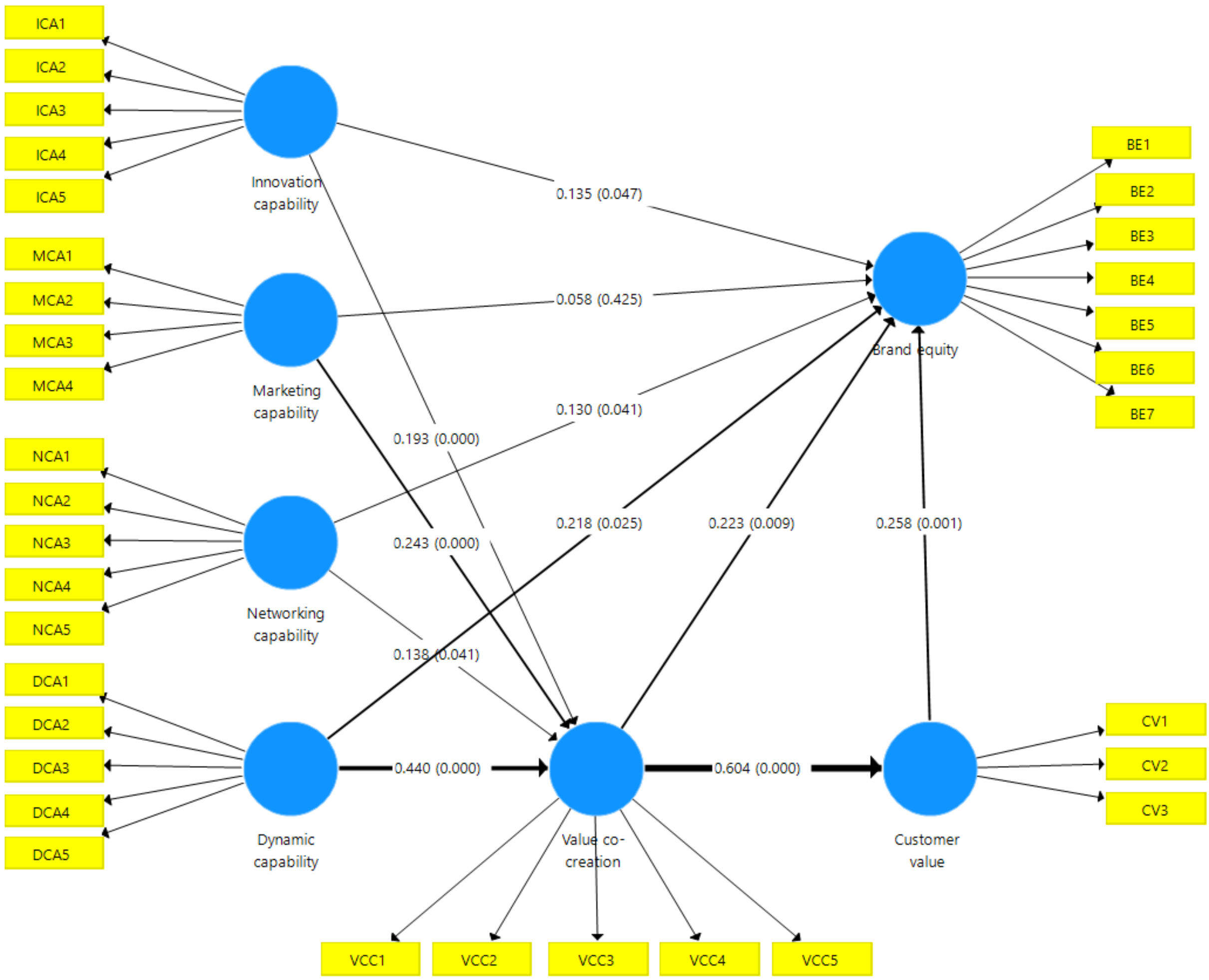

Figure 2. Structural model assessment.

Table 6. Path Coefficients.

Hypotheses	Direct Relationships	Coeff.	*p* Values	Result
H1	Innovation capability -> Brand equity	0.135	0.047	Supported
H3	Marketing capability -> Brand equity	0.058	0.425	Not Supported
H5	Networking capability -> Brand equity	0.130	0.041	Supported
H7	Dynamic capability -> Brand equity	0.218	0.025	Supported

Table 7. Effect size (f^2).

Hypotheses	Relationship	Effect Size (f^2)	
H1	Innovation capability -> Brand equity	0.051	Weak
H3	Marketing capability -> Brand equity	0.016	
H5	Networking capability -> Brand equity	0.042	Weak
H7	Dynamic capability -> Brand equity	0.123	Weak

Table 8. Mediation possible outcomes.

		Mediating Effect Outcomes
Insignificant Direct Effect	Insignificant Indirect effect	(1) No effect–No mediation
	Significant Indirect effect	(2) Indirect-only or full mediation
Significant Direct Effect	Insignificant Indirect effect	(3) Direct only or No mediation
	Significant Indirect effect	(4) Complementary mediation (If Direct and Indirect effects are both statistically significant and in the same direction)
		(5) Competitive mediation (If Direct effect and Indirect effect are both statistically significant and in the opposite direction)

To examine the indirect effects of firms' capabilities on brand equity via the mediating effects of value co-creation and customer value, hypotheses H2, H4, H6, and H8 were tested. As demonstrated in Table 9, the mediating roles of value co-creation and customer value were significantly proven with empirical evidence. Although value co-creation and customer value were complementary mediators in the relationship between dynamic as well as innovative capabilities and brand equity, they played a fully mediating effect in the association of marketing capability and brand equity.

Table 9. Mediating effect results.

Hypotheses		Direct Effect	Indirect Effect	Mediating Effect Outcome
		Coef.	Coef.	
H2	Innovation capability -> Value co-creation -> Customer value -> Brand equity	0.135 **	0.030 **	Complementary mediation
H4	Marketing capability -> Value co-creation -> Customer value -> Brand equity	0.058	0.038 **	Full mediation
H6	Networking capability -> Value co-creation -> Customer value -> Brand equity	0.130 **	0.022	No mediation
H8	Dynamic capability -> Value co-creation -> Customer value -> Brand equity	0.218 **	0.068 ***	Complementary mediation

Significant level: ** $p < 0.05$, *** $p < 0.01$.

4.3. Discussion

This paper investigated brand equity from the viewpoint of capability in B2B marketplaces, which was considered groundbreaking at the time. Contrarily, while customer value has been a widely discussed subject in the literature, relatively few studies addressed the organizational skills that a company must possess to generate customer value. In the context of the Vietnamese B2B IT industry, innovative, networking, and dynamic capabilities were proven to enhance brand equity directly. Even though marketing capability was supposed to be a direct contributor to brand equity in practical applications as well as in academic studies (O'Cass and Ngo 2007; Zhang et al. 2015; Guenther and Guenther 2019; Sürücü et al. 2019; Xie and Zheng 2019), this research did not have enough significant evidence to support a direct relationship. The impact of marketing capability on brand equity was fully mediated via value co-creation and customer value.

Consistent with RBV and the value creation process model (Zhang et al. 2015), our findings demonstrated that both internal-based capabilities (such as innovation and dynamic capabilities) and external-based capabilities (such as marketing and networking capabilities) are critical determinants of improving customer and brand performance through key organizational activities (value co-creation). The internal-based capabilities create the core competencies for firms to identify and achieve business targets. External-based capabilities, conversely, with their focus almost entirely outside the organization, enable the business to compete by meeting market demands ahead of competitors and developing long-lasting relationships with other stakeholders such as customers, channel members, and suppliers (Zhang et al. 2015).

In addition, our findings were consistent with a recent study by Bonamigo et al. (2020), which also emphasized the value co-creation process involving at least two players in the B2B setting. The authors found a significant impact from resource integration and value co-creation via human, intellectual, financial, or technical channels. Eleven facilitators and four inhibitors were identified based on the results. Among the facilitators of the capabilities–brand equity link, participant involvement, synergy, and complementary resources were found to be the most effective facilitators. On the other hand, value incompatibility and lack of engagement between actors were seen as obstacles. Interestingly, the dominant direct and indirect effects of dynamic capabilities on B2B brand equity have also been fitted into the theoretical arguments of Teece (2016), as it integrated firms' resources and other competencies more effectively to achieve the common goal.

4.4. Theoretical and Managerial Implications

4.4.1. Theoretical Implications

This article supplements the current research by delving into firm capabilities' antecedents and branding performance implications of value co-creation activities and customer value enhancement. First, the results shed some light on the role of dynamic capabilities, as emphasized by Borch and Madsen (2007) and Teece (2016), by investigating the direct and indirect effects of dynamic capabilities on B2B brand equity under the presence of value co-creation and customer value. Dynamic abilities may be considered a magical tool to connect and integrate other firm capabilities as it promotes adaptive responses and innovation to meet the rapid changes in the industry. Through continuous learning processes, dynamic capabilities allow firms to mobilize resources more effectively, configure organizational resources to cope with different situations, learn new knowledge and skills, and stay current with the industry best practices. The structure of an organization can be reshaped to meet changing business requirements via dynamic capabilities, which are propelled by highly skilled and innovative workers. In this way, the IT B2B sector is a knowledge-intensive sector requiring a well-educated and dynamic labor force that will be a good match. This study also contributes to the recent literature on value co-creation processes in the B2B marketplace (Mingione and Leoni 2020) by proposing the research model, which provides some fresh evidence on value co-creation as its role as a mediator in the capabilities–brand equity link is still not fully understood. Stakeholders in the co-creation process may have diverse perspectives. Successful brand equity requires the engagement of all stakeholders in value co-creating and brand equity development, which is especially important in a knowledge-intensive environment such as the B2B IT sector.

4.4.2. Managerial Implications

This paper affirms the role of strengthening an organization's internal and external resources to develop a brand. The strategy is formed on the background of collecting and analyzing actual and specific data about the market, products, competitors, and target customer groups with which to build a positioning map, develop branding strategies for market competitiveness, orient brand development with specific action plans to ensure high visibility, all of which are determined by the resources of the company. Businesses with stronger internal capabilities are more willing to retain brand awareness and build brand equity via effective marketing campaigns and efficient interactions with organizational purchasers. In other words, these two types of external skills may also assist companies indirectly in developing brand equity via marketing activities and interactive connections with direction in creating and co-creating customer values.

With respect to managerial implications, some substantial improvements may be derived from the findings of this research. To build a successful brand strategy, businesses need to develop their internal capabilities, especially their innovation capabilities, so they can be agile in a dynamic market. In addition, the study has confirmed the critical role of developing a network of relationships with business customers as well as with other partners in the industry. Marketing and product development activities create brand value through engagement activities and value co-creation with customers. For a dynamic industry like IT, expanding customer relationships as well as enhancing customer engagement is extremely important. This not only helps businesses make optimal use of internal resources, but it also enables them to take advantage of opportunities with customers as well as in the market to adopt new technologies and knowledge, develop new business practices, and increase tangible and intangible assets that can be employed as brand assets.

To successfully implement marketing strategies that build brand equity, companies must leverage their customer relationships. When the company shares the business's difficulties, customers will understand and be willing to empathize with the business's challenges. Likewise, the company must consider the needs of its customers as well as the internal capacity of the business to create the best value for its customers. Many technology companies need direct consulting support from their manufacturing suppliers for their end-customers in the IT industry. For example, a system integrator firm has to regularly arrange consultation sessions between hardware suppliers or software suppliers and end-customers, such as banks or financial institutions, that need to build or upgrade their information technology systems. When hardware and software vendors consult with a financial institution, they are not just selling their products or services; they are facilitating value co-creation with their customers.

5. Conclusions

This article examined the role of innovation, marketing, networking, and dynamic capabilities in co-creating value, increasing consumer value, and enhancing brand equity. It has been shown that a firm's internal capabilities may act as catalysts for establishing lasting brand equity via the value co-creation with customers in a B2B knowledge-intensive industry. Apart from other resource-based capabilities, the dynamic capability's function in value co-creation has also been verified. This study first explored the direct influence of firm capabilities on brand equity in the B2B IT industry. Innovation, networking, and dynamic capabilities positively affected brand equity. In addition, the research illustrated the indirect impacts of business capabilities on brand equity via the mediating effects of supplier–client value co-creation and consumer value. Even though marketing capabilities did not directly affect brand equity, value co-creation acted as a mediator of brand equity via customer value. The findings of this research suggested various implications in academic and practical fields.

6. Limitations

This work had several theoretical and methodological limitations, and they point to critical areas for further research. Firstly, although the paper explored the impact of various kinds of B2B IT firms' internal and dynamic capabilities on brand equity, some other relevant dynamic capabilities in commercial service IT environments such as information management and knowledge management capabilities have not yet been explored (Guenther and Guenther 2019). In addition, while the dynamic capability view emphasized the importance of a firm's continuous learning capability in sustaining its competitive advantage, the paper did not focus on this aspect (Teece 2016). As a result, future study may consider focusing on the role of these relevant capabilities in building powerful B2B brands.

Secondly, by examining B2B brand equity, value co-creation, and firms' capabilities from the singular perspective of IT service providers also limited our research. Future research investigating B2B brand equity from business clients' perspectives or from the vantage points of key stakeholders in the supply chain would provide additional, valuable data. Business clients' and other stakeholders' competencies also impact co-producing and co-innovating desirable goods and services and co-developing brand equity (Bonamigo et al. 2020). Firm managers should be able to identify the primary facilitators and inhibitors of brand building and the value co-creation process in the B2B environment.

Thirdly, the paper did not explore the antecedents that arose from the external business environment and market factors as well as the firm's heterogeneity characteristics. Thus, these underexplored factors should be considered in future research to examine whether they facilitate or hinder the impact of a firm's capabilities on brand equity via value co-creation and customer value (Zhang et al. 2015).

Finally, our methodology had several limitations as some constructs such as brand equity, value co-creation, and customer value could be measured more accurately if the measurement included more quantified dimensions. At the same time, the sample for this research was relatively small in size and comprised small and medium-sized information technology businesses located in Ho Chi Minh City's Science and Technology Parks. The economic climate in Ho Chi Minh City and Vietnam, in general, is unique in many ways, which may have resulted in subjective biases. This presented a challenge when transferring the results to a different context or social-economic environment, namely those with different political, legal, or industrial climates, such as industrial service environments in general. Therefore, by addressing these limitations and challenges, future research may provide more generalized findings on the complexities of B2B branding.

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References

Albers, Sönke. 2010. PLS and success factor studies in marketing. In *Handbook of Partial Least Squares*. New York: Springer, pp. 409–25.

Asamoah, Emmanuel Selase. 2014. Customer based brand equity (CBBE) and the competitive performance of SMEs in Ghana. *Journal of Small Business and Enterprise Development* 21: 117–31. [CrossRef]

Bamm, Robert, Marc Helbling, and Kaisa Joukanen. 2018. Online Branding and the B2B Context. In *Developing Insights on Branding in the B2B Context*. Bingley: Emerald Publishing Limited, pp. 163–76. [CrossRef]

Baumgarth, Carsten, and Lars Binckebanck. 2011. Sales force impact on B-to-B brand equity: Conceptual framework and empirical test. *Journal of Product & Brand Management* 20: 487–98. [CrossRef]

Baumgarth, Carsten, and Marco Schmidt. 2010. How strong is the business-to-business brand in the workforce? An empirically-tested model of 'internal brand equity'in a business-to-business setting. *Industrial Marketing Management* 39: 1250–60. [CrossRef]

Belo, Frederico, Xiaoji Lin, and Maria Ana Vitorino. 2014. Brand capital and firm value. *Review of Economic Dynamics* 17: 150–69. [CrossRef]

Bentler, Peter M., and Douglas G. Bonett. 1980. Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin* 88: 588–606. [CrossRef]

Bharadwaj, Sundar G., P. Rajan Varadarajan, and John Fahy. 2015. Competitive Advantage in Service Industries: A Conceptual Model. *Journal of Marketing* 57: 83–99. [CrossRef]

Biraghi, Silvia, and Rossella Chiara Gambetti. 2017. Is brand value co-creation actionable? A facilitation perspective. *Management Decision* 55: 1476–88. [CrossRef]

Blocker, Christopher P. 2011. Modeling customer value perceptions in cross-cultural business markets. *Journal of Business Research.* 64: 533–40. [CrossRef]

Bonamigo, Andrei, Dettmann Brenda, Camila Guimarães Frech, and Steffan Macali Werner. 2020. Facilitators and inhibitors of value co-creation in the industrial services environment. *Journal of Service Theory and Practice* 30: 609–42. [CrossRef]

Boo, Soyoung, James Busser, and Seyhmus Baloglu. 2009. A model of customer-based brand equity and its application to multiple destinations. *Tourism Management* 30: 219–31. [CrossRef]

Borch, Odd Jarl, and Einar Lier Madsen. 2007. Dynamic capabilities facilitating innovative strategies in SMEs. *International Journal of Technoentrepreneurship* 1: 109–25. [CrossRef]

Brodie, Roderick J., James R.M. Whittome, and Gregory J. Brush. 2009. Investigating the service brand: A customer value perspective. *Journal of Business Research* 62: 345–55. [CrossRef]

Brodie, Roderick J., Maureen Benson-Rea, and Christopher J. Medlin. 2017. Branding as a dynamic capability: Strategic advantage from integrating meanings with identification. *Marketing Theory* 17: 183–99. [CrossRef]

Byrne, Byrne M. 2013. *Structural Equation Modeling with AMOS*. Routledge: Psychology Press. [CrossRef]

Cavusgil, S. Tamer, and Gary Knight. 2015. The born global firm: An entrepreneurial and capabilities perspective on early and rapid internationalization. *Journal of International Business Studies* 46: 3–16. [CrossRef]

Chow, Hsueh-Wen, Guo-Jie Ling, I-Yin Yen, and Kuo-Ping Hwang. 2017. Building brand equity through industrial tourism. *Asia Pacific Management Review* 22: 70–79. [CrossRef]

Claro, Danny Pimentel, and Priscila B. Oliveira Claro. 2010. Collaborative buyer–supplier relationships and downstream information in marketing channels. *Industrial Marketing Management* 39: 221–28. [CrossRef]

Cohen, Jacob. 1988. Statistical Power Analysis for the Behavioral Sciences. In *Lawrence Erlbaum Associates*. Hillsdale and New York: Academic Press, pp. 20–26.

Davis, Davis F., Susan L. Golicic, and Adam Marquardt. 2009. Measuring brand equity for logistics services. *The International Journal of Logistics Management* 20: 201–12. [CrossRef]

Dijkstra, Theo K., and Jörg Henseler. 2015. Consistent and asymptotically normal PLS estimators for linear structural equations. *Computational Statistics & Data Analysis* 81: 10–23.

Farquhar, Peter H. 1989. Managing Brand equity. *Marketing Resesearch* 1: 24–33.

Flint, Daniel J., Robert B. Woodruff, and Sarah Fisher Gardial. 1997. Customer value change in industrial marketing relationships: A call for new strategies and research. *Industrial Marketing Management* 26: 163–75. [CrossRef]

Fornell, Claes, and David F. Larcker. 1981. Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research* 18: 382–88. [CrossRef]

Franklin, Drew, and Roger Marshall. 2019. Adding co-creation as an antecedent condition leading to trust in business-to-business relationships. *Industrial Marketing Management* 77: 170–81. [CrossRef]

Frías Jamilena, Dolores María, Ana Isabel Polo Peña, and Miguel Ángel Rodríguez Molina. 2017. The Effect of Value-Creation on Consumer-Based Destination Brand Equity. *Journal of Travel Research* 56: 1011–31. [CrossRef]

Fuchs, Christoph, and Martin Schreier. 2011. Customer Empowerment in New Product Development. *Journal of Product Innovation Management* 28: 17–32. [CrossRef]

Gil-Saura, Irene, María Eugenia Ruiz-Molina, Geraldine Michel, Amparo Corraliza-Zapata, and Marketing Department, Faculty. 2013. Retail brand equity: A model based on its dimensions and effects. *International Review of Retail, Distribution and Consumer Research* 23: 111–36. [CrossRef]

Girod, Stéphane J. G., and Richard Whittington. 2017. Reconfiguration, restructuring and firm performance: Dynamic capabilities and environmental dynamism. *Strategic Management Journal* 38: 1121–33. [CrossRef]

Guenther, Miriam, and Peter Guenther. 2019. The value of branding for B2B service firms—The shareholders' perspective. *Industrial Marketing Management* 78: 88–101. [CrossRef]

Hair, Joseph F., G. Tomas M. Hult, Chistian M. Ringle, and Marko Sarstedt. 2013. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Thousand Oaks: Sage, p. 165.

Hair, Joseph F., William C. Black, Barry J. Babin, and Rolph E. Anderson. 2010. *Multivariate Data Analysis: International Version*. Upper Saddle River: Pearson.

Han, Sang-Lin, and Hyung-Suk Sung. 2008. Industrial brand value and relationship performance in business markets—A general structural equation model. *Industrial Marketing Management* 37: 807–18. [CrossRef]

Han, Sung Ho, Bang Nguyen, and Timothy J. Lee. 2015. Consumer-based chain restaurant brand equity, brand reputation, and brand trust. *International Journal of Hospitality Management* 50: 84–93. [CrossRef]

Hanaysha, Jalal, and Haim Hilman. 2015. Product innovation as a key success factor to build sustainable brand equity. *Management Science Letters* 5: 567–76. [CrossRef]

He, Qiuqin, José Manuel Guaita-Martínez, and Dolores Botella-Carrubi. 2020. How brand equity affects firm productivity: The role of R&D and human capital. *Economic Research-Ekonomska Istraživanja* 33: 2976–92. [CrossRef]

Henseler, Jörg, Christian M. Ringle, and Marko Sarstedt. 2012. Using Partial Least Squares Path Modeling in Advertising Research: Basic Concepts and Recent Issues. In *Handbook of Research on International Advertising*. Edited by E. Elgar. Cheltenham and Northampton: Edward Elgar Publishing, pp. 252–76. [CrossRef]

Henseler, Jörg, Theo K. Dijkstra, Marko Sarstedt, Christian M. Ringle, Adamantios Diamantopoulos, Detmar W. Straub, David J. Ketchen Jr., Joseph F. Hair, G. Tomas M. Hult, and Roger J. Calantone. 2014. Common Beliefs and Reality About PLS. *Organizational Research Methods* 17: 182–209. [CrossRef]

Hirvonen, Saku, Tommi Laukkanen, and Jari Salo. 2016. Does brand orientation help B2B SMEs in gaining business growth? *Journal of Business and Industrial Marketing* 31: 472–87. [CrossRef]

Hu, Li-tze, and Peter M. Bentler. 1998. Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods* 3: 424. [CrossRef]

Hu, Li-tze, and Peter M. Bentler. 1999. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal* 6: 1–55. [CrossRef]

Hutchinson, Karise, Nicholas Alexander, Barry Quinn, and Anne Marie Doherty. 2007. Internationalization Motives and Facilitating Factors: Qualitative Evidence from Smaller Specialist Retailers. *Journal of International Marketing* 15: 96–122. [CrossRef]

Im, Holly Hyunjung, Samuel Seongseop Kim, Statia Elliot, and Heejoo Han. 2012. Conceptualizing Destination Brand Equity Dimensions from a Consumer-Based Brand Equity Perspective. *Journal of Travel & Tourism Marketing* 29: 385–403. [CrossRef]

Jajja, Muhammad Shakeel Sadiq, Vijay R. Kannan, Shaukat Ali Brah, and Syed Zahoor Hassan. 2017. Linkages between firm innovation strategy, suppliers, product innovation, and business performance. *International Journal of Operations & Production Management* 37: 1054–75. [CrossRef]

Keller, Kevin Lane. 2003. Brand Synthesis: The Multidimensionality of Brand Knowledge. *Journal of Consumer Research* 29: 595–600. [CrossRef]

Kelley, Donna J., Lois Peters, and Gina Colarelli O'Connor. 2009. Intra-organizational networking for innovation-based corporate entrepreneurship. *Journal of Business Venturing* 24: 221–35. [CrossRef]

Kim, Ji-Hern, and Yong J. Hyun. 2011. A model to investigate the influence of marketing-mix efforts and corporate image on brand equity in the IT software sector. *Industrial Marketing Management* 40: 424–38. [CrossRef]

Kock, Ned. 2015. Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration* 11: 1–10. [CrossRef]

Kock, Ned, and Gary Lynn. 2012. Lateral Collinearity and Misleading Results in Variance-Based SEM: An Illustration and Recommendations. *Journal of the Association for Information Systems* 13: 546–80. [CrossRef]

Kuo, Szu-Yu, Pei-Chun Lin, and Chin-Shan Lu. 2017. The effects of dynamic capabilities, service capabilities, competitive advantage, and organizational performance in container shipping. *Transportation Research Part A: Policy and Practice* 95: 356–71. [CrossRef]

Lam, Long, Phuong Nguyen, Nga Le, and Khoa Tran. 2021. The Relation among Organizational Culture, Knowledge Management, and Innovation Capability : Its Implication for Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity* 7: 66. [CrossRef]

Lucy, Matthews, Hengky Latan, and Richard Noonan. 2017. Partial least squares path modeling: Basic concepts, methodological issues and applications. *Partial Least Squares Path Modeling: Basic Concepts, Methodological Issues and Applications*, 1–414. [CrossRef]

Lawson, Benn, and Danny Samson. 2001. Developing innovation capability in organisations: A dynamic capabilities approach. *International Journal of Innovation Management* 5: 377–400. [CrossRef]

Leek, Sheena, and George Christodoulides. 2011. A literature review and future agenda for B2B branding: Challenges of branding in a B2B context. *Industrial Marketing Management* 40: 830–37. [CrossRef]

Leroi-Werelds, Sara, Sandra Streukens, Michael K. Brady, and Gilbert Swinnen. 2014. Assessing the value of commonly used methods for measuring customer value: a multi-setting empirical study. *Journal of the Academy of Marketing Science* 42: 430–51. [CrossRef]

Lindgreen, Adam, Martin K. Hingley, David B. Grant, and Robert E. Morgan. 2012. Value in business and industrial marketing: Past, present, and future. *Industrial Marketing Management* 41: 207–14. [CrossRef]

Loureiro, Sandra Maria Correia, and Eduardo Moraes Sarmento. 2018. Enhancing brand equity through emotions and experience: The banking sector. *International Journal of Bank Marketing* 36: 868–83. [CrossRef]

Maarit Jalkala, Anne, and Joona Keränen. 2014. Brand positioning strategies for industrial firms providing customer solutions. *Journal of Business & Industrial Marketing* 29: 253–64. [CrossRef]

Makkonen, Marika, and Henna Sundqvist-Andberg. 2017. Customer value creation in B2B relationships: Sawn timber value chain perspective. *Journal of Forest Economics* 29: 94–106. [CrossRef]

Mathivathanan, Deepak, Kannan Govindan, and A. Noorul Haq. 2017. Exploring the impact of dynamic capabilities on sustainable supply chain firm's performance using Grey-Analytical Hierarchy Process. *Journal of Cleaner Production* 147: 637–53. [CrossRef]

Michell, Paul, Jacqui King, and Jon Reast. 2001. Brand Values Related to Industrial Products. *Industrial Marketing Management* 30: 415–25. [CrossRef]

Mingione, Michela, and Luna Leoni. 2020. Blurring B2C and B2B boundaries: corporate brand value co-creation in B2B2C markets. *Journal of Marketing Management* 36: 72–99. [CrossRef]

Moradi, Hadi, and Azim Zarei. 2012. Creating consumer-based brand equity for young Iranian consumers via country of origin sub-components effects. *Asia Pacific Journal of Marketing and Logistics* 24: 394–413. [CrossRef]

Morgan, Neil A., Douglas W. Vorhies, and Charlotte H. Mason. 2009. Market orientation, marketing capabilities, and firm performance. *Strategic Management Journal* 30: 909–20. [CrossRef]

Myers, Chris A. 2003. Managing brand equity: A look at the impact of attributes. *Journal of Product & Brand Management* 12: 39–51. [CrossRef]

Nguyen, Phuong V., Hien Thi Ngoc Huynh, Long Nguyen Hai Lam, Toan Bao Le, and Nghi Hong Xuan Nguyen. 2021. The impact of entrepreneurial leadership on SMEs' performance: The mediating effects of organizational factors. *Heliyon* 7: 1–13. [CrossRef] [PubMed]

O'Cass, Aron, and Liem Viet Ngo. 2007. Market orientation versus innovative culture: Two routes to superior brand performance. *European Journal of Marketing* 41: 868–87. [CrossRef]

O'cass, Aron, and Liem Viet Ngo. 2012. Creating superior customer value for B2B firms through supplier firm capabilities. *Industrial Marketing Management* 41: 125–35. [CrossRef]

Odoom, Raphael, and Priscilla Mensah. 2019. Brand orientation and brand performance in SMEs: The moderating effects of social media and innovation capabilities. *Management Research Review* 42: 155–71. [CrossRef]

Pike, Steven, Constanza Bianchi, Gayle Kerr, and Charles Patti. 2010. Consumer-based brand equity for Australia as a long-haul tourism destination in an emerging market. *International Marketing Review* 27: 434–49. [CrossRef]

Protogerou, Aimilia, Yannis Caloghirou, and Spyros Lioukas. 2011. Dynamic capabilities and their indirect impact on firm performance. *Industrial and Corporate Change* 21: 615–47. [CrossRef]

Rahman, Mahabubur, M. Ángeles Rodríguez-Serrano, and Mary Lambkin. 2018. Brand management efficiency and firm value: An integrated resource based and signalling theory perspective. *Industrial Marketing Management* 72: 112–26. [CrossRef]

Rajapathirana, R. P. Jayani, and Yan Hui. 2018. Relationship between innovation capability, innovation type, and firm performance. *Journal of Innovation and Knowledge* 3: 44–55. [CrossRef]

Resnick, Sheilagh Mary, Ranis Cheng, Mike Simpson, and Fernando Lourenço. 2016. Marketing in SMEs: A "4Ps" self-branding model. *International Journal of Entrepreneurial Behaviour and Research* 22: 155–74. [CrossRef]

Rezazadeh, Bahram, Hadi Karami, and Azhdar Karami. 2016. Technology Orientation, Dynamic Capabilities and SMEs Performance. *Strategic Management Quaterly* 4: 41–60. [CrossRef]

Saha, Victor, Venkatesh Mani, and Praveen Goyal. 2020. Emerging trends in the literature of value co-creation: A bibliometric analysis. *Benchmarking* 27: 981–1002. [CrossRef]

Sales-Vivó, Vicente, Irene Gil-Saura, and Martina Gallarza. 2020. Modelling value co-creation in triadic B2B industrial relationships. *Marketing Intelligence and Planning* 38: 941–55. [CrossRef]

Samudro, Andreas, Ujang Sumarwan, M. Simanjuntak, and E. Z. Yusuf. 2018. Perceived Quality and Relationship Quality as Antecedents and Predictors of Loyalty in the Chemical Industry: A Literature Review. *European Scientific Journal* 14: 173. [CrossRef]

Sánchez-Gutiérrez, José, Pablo Cabanelas, Jesús F. Lampón, and Tania E. González-Alvarado. 2019. The impact on competitiveness of customer value creation through relationship capabilities and marketing innovation. *Journal of Business and Industrial Marketing* 34: 618–27. [CrossRef]

Shocker, Allan D., and David A. Aaker. 1993. Managing Brand Equity. *Journal of Marketing Research* 30: 256. [CrossRef]

Shou, Zhigang, Jun Chen, Wenting Zhu, and Lihua Yang. 2014. Firm capability and performance in China: The moderating role of guanxi and institutional forces in domestic and foreign contexts. *Journal of Business Research* 67: 77–82. [CrossRef]

Sobel, Michael E. 1982. Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models. *Sociological Methodology* 13: 290–312. [CrossRef]

Steenkamp, Jan-Benedict EM. 2020. Global Brand Building and Management in the Digital Age. *Journal of International Marketing* 28: 13–27. [CrossRef]

Sürücü, Özlem, Yüksel Öztürk, Fevzi Okumus, and Anil Bilgihan. 2019. Brand awareness, image, physical quality and employee behavior as building blocks of customer-based brand equity: Consequences in the hotel context. *Journal of Hospitality and Tourism Management* 40: 114–24. [CrossRef]

Teece, David J. 2016. Dynamic Capabilities. *The Palgrave Encyclopedia of Strategic Management* 18: 1–9. [CrossRef]

Teece, David J., Gary Pisano, and Amy Shue. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal* 18: 509–33. [CrossRef]

Ulaga, Wolfgang, and Andreas Eggert. 2006. Value-based differentiation in business relationships: Gaining and sustaining key supplier status. *Journal of Marketing* 70: 119–36. [CrossRef]

Vázquez, Rodolfo, A. Belen Del Rio, and Victor Iglesias. 2002. Consumer-based Brand Equity: Development and Validation of a Measurement Instrument. *Journal of Marketing Management* 18: 27–48. [CrossRef]

Walter, Achim, Michael Auer, and Thomas Ritter. 2006. The impact of network capabilities and entrepreneurial orientation on university spin-off performance. *Journal of Business Venturing* 21: 541–67. [CrossRef]

Wang, Catherine L., and Pervaiz K. Ahmed. 2004. The development and validation of the organisational innovativeness construct using confirmatory factor analysis. *European Journal of Innovation Management* 7: 303–13. [CrossRef]

Wang, Hui-Ming Deanna, and Sanjit Sengupta. 2016. Stakeholder relationships, brand equity, firm performance: A resource-based perspective. *Journal of Business Research* 69: 5561–68. [CrossRef]

Wernerfelt, Birger. 1984. A resource-based view of the firm. *Strategic Management Journal* 5: 171–80. [CrossRef]

Wong, Ho Yin, and Bill Merrilees. 2006. Determinants of SME brand adaptation in global marketing. *International Journal of Entrepreneurship and Small Business* 3: 477–97. [CrossRef]

Xie, Yi, and Xiaoying Zheng. 2019. How does corporate learning orientation enhance industrial brand equity? The roles of firm capabilities and size. *Journal of Business and Industrial Marketing* 35: 231–43. [CrossRef]

Yurtkoru, E. Serra, Pınar Acar, and Begüm Seray Teraman. 2014. Willingness to Take Risk and Entrepreneurial Intention of University Students: An Empirical Study Comparing Private and State Universities. *Procedia-Social and Behavioral Sciences* 150: 834–40. [CrossRef]

Zeithaml, Valarie A. 1988. Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing* 52: 2–22. [CrossRef]

Zhang, Jing, Yanxin Jiang, Rizwan Shabbir, and Miao Zhu. 2016. How brand orientation impacts B2B service brand equity? An empirical study among Chinese firms. *Journal of Business & Industrial Marketing* 31: 83–98. [CrossRef]

Zhang, Jing, Yanxin Jiang, Rizwan Shabbir, and Mingfei Du. 2015. Building industrial brand equity by leveraging firm capabilities and co-creating value with customers. *Industrial Marketing Management* 51: 47–58. [CrossRef]

Zhang, Yufeng, Zhibo Yang, and Tao Zhang. 2018. Strategic resource decisions to enhance the performance of global engineering services. *International Business Review* 27: 678–700. [CrossRef]

Zhao, Xinshu, John G. Lynch Jr., and Qimei Chen. 2010. Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of consumer research* 37: 197–206. [CrossRef]