(Forthcoming) Juntunen, M., Juntunen, J. & Juga, J. (2011) Corporate brand equity and loyalty in B2B markets. A study among logistics service purchasers. Journal of Brand Management Vol 11, No xx, xx-xx.

Corporate brand equity and loyalty in B2B markets. A study among logistics service purchasers

Product brand equity has become one of the most discussed concepts among marketing scholars. It is suggested that brand equity impacts on customers' loyalty intentions. This paper widens the traditional brand equity discussions into corporate level, namely into corporate brand equity, and examines whether corporate brand equity results in customer loyalty in B2B services context. A tentative model was created and tested by using empirical survey data collected from Finnish industrial logistics service purchasers in 2008. The analysis showed that the tentative model was unworkable, and therefore the data were further analysed in an explorative manner in order to find out how brand related concepts affect customer loyalty. According to the results loyalty is neither a component of nor an outcome of brand equity. Instead, brand image results in loyalty. In addition, it was noticed that the current brand equity measures developed from product brand perspective may not work so well in corporate brand equity purposes. Therefore, corporate brand equity measures should be further developed.

Keywords: brand equity, corporate brand equity, loyalty, structural equation modelling (SEM)

1. Introduction

The concept of brand equity has attracted considerable interest among marketing researchers and practitioners in the last two decades. Traditionally brand equity has been studied from product branding perspectives and most often in the consumer goods context (e.g. Aaker, 1991; Keller, 1996). In addition, there are attempts to study brand equity in business to business (B2B) markets as well, both in industrial (e.g. Bendixen, et al., 2004; Kuhn, et al., 2008) and in service (e.g. Davis, et al., 2007; Kim, et al., 2008; Rauyruen, et al., 2009) contexts.

Recently, the importance of corporate branding has been recognised and has gained more and more attention in academic studies (Ahonen, 2008). However, despite the growing interest in corporate branding the literature concerning corporate brand equity is still scarce. Keller's (2000) work is one of the few attempts to study corporate brand equity in the consumer markets. By contrast, little research has been devoted to corporate brand equity in business-to-business (B2B) markets.

Creating a strong corporate brand is especially important in business services, where the object of purchase is intangible service. For example, due to increased competition in the industry, logistics service providers (LSP's) need to find new ways to distinguish themselves from the competitors. Therefore, we have chosen B2B logistics services as the empirical context for investigating corporate brand equity. But, the task is not that simple. In product brand equity discussions there seems to be some ambiguity of concepts. Traditionally in marketing literature it has been considered that loyalty is a component of brand equity (e.g. Aaker, 1991), whereas others argue that loyalty is an outcome of brand equity (e.g. van Riel, et al., 2005) and it could positively influence the customer's willingness to stay, repurchase, and recommend the brand (Vogel, et al., 2008); in other words, a strong brand may result in increased customer loyalty.

To understand the role of loyalty in corporate brand equity discussions, the aim of the paper is to develop an empirically grounded model of the significance of corporate brand equity to loyalty. More specifically, the study concentrates on whether corporate brand equity results in loyalty in the B2B services context. Thus, the research question we address in the study is: "*Does corporate brand equity create loyalty among logistics service purchasers?*"

The remainder of the paper is organized as follows: First, logistics services markets are described. Next, different perspectives on brand equity are reviewed; brand equity, corporate brand equity, brand equity in business to business markets, and the role of loyalty in brand equity discussions. Then, on the basis of the literature review, a tentative model is created and measures are presented. These results are then described, and finally, the conclusions and further research topics are suggested.

2. Logistics services markets

Growing competition, globalization and the need for reduced delivery times and inventory levels have created a demand for more responsive logistics processes based on effective supply chain alliances among companies. Traditional methods for developing logistics strategy and structuring the supply chain are no longer valid for ensuring the survival of organizations. Companies can either use the *make* option, which means that they invest in and build their own logistics organization, or they can use the *buy* option by contracting these functions out (Razzaque & Sheng 1998). In other words, companies may outsource logistics activities to achieve seamless supply chain operations.

Outsourcing can be seen as a strategy in which organizations employ the logistics services of external providers (Bolumole, et al., 2007), or as a process whereby activities traditionally carried out internally are contracted out to external providers (Domberger, 1998). Important issues to consider are to evaluate benefits and risks, and consider which part of logistics will be outsourced and who will provide the service (Deepen, 2007). The worldwide usage and importance of logistics outsourcing has grown dramatically over the last decades and outsourcing affects thousands of companies and employees every year (Logan, 2000; Deepen, 2007). Up to 85 percent of all companies outsource at least one logistics function (Logan, 2000), transportation and warehousing being the most popular areas of outsourcing (Jaafar & Rafiq 2005).

In Finland, deregulation of the transportation business in the beginning of the 1990s greatly increased the number of transport companies and thereby improved the opportunities for industrial companies to outsource logistics operations to external service providers. However, the sizes of transport companies generally remained small, and competition turned out to be very tight. Freight rates have stayed at a low level and for example fuel price changes have often led to considerable problems for the transport companies. Due to tight competition in the industry, logistics services providers need to find new ways to differentiate themselves from the competitors. One way to do this is by developing strong and reliable corporate brands. It is suggested that customers experience high brand equity if they judge a particular brand as strong, unique, and desirable (Verhoef, et al., 2007).

There has recently been a strong interest in logistics outsourcing as indicated by the volume of writings in scholarly journals, trade publications and popular magazines (Razzaque & Sheng 1998; Bolumole, 2001). Outsourcing of logistics functions is studied from several perspectives including overviews of the industry, keys to successful logistics outsourcing relationships, selection of logistics service providers, and international perspectives on logistics outsourcing. (see e.g. Knemayer, et al., 2003). Despite these contributions, logistics companies are seldom studied from the branding perspective (Juntunen, Juntunen & Autere 2009). Similarly, corporate branding studies have seldom focussed on logistics companies (Ahonen, 2008) even though it is recognized that logistics offers an interesting research context for corporate branding (Juntunen, Juntunen & Autere, 2009). Only recently has the importance of branding been recognized in the logistics context (Juntunen, Juga & Grant 2009), and, for example, in some studies corporate branding has been examined as a factor affecting logistics costs in supply chains (Juntunen & Juntunen 2009) or customer loyalty (Grant, et al., 2009).

3. Brand equity in business services context

3.1 Brand equity

Traditionally brand equity discussions are rooted in product branding in the discipline of marketing. Sometimes there seems to be ambiguity between the terms brand equity and brand value. Most often *brand value* represents what the brand means to a focal company (Raggio &

Leone 2007), and it often includes the accounting viewpoint that sees brand value as the financial profit or value of the brand (Tuominen, 2006). *Brand equity*, on the other hand, seems to be the term used more frequently in the literature, but there seems to be some ambiguity about it, too. Even though brand equity is sometimes considered as referring to the financial value of the brand (see e.g. Biel, 1992; Simon & Sullivan 1993), in the marketing domain it is often suggested that brand equity refers to the asset-based, intangible properties of the brand (see e.g. Aaker, 1992; Lassar, et al., 1995; Pitta & Katsanis 1995; Berry, 2000), which add (or subtract) value (Aaker, 1991) and represent what the brand means to the customer.

Keller (1993) and Aaker (1996) have done a seminal job in developing the definition and measuring scales for brand equity. Aaker (1996, p. 216) defines brand equity as "*a set of brand assets and liabilities linked to a brand's name and symbol that add to or subtract from the value provided by a product or service to a firm and/or that firm's customers*". He divides brand equity into five categories: brand loyalty, brand awareness, perceived quality, brand associations and other proprietary brand assets. The first four categories are clearly intangible assets, whereas other proprietary brand assets are more external signs of the brand and thus are not commensurable with the other four components.

Keller (1996), on the other hand, introduces the concept of consumer based brand equity (CBBE), which differs slightly from Aaker's (1996) definition. Keller (1993, p. 1) includes the company's view and defines CBBE as *"the differential effect of brand knowledge on consumer response to the marketing of the brand"*. CBBE may be either negative or positive, but it is important that it is always compared to an unnamed version of the product or service, and it relates strongly to the knowledge (memory and associations) of the brand by a specific customer. According to Keller (2003, p. 53), customer-based brand equity "*occurs when the consumer has a high level of awareness and familiarity with the brand and holds some strong, favorable, and unique brand associations in memory*". Keller's (1993) model of brand equity focuses on brand knowledge and its components – brand awareness and brand image. Thus, compared to Aaker's (1996) brand equity concept, CBBE is narrower and emphasizes the comparison between a brand and unbranded substitutes. CBBE is often applied in other contexts, too, for example tourism (see e.g. Boo et al., 2009).

3.2 Corporate brand equity

According to Keller (2000), corporate brand equity is the sum of the results formed by any action made under the corporation and its brand. Every brand element at every level of the brand hierarchy may increase corporate brand equity by creating awareness and building strong, unique and favourable mental associations. Keller (2000, p. 115) defines corporate brand equity as "*the differential response by consumers, customers, employees, other firms or any relevant constituency to the words, actions, communications, products or services provided by an identified corporate brand entity*". In other words, corporate brand equity is seen as the sum of results formed by any action made under the corporation and its brand.

Corporate brand equity is built on the grounds of corporate image, and the dimensions of corporate image affect corporate brand equity. Corporate image is about the products of the organisation, the actions an organisation takes and the manner in which the organisation communicates. Corporate image associations may also be affected by the characteristics of the personnel of the organisation. (Keller, 2000) In addition, corporate brand name and/or logo are important elements of creating brand awareness and recognition, as well as signs of trust and assurance of the organisation (Balmer & Gray 2003). All in all, the whole organisation affects the perceptions of corporate brand, and all the actions of the organisation are involved in this perception-making (Keller, 2000). In contrast to product brand, corporate brand is communicated not only to the customers, but to all other stakeholders as well (Balmer, 2001; Gylling & Lindberg-Repo 2006), in order to be able to enhance brand equity.

3.3 Brand equity in business to business context

There have been several attempts to study brand equity both in industrial business to business (B2B) markets (see e.g. Bendixen, et al., 2004; Kuhn, et al., 2008) and in B2B services markets (see e.g. Taylor, et al., 2007; Roberts & Merrilees 2007; Davis, et al., 2007; Kim, et al., 2008; Rauyruen, et al., 2009). For example, it is suggested that corporate image and thus corporate brands may have a salient role in the selection of subcontractors (Blombäck & Axelsson 2007), and that in B2B markets brand equity exists in the form of a buyers' willingness to pay a price premium for their preferred brand (Hutton, 1997). In these studies the theoretical background is rooted in product brand discussions.

The study of Davis et al. (2008) is one of the few that have concentrated on branding in logistics service markets. They adopt Keller's (1993) definition of brand equity and propose that brand equity that accrues to a firm, rather than to a product, is the relevant dependent variable in the context of B2B services. They suggest that customer-based brand equity is generated when the customer is aware of the brand and associates some favourable, strong and unique attributes with the brand's image. Thus, they conclude that in logistics services a positive relationship exists between brand awareness and brand equity, as well as between brand image and brand equity.

3.4 Loyalty and brand equity

Brand loyalty is seen in product brand equity discussions as an element of brand equity referring to the loyalty of stakeholders for the organisation and its brand. In other words, traditionally loyalty is seen as a component of brand equity (e.g. Aaker, 1991) and some of recent studies (e.g. Rios & Riquelme 2008; Rauyruen et al., 2009) support this view. However, many researchers are now saying that loyalty is an outcome of brand equity (e.g. Taylor, et al., 2004; van Riel, et al., 2005). It is argued that brand equity has a strong impact on customers' loyalty intentions (Vogel, et al., 2008) and it is likely to influence a customer's willingness to stay, repurchase, and recommend the brand.

3.5 Tentative model and measures

In this study, a tentative model was developed to describe whether corporate brand equity, which is seen as a result of corporate brand awareness and corporate brand image, explain customers' corporate brand loyalty (Figure 1). The model is mainly based on the work of Davis et al. (2007), and is extended with loyalty.

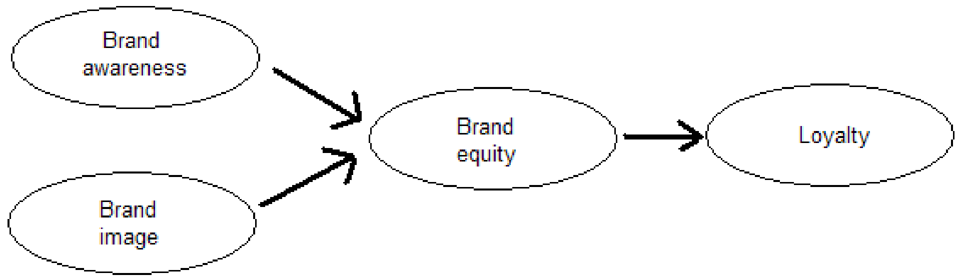

Figure 1. A tentative model of the impact of brand equity on loyalty.

Because several researchers (Van Riel et al., 2005; Vogel et al., 2008) suggest that loyalty can be understood as a result of brand equity, we assume that corporate brand equity has a positive relationship with corporate brand loyalty. Corporate brand loyalty is seen as the customer's willingness to stay, repurchase, and recommend the corporate brand. In this study, loyalty was measured with two questions related to the customers' willingness to stay with the brand and to their overall satisfaction with the brand.

Corporate brand equity is seen here as representing the customer perspective. Following Keller (1993) and Davis et al., (2007), brand awareness and brand image are seen as components of corporate brand equity. Corporate brand equity was measured with three questions related to the value and differentiating capacity of the logistics company's brand. Corporate brand awareness consists of the customer's ability to recognize and recall the brand under different conditions (Aaker, 1996; Davis, et al., 2007). Corporate brand awareness was measured with three questions. Corporate brand image consists of the attributes and benefits associated with a brand that make the brand distinctive and thereby distinguish the firm's offer from the competition in a way that may provide a differential advantage (Webster & Keller 2004). In this study, corporate brand image was measured with five questions.

All the questions used in the study were developed on the basis of the work of Keller (1993; 2000; 2003), Aaker (1993) and Davis, et al., (2007). In the questionnaire, the operational measures were expressed as attitudinal statements based on the 7-point Likert scale (strongly disagree … strongly agree). The descriptions of the concepts and their operational measures are presented in Table 1.

Table 1. Latent variables and their operational measures

Latent variable	Explanation and operational measures in the questionnaire	Label
Corporate brand awareness	Refers to awareness of the corporate brand	BA
	The name of our logistics service provider is well-known in our industry.	name
	Our logistics service provider is recognized by other members of our supply chain as a strong trade partner.	strong
	In comparison to other logistics service providers, our logistics service provider is a leading brand in the industry.	brand
Corporate brand image	Refers to image of the corporate brand	BI
	Our logistics service provider is known as a company that takes good care of its trade partners.	Careful
	We can reliably predict how our logistics service provider will perform.	predict
	In comparison to other logistics service providers, our logistics service provider is known to consistently deliver very high quality.	quality
	In comparison to other logistics service providers, our logistics service provider is highly respected.	comresp
	Our logistics service provider is highly respected.	resp
Corporate brand equity	Refers to equity of the corporate brand	BE
	We are willing to pay more in order to do business with our logistics service provider.	paymore
	This company's brand is different from other logistics service providers.	difbrand
	The name of this provider gives them an advantage over other logistics service providers.	nameadv
Corporate brand loyalty	Refers to the customers' corporate brand loyalty	LOYAL
	Give an evaluation of your overall satisfaction with the operation of your main logistics service provider.	satisfi
	With high probability we will continue the relationship with our present logistics service providers as long as possible.	continue

3. Empirical analysis

3.1 Data description and estimation method

The sample consisted of 1043 respondents from middle sized and large companies (more than 49 employees and sales over 400,000 Euros) located in Finland and operating in the industries where logistics services are vital in order to carry on business; for example mining, manufacturing, oil-gas- and water maintenance, and construction. The survey was conducted by using the Internet and the Webropol online survey software package during the spring 2008. Altogether 235 acceptable responses were returned representing a response rate of 22.5 per cent.

A randomized one-way analysis of variance (ANOVA) was used to study non-response bias by comparing different response waves (Lambert & Harrington, 1990). The first wave included companies that responded after the original e-mail request (37.4 percent) and the second wave consisted of companies that responded after a telephone reminder (62.6 percent). There were no statistically significant differences (using the criterion of $p > 0.05$) between the two groups for any of the variables used in this study. Therefore, it may be assumed that non-response bias is not a problem in this study and the sample represents the target group. The questionnaires had been filled thoroughly, and when needed, missing data were completed with SPSS software's expectation maximization (EM) function.

The estimations were made with the Lisrel software (Jöreskog, et al., 2000; Jöreskog & Sörbom 1993a). The estimates were calculated using the maximum likelihood (ML) method based on covariance matrix and the normality of the variables was studied with Prelis 2 software (Jöreskog & Sörbom 1993b).

3.1 Data analysis

First, the data were used to test the validity of the tentative model (Figure 1), but the empirical model (Figure 2) did not support the tentative model. The Chi-square test (Table 2) shows an inadequate fit of the model to the data, and other indices also confirmed insignificant statistical fit. Thus, according to the fit indices, the empirical model was not valid enough and had to be rejected.

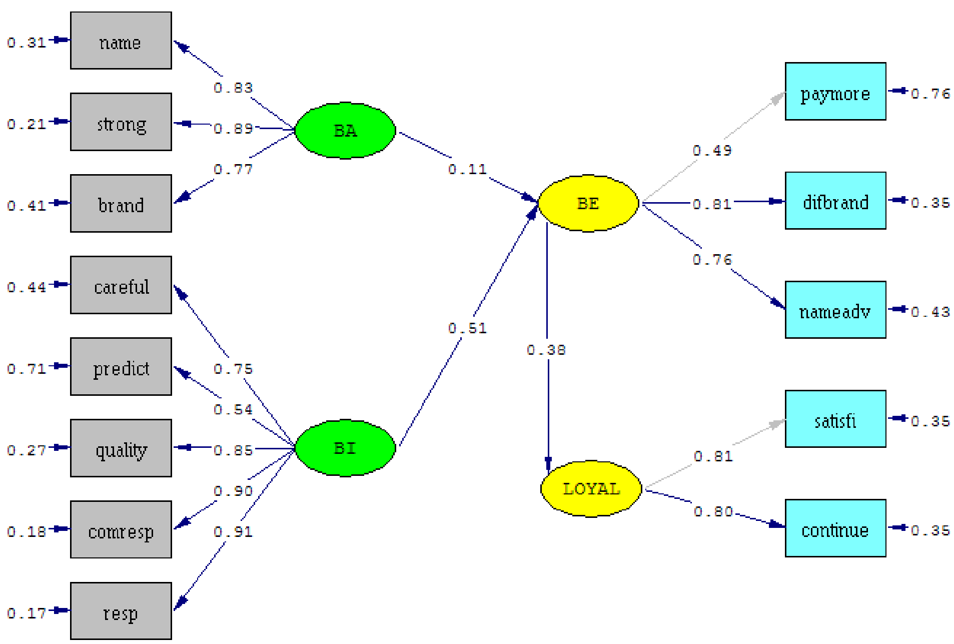

Figure 2. Empirical model of the impact of brand equity on loyalty

Table 2: Fit indices of the empirical model

Test	Value	P-value
chi-square (df)	315.65 (61)	0.000
RMSEA	0.134	
CFI	0.92	
GFI	0.83	
SRMR	0.13	
normed chi-square	5.175	

Because the empirical model was not acceptable, the study was continued by examining the data in an exploratory manner with the Lisrel software. By reducing some measures and testing different relationships, an amended model (Figure 3) was produced. In this model, corporate brand awareness and corporate brand image show positive relationships with corporate brand equity, as was assumed in the tentative model. In addition, however, corporate brand awareness shows a positive relationship with corporate brand image, which was *not* assumed in the tentative model. Furthermore, corporate brand image – rather than corporate brand equity, as was expected in the tentative model – has a positive relationship with corporate brand loyalty. There was no relationship between corporate brand equity and corporate brand loyalty in this data. In the amended model, the highest factor loadings are set to be one, so that the scale of the different factors in the standardized solution remains the same.

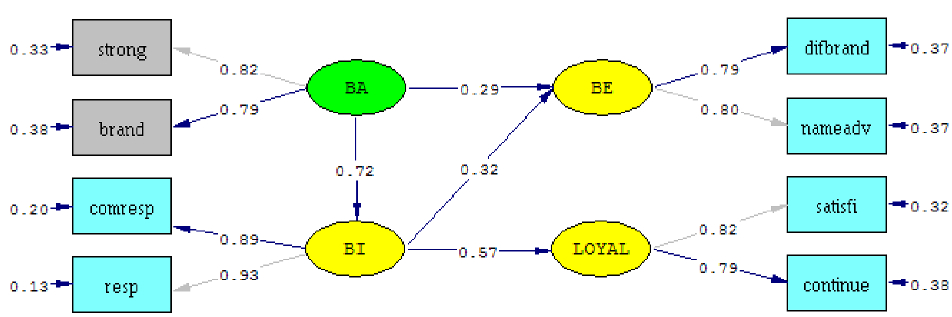

Figure 3. Amended model

The test values of the amended model are shown in Table 3. The Chi-square test shows an acceptable fit of the model to the data, the minimum acceptable p-value normally being 0.05. The RMSEA value below 0.08 indicates a reasonable error of approximation and the value below 0.05 indicates a close fit of the model (Browne & Cudeck 1993). As suggested for an acceptable model, both CFI and GFI values are above 0.90 (Jaccard & Wan, 1996), while the value of the Normed Chi-square is between 1.0 and 2.0 (Grant, 2004). Thus, based on the test values, the amended model can be considered acceptable. All the relationships in the model are statistically significant and the remaining factor loadings are good. The modification indices of the Lisrel software indicated high error correlation between corporate brand equity measures ('brand' and 'nameadv'). This is understandable because a leading corporate brand in the industry gains several advantages from its strong brand.

Table 3. Fit indices of the amended model

Test	**Value**	**P-value**
chi-square (df)	24.84 (15)	0.052
RMSEA	0.053	
CFI	0.99	
GFI	0.97	
SRMR	0.035	
normed chi-square	1.656	

Each latent variable was also evaluated individually (Table 4). Acceptable construct reliability (CR) value is 0.70 or greater, and acceptable reliability value for average variance extraction (AVE) is 0.50 or greater, as suggested by Garver and Mentzer (1999). In addition, the validity of the measures is equal to the factor loadings (Bollen, 1989). However, because each of the factors has only two measures, they are unidentified without full structure and it is impossible to perform factor analyses of individual latent variables. This weakens the usability of CR and AVE, even though their values support good statistical fit of the model. Therefore, the results of this study should be evaluated primarily on the basis of the fit indices of the full model and the theoretical background of these measures.

Table 4. CR and AVE values

Latent variable	CR	AVE
BA	0.79	0.56
BI	0.91	0.62
BE	0.77	0.56
LOYAL	0.79	0.56

5. Conclusions

This paper concentrated on developing a model of the significance of corporate brand equity to loyalty by studying these issues in the B2B services context. First, a tentative model was created for examining whether corporate brand equity results in corporate brand loyalty. The model was tested with the data gathered from Finnish industrial companies in 2008. The results indicated that the tentative model was not acceptable. Thereafter, the study was continued by examining the data in an exploratory manner. These results provided an acceptable model (Figure 4).

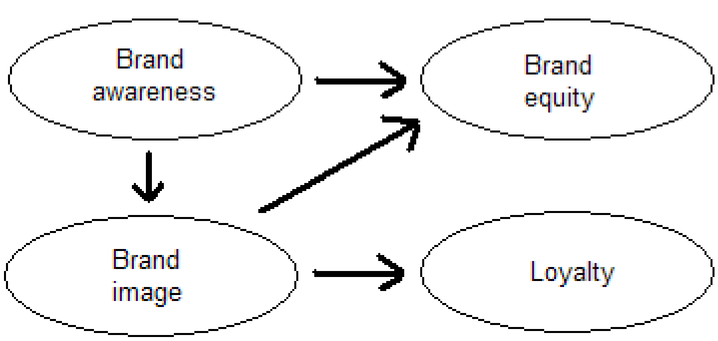

Figure 4. Corporate brand loyalty as a result of corporate brand image

The model reveals that corporate brand loyalty is neither an outcome nor a component of corporate brand equity. Instead, corporate brand image impacts on corporate brand loyalty. Similarly to previous studies (e.g. Keller, 2000), corporate brand awareness and corporate brand image were found to affect corporate brand equity. This is understandable because for example Keller (2000) suggests that corporate brand equity is built on the grounds of corporate image, and the dimensions of corporate image affect corporate brand equity. In addition to these findings a one way relationship between corporate brand awareness and corporate brand image was found even though it was assumed that no relationship would exist between them.

As an answer to the question "*Does corporate brand equity create loyalty among logistics service purchasers?"* we conclude that, according to this data, corporate brand equity does not create loyalty among logistics service purchasers. Instead, corporate brand image impacts on corporate brand loyalty, as well as it impacts on corporate brand equity.

This study has two important theoretical implications. First, the study widens the traditional product brand equity discussions into the corporate level by concentrating on corporate brand equity in B2B services markets. Building on earlier research (Aaker, 1996; Keller, 1993) in brand equity and especially the work of Davis et al. (2008), the results of this study are only partially consistent with previous models specifying the relationships of brand equity concepts. However, especially the relationship between corporate brand equity and loyalty can be debated. According to this particular data, corporate brand equity has an insignificant relationship with loyalty; therefore, we can ask whether there are sufficient grounds for considering loyalty to be either a component of brand equity (Aaker, 1996) or its outcome (van Riel et al., 2005; Vogel et al., 2008) in B2B service markets. In this study, it seems that corporate brand loyalty is an outcome of corporate brand image. Similar results concerning brand image and loyalty have been found previously in product branding (e.g. Ogba & Tan 2009).

The second main issue is related to the operational measures of the theoretical constructs. In our model, an adequate fit was accomplished with only two measures on each component. In other words, these measures appear in our study to be valid measures for the theoretical constructs, whereas the other measures should be further developed. Perhaps the current measures of brand equity are too strictly focussed on product brand equity while lacking a wider perspective of corporate brand equity; therefore, the measurements should be further developed from a corporate brand equity perspective to cover all aspects of the concepts.

From a managerial perspective, the results mean that the service providers can think of corporate branding in a fairly straight-forward manner when developing brand loyalty. The strongest associations in the final model form a causal chain from brand awareness to brand image and loyalty. This is quite nicely in line with the well-known elements of learning theory, including the cognitive, affective and conative components (for application in corporate branding, see e.g. Back & Parks, 2003). Brand equity, then, develops alongside with loyalty, out of the same antecedent factors.

According to the results logistics service purchasers are willing to co-operate with LSPs who are seen as strong trade partners and leading brands in the industry. To be a leading brand in the industry is a big challenge especially for small companies providing limited logistics services. Therefore, to create a healthy business relationship, rather than only competing on price, small companies should differentiate themselves and, in their particular niches, try to work on image as respected business partners. Being a central component of image and a strong antecedent to loyalty, a high respect status may be more easily earned for small companies in their particular niches than brand awareness through industry leadership.

Naturally, the study has several limitations. First, our model works well when there are only two measures on each component. Therefore, the measures should be developed further, from a corporate branding perspective, and validated with systematic methods such as confirmatory factor analyses. Second, the data in this study were gathered in Finland and especially in a particular context, logistics. This might limit the generalizability of the results. However, since logistics services are global in nature, the study may offer new insights for logistics services providers and purchasers all over the world. And, further to this, the results might be usable in other B2B services contexts, for example health care or other professional services.

The study raised multiple topics for further research. It would be extremely important to create measures intended for describing corporate brand equity particularly. This will require a great deal of work, because the current measures developed for product branding may not be correct for measuring corporate brand equity. This could possibly be done first with qualitative methods and then validating them with quantitative methods. In addition, the relationships between the central concepts should be further examined. There may even be other relevant concepts, such as relational elements, that could add complementary insight into the impact on brand loyalty. Furthermore, as noted above, the research should be extended to other B2B services contexts as well. Hopefully this study contributes new insights into the research of corporate branding and brand equity, and offers ideas for developing the research in service contexts even further.

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