

B. Study 1: Sector-specific Antecedents of Retail Brand Equity

1. Introduction

Consumer-based retail brand equity that refers to the consumers' overall assessment of a retailer's channels as strong, attractive, and unique brands (Hartman and Spiro 2005; Keller 1993), is known to affect retailer performance and consumer behavior (e.g., Baldauf et al. 2009; Grewal et al. 2009). Following the longtime practice of brand manufacturers, retail firms increasingly seek strategies to manage their retail brand equity because having strong brands is of paramount importance (e.g., when attracting consumers or recruiting employees). Target and Walmart, for example, consider their retail brand to be a critical element of their business strategies, and they continue investing in their stores and retail attributes with the goal of delivering on customer propositions (Target 2014; Walmart 2015). In other sectors, Best Buy or Kingfisher, for example, also focus on their retail brands and regard them as valuable resources (Planet Retail 2015). Because retail brand associations in consumers' memory, particularly the attributes that affect retail brand equity (e.g., assortment, price), are likely to vary between retail sectors, we study the effects of retail attributes on retail brand equity and the effects of retail brand equity on consumers' intentional loyalty to retailers in important sectors. Intentional loyalty, which refers to consumers' readiness to repurchase at a retailer or to recommend it to others (Johnson et al. 2006), is examined because it is a well-researched outcome variable that facilitates the evaluation of our observations, because it is related to retail brand equity (e.g., Jinfeng and Zhilong 2009), and because it remains worthy of further research (Puccinelli et al. 2009).

Scholars often study the role of retail attributes for store or retailer image (e.g., Martineau 1958; Mazursky and Jacoby 1986; Pan and Zinkhan 2006) and less frequently for retail brand equity (e.g., Beristain and Zorrilla 2011; Yoo et al. 2000). Most scholars have analyzed a single retail sector, sometimes claiming that their results can be generalized to the retail industry as a whole (see Figure B—1). Jinfeng and Zhilong (2009) were among the first scholars to provide evidence of retail brand equity in grocery retailing, the sector that has received the most research attention (e.g., Allaway et al. 2011; Beristain and Zorrilla 2011; Swoboda et al. 2014), followed by studies of fashion retailing (mostly on image, Arnett et al. 2003; Berry 1969; Liljander et al. 2009). Studies in other

sectors are scarce (e.g., price and service effects on retail brand equity in electronics retailing, Darian et al. 2005; Kukar-Kinney et al. 2007). Swoboda et al. (2007), among few others, have compared various retail sectors in showing, for example, that retail attributes have different effects on retail brand equity. Nevertheless, the authors did not systematically conceptualize the role of retail attributes in the building of retail brand equity across retail sectors. Thus, research on retail brand equity across retail sectors is rare and limited. In particular, we do not know whether retail attributes are equally relevant for strong brand associations across retail sectors and which specific retail attributes most strongly predict retail brand equity in each retail sector. Thus, a broader, theoretically based conceptualization of retail brand equity predictors and effects is compelling. We aim to advance the literature by providing a more nuanced account of retail sectors as moderators in analyzing whether perceived retail attributes predict retail brand equity and, in particular, which specific attributes are the strongest predictors of retail brand equity across retail sectors. Important decisions on store choice, for example, are related to retail attribute associations that also influence brand associations. These associations theorized in cognitive and motivational theories (as shopping behavior is known to vary across retail sectors, Schenk et al. 2007) constitute the framework of this study because these two perspectives offer a strong theoretical foundation to study retail brand equity across sectors.

We seek to offer important contributions to the extant literature by extending the knowledge of retail brands across retail sectors, a contribution that is important because retail brand equity, particularly the knowledge of which retail attributes are relevant to the building of a strong, attractive, and unique retail brand, is advantageous for retailers. In particular, we contextualize the attribute–retail brand equity–loyalty relationship by investigating the grocery, fashion, electronics, and DIY retail sectors, which are the most important retail sectors in most countries and are known to show different patterns in consumers' shopping behavior (e.g., Planet Retail 2015). A comparison of these sectors contributes to the extant research, which has not yet systematically analyzed the role of sectoral differences. For retailers that work in heterogeneous contexts it should be clear which attributes affect retail brand equity most in each retail sector to maximize the returns on investments in brand management. For diversified retailers that operate in several retail sectors like Kroger, Metro Group, or the Swiss Coop this study contributes to strategically quite complex decisions on retail brand equity.

Study on																										
Study type	Store/retailer image																									
	Retail brand equity ¹																									
Retail attributes	Retail sector	1	2	6	1	5	2	23,6	5	1	1	5	1,2,6	-	2	1	1	1	1	1	1	1	1	1	1	1
	Study type	e	e	e	e	e	e	e	e	e	e	e	e	c	e	e	e	e	e	e	e	e	e	e	e	e
Retail attributes	Assortment ²	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Price ³	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Layout ⁴	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Communication ⁵	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Service ⁶	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Location ⁷	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Guarantee/refund policy	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	After sales efforts ⁸	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Community involvement	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Institutional factors	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Symbols	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Personal and social aspect	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Opening hours	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Clientele	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Figure B—1: Literature review on retail brand equity and retail image
Source: Own creation.

The remainder of this study is structured as follows. Drawing from theory and literature on consumer behavior in retail sectors, we derive hypotheses on the sector-specific role of retail attributes for retail brand equity and on the retail brand equity-loyalty link, and we test them with data obtained from 2,112 face-to-face interviews. After presenting the results, we discuss the implications of the study and avenues for further research.

2. Conceptual Framework and Hypothesis Development

In contrast to retail image, which is conceptualized based on retail attributes (e.g., Martineau 1958, already identified layout, communication, and personnel as important image dimensions), consumer-based retail brand equity represents information about a retailer in consumers' memory, that is their knowledge and associations of a retailer as a strong, attractive, and unique brand (Hartman and Spiro 2005; Swoboda et al. 2013a). Retail brand equity is a latent construct (sometimes resembling a gestalt view of retailers as brands, Keaveney and Hunt 1992) that is—similar to manufacturers' brands—affected by marketing-mix elements that are perceived retail attributes and that in turns affects consumers' loyalty behavior. In the conceptual model in Figure B—2, five retail attributes are included for several reasons: despite the lack of common agreement on the retail attributes that are relevant to retail image and brand research, the attributes of assortment, price, layout, communication, and service are frequently used in extant studies (see Figure B—1). These attributes are important for both stationary retailers and multichannel retailers in all four retail sectors, and they can be included in a sector comparison.

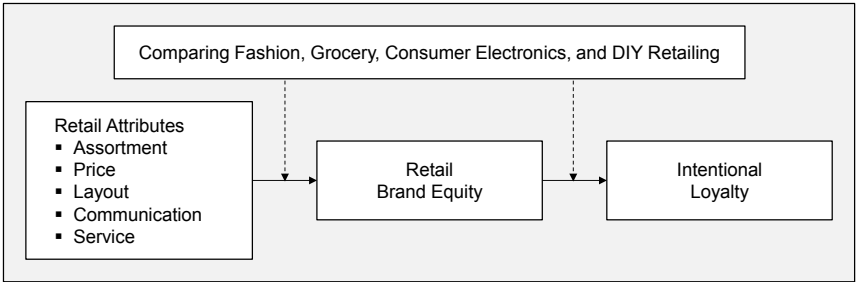


Figure B—2: Conceptual framework

Source: Own creation.

To address our research aims, we primarily build on theories that regard retail brands and retail attributes as associations in consumers' memory (Hartman and Spiro 2005; Keller 1993; Krishnan 1996), on motivational theories and on

empirical studies to better understand the different contexts of retail sectors concerning retail brand building and effects.

Many scholars understand retail attributes as firm signals and suggest that customers perceive specific stimuli as information cues to form attitudes toward a retailer (e.g., Jinfeng and Zhilong 2009). Particularly under highly uncertain conditions, customers search for more information before making a decision to minimize their losses, for example, whereas retailers provide customers with information using signals that influence consumer attitudes, which in turn affect their shopping decisions (e.g., to be loyal, Allaway et al. 2011). Consumers, especially loyal consumers, possess information about a retailer that is learned and stored in memory as a network of dependent associations (e.g., Krishnan 1996). Scholars tend to regard retail brand equity as a brand node in customers' memory that is linked to various associations and other nodes, such as retail attributes (e.g., Puligadda et al. 2012). The strength and number of links between nodes can be explained by the degree of activation (e.g., information retrieval, Anderson 1983; Malle and Horowitz 1995). The behavioral importance of these associations arises as consumers access information in memory about retail brands in decision situations. Following this reasoning, scholars highlight the effects of retail brand equity on consumer loyalty (e.g., Swoboda et al. 2013b). Thus, two mechanisms theoretically explain the attribute–retail brand equity–loyalty relationship: the perceived stimuli of a retailer and associations learned in different contexts and stored in memory.

The predictors and effects of retail brand equity are likely to differ between retail sectors. Consumers' dominant shopping motivations in retail sectors (e.g., utilitarian vs. hedonistic motives) and varying purchasing frequency (e.g., twice a week vs. every second month on average in grocery vs. fashion retailing) probably affect the use of stimuli and retrieval-based retailer associations in decision situations (e.g., Arnold and Reynolds 2012; Ghemawat and Nueno 2003; Melis et al. 2015). Shopping goal theory, for example, constitutes a framework in which shopping goals determine the relative salience of dominant retail attributes for consumers (Puccinelli et al. 2009) by either supporting or inhibiting the links between shopping goals and the means to achieve them (Kruglanski et al. 2002). Goals motivate consumers to search for relevant information and constitute the hub of an information network (Barsalou 1991), including the appropriate paths to achieve specific goals. For example, most grocery shoppers primarily satisfy supply-oriented goals by relying on functional information such as assortment and price, and they are likely to evaluate retailer brands on this basis. In goal-organized associative networks, consumers dominantly access those retail attributes that relate to the shopping goals that they are pursuing. Attributes that are linked to both retail brand equity and

consumer goals are activated by motivated information retrieval. Loyal consumers, for example, have well-linked, organized information, and because of their goal-driven behavior, they use the best available information based on their experiences (Puccinelli et al. 2009). Thus, the theoretical rationales for sector-specific predictors and effects of retail brand equity may be linked to consumers' dominant motivations in each sector, which is the focus in this study—with the recognition that other less dominant motivations exist—and which affect consumers' dominant use of specific stimuli and associations in a decision situation.

2.1. *Specific Attributes and Retail Brand Equity in Retail Sectors*

In this section, we examine which specific attributes most strongly affect retail brand equity in the four retail sectors by referring to theoretical rationales and empirical studies and by characterizing each retail sector first to better understand the different contexts. Differences across retail sectors are then hypothesized. Using identical conceptualizations for all retail sectors and multi-group analysis facilitates comparisons in generating and testing the hypotheses.

Grocery retailing. The grocery retail sector is highly concentrated in most developed countries; in fact, the top five retailers hold more than 70% of the market share, and retailers face strong intra- and inter-format competition by focusing on efficient supply chain processes and primarily relying on assortments and prices to position themselves as brands in the minds of consumers (e.g., Cleeren et al. 2010). Consumers primarily shop for groceries motivated by supply-oriented goals when satisfying their day-to-day needs. They choose grocery retailers primarily based on utilitarian attributes such as assortment and price—along with location, which is not analyzed in this study—because the motivation for consumer behavior is largely task oriented (Kaltcheva and Weitz 2006). Thus, consumer-based retail brand equity should largely be based on these two retail attributes, additionally because grocery retailers differentiate themselves in spatial competition based on these attributes, such as hypermarkets vs. discounters with large vs. narrow assortments and high-low vs. everyday low pricing strategies (Cleeren et al. 2010; Solgaard and Hansen 2003). Other retail attributes are expected to be less relevant to retail brand equity. Although some scholars have identified service as an important attribute (e.g., Gómez et al. 2004; Jinfeng and Zhilong 2009; Solgaard and Hansen 2003) and although we observe increased communication in grocery retailing (e.g., TV and e-commerce information in addition to direct mailings), we expect a weaker role of service and communication for retail brand equity because, for example, an increase in competitive advertising inferences is said to de-

crease brand recall and attitudes (Danaher et al. 2008). Similar, store layout has been recognized as a less important driver of retail brand equity in grocery retailing (Allaway et al. 2011).

Theoretically, given their generally supply-oriented shopping motivation, consumers are likely to primarily perceive assortment and price as stimuli and to retrieve these two attributes the most in grocery shopping. Strong, attractive, and unique grocery retail brands are likely to be linked to assortment and price associations, whereas the links to service, communication, and layout associations should be weaker. Thus, consumers' dominant shopping motivations and their learned retrieval-based associations lead to the following hypothesis:

- H1.** In grocery retailing, (a) assortment and (b) price perceptions affect retail brand equity most strongly.

Fashion retailing. The fashion retail sector is highly trend driven and less concentrated, with 50 or more firms often accounting for approximately two-thirds of sector sales (Planet Retail 2015). Vertical firms, apparel and footwear specialists, warehouses, and discounters engage in competition. Large firms offer wide selections of clothing and have advantages in purchasing, distribution, and marketing, while small stores compete by offering unique assortments, targeting specific segments, or serving a local market and by providing superior service. Thus, in fashion retailing, a wide range of attributes can be combined to build a strong, attractive, and unique retail brand and to customize offers to target groups (e.g., Birtwistle et al. 1999; Moore and Fairhurst 2003). However, most fashion consumers pursue hedonic shopping goals and tend to associate retail brands with such goals. Highly arousing stores and attractive, broad, unique, or frequently changing assortments are believed to be of particular importance for fashion retailers' images (e.g., Foster and McLelland 2015; Kaltcheva and Weitz 2006). Because unique assortments of retailers (e.g., different product brands) hinder consumers' price comparisons to a certain degree, price perceptions might be less important as an antecedent of retail brand equity. However, because price is believed to affect fashion retailers' images (e.g., Herstein et al. 2013), we expect it to be an important predictor of retail brand equity as well. Furthermore, communication is expected to be a less important driver of retail brand equity, whereas service might be of particular importance for retail brand equity in fashion retailing because consumers require a certain level of support during such shopping experiences (e.g., Kumar and Kim 2014).

Conceptually, the fashion sector might be the most heterogeneous retail sector, in which diverse offers are likely to affect retail brands (even online, e.g., Kwon and Lennon 2009a). Nevertheless, based on most fashion consumers' dominant shopping motives and information retrieval, we expect retail brand equity to be strongly linked to assortment, price, store layout, and service because most consumers seek those stimuli and base their brand associations on them. We therefore hypothesize the following:

- H2.** In fashion retailing, (a) assortment (b) price, (c) layout, and (d) service perceptions affect retail brand equity most strongly.

Electronics retailing. The electronics retail sector is driven by new technologies, strong price competition, and continuously declining prices. As the largest consumer electronics retailers, big-box stores compete with broad-based retailers and warehouses, e-commerce specialists and small specialized stores that sell consumer electronics or white goods, for example, and that offer superior customer service (Planet Retail 2015). Consumer shopping motives and retail offers are determined by rapid innovation rates and short life cycles of electronic products whose prices facilitate easy comparison. We therefore believe that price will be one of the main drivers of retail brand equity, while assortment will contribute less to retail brand equity (Darian et al. 2005; Kukar-Kinney et al. 2007). Because of a high percentage of complex products, relative lower purchase frequency and greater involvement of shoppers, the requirement for product information seems obvious. Thus, assistance from sales personnel, the possibility of after-sales services (e.g., Ballantine et al. 2010; Darian et al. 2005), and further communication through various channels such as mass media, websites, or communities should be particularly important to the building of a strong retail brand. Because store layout or atmosphere scarcely corresponds to the shopping goals of most consumers in this sector, we believe that such stimuli and associations have less effect on retail brand equity (Carpenter and Balija 2010).

Given the specific retail sector context and the rationales of dominant consumer shopping motives, strong, attractive, and unique electronics retail brands are likely to be linked to price, service and communication associations, whereas the links to assortment and layout associations should be weaker. We hypothesize as follows:

- H3.** In electronics retailing, (a) price, (b) communication, and (c) service perceptions affect retail brand equity most strongly.

DIY retailing. The DIY retail sector is highly concentrated in most countries, as it is controlled by a relative small number of retailers that offer similar retail formats and that compete with efficient purchase and supply chain processes and attractive assortments (Williams 2004, 2008). DIY shoppers have specific motivations because they often undertake DIY projects with higher investments and simultaneously seek a wider range of available products. Following scholars who emphasize assortment as an important differentiation criterion in DIY (Van Kenhove et al. 1999; Vogel et al. 2008), we assume that assortment is the most important attribute for retail brand equity. Price is expected to be less important, and previous studies show contradictory results regarding the strong or weak importance of price in relation to consumers' shopping goals. Consumers who purchase DIY products for difficult jobs, for example, are less price-sensitive than consumers who buy large quantities (e.g., Van Kenhove et al. 1999). Furthermore, shopping goals in DIY retailing appear to be less linked to price consciousness because of the higher incomes of consumers who renovate houses and who more strongly rely on assortment quality. Because of the relatively lower purchase frequency in this sector and the complex nature of DIY products, most consumers seek the specific services that they need in their situation (Foster 2004; Sands et al. 2009). We also assume that layout perceptions may emerge as a main predictor of retail brand equity because layout contributes to visually depicting DIY projects and thus may lead consumers to alter their planned projects and to choose alternative retailers (Wolf and McQuitty 2011). Communication is expected to affect retail brand equity less because consumers—because of both the nature of DIY products and their shopping motives—more strongly rely on service or interpersonal recommendations than on mass communication.

Referring to the abovementioned consumer shopping motives in DIY retailing and early empirical findings, we expect assortment, service, and layout stimuli and associations to be particularly linked to retail brand associations, whereas the links to price and communication associations should be less important. Thus, we hypothesize as follows:

- H4.** In DIY retailing, (a) assortment, (b) layout, and (c) service perceptions affect retail brand equity most strongly.

Comparing retail sectors. As illustrated, retail sectors vary in the specific combinations of retail attributes that are most applicable—especially with respect to their importance in attracting and retaining consumers. For example, in grocery retailing, retailers primarily emphasize assortment and price, whereas in fashion retailing, retailers focus on assortment and layout (e.g., Foster and

McLelland 2015; Kaltcheva and Weitz 2006). We have linked these differences to higher (vs. lower) probabilities with which consumers are confronted with the particular retailer attribute and that consumers' retrieval processes will involve the dominant attributes when choosing retail brands as well as consumers' dominant motives when shopping for groceries, textiles, electronics, and DIY products based on their different shopping goals and different paths to achieve these goals stored in memory (e.g., Schenk et al. 2007). Because we expect retail attributes (i.e., assortment, price, layout, communication, and service) to have varying levels of relevance to retail brand equity across retail sectors and following Swoboda et al. (2007), we hypothesize as follows:

- H5.** The importance of retail attributes for retail brand equity differs across retail sectors.

2.2. *Retail Brand Equity Effects in Retail Sectors*

Retail brand equity is expected to affect consumer loyalty across retail sectors. We analyze intentional loyalty (Johnson et al., 2006) because it is a predictor of shopping frequency and expenses (e.g., Chiou and Droge 2006; Pan and Zinkhan 2006), because it is a key indicator of competitive advantage (e.g., Deng et al. 2010), and because it aids in assessing our observations.

As mentioned previously, the importance of brand associations theoretically arises because such associations are accessed by loyal consumers in particular; information is activated in memory in decision situations that are highly important and strong, and that have many links to other information. As a strong and important overall assessment indicator of a retailer, consumer-based retail brand equity is believed to have considerable effects on consumer loyalty (e.g., Grewal et al. 2009; Swoboda et al. 2013a). In goal-motivated shopping behavior across retail sectors, loyal consumers access information based on their experience and rely on the best available information in associative networks, such as considering the strength of a brand when making a store choice. We therefore posit a stable role of retail brand equity for intentional loyalty across retail sectors although the importance of retail brand equity is likely to differ in retail sectors because, for example, both retail brands and product brands are particularly important for fashion shoppers, who generally access brand associations in memory more often than grocery shoppers do. Even scholars analyzing a single retail sector underline the strong effects of retail brand equity on loyalty intentions (in fashion: Arnett et al. 2003; in electronics: Darian et al. 2005; in grocery: Jinfeng and Zhilong 2009; and in DIY: Vogel et al. 2008). We therefore expect a strong retail brand equity–loyalty relationship across retail sectors and propose the following hypothesis:

- H6.** The effects of retail brand equity on consumer loyalty are stable across the grocery, fashion, electronics, and DIY retail sectors.

3. Empirical Study

3.1. Context and Sampling Method

To test our hypotheses, we conducted four studies in the retail sectors in a medium-sized city in Germany. As mentioned previously, the grocery, fashion, electronics, and DIY sectors were chosen because they are the largest retail sectors (shares of 48% in grocery and 8-11% each in fashion, electronics, and DIY, out of the total retail market volume of approximately 490 bn €, Destatis 2015), because consumer behavior differs among these sectors, and because they enable the results to be generalized to the retail industry to a certain extent. The particular city was chosen for the field studies because it is a typical medium-sized city, with approximately 250,000 inhabitants in the region, and because of the local presence of nearly all well-known retailers in the concentrated grocery, electronics, and DIY retailing sectors as well as a strong concentration of fashion retailing in the city center. No other medium-sized cities are within a one-hour driving distance, which enables a certain level of control of consumer streams of inhabitants in the analyzed city. However, because we observe one city and one competitive context, our results are limited in this respect.

To obtain the consumer samples, we used a cross-sectional design and randomly selected inhabitants at the city center equally throughout each day and over a period of one week for each study. We calculated the appropriate sample size following Bartlett et al. (2001). For the chosen values of the confidence level (97.5%), the estimate of variance (.50), and the acceptable margin of error (.05), the appropriate sample size is 502. We chose to employ a quota sampling procedure for 553 consumers in each study—adding 10% to account for potential item or unit non-response—based on age and gender according to the national census. Quota sampling facilitates sector comparison but limits the results because it does not consider sector-specific target groups (e.g., women shop for textiles more often than they shop for DIY products). Every third person who passed the trained, experienced interviewers and fulfilled the sample quota was asked to participate in the study (following Orth and Holancova 2004). To further reduce possible selection bias, every interviewer questioned equal numbers of inhabitants by using a standardized questionnaire (Patterson and Smith 2003); the approximate interview duration was 15 minutes. To further reduce social desirability bias, the questionnaire was ad-

ministered anonymously, and the respondents were assured of the confidential treatment of their responses for scientific purposes only (King and Bruner 2000). Each respondent was first asked to name as many as three retailers that he/she knew and frequently shopped at in the observed sector. The interviewers then randomly selected one of the previously mentioned retailers for the respondents to evaluate during the course of the interview. In total, seven grocery, twenty-four fashion, five electronics, and four DIY retail chains were evaluated, which may be regarded as representative of the retail structures in these sectors.

N = 2,112	Realized sample (in %)												Planned quota sample (in %)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Age groups	Grocery (n = 516)			Fashion (n = 521)			Electronics (n = 542)			DIY (n = 533)					
Age 15-24	9.5	7.6	17.1	8.8	12.9	21.7	9.4	12.2	21.6	8.4	11.4	19.9	9.4	10.6	20.0
Age 25-34	13.8	16.7	30.4	8.4	11.5	21.5	11.8	10.1	22.0	14.1	10.3	24.4	12.0	11.8	23.8
Age 35-44	4.8	7.9	12.8	7.3	7.1	14.4	8.5	6.8	15.3	9.8	8.4	18.2	7.8	8.2	16.0
Age 45-54	8.5	7.0	15.5	9.8	7.5	17.3	8.1	5.9	14.0	9.8	6.8	16.5	8.4	7.1	15.5
Age 55-64	6.6	6.0	12.6	5.4	6.1	11.5	7.9	6.1	14.0	8.6	5.1	13.7	6.5	6.4	12.9
Age over 64	5.2	6.4	11.6	6.7	8.4	15.2	6.8	6.3	13.1	4.5	2.8	7.3	5.6	6.2	11.8
Total	48.4	51.6	100.0	46.4	53.6	100.0	52.6	47.4	100.0	55.2	44.8	100.0	49.7	50.3	100.0

Table B-1: Sample characteristics

Source: Own creation.

Against this background, we collected data from a total of 2,212 respondents. After the removal of 44 incomplete questionnaires and after the defection of outliers according to the Mahalanobis distance, 2,112 cases remained. The realized sample distribution largely satisfied the planned sample quota (see Table B-1). Tests for normality showed no deviations from univariate and multivariate normality; hence, the maximum-likelihood estimator was chosen to test the hypotheses.

3.2. Measurement

For the measurement of variables, we first considered the hierarchy of effects by applying an appropriate questionnaire design (e.g., randomizing the question order), and we also relied on previous studies using seven-point Likert-type scales (ranging from 1 for strongly disagree to 7 for strongly agree, see Table B-2). We measured intentional loyalty using three adapted items (Bouzaabia et al. 2013; Zeithaml et al. 1996) and measured retail brand equity using four items according to Verhoef et al. (2007a). This measure was chosen because it has been specifically developed for the retail context and has been used in most retail studies of retail brand equity and because it is based on common, but different consumer-based brand equity measures in other

sectors (e.g., Keller 1993, 2003). As mentioned previously, because different inventories of retail attributes and items for measuring retail attributes have been provided in the literature, we chose to measure five retail attributes, and for each attribute, we used four items (adapted from extant studies). The retail attributes were selected through the use of two focus groups ($n = 5$) that involved a discussion of the importance of the most common retail attributes based on the literature; the scales were then chosen for an additional pretest. The selected scales were then pre-tested quantitatively ($n = 120$ for each of the four retail sectors based on quota sampling), and the results yielded satisfactory values for reliability and validity. However, the study is limited in this respect because the chosen items for each attribute are likely to affect the results and because we are unable to test alternative measures.

Item	MV/Std.	FL	KMO	ITC	α	CR	λ
Assortment - Adapted from Chowdhury et al. (1998); Jinfeng and Zhilong (2009)							
ASS1: The assortment at _ has very good quality.	5.7/1.0	.777		.626			.578
ASS2: _ I can find all the products I need very easily.	5.1/1.5	.631	.741	.522	.736	.730	.575
ASS3: The products are always available at _.	5.4/1.3	.598		.513			.705
ASS4: _ offers plenty of own brands.	5.3/1.2	.630		.512			.761
Price - Adapted from Grewal et al. (1998a); Yoo et al. (2000)							
PRI1: The prices at _ are always reasonable.	5.7/1.0	.779		.692			.807
PRI2: _ offers products at favorable prices over a long period.	5.2/1.3	.829	.805	.748	.842	.847	.801
PRI3: The special offers by _ are very attractive.	5.5/1.0	.782		.692			.706
PRI4: The price/performance ratio at _ is very good.	5.0/1.5	.709		.656			.785
Layout - Adapted from Chowdhury et al. (1998); Baker et al. (1994)							
LAY1: I like the store layout of _ very much.	5.0/1.3	.648		.582			.743
LAY2: I can find my way around easily at _.	5.6/1.0	.808		.661			.705
LAY3: The shopping atmosphere at _ is very pleasant.	5.5/1.2	.747	.730	.607	.783	.790	.697
LAY4: I feel comfortable when shopping at _.	5.5/1.3	.590		.533			.656
Communication - Adapted from Hansen and Deutscher (1977); Yoo et al. (2000)							
COM1: _ has excellent advertising.	4.8/1.5	.845		.762			.860
COM2: The advertising by _ appeals to me.	4.6/1.7	.813	.782	.753	.871	.868	.780
COM3: The communication by _ is very informative.	4.3/1.6	.811		.729			.845
COM4: The communication by _ is helpful.	4.6/1.8	.719		.670			.692
Service - Adapted from Chowdhury et al. (1998); Jara and Cliquet (2012)							
SER1: The service at _ is very good.	5.0/1.4	.887		.785			.901
SER2: The employees at _ are very friendly and honest.	5.1/1.4	.906		.804			.910
SER3: The employees at _ are very competent.	4.6/1.5	.847	.795	.775	.862	.867	.832
SER4: Employees are always available at _.	4.7/1.6	.532		.509			.525
Retail brand equity - Verhoef et al. (2007a)							
RBE1: _ is a strong brand.	4.1/1.5	.716		.616			.703
RBE2: _ is a well-known brand.	4.3/1.6	.678	.787	.588	.793	.790	.638
RBE3: _ is an attractive brand.	4.8/1.3	.786		.668			.812
RBE4: _ is a unique brand.	4.5/1.6	.638		.554			.653
Loyalty - Adapted from Bouzaabia et al. (2013); Zeithaml et al. (1996)							
LOY1: I consider _ my first choice.	5.5/1.0	.921		.678			.883
LOY2: I will shop more at _ in the next few months.	5.6/1.2	.660	.635	.556	.741	.755	.701
LOY3: I encourage friends and relatives to do business with _.	5.5/1.1	.550		.479			.544

Confirmatory model fit: CFI .923; TLI .911; RMSEA .059; SRMR .049; $\chi^2(303) = 2499.394$.

Note: ASS = Assortment; PRI = Price; LAY = Layout; COM = Communication; SER = Service; RBE = Retail brand equity; LOY = Intentional loyalty; MV/Std. = Mean values and standard deviations; FL = Factor loadings (exploratory factor analysis); KMO = Kaiser-Meyer-Olkin Criterion ($\geq .5$); ITC = Item-to-Total Correlation ($\geq .3$); α = Cronbach's alpha ($\geq .7$); CR = Composite Reliability ($\geq .6$); λ = Standardized Factor Loadings (confirmatory factor analysis) ($\geq .5$).

Table B-2: Reliability and validity

Source: Own creation.

Because the sample structure does not fully comply with the quota sample and because consumer behavior in retail sectors is likely to differ based on gender

(0 = male; 1 = female) and age (e.g., Meneely et al. 2009; Noble et al. 2006), we controlled for both factors as well as for familiarity with the retailer (which was measured using a single item, consumers' retailer visit frequency, Inman et al. 2009).

3.3. Method

Methodologically, we proceeded in three steps. The measurements were tested for reliability, validity, and possible biases; tests for measurement invariance between sectors were performed; and the hypotheses were tested.

To confirm the reliability of the measurements, we scrutinized the factor loadings of the respective constructs and the corrected item-to-total correlations (see Table B-2). The values exceeded the recommended thresholds. To assess construct reliability, we computed Cronbach's alpha and the level of composite reliability. These values exceeded the recommended thresholds (Bagozzi and Yi 1988; Nunnally 1978). Face validity was assessed using pre-tests. To determine construct validity, we examined all of the factor loadings of the confirmatory factor analysis (CFA) (Hair et al. 2014, p. 605) and the average variance extracted (AVE), which provide support for the convergent validity of the measures (Bagozzi and Yi 1988; Hair et al. 2014, p. 605). We tested for discriminant validity (see Table B-3) by assuring that all calculated AVEs exceeded the squared correlations between the constructs (Fornell and Larcker 1981). Finally, the fit values for the confirmatory model were found to be satisfactory except for the χ^2 /df ratio (Hu and Bentler 1999), which is, however, highly sensitive to sample size, and we thus considered a ratio beyond the recommended threshold to be acceptable (Hair et al. 2014, p. 578).

Constructs	1	2	3	4	5	6	7
1 Assortment	.552						
2 Price	<i>.082</i>	.563					
3 Layout	<i>.487</i>	<i>.076</i>	.614				
4 Communication	<i>.118</i>	<i>.107</i>	<i>.144</i>	.573			
5 Service	<i>.379</i>	<i>.025</i>	<i>.460</i>	<i>.068</i>	.521		
6 Retail brand equity	<i>.319</i>	<i>.204</i>	<i>.438</i>	<i>.176</i>	<i>.373</i>	.543	
7 Loyalty	<i>.494</i>	<i>.187</i>	<i>.402</i>	<i>.130</i>	<i>.288</i>	<i>.534</i>	.554

Confirmatory model fit: CFI .923; TLI .911; RMSEA .059; SRMR .049; χ^2 (303) =2499.394.
Note: values in italics represent squared correlations between constructs; values in bold represent the AVE ($\geq .5$) of the construct; Loyalty = Intentional loyalty.

Table B-3: Discriminant validity

Source: Own creation.

We attempted to reduce the probability of non-response bias in several ways. We ensured the respondents of the confidentiality of the survey, particularly emphasized the questionnaire design, and offered incentives motivating the

respondents to participate (e.g., Castiglioni et al. 2008). Because approximately 100-150 inhabitants declined to participate in each study, we compared the respondents' demographics to those of our census-based quota using a χ^2 test and did not find differences in the percentage distribution of gender and age.

Item	Unweighted sample CFA		Weighted sample CFA		Parameter comparison
	Δ	λ	Δ	λ	t-value
Assortment					
ASS1	1.000	.578	1.000	.580	.140
ASS2	.848	.575	.848	.577	.190
ASS3	.943	.705	.951	.707	.201
ASS4	.837	.761	.830	.763	.214
Price					
PRI1	1.000	.807	1.000	.807	.000
PRI2	.756	.801	.752	.799	-.231
PRI3	.994	.706	.994	.706	.000
PRI4	.717	.785	.722	.790	.722
Layout					
LAY1	1.000	.743	1.000	.742	-.059
LAY2	1.121	.705	1.229	.706	.104
LAY3	1.045	.697	1.043	.692	-.250
LAY4	1.079	.656	1.096	.660	.390
Communication					
COM1	1.000	.860	1.000	.851	-1.134
COM2	.943	.780	.945	.777	-.258
COM3	.973	.845	.976	.849	.667
COM4	.933	.692	.927	.683	-.592
Service					
SER1	1.000	.901	1.000	.902	.000
SER2	1.017	.910	1.017	.912	.603
SER3	.980	.832	.982	.834	.485
SER4	.673	.525	.671	.524	-.021
Retail brand equity					
RBE1	1.000	.703	1.000	.704	.218
RBE2	.911	.638	.915	.639	.125
RBE3	.995	.812	.999	.805	-1.347
RBE4	.937	.653	.944	.655	.250
Loyalty					
LOY1	1.000	.883	1.000	.884	.218
LOY2	.897	.701	.899	.699	-.258
LOY3	.640	.544	.646	.547	.354

Confirmatory model fit (unweighted sample): CFI .923; TLI .911; RMSEA .059; SRMR .049; $\chi^2(303) = 2499.394$.

Confirmatory model fit (weighted sample): CFI .920; TLI .907; RMSEA .055; SRMR .049; $\chi^2(303) = 2240.539$.

Note: ASS = Assortment; PRI = Price; LAY = Layout; COM = Communication; SER = Service; RBE = Retail brand equity; LOY = Intentional loyalty; MV/Std. = Mean values and standard deviations; FL = Factor loadings (exploratory factor analysis); KMO = Kaiser-Meyer-Olkin Criterion ($\geq .5$); ITC = Item-to-Total Correlation ($\geq .3$); α = Cronbach's alpha ($\geq .7$); CR = Composite Reliability ($\geq .6$); Δ = Unstandardized Factor Loadings; λ = Standardized Factor Loadings (confirmatory factor analysis) ($\geq .5$).

* Item deleted due to a low item-to-total correlation.

Table B-4: Unweighted and weighted sample CFA comparison

Source: Own creation.

As non-response bias could have affected our data we applied weighting class adjustment (WCA) to test whether the sample-estimated values match previously determined population values. The procedure corrects for over- and underrepresentation of specific groups (Groves 2006). We choose to use post-stratification weighting, as it is known to be conditionally unbiased and as it leads to efficiency gains (Holt and Elliot 1991). In a first step we calculated the adjustment weights for each case by the use of census data. The second step consists of the estimation using the weighted instead of the unweighted val-

ues. The parameter estimates are compared by a t-test. Because the un-weighted and weighted parameter estimates are not statistically distinct we conclude, that the threat of non-response bias is diminished in our data (see Table B-4).

We aimed to diminish the threat of common method variance (CMV) by using an appropriate questionnaire design and administration a priori. The design and ad-ministration included first that respondents were assured that the study was anonymous and confidential and that their answers could neither be right or wrong. Second, the question order was randomized and the study started with the measures of the dependent variables (Chang et al. 2010; Weiber and Mühlhaus 2014, p. 359-360). CMV was addressed a posteriori using a single-factor test. The model with all items loading on a single factor (CFI .536; TLI .497 RMSEA .139; SRMR .111; $\chi^2(324) = 13530.433$) showed significantly worse fit values than the proposed model did ($\Delta\chi^2 = 11031.039$ (21); $p < .001$). Furthermore, we applied the marker variable technique (Williams et al. 2010) and use job as marker variable as it is theoretically unrelated to the constructs of the model (Lindell and Whitney 2001). The technique consists of three succes-sive phases. The results of the model comparisons (phase I) point out that the correlations between the latent constructs are not biased through the presence of the marker variable (Method-U vs. -R). The results of the following reliability de-composition (phase II) indicate that the amount of method variance, associated with the measurement of the substantive latent constructs, is less than 12 per-cent. As the impact of method variance in the study of Williams et al. (2010) was above 12.5 percent, we found that the present results could be decreased. The results of the sensitivity analysis (phase III) show that marker-based method vari-ance has a very low effect on construct correlations (see Table B-5).

Phase I – Results of the model comparisons						
Model	χ^2	df	CFI	TLI	RMSEA	SRMR
CFA	2573.452	323	.921	.908	.057	.048
Baseline	2631.616	331	.919	.908	.057	.050
Method-C	2617.485	330	.920	.908	.057	.049
Method-U	2311.010	304	.930	.913	.056	.042
Method-R	2323.956	325	.930	.919	.054	.043
Δ Models	$\Delta\chi^2$	Δ df	p			
Baseline with Method-C	14.131	1	***			
Method-C with Method-U	306.475	26	***			
Method-U with Method-R	12.946	21	ns			
Phase II – Reliability decomposition						
Latent variable	Reliability baseline model	Decomposed reliability from Method-U-Model				
	Total reliability	Substantive reliability	Method reliability	% reliability marker variable		
Assortment	.752	.687	.064	8.5%		
Price	.858	.816	.050	5.8%		
Layout	.794	.751	.057	7.1%		
Communication	.874	.834	.048	5.5%		
Service	.878	.824	.052	5.9%		
Retail brand equity	.796	.752	.055	7.0%		
Loyalty	.760	.693	.089	11.7%		

Table to be continued

Table B-5 continued

Phase III – Sensitivity analysis					
Construct correlations	CFA	Baseline	Method-U	Method-S (.05)	Method-S (.01)
Assortment with price	.286	.287	.350	.374	.381
Assortment with layout	.698	.698	.671	.664	.661
Assortment with communication	.343	.343	.343	.341	.340
Assortment with service	.616	.616	.579	.571	.569
Assortment with retail brand equity	.565	.565	.568	.570	.571
Assortment with loyalty	.703	.703	.710	.710	.710
Price with layout	.275	.276	.315	.329	.333
Price with communication	.327	.327	.338	.344	.346
Price with service	.158	.159	.206	.222	.226
Price with retail brand equity	.451	.452	.469	.475	.477
Price with loyalty	.432	.432	.452	.462	.465
Layout with communication	.380	.380	.373	.370	.369
Layout with service	.678	.678	.653	.645	.643
Layout with retail brand equity	.662	.662	.652	.650	.649
Layout with loyalty	.634	.634	.624	.621	.620
Communication with service	.260	.260	.254	.250	.249
Communication with retail brand equity	.420	.420	.417	.416	.416
Communication with loyalty	.360	.537	.356	.355	.354
Service with retail brand equity	.611	.611	.613	.613	.613
Service with loyalty	.537	.537	.533	.530	.529
Retail brand equity with loyalty	.731	.731	.728	.727	.727
Job with assortment	.139	.000	.000	.000	.000
Job with price	-.060	.000	.000	.000	.000
Job with layout	.108	.000	.000	.000	.000
Job with communication	.046	.000	.000	.000	.000
Job with service	.135	.000	.000	.000	.000
Job with retail brand equity	.051	.000	.000	.000	.000
Job with loyalty	.034	.000	.000	.000	.000

Table B-5: Marker variable technique

Source: Own creation.

We tested measurement invariance using CFA to determine whether the measurements are equivalent across the four retail sectors (see Table B-6). Because full metric measurement invariance was not attained, partial metric invariance was ascertained by freely estimating some of the factor loadings (Byrne et al. 1989). The partial metric invariance model was then used in testing the hypotheses.

Model	χ^2/df (p-value)	χ^2 -Difference (p-value)	CFI ($\geq .90$) ΔCFI ($\leq .01$)	TLI ($\geq .90$) (ΔTLI)	RMSEA ($\leq .08$) ($\Delta RMSEA$)
Configural invariance	3334.404/1212 (.000)	-	.928 (-)	.916 (-)	.058 (-)
Full metric invariance	3745.087/1272 (.000)	410.683 (.000)	.916 (.012)	.907 (.009)	.061 (.003)
Partial metric invariance ^a	3375.441/1245 (.000)	41.037 (.159)	.927 (.001)	.918 (.002)	.057 (.001)

^a Factor loadings are freed for the items: ASS3, PRI1, PRI3, LAY1, LAY4, COM2, COM4, SER3, RBE3.

Table B-6: Measurement invariance

Source: Own creation.

To test the hypotheses, we conducted non-recursive multi-group structural equation modelling (SEM) using Mplus 7.3. This method facilitates simultaneous testing of the differences between the effects of retail attributes on retail

brand equity and the effects of retail brand equity on loyalty across the retail sectors. The significance of the difference in the effects between sectors was assessed using χ^2 difference tests (see Table B-7). The fit values for the multi-group structural model were satisfactory (CFI .916; TLI .904; RMSEA .056; SRMR .058; $\chi^2(1522) = 4038.217$). In addition to applying our proposed model, we also estimated rival models (for details, see Appendix E.1.1). Rival model I included direct effects of retail attributes on intentional loyalty. We analyzed this rival model because it is theoretically reasonable that both attribute and retail brand associations might directly affect loyalty. The fit of the rival model (CFI .915; TLI .906; RMSEA .055; SRMR .067; $\chi^2(1496) = 4088.066$) was significantly poorer than the fit of the proposed model ($\Delta\chi^2 = 49.789(26)$; $p < .01$). Using rival model II, we tested a revised relationship (i.e., the retail brand equity-attributes-loyalty relationship), and the model fit (CFI .898; TLI .884; RMSEA .061; SRMR .068; $\chi^2(1528) = 4570.899$) was significantly poorer than the fit of the proposed model ($\Delta\chi^2 = 532.682(6)$; $p < .001$). According to these results and to the parsimony principle, we chose to use the proposed model (Kline 2011, p. 102).

3.4. Results

In this section, the results regarding the effects of retail attributes on retail brand equity are presented for each sector based on a comparison of standardized structural coefficients (see Table B-7) followed by the results regarding the predictors and effects of retail brand equity across retail sectors by comparing unstandardized structural coefficients (e.g., Raines-Eudy 2000).

In the *grocery sector*, the results show that assortment ($\beta = .326$; $p < .001$) and price perceptions ($\beta = .279$; $p < .001$) affect retail brand equity most strongly; thus, the results support H1a and H1b. By contrast, store layout ($\beta = .192$; $p < .001$), communication ($\beta = .124$; $p < .01$) and service perceptions ($\beta = .184$; $p < .001$) are less important for retail brand equity. We conclude that assortment and price in particular are predictors of a strong, attractive, and unique retail brand in grocery retailing, and we discuss these results subsequently. In the *fashion sector*, retail brand equity is affected most by assortment perceptions ($\beta = .356$; $p < .001$) followed by price ($\beta = .337$; $p < .001$) and then layout perceptions ($\beta = .297$; $p < .01$). These results support H2a, H2b, and H2c. The importance of service (H2d) is not supported ($\beta = .121$; $p < .01$), and the importance of communication is weak ($\beta = .095$; $p < .05$). As the implications of these results extend the hypothesized relationships, they will be discussed subsequently. In the *electronics sector*, price ($\beta = .200$; $p < .001$), communication ($\beta = .309$; $p < .001$), and service ($\beta = .370$; $p < .001$) most strongly affect

retail brand equity, whereas the effects of assortment ($\beta = .150$; $p < .01$) and layout ($\beta = .137$; $p < .001$) are less important for retail brand equity. These findings support H3a, H3b and H3c. Finally, in the *DIY sector*, the results reveal that assortment ($\beta = .287$; $p < .001$), layout ($\beta = .190$; $p < .01$), and service ($\beta = .344$; $p < .001$) affect retail brand equity most strongly; this finding supports H4a, H4b and H4c. By contrast, price ($\beta = .120$; $p < .001$) and communication ($\beta = .115$; $p < .01$) have the weakest effects on retail brand equity.

(N = 2112)	1 - Grocery			2 - Fashion			3 - Electronics			4 - DIY			Difference tests between retail sectors							
Effects	b	β	p	b	β	p	b	β	p	b	β	p	1 vs. 2	1 vs. 3	1 vs. 4	2 vs. 3	2 vs. 4	3 vs. 4		
ASS → RBE	.443	.326 ***		.459	.356 ***		.265	.150 **		.464	.287 ***		ns	ns	ns	ns	ns	ns		
PRI → RBE	.342	.279 ***		.374	.337 ***		.407	.200 ***		.211	.120 ***		ns	ns	**	ns	***	**		
LAY → RBE	.183	.192 ***		.230	.297 **		.112	.137 ***		.143	.190 **		*	ns	ns	ns	ns	ns		
COM → RBE	.097	.124 **		.068	.095 *		.256	.309 ***		.101	.115 **		ns	***	ns	***	ns	***		
SER → RBE	.160	.184 ***		.085	.122 **		.347	.370 ***		.309	.344 ***		ns	**	*	***	***	ns		
RBE → LOY	.736	.791 ***		.759	.766 ***		.627	.797 ***		.650	.830 ***		ns	ns	ns	ns	ns	ns		
R ² LOY		.746 ***			.610 ***			.638 ***			.672 ***									
Covariates																				
Gender	.091	.045 ns		.024	.014 ns		-.016	-.009 ns		.034	.020 ns		ns	ns	ns	ns	ns	ns		
Age	-.045	-.074 *		.023	.046 ns		-.024	-.046 ns		-.062	-.111 **		*	ns	ns	ns	**	ns		
Familiarity	.274	.241 ***		.087	.057 ns		.019	.011 ns		.005	.004 ns		**	***	***	ns	ns	ns		

Structural model fit: CFI .916; TLI .904; RMSEA .056; SRMR .058; $\chi^2(1522) = 4038.217$.

Note: ASS = Assortment; PRI = Price; LAY = Layout; COM = Communication; SER = Service; RBE = Retail brand equity; LOY = Intentional loyalty; b = unstandardized coefficient; β = standardized coefficients.

*** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .10$; ns = not significant.

Table B-7: Results

Source: Own creation.

Across retail sectors, the retail attributes affect retail brand equity in different ways. Surprisingly, differing effects across retail sectors were not observed for all retail attributes. The effects of assortment and layout on retail brand equity do not differ significantly across all retail sectors ($p > .05$). The effect of price on retail brand equity is equally strong among the grocery, fashion, and electronics retail sectors ($p > .05$), but different effects were observed when these three sectors were compared with DIY retailing ($p < .01$ for grocery and DIY retailing; $p < .001$ for electronics retailing). For communication we found equal effects on retail brand equity among the grocery, fashion, and DIY retail sectors ($p > .05$), whereas a comparison of these three sectors with electronics retailing shows significantly stronger effects in electronics retailing ($p < .001$). For service, we found that the effects are equal in grocery and fashion retailing ($p > .05$) as well as in electronics and DIY retailing ($p > .05$). The differences arising between these units (e.g., between fashion and DIY retailing, $p < .001$) show that service perceptions play a stronger role for retail brand equity in electronics and DIY retailing than in grocery and fashion retailing. In sum, differences between retail sectors were observed, and H5 is thus supported.

The effects of retail brand equity on intentional loyalty are significant in all four retail sectors ($b_{\text{grocery}} = .736$; $b_{\text{fashion}} = .759$; $b_{\text{electronics}} = .627$; $b_{\text{DIY}} = .650$; $p < .001$). We observed the discussed tendencies concerning the role of retail brand equity in the building of consumers' intentional loyalty. The assumed stable effects of retail brand equity on loyalty across retail sectors posited in H6 are thus supported (given the non-significant χ^2 -difference tests between the sectors).

With respect to the covariates, we find largely non-significant results, except that for example younger (vs. older) consumers are less loyal in DIY retailing, whereas retailer familiarity affects intentional loyalty significantly in grocery retailing. These additional observations seem plausible, and we do not discuss them further.

4. Discussion and Conclusions

To determine whether perceived retail attributes predict strong brand associations, particularly the specific retail attributes that most strongly predict retail brand equity when we compare sectors, and to ascertain whether retail brand equity affects consumer loyalty equally across retail sectors, we examine the under-researched topic that is important for retail firms such as Target and Walmart that increasingly seek to attract customers by following brand manufacturers' longtime practice in seeking to position themselves as retail brands. Although our study is based on evaluations of only four important sectors in one German city, whose competition and consumer behavior may differ more extensively than is reflected in our theoretical reasoning regarding the major shopping goals in each sector, we discuss important theoretical implications and provide suggestions for managers.

Concerning our first research aim, although all retail attributes were found to influence the building of a strong, attractive, and unique retail brand for retailers operating in any of these sectors, the results underline the varying roles of dominant retail attributes among the grocery, fashion, electronics, and DIY retail sectors. Because the results fully support the hypothesized relationships in three retail sectors and offer partial support for the fashion retail sector, we can recognize the value in our theoretically deduced mechanisms of signals/retrieval information that depend on the predominant shopping goals in each retail sector (e.g., Kruglanski et al. 2002; Puligadda et al. 2012). However, further research may extend this conceptual framework, and thus, we subsequently discuss the sector-specific results in view of our theoretical reasoning and the extant literature.

- In *grocery retailing*, assortment and price particularly affect retail brand equity. The results support the research focus of many scholars on these two attributes in grocery retailing (for a review, see Cleeren et al. 2010). For retail branding in the highly supply-motivated purchase of groceries, assortment (i.e., quality, availability, and convenience) and price (i.e., reasonable price or a favorable price or price ratio) are predominant. However, layout and service perceptions affect retail brand equity notably less strongly than do price perceptions. This result conditionally reflects—from a consumer perspective—the recent ongoing changes in price-sensitive competition in the German grocery sector, where the market share of supermarkets has been growing and where supermarkets have gained some of the 40% of the market shares of discounters (Planet Retail 2015). We conclude that consumers largely perceive assortment and price and that they save and retrieve information in memory related to the retail attributes. The dominant use of assortment and price in consumer decision situations in grocery retailing might also be highly related to the utilitarian shopping motives that are dominant in this sector. Further research may theoretically argue that consumers' perceived dominant signals, information retrieval, and motivations may vary among different situations (for different countries, see Gómez et al. 2004; Jinfeng and Zhilong 2009).
- In *fashion retailing*, we find that assortment, price, and layout perceptions are important for retail brand equity, as hypothesized; surprisingly, however, service is not among the important drivers of retail brand equity. This result contradicts our reasoning that service might be relevant because of the unique assortments that hinder price comparisons. This finding may reflect changes in consumer behavior—enhancing our primarily hedonically based motivational reasoning (e.g., Arnold and Reynolds 2012)—and may also reflect changes in competition: the German fashion sector has been affected by discounters and aggressive price competition from vertical firms that have been rapidly gaining market share within the context of generally decreasing market volume (Planet Retail 2015). This finding might also be reflected in consumer behavior; hence, consumers are interested in highly arousing stores that offer the most up-to-date assortments as well as low prices, and they may thus be willing to consider the retailer's service to a lesser degree. Thus, consumers often retrieve information in their memory concerning attributes that are related not only to hedonic motives but also to price information. These results are insightful because few studies of retail brand equity have solely addressed fashion retailing. These findings also extend the few existing studies that compare v across retail sectors and focus on fashion retailing (Swoboda et al. 2007).

- As hypothesized for *electronics retailing*, price, communication, and service perceptions constitute the main predictors of retail brand equity. This result seems plausible, as stationary electronics retailing is price driven, and because of the low purchase frequency and high innovation rates of complex products, there is a high need for service from service personnel as well as a need for further communication/information (Darian et al. 2005). It is perhaps surprisingly that service and communication affect v to significantly different degrees (i.e., the effects are stronger than in grocery and fashion retailing). However, only two studies have addressed retail brand equity or retail image in this clearly distinct sector, whereas comparative studies of electronics and other retail sectors have underlined the importance of service, price, and communication (e.g., Cornelius et al. 2010; Kukar-Kinney et al. 2007). Future research may address our thesis that wide and narrow assortments are important but not essential for retail brand equity for most consumers who are motivated to shop at big-box electronics stores, whereas consumers are not attracted to retailers with outstanding store layouts—which could be a possible advantage against e-commerce specialists—but are more attracted to stores with outstanding service that is still an advantage. In contrast, consumers that are motivated to buy at small specialized stores are strongly attracted to such stores based on the service that they offer and big-box electronics stores lose their previous advantages.
- In *DIY retailing*, retail brand equity is primarily affected by service, followed by assortment and layout, which are the three retail attributes that were hypothesized and consistently addressed in the few extant studies of DIY retailing (e.g., Sands et al. 2009; Van Kenhove et al. 1999). Our theoretical reasoning seems to hold, as DIY shopping is often motivated by specific projects related to broad product offers, a considerable array of in-store services, and store layout enabling consumers to visualize solutions, for example, by motivating them to change planned projects and shopping decisions (Wolf and McQuitty 2011). Because price effects on retail brand equity are significantly weaker in DIY than in all other retail sectors (see the χ^2 -difference tests), we conclude that DIY shoppers retrieve and rely on price information less in their decision processes.

In summary, our theoretical reasoning largely appears to be supported by the results of this study. However, future research may more deeply analyze whether information signals or retrieval contributes more to explaining these effects; whether additional motives—beyond the conceptually most important ones—affect sector-specific results; or whether these motives vary for different shopping occasions, purchase expenses, or products purchased (e.g., King

and Balasubramanian 1994; Noble et al. 2006). Because of the complex nature of this study and our theoretical objective of analyzing the dominant attributes in retail sectors, we were unable to analyze the abovementioned issues, which may be explored in future research.

Our second aim—to analyze the stability of the effects of retail brands on consumers' intentional loyalty—is highly relevant because previous studies have not compared whether the effects of retail brand equity on loyalty vary across the major retail sectors or whether a strong, attractive, and unique retail brand shows similar effects among all retail sectors. Because we find significant effects of retail brand equity on intentional loyalty throughout all sectors (compliant with extant studies, e.g., Allaway et al. 2011, in grocery; Kukar-Kinney et al. 2007, in electronics; Merrilees et al. 2007, in fashion) and because these effects are equally strong across the observed sectors, we conclude that consumers' overall assessment of a retailer as a strong, attractive and unique brand pays off. Theoretically, retail brand equity represents a valuable stimulus and a particularly strong association stored in consumers' memory that is relevant in different retail sectors. Hence, retailers should emphasize the building of strong, attractive, and unique retail brands (Keller 1993, 2003) to attract and retain consumers. However, future research should address different measures of loyalty because our cross-sectional measure captures only one aspect of loyalty (e.g., Oliver 2015, p. 453-454), or future studies could use more objective measures, such as purchase data.

For managers, it is important to know that retail brand equity strongly attracts consumers (and possibly potential employees as well) and to know which retail attributes are most beneficial in building a strong retail brand in a particular retail sector. Because we chose the evaluated retailers randomly, the results indicate starting points for retail brand management in those particular sectors. The paths to intentional loyalty show sector-specific levers (i.e., specific and largely consumer-perceived attributes as predictors of retail brand equity) but stable retail brand equity-loyalty relationships across retail sectors. For example, while a grocery retailer should primarily focus on assortment followed by price, a consumer electronics retailer should devote more attention to service, communication, and price to build a strong retail brand and to promote loyalty to the same extent as a grocery retailer. By doing so, a retailer can increase the probability of strong consumer loyalty intentions (Van Lin and Gijbrecchts 2014). Retailers may wish to consider sector-specific levers when building firm-specific unique retail brand equity and when determining the appropriate and most important predictors.

Furthermore, as all of the retail attributes have a positive influence on retail brand equity in the analyzed retail sectors, it might be valuable for managers to address less important attributes in their branding strategies—in addition to emphasizing the most important levers in their particular sector, as their competitors will also likely do. In doing so, managers can differentiate their firms from their competitors based on such a criterion. However, investments in these drivers of retail brand equity must be carefully evaluated and contrasted when planning a strategy for strengthening retail brand equity, because these attributes are perceived less strongly by consumers and contribute less to retail brand equity. However, emphasizing a lever that has a relatively small influence on retail brand equity might still be beneficial, even if it addresses only a small number of consumers. Successful attribute-related strategies cannot be easily transferred from one retail sector to another; indeed, such strategies must be transferred very carefully and must involve weighing possible flaws that may weaken the retail brand or may affect retail brand equity less and therefore fail to compensate for the investments intended to influence attribute and brand perceptions. For diversified retailers, sector-specific branding strategies are required.

5. Limitations and Directions for Further Research

To better understand predictors and effects of retail brand equity in retail sectors, additional research is needed because the present study is not without limitations. We seek to highlight three issues of this nature.

Although we devoted special attention to the data collection, analyzing the four most important retail sectors in a German city, using a census-based quota sample, and merging the evaluations of retailers in each sector limits the scope of this study. Broadening the data used in future studies would mitigate these limitations and enable additional conclusions. For example, although our sampling facilitated sector comparisons, sector-representative quota samples would more precisely reflect the specific effects. We merged the data of randomly chosen retailers to conduct a sector-specific evaluation although the relative contribution of each retailer might be hierarchically analyzed (as the respondents are nested within retailers). Alternatively, the leading retailers in a sector might be observed in a more thorough analysis of retail brand equity predictors and effects within different retail branding strategies or formats (Gonzalez-Benito et al. 2005). Although we analyzed important sectors in Germany, we cannot eliminate the possibility that the results may differ when observing different sectors and local contexts. Finally, focusing on the retail brand equity of e-commerce retail chains in addition to stationary chains is ad-

vantageous because multichannel retailing has been increasing and because retailers have different offline and online chain images and brand perception levels and must therefore manage their crosswise and reciprocal relationships (e.g., Kwon and Lennon 2009a; for store levels, see Swoboda et al. 2013a).

Alternatives exist for the applied measurements. Compared with Yoo and Donthu (2001, who include loyalty in their retail brand equity measure, for example) and Jara and Cliquet (2012, who strongly link retail brand equity to store image), customer-based retail brand equity (Verhoef et al. 2007a) more strongly emphasizes common conceptualizations of brand equity (Keller 1993, 2003). However, the measures offer similar levels of convergent validity and explanatory power. As mentioned previously, addressing alternative measurements of loyalty (e.g., Oliver 2015, p. 453-454), additional retail attributes (given the lack of agreement on attributes and their valid measurement) and the dimensionality of measures (e.g., emphasizing the breadth and depth of assortments) may extend the conclusions that can be drawn from such a study. Further research should rigorously use pretests to identify relevant attributes in their respective context (e.g., across retail sectors as in this study).

Future research may also extend the proposed conceptual framework. Analyzing additional predictors of retail brand equity would be fruitful because, for example, perceived value comprehensively reflects customers' evaluations of the utility and expectations of retail offers (Zeithaml 1988). Alternatively, institutional factors were shown to affect retail brand equity, while perceptions of local competitor retail brand equity were shown to diminish the retail brand equity of focal retailers who strongly link retail brand equity to store image (e.g., Jinfeng and Zhilong 2009; Swoboda et al. 2013a). Finally, analyzing the specific shopping motives of consumers in each sector would extend our conclusions regarding the predictors and effects of retail brand equity (e.g., Arnold and Reynolds 2012).

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