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Three Essays On Retail Branding, The Makings Of A Great Retail Brand: Antecedents, Outcomes, And Retailer Ad Spending Strategies

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THREE ESSAYS ON RETAIL BRANDING

THE MAKINGS OF A GREAT RETAIL BRAND: ANTECEDENTS, OUTCOMES, AND

RETAILER AD SPENDING STRATEGIES

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ABSTRACT

Brands are valuable intangible assets with long-term benefits. In the retail industry, branding is of particular importance because of the highly competitive nature of the industry. Even though many of the important branding principles apply, retail brands are distinct from product brands. This dissertation aims to clarify the nature and dimensionality of retail brand equity and explore the effect of retail advertising on its market and financial performance.

In the first essay, the primary antecedents of retail brand equity are examined using both functional and experiential dimensions of retail brand association. The results illustrate the salient role of the consumer shopping experience in cultivating retail brand equity and suggest that retailers are worth more than just the products they sell. Additionally, the assessment of several sources of shopping value and the consumer shopping experience in a retail setting can provide a good diagnostic tool for marketing practitioners.

The second essay proposes and validates the resource premium as an outcome measure of retail brand equity. We developed our measurement in a retail clothing setting and validated it for retail grocery to prove its generalizability. We further validated the measure by examining its correlation with other commonly available measures and assessed the predictive validity of the measure by examining its relationship with a firm's brand performance (Tobin's q). The results show that our measure reflects the main underlying construct of retail brand equity and can also tap into dimensions of retail brand equity that other measures do not reflect.

Finally, as retail continues to spend the most on advertising across all industries, the third essay aims to explore the effect of retail advertising on different retail brand performance metrics.

Using longitudinal data of 113 retailers from 2008-2015, this study is the first to empirically examine whether the timing of advertising can influence a retailer's performance, and in what way. The findings underscore the importance of advertising concentration and reveal a more comprehensive picture of how retail advertising really works.

DEDICATION

To my late grandfather Xiankai Zhang,

who always believed in me, encouraged me, and loved me.

ACKNOWLEDGEMENT

grateful to have had her as my research mentor when I was just starting my PhD program. She is one of the smartest professors I have ever met and always greatly inspires me in my research.

Last but not least, I would like to thank my dear parents, Hanping Zhang and Xiaohua Nie, and my great husband, Dr. Shengfeng Yang, for their unconditional support and love throughout this long, challenging, but ever-memorable journey.

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"The customer experience is really your brand, since that is what customers remember and communicate to others, rather than your marketing." - Forbes, 2013

INTRODUCTION

Brand is one of the most valuable intangible assets of a firm and is an important source of its sustainable competitive advantage (Aaker 1996). Building a strong brand has become a topic vital to marketing practitioners in last few decades. In a retail industry, branding becomes even important because the highly competitive nature of the industry (Ailawadi and Keller 2004). Retailers often offer the same assortments at comparable prices (Homburg et al. 2002). Thus, Grewal et al. (2004) suggested that retailer as a brand has become the trend in the retail setting.

Even though many important branding principles apply, retail brands are distinct from product brands. Retail brands are "typically more multi-sensory than product brands, and can rely on rich consumer experiences to impact their equity (Ailawadi and Keller 2004, p.2)." Moreover, the emotive stimulants in a shopping experience are likely to be far more intense than the consumption experience of general brands (Machleit and Eroglu 2000). Such distinct differences between product brand and retail brand not only make intuitive sense, but also are supported by numerous findings in marketing: consumers who shop in a retail store are searching not only for products but also for a pleasant purchasing experience (Babin, Darden and Griffin 1994). Consumers are commonly willing to drive further or pay more to shop in a store that provides a pleasant shopping experience. Remarkably, despite the importance of the experiential

aspect of shopping experience on retail brands, few studies empirically examine how the consumers' shopping experiences – consumers' emotional responses emerging from their interactions with a retailer – influence retail brand equity. Brand equity is the value added by the brand to the product. Retail brands also hold equity, similar to but separate from brand equity (e.g., Keller 1998; Ailawadi and Keller 2004; Hartman and Spiro 2005).

To address such limitations, this paper, using a customer-based brand equity perspective, investigates the experiential antecedents of retail brand equity, including consumer shopping experience and its contributors (i.e., shopping effort and shopping atmosphere). In addition, based on the consumer-based brand equity model presented by Keller (1993), we propose a retail brand equity model incorporating both consumer shopping experience and several retail-related elements (i.e., product assortment and brand assortment) to broaden our understanding of the formation of consumers' retail-brand knowledge and retail brand equity. Specifically, we will answer three main research questions:

1) What are the main antecedents of retail brand equity?

2) What are the main contributors to shopping value and consumer shopping experience in a retail setting?

3) How do shopping value and consumer shopping experience influence retail brand equity?

This study offers three main contributions to marketing academics and practitioners. First, our study addresses an important gap in knowledge regarding current retail equity measurement by clarifying the nature of and dimensionality of retail brands. Through systematically demonstrating both experiential (i.e., consumer shopping experience) and functional (i.e., shopping value) associations of retail brands, our findings examine the key antecedents of

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consumer-based retail brand equity. Second, from a theoretical perspective, our study responds to the research call of Ailawadi and Keller (2004) to explore the relationships between consumer shopping experience and retail brand. Our paper contributes to the brand equity literature by extending knowledge about how consumer shopping experience influences customer-based brand equity and the main contributors to consumer shopping experience in a retail setting. Lastly, for marketing practitioners, our empirical model and measurement scales provide a diagnostic tool and a roadmap for them to continue examining, monitoring, and improving their brand performances in a retail setting.

The paper is organized as follows. First, we provide a literature review regarding retail brand equity, shopping value and consumer shopping experience, including their measurements and main antecedents. Second, we propose the empirical model and the methodology to test it. Third, we discuss the results and the implications of our study. Last, we point out several limitations of the study and possible directions for future research.

LITERATURE REVIEW

Brand Equity and Its Measurement

Brand equity is the value added to a product or service by its association with a brand name and/or symbol (e.g., Aaker 2004; Keller 1993). For a brand that has positive (or negative) brand equity, consumers react more (or less) favorably to its marketing mix elements (e.g., product, price, and promotion) than they do to the same marketing mix element when it is attributed to a fictitiously named or unnamed version of the product or service (Keller 1993).

Measures of Brand Equity. Most research measures brand equity from three different perspectives, customer knowledge, product-market outcomes and firm financial performance.

Customer knowledge. From the customer knowledge-based perspective, researchers assess brand equity by measuring the customers' brand knowledge (e.g., Aaker 1991; Keller 1993; Park and Srinivasan 1994). This approach is based on Keller's (1993) definition of customer-based brand equity (CBBE), which refers to the differential effect of brand knowledge on consumer response to the marketing of the brand. In the present study, we also use the customer-based brand approach to measure the brand equity by assessing consumers' brand knowledge.

Product-market outcomes. From product-market outcomes perspective, brand equity is reflected in the brand's performance in the market place. The most commonly used product-market outcome is price premium (Ailawadi et al. 2003).

Firm financial performance. From the firm performance-based perspective, researchers assess the value of a brand as a financial asset. Most research in this area focus on measuring brand equity by the added value in terms of cash flows, revenues, market share, firm risk, or other related metrics (e.g., Simon and Sullivan 1993; Mahajan et al. 1994; Rego et al. 2009).

Retail Brand Equity

Similar to product brand, retail brands also possess equity, known as retail brand equity. In other studies, retail brand equity may be referred to as "store equity" (Hartman and Spiro 2005), "equity of retailer brand" (Ailawadi and Keller 2004), or "retailer equity" (Arnett et al. 2003). In our study, consistent with Keller's (1993) definition of CBBE, we define retail brand equity as the differential effect of retailer brand knowledge on customer response to the marketing of the retailer. Retail brand equity is also exhibited by consumers' responding more favorably to a retailer's marketing actions than they do to the marketing actions of its competing retailers.

Theoretical Framework of Retail Brand Equity

In Keller's consumer-based brand equity model (1993), customer-based brand equity refers to the differential effect of brand knowledge on consumer response to the marketing of the brand. Consumer brand knowledge is comprised of two main components: brand awareness and brand image, characterized by conceptualizations and relationships among brand associations. Brand associations can be classified into three major categories: attributes, benefits, and attitudes. Moreover, benefits have two main dimensions: functional benefits and experiential

benefits. Functional benefits are represented by the more intrinsic advantages of product or service consumption (i.e., product-related attributes), while experiential benefits are represented by the consumer's emotional response to the use of the product or service (i.e., sensory pleasure). Arnett et al. (2003) suggested that retail brand equity is a form of brand equity, and its structure parallels that of general brand equity (Hartman and Spiro 2005).

Thus, based on Keller's CBBE model (1993), we develop the theoretical model of retail brand equity in Figure 1.
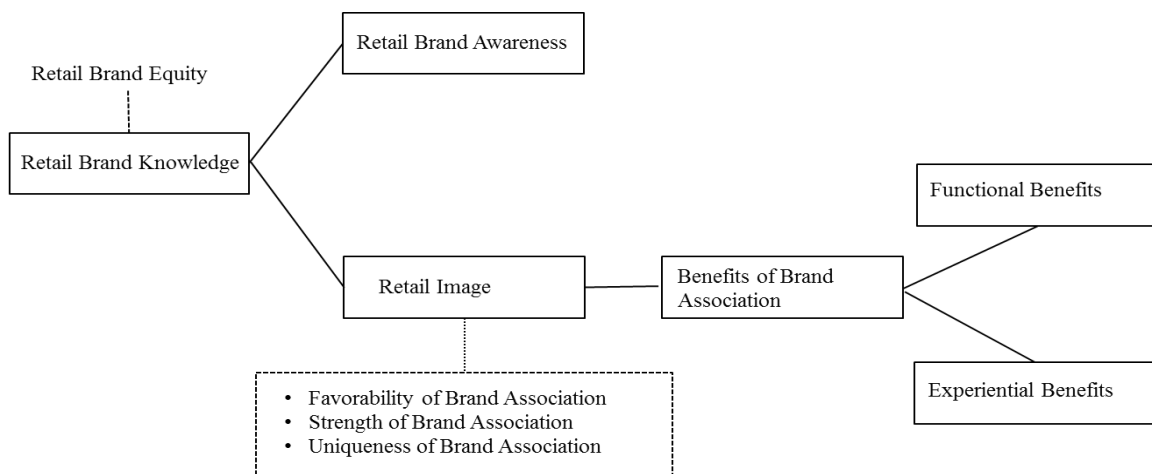
Figure 1. A Conceptual Framework of Customer-Related Retail Brand Equity

HYPOTHESES

Main Component of Retail Brand Equity

Adopting the customer knowledge-based perspective, we measure retail brand equity by assessing the consumer's retail brand knowledge. Retail brand knowledge includes two main components: retail brand awareness and retail brand image.

Retail Brand Awareness, similar to brand awareness, is the strength of the brand node in memory, as reflected by a consumer's ability to identify the retail brand under different conditions (Rossiter and Percy 1987; Keller 1993).

Retail Brand Image is defined as the perceptions about a brand as reflected by the brand associations held in consumer memory (Keller 1993). As an important component of retail brand equity, Ailawadi and Keller (2004) suggest that the image of the retailer in the minds of consumers is the basis of retail brand equity. Based on this theoretical model, we propose:

H_1: *Retail brand image associates positively with retail brand equity.*

H_2: *Retail brand awareness associates positively with retail brand equity.*

Shopping Value

Shopping value (or "perceived value" in a retail setting) is a customer's overall assessment of the utility of the brand based on perceptions of what is received (e.g., quality) and what is given (e.g., price) compared to other brands. Perceived value is considered a cornerstone

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of most CBBE frameworks (Aaker 1996a; Keller 1993). Keller (2003) suggests that the functional benefits related to brand image are the intrinsic advantages of product or service consumption (i.e., product-related attributes).

Brand associations related to functional benefits stem from the intrinsic advantages of a product or service, and most research on retail brand equity focuses on the effects of intrinsic, product-related attributes on retailer's image and brand equity. For example, Arnett et al. (2003) developed a set of formative indicators for retail brand equity index, including: retail associations (i.e., perceived quality and perceived value), service quality, name awareness, and retailer loyalty.

Therefore, based on the literature, we propose that the functional attribute of a retail brand, shopping value, associate positively with retail brand image and retail brand awareness.

H₃ₐ: Shopping value associates positively with retail brand image.

H₃ᵦ: Shopping value associates positively with retail brand awareness.

In order to broaden our understanding of shopping value, we examine the two contributors to it in the retail setting, product assortment and brand assortment.

Product assortment is the total set of products offered by a retailer, reflecting both breadth and depth of offered goods (Simonson 1999). It is another important part of consumers' brand knowledge. For example, when consumers think of Walmart, they may simultaneously recall that this store can provide products and services ranging from oil changes to pre-prepared food, from clothes to furniture. Therefore, by offering convenience through large selections (e.g., one-stop shopping), a broad product assortment contributes positively to shopping value.

Brand assortment, consumers' perception of the quality and variety of a retailer's brands, is another contributor to retail image. Ailawadi and Keller (2004) suggest that, "the image and

equity of retailers partly depend on the manufacturer brands they carry and the equity of these brands."

When consumers name reasons why they patronize their favorite stores, assortment is right behind location and price (Hoch et al. 1999). Both variety and quality of the assortment can influence shopping value. Thus, we propose that:

H_{4a}: *Product assortment associates positively with shopping value.*

H_{4b}: *Brand assortment associates positively with shopping value.*

Consumer Shopping Experience

Most research on retail brand equity focuses on the effects of intrinsic, product-related attributes on retailer's image and brand equity. However, the experiential benefits of retail brand association are as important as, if not more important than, the functional benefits. Experiential associations represent the emotional response to the use of a product or service (e.g., sensory pleasure), and are an important part of brand image (Keller 2003).

Consistent with previous research, we define consumer shopping experience in retail settings as the consumer's emotional evaluation of the whole store visit experience (e.g., Kerin and Jain 1992; Menon and Kahn 2002; Arnold et al. 2004). Such experiences are constituted by their interactions with a store's physical surroundings, personnel, and customer-related policies and practices, and have great impact on the consumer's evaluation of the retailer (Kerin and Jain 1992). Based on Mehrabian-Russell's PAD emotion model (1974), there are three dimensions of emotion responses: pleasure, arousal, and dominance. Previous research reveals that pleasure/displeasure has the strongest and most direct effect on a consumer's evaluation and

behavior in a retail setting (Hui and Bateson 1991; Machleit and Eroglu 2000); therefore, we use pleasure/displeasure to represent the consumer's emotional evaluation of a retail setting.

Experiential association benefits are a crucial part of consumers' retail brand knowledge. The importance of consumer shopping experience should prompt retailers to redefine themselves as sources of memories rather than goods, as "experience stagers" rather than service providers (Pine & Gilmore 1999). When consumers think of a retailer, they will recall the products and services it offers. Moreover, in the meantime, consumers will recall their experience as a whole, whether positive or negative. The consumer shopping experience represents an experiential benefit-related brand association of a retail brand (Holbrook and Hirschman 1982; Babin et al. 1994). Therefore, we assert that consumer shopping experience is an important antecedent of retail brand image and can positively influence retail brand awareness. Thus, we propose that:

H_{5a}: *Consumer shopping experience associates positively with retail brand image.*

H_{5b}: *Consumer shopping experience associates positively with retail brand awareness.*

Specifically, in order to broaden our understanding of consumer shopping experience, we examine its three main contributors: service, shopping effort and shopping atmosphere.

(1) Service

Service, defined as "the consumer's comparison between service expectations and service performance" (Parasuraman et al. 1988), is a vitally important differentiator across the retail industry. It is also an important antecedent of consumer satisfaction (Foxal and Greenley 1999). Oliver (1997) states that emotion coexists in consumer satisfaction. Service failures can evoke strong emotional responses from customers (Smith and Bolton 2002). When customers who visit a store report being satisfied with the service provided, they are likely to also describe the

experience as pleasant. Conversely, inadequate service results in reports of dissatisfaction and an unpleasant overall experience. Thus, we propose that service quality has a direct impact on consumer emotional response.

H₆ₐ: Service associates positively with consumer shopping experience.

(2) Shopping Effort

Shopping effort is defined as the amount of psychological effort, physical effort, and time involved in the completion of a purchase (Zeithaml 1988). It can also refer to the convenience or inconvenience of shopping. Consumers favor stores that can present not only value but also convenience (Kelley 1958). A key factor in improving the customer experience is the reduction of the amount of effort required by customers to receive the service they expect. The amount of effort customers expend during shopping has a great impact on the shopping experience. When a customer expends more effort than they perceive necessary or acceptable, their frustration will increase, consequently leading to a decreased overall experience. Thus, we propose that:

H₆ᵦ: The less shopping effort consumers need, the better the consumer shopping experience is.

(3) Shopping Atmosphere

Besides the shopping convenience (or shopping effort) provided by the store, shopping atmosphere plays an important role in influencing consumers' emotional responses to the shopping experience (Machleit and Eroglu 2000). Shopping atmosphere is influenced by multiple store environment factors, such as lighting, layout, music, and smell (e.g., Baker et al. 2002; Grewal et al. 2003). Such in-store elements are designed to evoke positive feelings in shoppers (Machleit and Mantel 1999). Shopping is an activity that requires not only utilitarian, but also hedonic value (Jones et al. 2006). A pleasant in-store atmosphere can provide

substantial hedonic rewards to consumers (Ailawadi and Keller 2004). Shopping atmosphere

therefore positively influences consumers' shopping experiences. Thus, we propose that:

H6c: Shopping atmosphere associates positively with consumer shopping experience.

Building on the above theoretical perspective, we hereafter develop the empirical model

as represented in Figure 2.
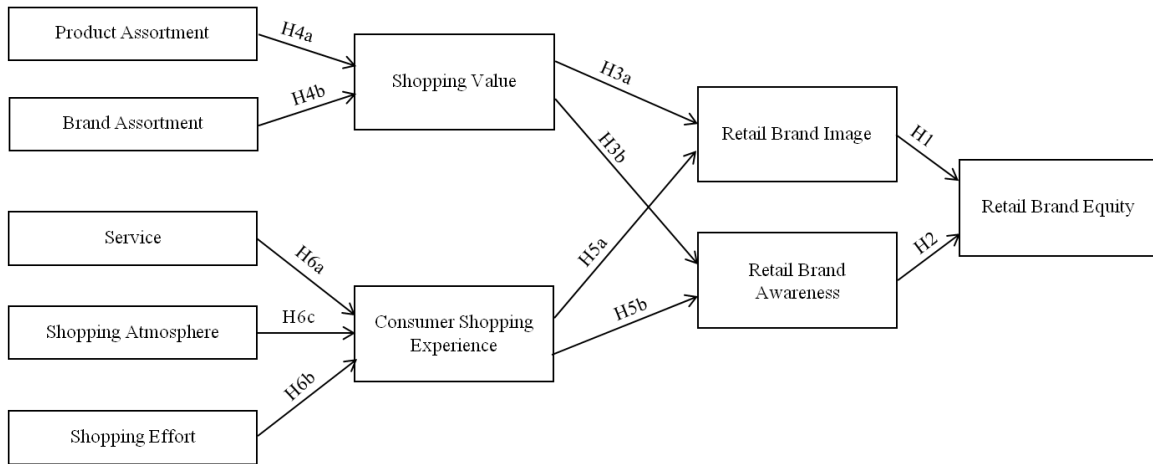
Figure 2. Empirical Research Model of Customer-Related Retail Brand Equity

METHODOLOGY

Data Collection

Data for testing our hypotheses was collected from 254 respondents to our survey on mTurk. The average age was 37, with 51% female and 49% male. Participants were prompted to list five grocery stores at which they have previously shopped. The system then randomly selects one of them for the respondent to evaluate. In this way, we counteract the tendency for respondents to provide and evaluate only their favorite store, which would result in limited variance for the constructs in our model. We used a standard Likert-type seven-point scale with anchors of "strongly disagree" and "strongly agree."

Measurement

Retail brand equity, retail brand images, and retail brand awareness were measured using scales adapted from Yoo et al. (2000). Shopping value was measured using a scale adapted from Netemeyer et al. (2004). Shopping atmosphere was measured using scales adapted from Grewal et al. (2003).

We assessed consumer shopping experience, product assortment, brand assortment, and shopping effort using new multi-item measures. We had pretested and modified these measures through two smaller-scale surveys before using them in this project. The measures show strong reliability and validity in the measurement property test via confirmatory factor analysis and

reliability analysis. The specific item indicators and questions for each survey measure are contained in the Appendix.

Measurement Property

We assessed the measurement properties of our scale via confirmatory factor analysis (CFA) and reliability analysis. To maintain adequate sample size-to-parameter ratios, we divided our research model into three sub-models of theoretically related variables.

Model 1 is related to retail brand image and retail brand awareness as the two antecedents of retail brand equity. For Model 1, $\chi 2 = 188.52$ (41), p<0.001, CFI=0.93, RMSEA=0.12. Model 2 is related to shopping value and its main contributors: product assortment and brand assortment. For Model 2, $\chi^2 = 234.03$ (62), p<0.001, CFI=0.95, RMSEA=0.11. Model 3 is related to consumer shopping experience and its main contributors: service, shopping atmosphere and shopping effort. For Model 3, $\chi^2 = 233.37$ (71), p<0.001, CFI=0.96, RMSEA=0.10.

We also assessed discriminant validity using two-factor CFA models containing each possible pair of constructs for all three models, with the correlation between the two constructs first freely estimated and then constrained to one. In all cases, the χ^2 value was significantly lower than that of the constrained models, indicating discriminant validity between all of our constructs in Model 1(Bagozzi, Yi and Phillips 1991). All measures exhibit strong reliability, with composite reliabilities ranging from 0.83 to 0.97.

Summary scale statistics are reported in Table 1.

Table 1. Descriptive Statistics, Average Variance Extracted, Cronbach alpha[a], and Construct Intercorrelations[b]

	Mean(S.D.)	AVE	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
X1 Product Assortment	5.19(1.32)	69%	**0.90**									
X2 Brand Assortment	5.23(1.36)	79%	0.85*	**0.92**								
X3 Service	5.11(1.51)	88%	0.71*	0.69*	**0.96**							
X4 Shopping Atmosphere	5.13(1.45)	61%	0.77*	0.72*	0.80*	**0.91**						
X5 Shopping Effort	4.88(1.58)	80%	0.60*	0.57*	0.60*	0.57*	**0.92**					
X6 Shopping Value	5.13(1.46)	84%	0.73*	0.67*	0.64*	0.62*	0.66*	**0.96**				
X7 Consumer Shopping Experience	2.84(1.07)	87%	0.75*	0.68*	0.73*	0.81*	0.69*	0.71*	**0.97**			
X8 Retail Brand Image	5.07(1.44)	71%	0.59*	0.50*	0.44*	0.48*	0.50*	0.56*	0.58*	**0.88**		
X9 Retail Brand Awareness	5.73(1.28)	63%	0.36*	0.37*	0.30*	0.32*	0.37*	0.36*	0.32*	0.58*	**0.83**	
X10 Retail Brand Equity	4.35(1.67)	74%	0.63*	0.54*	0.57*	0.59*	0.66*	0.69*	0.68*	0.59*	0.37*	**0.92**

[a] Cronbach coefficient alpha are shown on the diagonal.

[b] N=254 for all correlations

*$p < 0.05$

MODEL FORMULATION AND HYPOTHESES TESTING

Using seemingly unrelated regression (SUR) to estimate all regressions simultaneously can alleviate the concerns of endogeneity and correlated error. SUR can produce better estimates when the error terms of different regressions are correlated; the system is suitable when several variables in the model are both independent and dependent variables of different regressions. SUR was selected as the appropriate method to test our model. The system of regressions estimated simultaneously is detailed below.

(1) RETAIL BRAND EQUITY $= \beta_0 + \beta_1 *$RETAIL BRAND AWARENESS
$\qquad + \beta_2 *$RETAIL BRAND IMAGE $+ \mathcal{E}_{Retail\ Brand\ Equity}$

(2) RETAIL BRAND IMAGE $= \beta_0 + \beta_1 *$SHOPPING VALUE
$\qquad + \beta_2 *$CONSUMER SHOPPING EXPERIENCE
$\qquad + \mathcal{E}_{Retail\ Brand\ Image}$

(3) RETAIL BRAND AWARENESS $= \beta_0 + \beta_1 *$SHOPPING VALUE
$\qquad + \beta_2 *$CONSUMER SHOPPING EXPERIENCE
$\qquad + \mathcal{E}_{Retail\ Brand\ Awareness}$

(4) SHOPPING VALUE $= \beta_0 + \beta_1 *$PRODUCT ASSORTMENT
$\qquad + \beta_2 *$BRAND ASSORTMENT $+ \mathcal{E}_{Shopping\ Value}$

(5) CONSUMER SHOPPING EXPERIENCE $= \beta_0 + \beta_1 *$SERVICE
$\qquad + \beta_2 *$SHOPPING EFFORT
$\qquad + \beta_3 *$SHOPPING ATMOSPHERE
$\qquad + \mathcal{E}_{Consumer\ Shopping\ Experience}$

Our results revealed R^2 of each individual equation values ranging from .33 to .74, suggesting that our independent variables account for significant variance in the dependent variable for the retail brand equity in our sample.

In equation 1, H_1 (β= .82, t= 12.25) was supported. Consistent with Keller's (1993) brand equity model, which shows that retail brand image is the main component of retail brand equity. H_2 (β= .05, t= 0.68) was not supported in the model. One possible explanation is that variance in brand awareness is low. The store that each participant was prompted to evaluate was among the set of retailers provided by the participant him/herself. H_{3a} (β= .38, t= 5.89) and H_{3b} (β= .27, t= 3.83) which predicted that shopping value associates positively with retail brand image and retail brand awareness were also supported. H_{4a} (β= .19, t= 3.09) and H_{4b} (β= .61, t= 9.71), which examine product assortment and brand assortment as the two main contributors to shopping value in a retail setting, were supported. H_{5a} (β= .36, t= 4.33), H_{5b} (β= .14, t= 1.88) which posited that consumer shopping experience was positively associated with retail brand image and retail brand awareness, were also supported. Ailawadi and Keller (2004) suggested that retail brand image is the basis of retail brand equity; our result thus reveals that consumer shopping experience is positively associated with retail brand image, and therefore is an important antecedent of retail brand equity. H_{6a} (β= .07, t= 3.83), H_{6b} (β= .26, t= 2.65), and H_{6c} (β= .19, t= 7.14) proposed that service, shopping atmosphere and shopping effect were three main contributors to consumer shopping experience. These three hypotheses were also supported.

Product Assortment

Brand Assortment

Service

Shopping Atmosphere

Shopping Effort

Shopping Value

Consumer Shopping Experience

Retail Brand Image

Retail Brand Awareness

Retail Brand Equity

.59**

.18*

.07*

.41**

.19**

.38**

.27**

.54**

.26*

.82**

.05
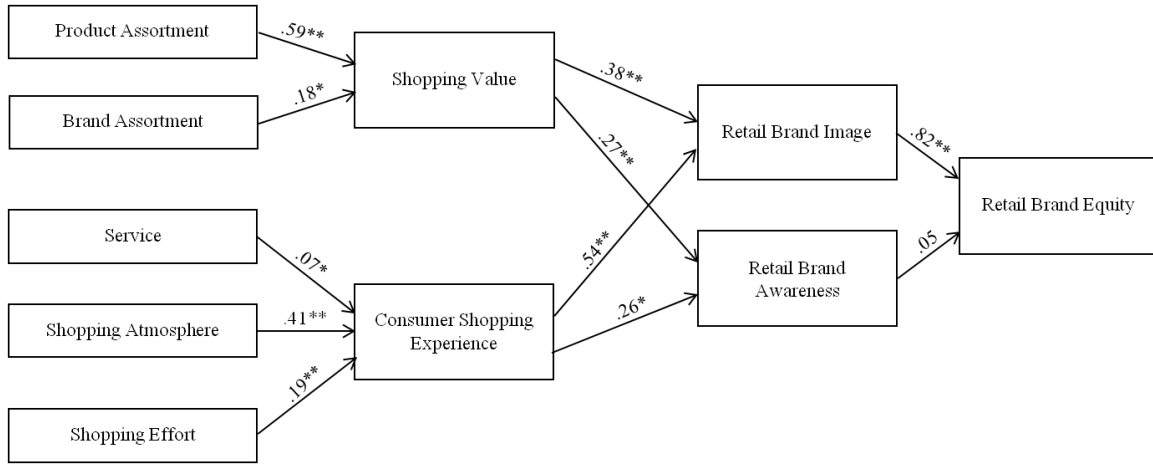
Figure 3. Empirical Results of Customer-Related Retail Brand Equity

Table 2. System of Equations (SUR) Results

Independent Variables:	Equation 1 Retail Brand Equity Standardized Estimate (t-value)	Equation 2 Retail Brand Image Standardized Estimate (t-value)	Equation 3 Retail Brand Awareness Standardized Estimate (t-value)	Equation 4 Shopping Value Standardized Estimate (t-value)	Equation 5 Consumer Shopping Experience Standardized Estimate (t-value)
Retail Brand Image	.82 (12.25)				
Retail Brand Awareness	.05 (0.68)				
Shopping Value		.38 (5.89)	.27 (3.83)		
Consumer Shopping Experience		.54 (6.07)	.26 (2.65)		
Product Assortment				.59 (6.95)	
Brand Assortment				.18 (2.15)	
Service					.07 (1.81)
Shopping Atmosphere					.41 (10.27)
Shopping Effort					.19 (7.14)
Individual Equation R^2	`.33	.37	.12	.54	.74

Additional Analyses

Mediation Analysis. To further explore the relationship between the antecedents and the

retail brand equity, we used Hayes' (2013) PROCESS Model 4 with 1,000 bootstrap samples and

a 95% bias-corrected confidence interval (CI) to examine the significance of the indirect effect of

shopping value on retail brand equity through retail brand image and brand awareness. The

results revealed that for brand image the CI surrounding the positive IE did not contain zero (CI

[.2130, .4487], $p < 0.05$), which suggests that retail brand image indeed served as a mediator in

the relationship between shopping value and retail brand equity (Hayes 2013). However, we

found that the retail brand awareness does not function as a mediator in the relationship (CI [-

.0881, .0109], $p > 0.05$). Likewise, we also examined the mediating effects of retail brand image

and brand awareness on the relationship between consumer shopping experience and retail brand

equity. The mediation analysis suggested that positive consumer shopping experience increased

the brand image, which in turn resulted in greater retail brand equity (CI [.1874, .4301], $p < 0.05$).

However, there was no evidence that consumer shopping experience influenced the retail brand

image by changing retail brand awareness (CI [-.0696, .0364], $p < 0.05$).

Common Method Biases. Common method biases arise from having a common rater; a

common measurement context; a common item context; or from the characteristics of the items

themselves. One potential remedy is to obtain data from different sources (Podsakoff et al.

2003). In our study, we use brand equity score from EquiTrend as an alternative way to measure

retail brand equity.

Comparing the retailers provided by our respondents with those listed in EquiTrend

resulted in a subset of 100 observations. We replaced the brand equity data obtained in our

survey with the brand equity scores in EquiTrend to further examine the model. To maintain

adequate sample size-to-parameter ratios, we only tested the first two equations in the subset.
The results show that there is little change in our SUR model, which alleviated the concern of
common method bias in our study.

The regression results are shown in Table 3.

Table 3. System of Equations (SUR) Results by Using EquiTrend Data

	Equation 1	*Equation 2*
	Retail Brand Equity	*Retail Brand Image*
Independent Variables:	Standardized Estimate (t-value)	Standardized Estimate (t-value)
Retail Brand Image	.14 (3.14)	
Retail Brand Awareness	.05 (0.81)	
Shopping Value		.52 (4.70)
Consumer Shopping Experience		.29 (2.06)
Individual Equation R^2	0.18	0.44

IMPLICATIONS

Theoretical Implications

Our study has three primary implications for marketing theory. First, based on consumer-based brand equity, we provide new insights by identifying and directly measuring consumer shopping experience and linking it with retail brand equity.

Retail brands are more multi-sensory in nature than product brands (Ailawadi and Keller 2004). Because of this difference, previous research has tried to incorporate service or customer interactions as potential sources of retail brand equity (e.g., Arnett et al. 2003; Hartman and Spiro 2005). However, those findings are not enough to capture all the aspects of consumer shopping experiences in a retail setting because those experiences are influenced by consumers' interactions with all aspects of a store as a whole, including physical surroundings, personnel, and customer-related policies and practice. An integrated and reflective variable is required to incorporate the different interaction results. Through the exploration of the consumer shopping experience, our findings show that consumer shopping experience plays an important role in building retail brand equity.

Second, based on Keller's (1993) CBBE model, our study proposed a retail brand equity model by incorporating retail-related variables (i.e., consumer shopping experience, product assortment, and brand assortment) to broaden our understanding of the formation of consumers' retail brand knowledge and retail brand equity. In addition, the retail brand equity model clarifies the nature and dimensionality of retail brand by systematically demonstrating both experiential

(i.e., consumer shopping experience) and functional (i.e. shopping value, and product and brand assortment) associations of retail brand.

Last, our findings provide empirical evidence to support Ailawadi and Keller's (2004) proposition that low price-positioning retailers can also build retail brand equity. "Value-based" retailers, who carry lesser but high-value brands, can also build good retail brand equity. Low margin mass merchants (e.g., Walmart and Dollar Tree) can cultivate their brand equity by providing exclusive shopping value through a combination of good value, efficiency, and convenience.

Managerial Implications

In addition to our discussion in the preceding sections, our research also offers important implications for retailing practice. A key goal of retailers is to develop and maintain strong positive attitudes toward the retail brand. The good news for retailers is that compared to manufacturers, retailers have more opportunities to interact with customers; these interactions provide an ideal position from which to create experiences for their customers (Ailawadi and Keller 2004). Our study provides a roadmap for retailers showing how they can leverage the interactions between customers and store to create great consumer shopping experiences, therefore enhancing brand equity. Managers can benefit by considering the following practical implications of our research.

First, the measurements of consumers' shopping experiences can be used to predict and monitor retailers' brand performance. The assessment of several sources of consumer shopping experiences in a retail setting provides good diagnostic tools. For example, based on marketing

practitioners' assessment of consumers' shopping experiences, as well as an assessment of each of the sources of that experience, store managers can make tactical marketing decisions.

Another consideration for retailers is how to maintain consistent consumer shopping experiences not only in nationwide retail stores, but also in multichannel (e.g., store, mobile device, and online marketplace) settings. Accenture's (2013) study found that 78 percent of U.S. shoppers had webroomed (browsed online and then gone to a store to make their purchase), while 72 percent had showroomed (gone into a store to see a product and then searched online for a better price, making their purchase online). As customers already use different channels to make one purchase, it is not reasonable for retailers to consider the consumer shopping experience in discrete settings. It is vital that retailers find a creative way to integrate different shopping environments to create consistent and positive shopping experiences.

LIMITATIONS AND FUTURE RESEARCH

There are several limitations to the research. First, because of data source limitations, our sample contains only grocery store. Consumers may have various expectations for different types of retailers. For example, regarding product assortment, consumers could prefer depth to width for those specialty stores (i.e., AutoZone) while preferring width to depth for grocery stores (i.e., Costco, Super Walmart). Future research can examine retail brand equity among different retailers to obtain in-depth understanding of any single retail category.

Second, our study measured retail brand equity based on the perspective of consumer-based brand equity. Although these measures can be a good diagnostic tool to predict brand performance, this approach cannot reflect a dollar value for retailers' financial purposes. Future research can focus on the outcomes or net benefit that a retailer derives from its retail brand equity. For example, researchers can regress retailer revenue or profit on various physical attributes (e.g., location) and use the residual of this regression as the measure of retail brand equity (Ailawadi and Keller 2004).

Third, our study did not directly measure consumers' dynamic experience with a retailer. Research shows that experience changes over time, and the pattern of extended experiences can impact the evaluation of experience (Ariely 1998). In the future, research can explore whether consumers' dynamic experiences are different from static experiences, which were measured in our study.

Our study also indicates three important future research directions. First, regarding product brand, brand equity can be measured by the price premium of the brand; that is, the ability of a brand to charge a higher price than an unbranded equivalent such as a private label product (e.g., Agarwal and Rao 1996). However, our results show that retailers with good value associations can also obtain high brand equity. Future research should develop more value-specific measures to assess retail brand equity. For example, researchers should examine "resource premium," which refers to consumers' willingness to go to greater efforts (e.g., distance traveled) to shop with a particular retailer (Ailawadi and Keller 2004), or use "revenue premium," (Ailawadi et al. 2003) instead of "price premium," to measure retail brand equity.

Second, Menon and Kahn (2002) find that consumers' online shopping experiences can influence consumers' shopping behavior through atmosphere and service. As sources of environment and atmosphere vary between traditional and online retail, further research should examine the shopping experience in both traditional and online retail settings to determine potential contributors to shopping experience and brand equity in both settings.

Finally, as the private label has become one of the most important strategies of retailers, further research should examine relationships between consumer shopping experience and brand experience with private labels. For example, how exactly are consumers' shopping experiences influenced by retail's private label brand associations, and how do consumers' shopping experiences influence the value perception of the private label?

CONCLUSION

In this study, primary antecedents of retail brand equity are examined, using both functional and experiential dimensions of retail brand association, and discussed. Our findings suggest that retailers are worth more than just the products they sell. Carrying high-quality brands is neither a necessary nor a sufficient way to enhance retail brand equity since the same product brands can be carried by multiple retailers. For a retailer, rather than relying on the equity of product brands it sells, managing the depth and width of product assortment and communicating the value and quality of products are more crucial to building a favorable retail brand image and equity.

Moreover, this article illustrates the salient role of the consumer shopping experience in cultivating retail brand equity. By exploring the sources of consumer shopping experience, our study broadens the understanding of consumer shopping experience in a retail setting.

As the old saying goes, "people will forget what you said, people will forget what you did, but people will never forget how you made them feel". Retailers should evaluate their store performance constantly based not only on their visible metrics (e.g., sales), but also on how they make their customers feel. Consumers have in-store shopping experiences that exert great influence on their brand evaluations and patronage behaviors. Effectively monitoring, managing, and leveraging consumer experiences will boost brand equity and should be a strategic priority on retailers' agenda.

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ESSAY II

RESOURCE PREMIUM AS AN OUTCOME MEASURE OF RETAIL BRAND EQUITY

INTRODUCTION

Brands are valuable intangible assets with long-term benefits, and they are viewed as critical to the success of firms (Aaker 2011; Keller 2012; Keller and Lehmann 2006). Brand equity, the value added to a product by its brand name, is an important source of sustainable competitive advantage and a topic vital to marketing practitioners and researchers. Retail brands also hold equity similar to but separate from brand equity (e.g., Keller 1998; Ailawadi and Keller 2004; Hartman and Spiro 2005). The measurement of brand equity has been one of the most challenging and important issues for both academics and managers (Ailawadi and Keller 2004). However, the measurement of retail brand equity has its own unique challenges.

In the measurement of brand equity, brand equity is supposed to enable the brand to charge a price premium (e.g., Agarwal and Rao 1996). Therefore, many researchers view this price premium as a measure of brand equity (Aaker 1991, 1996; Sethuraman 2000; Sethuraman and Cole 1997). However, previous studies show that retailers with good value associations can also obtain high brand equity. For example, retailers like Walmart, which are built squarely on low price positioning, clearly do have a strong brand (Ailawadi and Keller 2004). Therefore, researchers proposed that future research should develop more value-specific measures to assess retail brand equity (Ailawadi and Keller 2004).

To respond to the research call and develop a more effective scale to measure the outcome of retail brand equity, we propose and validate resource premium as a measure of retail brand equity. We also demonstrate a method for developing a measurement of resource premium

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and compare it with price premium. Additionally, we further validate the measure by examining

its correlation with other commonly available measures, including retail brand equity, retail

brand image, customer satisfaction and the financial performance of a firm (Tobin's Q).

Specifically, we would like to answer the following two main research questions:

1) Which measure is more effective in evaluating and tracking retail brand equity, price

premium or resource premium?

2) What is the relationship between resource premium and a firm's financial

performance?

THEORETICAL BACKGROUND

Brand Equity and Retail Brand Equity

Brand equity is the value added to a product or service by its association with a brand name and/or symbol (e.g., Aaker 2004; Keller 1993). For a brand that has positive (or negative) brand equity, consumers react more (or less) favorably to its marketing mix elements (e.g., product, price, and promotion) than they do to the same marketing mix element when it is attributed to a fictitiously named or unnamed version of the product or service (Keller 1993).

Similar to product brand, retail brands also possess equity, known as retail brand equity. In other studies, retail brand equity may be referred to as "store equity" (Hartman and Spiro 2005), "equity of retailer brand" (Ailawadi and Keller 2004), or "retailer equity" (Arnett et al. 2003). In our study, consistent with Keller's (1993) definition of CBBE, we define retail brand equity as the differential effect of retailer brand knowledge on customer response to the marketing of the retailer. Retail brand equity is also exhibited by consumers' responding more favorably to a retailer's marketing actions than they do to the marketing actions of its competing retailers. Customer response to marketing activities, as defined in terms of customer evaluations, preferences, and behaviors (Hartman and Spiro 2005).

Adopting the customer knowledge-based perspective, we measure retail brand equity by assessing the consumer's retail brand knowledge. Retail brand knowledge includes two main components: retail brand awareness and retail brand image.

Retail Brand Awareness, similar to brand awareness, is the strength of the brand node in memory, as reflected by a consumer's ability to identify the retail brand under different conditions (Rossiter and Percy 1987; Keller 1993). *Retail Brand Image* is defined as the perceptions about a brand as reflected by the brand associations held in consumer memory (Keller 1993).

Measures of Brand Equity

Most research measures brand equity from three different perspectives, customer knowledge, product-market outcomes and firm financial performance.

Customer knowledge. From the customer knowledge-based perspective, researchers assess brand equity by measuring the customers' brand knowledge (e.g., Aaker 1991; Keller 1993; Park and Srinivasan 1994). This approach is based on Keller's (1993) definition of customer-based brand equity (CBBE), which refers to the differential effect of brand knowledge on consumer response to the marketing of the brand.

Product-market outcomes. From the product-market outcomes perspective, brand equity is reflected in the brand's performance in the market place. The most commonly used product-market outcome is price premium (Ailawadi et al. 2003).

Price premium measuring a customer's willingness to pay for a brand in comparison with another brand offer similar benefits is an important indicator of loyalty (Aaker 1996). There are two ways to measure price premium. It can be measured by asking consumer how much more they would be willing to pay for a brand than for a private label or unbranded product. It can also be obtained by can by conducting conjoint studies in which brand name is an attribute. However,

we should note that several brands may not command a price premium, but that does not mean they do not have equity.

Firm financial performance. From the firm performance-based perspective, researchers assess the value of a brand as a financial asset. Most research in this area focus on measuring brand equity by the added value in terms of cash flows, revenues, market share, firm risk, or other related metrics (e.g., Simon and Sullivan 1993; Mahajan et al. 1994; Rego et al. 2009).

Each approach has its own advantages and disadvantages. For example, the measurement based on consumer's knowledge has diagnostic ability. It can not only measure the brand performance but can also assess the source of brand equity to predict a brand's future performance. However, it also has its own disadvantages, such as the fact that it cannot directly reflect the financial valuation. The major existing measures of brand equity and their pros and cons are summarized in Table 1.

Table 1. Existing Measures of Brand Equity

	Customer Mind Set	Product Market Outcome	Financial Market Outcomes
Existing Measures	**Netemeyera et al. 2004** Developed measures of ''core/primary'' facets of customer-based brand equity, including perceived quality , perceived value for the cost , uniqueness, and the willingness to pay a price premium for a brand. **Arnett et al. 2003** Developed a set of formative indicators for retailer equity index, including Retailer loyalty, Name awareness, Service quality and Retailer associations. **Yoo and Donthu 2001** Measured the brand equity by assessing brand loyalty, Perceived quality, Brand awareness/association and Overall brand equity **Aaker 1996** Brand Equity Ten was proposed to create a set of brand equity measures	**Ailawadi et al. 2003** Proposed that the revenue premium a brand generates compared with that of a private product as the measurement of brand equity **Chaudhuri and Holbrook 2001** Used market share and relative price as the product-outcome measure of brand equity **Dubin 1998** Examined the difference between the brand's profit and the profit it would earn without the brand name **Agarwal and Rao 1996** Used Price premium as an outcome of brand equity **Moran 1994** Assess the brand equity by examining the market share adjusted by a "durability" factor	**Rego et al. 2009** Examined the impact of consumer-based brand equity on firm risk **Mahajan et al. 1994** Used brand purchase price when it is sold or acquired **Simon and Sullivan 1993** Estimated the Brand equity as the incremental cash flows which accrue to branded products over unbranded products.
Advantage	1) Can assess the sources of brand equity 2) Have diagnostic ability 3) Can predict a brand's potential	1) Can directly reflect a culmination in a dollar value 2) Measure the current strength of a brand 3) Objective	1) Assess to quantify future potential of a brand 2) Objective
Disadvantage	Cannot directly reflect the financial valuation	Have limited diagnostic ability	Less immediate relevance to marketing, because many things other than marketing activities influence it.

Measures of Retail Brand Equity

Even though many previous studies have attempted to examine brand equity, research on the measurement of retail brand equity is limited. Since retail brands are fundamentally different from product brands, directly borrowing the scales used in the retail setting is not an ideal solution. To our best knowledge, there is only one study has developed a retail-specific measurement. Arnett et al. (2003) developed a set of formative indicators for a retailer equity index, including retailer loyalty, name awareness, service quality, and retailer associations. However, while this measurement examines several sources of retail brand equity, it fails to tap into consumers' specific responses to the brand name in the retail setting.

Measuring retail brand equity has its own challenges. First, most research using a product-market outcomes approach requires a non-branded product for comparison. Most researchers use a private label in this case. However, in the case of a retail brand, there is no private label that can be used for comparison.

Second, when consumers decide to visit a particular retailer to shop, they are not considering only the price of the specific product, which might be more directly related to that product's brand equity: they are also assessing how much time and effort they will expend to go to the particular store to get the product. In this case, using price premium cannot capture all the consumers' responses to a retail brand.

For this reason, Ailawadi and Keller (2004) propose that instead of price premium, retail brand equity should be measured by using the "resources premium" that consumers are willing to expend in order to shop with the retailer. In the current paper, based on the definition proposed by Ailawadi and Keller, we define retailer resource premium as consumers' willingness to

expend extra effort to shop with a particular retailer, including factors such as distance traveled, brand or size preferences compromised, and services foregone.

We will use the customer knowledge approach to measure the outcome of retail brand equity, but we will also validate this measurement by using other approaches and metrics, including product-market outcome (customer satisfaction, price premium) and the brand's financial performance (Tobin's Q). We will develop our measurement in a retail clothing setting and also validate it in the area of retail grocery to prove the generalizability of our scales. Our empirical model is shown in Figure 1.
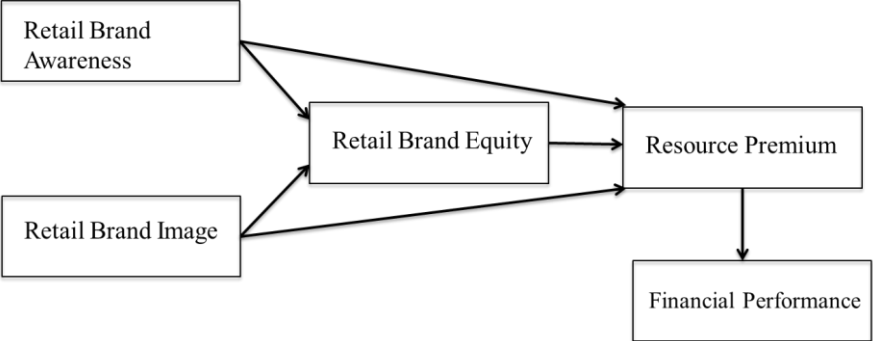
Figure 1. The Role of Retail Brand Equity in Determining the Resource Premium

METHODOLOGY

We use Churchill's (1979) scale development paradigm to develop the measurement scale, including item generation and refinement, item reduction and reliability testing, confirmatory factor analysis, and assessment of construct predictive validity.

Item Generation and Refinement

Ailawadi and Keller (2004) propose that resources may not only reflect financial considerations but also other factors such as distance traveled, brand or size preferences compromised, or services foregone. Based on Ailawadi and Keller 's (2004) definition of resource premium, we develop the scales to measure the resource premium (Table 1).

Based on the extant literature, an initial list of 15 items, including four revered questions, was generated. In this stage, our purpose is to ensure that we captured the essence of resource premium. The items were placed on a seven-point Likert scale, anchored by 1 'strongly disagree' and 7 'strongly agree'. All the scale items are shown in Table 2.

Table 2. Measurement Scales

Dimensions	Scales
Distance Traveled	RP1Q1. I am willing to travel longer distance to shop in the store than other similar stores. RP1Q2. The location of the store would be father quite a bit before I would switch to another store. RP1Q3. Even if there are closer stores, I am willing to travel longer to shop in this store.
Brand Preferences Compromised	RP2Q1. Even if this store does not sell the brand I prefer, I am also willing to buy similar brands in the store rather than switch to another store. RP2Q2. I would like to compromise buying brands sold in this store even though they are not my first options, rather than switch to another store.
Size Preferences Compromised	RP3Q1. If this store does not provide the package size I prefer, I am also willing to choose bigger size in the store rather than switch to another store. RP3Q2. I would like to compromise buying bigger package size sold in this store when the package size I prefer is not available, rather than switch to another store.
Services Foregone	RP4Q1. I am more likely to forgive the service failure in this store. RP4Q2. Even if the service in this store becomes worse, I would continue shopping in this store.
Overall Willingness to Buy	RP5Q1. I am willing to buy more items in this store compared to other stores. RP5Q2. I would like to buy more items in this store compared to other stores.
Reversed Items	RV1. If there are closer retailers, I would not shop with this retailer. RV2. If this retailer does not carry my preferred brand, I would not shop with this retailer. RV3. I am not willing to expend any extra effort to shop with this retailer. RV4. I would be less likely to shop with this retailer if there were other options

Item Reduction and Reliability Testing

Based on the item pool, we purify the scale items by assessing their internal reliability them. To assess the generalizability of the scales, we collected data for two types of retailers, grocery store and clothing retail, respectively.

Participants were asked to recall a clothing retailer and report their evaluation of the retailer. At the beginning of the survey, they were asked to write down five words that came to their minds when they thought about the retailer. Next, participants answered questions related to our model, including questions about shopping experience, retail brand image, and retail brand awareness. We used a standard Likert-type seven-point scale with anchors of "strongly disagree" and "strongly agree." For the clothing retailer, 252 participants were enrolled on mTurk. The average age was 35, with a relative even split between male (49%) and female (51%). For the grocery store, 254 respondents were enrolled on mTurk. The average age was 37, with 51% female and 49% male. Descriptive statistics are shown in Table 3.

Table 3. Descriptive Statistics, Cronbach alpha[a], and Construct Intercorrelations

	Grocery Store (*N*=254)				Clothing Store (*N*=252)			
	Mean(S.D.)	X1	X2	X3	Mean(S.D.)	X1	X2	X3
X1 Retail Brand Equity	4.47(1.68)	**0.90**			4.72(1.45)	**0.89**		
X2 Resource Premium	3.64(1.63)	0.75**	**0.94**		3.91(1.40)	0.68**	**0.84**	
X3 Price Premium	3.28(1.61)	0.63**	0.74**	**.84**	3.58(1.62)	0.58**	0.75**	**0.85**

[a] Cronbach coefficient alpha are shown on the diagonal.
**$p < 0.001$

Using the data obtained for the clothing retailer, structural equation modeling was used to perform a confirmatory factor analysis. The item with less than 0.5 standardized item-to-total

correlation was deleted. In order to ensure the parsimonious of the scales, after several round of

CFA, the final set incorporates four items, accounting for 59% of the variance. The Crobach

alpha of the final items was 0.89 (*N*=252), which within Nunnally's (1978) guidelines for scale

development.

In order to assess the generality of our measure, we further validated our scales in the

grocery store sample. The Cronbach alpha for the final items concerning grocery store was 0.92

(*N*=254), indicating the generalizability of our measure across different types of retail stores. The

CFA results for the clothing retailer and grocery store are shown in Table 4 and Table 5,

respectively.

Table 4. Confirmatory Factor Analysis of the Sample in Grocery Store

Constructs and Items	Cronbach Alpha	Construct Reliability	AVE	Standardized Coefficient	t-Value
Retail Brand Equity					
P6Q6 It makes sense to go to STORE NAME instead of any other store, even if they seem to be the same.				0.91	57.01
P6Q7 If there is another retailer as good as STORE NAME, I prefer to go to the STORE NAME.	0.90	0.90	76%	0.91	58.05
P6Q8 If another retailer is not different from STORE NAME in any way, it seems smarter to go to STORE NAME.				0.79	29.94
Price Premium					
P6Q11 I am willing to pay a higher price at STORE NAME.				0.87	39.87
P6Q12 The price level at STORE NAME would have to go up quite a bit before I would switch to another store.				0.63	14.23
P6Q13 I am willing to pay a lot more for the items bought at STORE NAME than at other retailers.	0.82	0.84	58%	0.90	43.13
Resource Premium					
RP1Q1 I am willing to travel longer distance to shop in STORE NAME than other similar stores.				0.85	41.03
RP2Q1 Even if this store does not sell the brand I prefer, I am also willing to buy similar brands in STORE NAME rather than switch to another store.				0.88	51.34
RP2Q2 I would like to switch to brands sold in STORE NAME even though they are not my first options, rather than switch to another store.	0.93	0.94	76%	0.90	56.49
RP3Q2 I would like to switch to a different package size sold in STORE NAME rather than switch to another store.				0.81	33.82
RP5Q2 I would like to buy more items in STORE NAME compared to other stores.				0.81	34.57

Overall Fit:

χ^2 (and d.f.)   263.24(41)
CFI   0.91
RMSEA   0.15

Table 5. Confirmatory Factor Analysis of the Sample in Clothing Retail

Constructs and Items	Cronbach Alpha	Construct Reliability	AVE	Standardized Coefficient	t-Value
Retail Brand Equity					
P6Q6 It makes sense to go to STORE NAME instead of any other store, even if they seem to be the same.				0.83	34.59
P6Q7 If there is another retailer as good as STORE NAME, I prefer to go to the STORE NAME.	0.89	0.89	73%	0.88	42.76
P6Q8 If another retailer is not different from STORE NAME in any way, it seems smarter to go to STORE NAME.				0.85	36.38
Price Premium					
P6Q11 I am willing to pay a higher price at STORE NAME.				0.92	39.87
P6Q12 The price level at STORE NAME would have to go up quite a bit before I would switch to another store.	0.84	0.84	57%	0.63	14.86
P6Q13 I am willing to pay a lot more for the items bought at STORE NAME than at other retailers.				0.89	50.28
Resource Premium					
RP1Q1 I am willing to travel longer distance to shop in STORE NAME than other similar stores.				0.84	37.19
RP2Q1 Even if this store does not sell the brand I prefer, I am also willing to buy similar brands in STORE NAME rather than switch to another store.				0.81	31.95
RP2Q2 I would like to switch to brands sold in STORE NAME even though they are not my first options, rather than switch to another store.	0.89	0.85	59%	0.83	34.21
RP5Q2 I would like to buy more items in STORE NAME compared to other stores.				0.78	27.02

Overall Fit:

χ^2 (and d.f.)   180.21(32)
CFI   0.92
RMSEA   0.14

Correlation with Other Measures

Theoretically, different measures should reflect the same underlying construct. However, brand equity is a multidimensional construct (Aaker 1996), and each measure may only tap certain dimensions. Thus, in order to validity a new measure of retail brand equity, it should correlate well with other retail brand equity measures, but it should not correlate so highly as to be redundant. Therefore, we examine the correlations between our scales and other existing measures. Note that, we only examine the association, not causality. The predictive validity is discussed in the following sections. As Table 2 shows, our measure correlates strongly with other measures, including price premium and retail brand equity, but the correlation is not perfect, suggesting that our resource premium captures something different from price premium.

Assessing Construct and Predictive Validity

We validate the measure by examining its correlation with other commonly available measure. Aaker (1996) propose that effective measures of brand equity should reflect constructs that truly drive the market because they are associated with future sales and profits. Therefore, we choose Tobin's q, which is a forward-looking financial market measure that has been used as a proxy measure for brand equity (Rao et al.2004) to validate the measurement of resource premium. We propose the following hypothesis:

H1: A retailer's resource premium is positively associated with a brand's financial

performance (Tobin's q).

Since we expect that price premium in the retail setting is more related to the product brand equity rather than the retailer' brand equity, we propose the following:

H2: A retailer's price premium is not a significant predictor of the retailer's brand

performance (Tobin's q).

To control for the effects of differing circumstances facing retailers and their customers, we will include a set of firm-level characteristics (e.g., retailer size, advertising expenditure and customer satisfaction). Consistent with previous studies, the logarithm of number of the total asset was used to measure retailer size. Customer satisfaction was collected from the American Satisfaction Index Score from 2011 to 2014.

DATA

Following measure development and refinement, survey data were collected on mTurk. The subset of clothing retail was employed to assess whether resource premium is a significant predictor of financial performance (Tobin's Q). Following collection of the survey data, secondary data on each clothing retailer were collected to pair with the survey data. The secondary measures used in this study were publicly available data including objective financial performance, organization size and advertising expenditure. Using COMPUSTAT data we utilized Chung and Pruitt's (1994) method to compute Tobin's Q.

> *Tobin's Q= (market value of the firm's common stock shares + book value of the firm's preferred stocks + book value of the firm's long-term debt+ book value of the firm's inventories + book value of the firm's current liabilities − the book value of the firm's current assets/(book value of the firm's total assets).*

Model Formulation

Using seemingly unrelated regression (SUR) to estimate all regressions simultaneously can alleviate the concerns of endogeneity and correlated error. SUR can produce better estimates when the error terms of different regressions are correlated; the system is suitable when several variables in the model are both independent and dependent variables of different regressions. SUR was selected as the appropriate method to test our model. The system of regressions estimated simultaneously is detailed below.

$(1)\ Q = \beta_0 + \beta_1 * RESOURCE\ PREIMUM + \beta_2 * CS + \beta_3 * SIZE + \beta_4 * ADV + \mathcal{E}_Q,$

$(2)\ RESOURCE\ PREIMUM =$

$\beta_0 + \beta_1 * BRANDAWARNESS + \beta_2 * BRANDIMAGEPREIMUM + \mathcal{E}_{RESOURCEPREMIUM,}$

where

$Q = $ Tobin's Q,

$CS = $ customer satisfaction score,

$SIZE = $ the natural log of retailer's asset

$ADV = $ advertising expenditure.

The definitions of variables used in empirical analysis are in Appendix B.

Results

Our results demonstrated R^2 values ranging from .34 to .89, suggesting that our independent variables account for significant variance in the dependent variable for the firms in our sample. *H1*, which predicted a positive relationship between resource premium and brand's performance, (Tobin's q) was supported *(β=0.06, t=1.77)*. Support was also found for *H2*, which suggested that price premium is not a significant predictor of retail brand's performance *(β=0.04, t=1.33)*. The results of the SUR are shown in Table 6 and 7.

Table 6. SUR Results of Resource Premium

	Equation 1 Tobin's Q	**Equation 2** Resource Premium
Independent Variables:	Standardized Estimate (t-value)	Standardized Estimate (t-value)
Firm Size	0.55 (1.99)	
Advertising Expenditure	0.41 (2.29)	
Resource Premium	0.06 (1.79)	
Customer Satisfaction	0.75 (21.00)	
Retail Brand Awareness		-0.15 (-0.96)
Retail Brand Image		0.68 (5.15)
Individual Equation R^2	0.89	0.34

Table 7. SUR Results of Price Premium

	Equation 1 Tobin's Q	**Equation 2** Price Premium
Independent Variables:	Standardized Estimate (t-value)	Standardized Estimate (t-value)
Firm Size	0.64 (2.39)	
Advertising Expenditure	0.34 (1.92)	
Price Premium	0.04 (1.33)	
Customer Satisfaction	0.74 (20.71)	
Retail Brand Awareness		-0.29 (-1.85)
Retail Brand Image		0.67 (4.98)
Individual Equation R^2	0.89	0.29

IMPLICATIONS

The contribution of this article lies not only in proposing the resource premium measure of retail brand equity, but also in broadening our knowledge about defining a retailer's brand equity in today's value-conscious consumer market. As suggested in previous literature, retailer can maintain a strong brand through value-based positioning. By incorporating both time and effort resources into the analysis, our measures provide a valid measure to examine retail brand equity. Because the customer satisfaction score (obtained from ACSI) and consumer's resource premium (obtained from a survey) are collected from different resources in our methodology, we eliminate the possibility of method variance.

There are several salient advantages of the resource premium measure. First, resource premium is more complete than other outcome measures because it considers all the resources that consumers need when deciding to shop with a retailer. It directly reflects the customer's main responses in a retail setting. When consumers make a decision about a product, price can act as a good proxy of brand equity. However, when consumers make a decision to go to a particular retailer to shop, they are not only considering the price of the specific product, which might be more directly related to that product's brand equity, but are also assessing how much time and effort they will expend to go to the particular store to get the product. Therefore, using resource premium to measure retail brand equity can tap into a more comprehensive picture of consumers' responses to the retail brand name.

Second, the resource premium is easy to obtain. It can be obtained by either direct measurement from a simple consumer survey, or by using a change of customer portfolio to track brand performance. Our measurement captures the most relevant resources that consumers need to decide to shop with a particular retailer, including travel distance, brand compromise, and basket size. Based on the dimensions of resource premium, a manager can also use the firm's customer portfolio (i.e., the average distance between the consumer's home to the store, which we refer to as travel distance in our measure) and purchase history (e.g., the number of items consumers purchased in a single visit to the store, which refers to the basket size) to monitor the brand's health. Using this scale, retail brand equity can be tracked over time, allowing managers to determine a retail brand's performance relative to competing brands.

Our paper also has several implications regarding the antecedents of retail brand equity and resource premium. Consistent with previous literature, we found that both advertising and customer satisfaction can exert a positive impact on retail brand equity. However, with respect to resource premium, a measurement directly relevant to consumers' loyalty behavior and favorable responses to a retail brand, we found that customer satisfaction is positively associated with a retailer, while advertising expenses are not. This finding suggests several specific avenues for further research.

Using advertising to increase brand awareness and image is a common approach for firms to enhance their brand equity. However, our results suggest that, even though advertising can increase consumers' brand knowledge, it might not exert a positive influence on consumer loyalty behavior. For example, spending huge amounts on advertising may boost a brand's market share and revenue. However, this effect may also decline with any decreases in advertising expenditure. Customer satisfaction, in contrast, can exert a positive impact on

consumers' loyalty behavior in the retail setting. In the future, research could examine the differences in how advertising expenditure and customer satisfaction influence retail brand equity. As advertising influences brand equity mainly through brand awareness, a brand has various levels of brand awareness in its different stages. Future research could also examine how advertising expenditure and customer satisfaction influence brand equity differently for brands in different stages (e.g., in the introductory stage versus the mature stage.)

CONCLUSION

In this paper, we have proposed resource premium as a measure of retail brand equity. The conceptual basis and the method for developing the measurement are discussed. We validate the measure by examining its correlation with other commonly available measures, including retail brand equity, price premium, and consumer satisfaction. Moreover, we assess the predictive validity of the measure by examining its relationship with a firm's brand performance (Tobin's Q).

The results show that our measure is highly but not perfectly correlated with other retail loyalty proxies, suggesting that it reflects the main underlying construct of retail brand equity and can also tap into dimensions of retail brand equity that other measures do not reflect. Additionally, as we expected, in a retail setting, resource premium is a significant predictor of a firm's brand performance, rather than price premium, which is not significantly associated with retailer' brand performance.

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LIST OF APPENDICES

APPENDIX A

Resource Premium

(Clothing Retail: Cronbach Alpha = 0.89; Grocery: Cronbach Alpha =0.93)

RP1Q1 I am willing to travel longer distance to shop in STORE NAME than other similar stores.

RP2Q1 Even if this store does not sell the brand I prefer, I am also willing to buy similar brands in STORE NAME rather than switch to another store.

RP2Q2 I would like to switch to brands sold in STORE NAME even though they are not my first options, rather than switch to another store.

RP5Q2 I would like to buy more items in STORE NAME compared to other stores.

Price Premium *(Netemeyer et al. 2004)*

(Clothing Retail: Cronbach Alpha = 0.84; Grocery: Cronbach Alpha =0.82)

P6Q11 I am willing to pay a higher price at STORE NAME.

P6Q12 The price level at STORE NAME would have to go up quite a bit before I would switch to another store.

P6Q13 I am willing to pay a lot more for the items bought at STORE NAME than at other retailers.

Retail Brand Equity *(Yoo and Donthu 2001)*

(Clothing Retail: Cronbach Alpha = 0.89; Grocery: Cronbach Alpha =0.90)

P6Q6 It makes sense to go to STORE NAME instead of any other store, even if they seem to be the same.

P6Q7 If there is another retailer as good as STORE NAME, I prefer to go to the STORE NAME.

P6Q8 If another retailer is not different from STORE NAME in any way, it seems smarter to go to STORE NAME.

Brand Image

Favorability (New scale)

P2Q10 The image of STORE NAME in my mind is positive.

P2Q11 The image of STORE NAME in my mind is favorable.

P2Q12 The image of STORE NAME in my mind is likable.

P2Q13 In my mind STORE NAME has a negative image.

Strength (New scale)

P2Q6 STORE NAME has a clear image in my mind.

P2Q8 I can easily describe the image of STORE NAME to someone else.

P2Q9 The image of STORE NAME is very strong.

Uniqueness   Netemeyer et al. (2004)

P2Q14 STORE NAME is unique from other stores.

P2Q15 STORE NAME is distinct from other stores.

P2Q16 STORE NAME really stands out from other stores.

Brand Awareness *(Yoo and Donthu 2001)*
P2Q1 I can quickly recall the symbol or logo of STORE NAME.
P2Q2 I can recognize STORE NAME among other competing stores.
P2Q3 Some characteristics of STORE NAME come to my mind quickly.
P2Q4 When I think of clothing retailers, STORE NAME come to my mind quickly.
P2Q5 It is impossible to confuse STORE NAME with any other.
P2Q6 I have difficulty in imagining STORE NAME in my mind.

APPENDIX B

Definitions of Variables Used in Empirical Analysis

Variable	Definition	Source
Resource Premium	Consumers' willingness to go to greater efforts (e.g., distance traveled) to shop with a particular retailer (Ailawadi and Keller 2004).	Survey
Price Premium	The amount a customer would like to pay for the brand in comparison with another brand offering similar benefits (Aaker 1996)	Survey
Customer Satisfaction	An individual firm's customer satisfaction score represents its customers' overall evaluation of total purchase and consumption experience (Fornell et al. 1996).	ACSI score from 2011-2014
Tobin's Q	It compares a firm's market value with the replacement cost of its assets. It has been used as a proxy measure for brand equity (Rao et al.2004).	COMPUSTAT
Firm covariates		
Retailer Size	Measuring firm size by computing the natural log of each retailer's assets to control for any scale economies.	COMPUSTAT
Advertising Intensity	Measuring advertising intensity by computing retailer's advertising expenditures to its sales revenue.	COMPUSTAT

ESSAY III

"TIMING IS MONEY":

HOW COULD ADVERTISING CONCENTRATION INFLUENCE A RETAILER'S

MARKET AND FINANCIAL PERFORMANCE?

INTRODUCTION

Advertising is widely recognized as a powerful force for enhancing brand awareness and shaping consumer preferences (e.g. Tellis 2005; Ailawadi et al. 2009). Companies continue to spend vast amounts of money on advertising every year; the United States alone spent 189 billion dollars in 2015 (Statista 2016). Despite the consensus that advertising is an effective tool, it is still quite challenging for companies to exactly evaluate and quantify its impact. As John Wanamaker pointed out, "Half the money I spend on advertising is wasted; the trouble is I don't know which half."

Therefore, in past decades, both practitioners and academics have made enormous efforts to examine the effectiveness of advertising. Studies have examined how much advertising effort is needed by adopting different econometrics models to predict the relationship between advertising and sales (e.g. Simon and Sullivan 1993; Ailawadi et al. 2003); or how to advertise by examining consumer's responses to different advertising contents and images (e.g. Campbell and Keller 2003; Chandy et al. 2001); or where to advertise by looking at various advertising channels (e.g. Danaher and Dagger 2013). Remarkably, even though D'Souza and Rao (1995) find that for a particular advertising campaign timing plays a crucial role in its success, no research has systematically explored how timing could influence advertising effectiveness from a strategic point of view.

Specifically, for retailers, this issue becomes even more important for two primary reasons. Firstly, retail continues to spend the most on advertising across all industries (Kantar

and Media 2014). Considering such a tremendous investment, understanding how to assess and improve advertising effectiveness becomes vital (Ailawadi and Keller 2004). Secondly, most prior research on the effectiveness of advertising uses a cross-industry sample where retailers constitute only a small part (Tuli et al. 2012). However, cross-industry factors can significantly impact the financial valuation of marketing activities (Tuli et al. 2012). Given that retailers have different communication objectives and performance measurements, it remains unknown whether the same principles that apply to manufacturers can work for retailers (Petersen et al. 2009).

To address such limitations, the authors aim to assess whether and how the timing of advertising is associated with a retailer's market and financial performance by using a sample of 2502 observations for 113 retailers from 2008 to 2015. Based on the latest data, our results not only contribute to advertising literature but also provide several important and relevant implications for marketing practitioners.

The paper is organized as follows. First, we provide a literature review regarding advertising effectiveness. Second, we specify the model and the methodology used to test it. Third, we describe and interpret our results. Last, we discuss several limitations of the study and possible directions for future research.

LITERATURE REVIEW

Advertising is "the nonpersonal communication of information usually paid for and usually persuasive in nature about products, services, or ideas by identified sponsors through the various media" (Arens 2002, p. 7). For retailers, advertising also plays an important role in communicating product availability and benefits, as well as building a favorable brand image. Most research on advertising effectiveness can be divided into three main areas depending on the performance metrics: 1) consumer responses (e.g. brand awareness and consumer attitudes), 2) market responses (e.g. sales and market share), and 3) financial responses (e.g. shareholder value and profitability).

Consumer responses. This type of research focuses on the effects of advertising on consumers' mental processes, such as attention, attitude, recall and purchase intentions. Researchers in this area examine questions of how consumers process the advertising information (e.g. Petty and Cacioppo 1986) and whether emotional appeals are more powerful than argument appeals (e.g. Chandy et al. 2001). Most of these studies have been experimental, and the results are quite large and disparate.

Market responses. Research in the area of market responses focuses on the relationship between advertising and market performance. Most of these studies focus on developing different econometrics models by using market or field data, sales volume, and market share. In addition to advertising's primary effect on sales, researchers have also examined the dynamic

effects of advertising campaigns. For example, Leone (1995) suggested that advertising's effects on sales would disperse after six to nine months.

Instead of focusing on short-term performance, many studies in this area turn to long-term effects of advertising on brand equity. The findings suggest that firms' advertising efforts can also help them to build their brands and increase their intangible market-based assets (e.g. Wang et al. 2009).

Financial responses. In order to point out the importance of advertising to the financial community, an increasing number of studies on advertising also focus on its financial impact. The positive relationship between advertising expenditure and the firm market value was first concluded in the 1970s and has repeatedly been proved in the years following. Advertising can not only signal the financial soundness of a firm (Erickson and Jacobson 1992), but can also affect customers' responses in the marketplace, consequently leading to a firm's financial performance (e.g. Tellis 2005).

The extant literature review of advertising effectiveness is summarized in Table 1.

Table 1. Literature Review on the Advertising Effectiveness

Study	Construct	Context	Key Findings
		Consumer Responses	
Buil, Chernatony, and Martinez (2013)	Advertising, brand awareness, brand quality	Survey of 302 consumers from United Kingdom	Consumers' perceptions of a brand's advertising spend has no impact on perceived quality but a positive impact on brand awareness.
Campbell and Keller (2003)	Advertising repetition effect	Experiment (bank, clothing brand and heal-care plan)	Firms' advertising helps customers recognize brands and certain features of products by drawing customers' attentions and providing familiarity from past exposure.
Chandy et al. (2001)	Advertising, emotional and argument appeals	Experiment	Emotional appeals seem to be more effective than argument appeals
Clark, Doraszelski, and Draganska (2009)	Advertising, brand awareness, brand quality	Survey	Advertising has consistently a significant positive effect on brand awareness but no significant effect on perceived brand quality.
		Market Responses	
Ailawadi, Lehmann, and Neslin (2003)	Advertising, R&D, revenue premium, price elasticity	Consumer packaged goods industry	Advertising enhances brand equity. Brand equity is measured as revenue premium.
Simon and Sullivan (1993)	R&D, advertising, brand value	Firms in manufacturing industries	R&D could affect brand equity when innovation is important to consumers. Also, advertising increases brand awareness and perceived brand quality.

Table 1. Literature Review on the Advertising Effectiveness (continued)

Study	Construct	Context	Key Findings
Wang, Zhang, and Ouyang (2009)	Brand equity, advertising	367 companies across 32 industries	Brand equity is generally positively and persistently enhanced (vs. enhanced following decay) by advertising. Large industry size and low industry concentration positively moderate the relationship between advertising and persistently enhanced brand equity.
Yoo, Donthu, and Lee (2000)	Marketing mix, advertising, brand awareness, brand quality, brand loyalty	Survey of 569 college students	Customers in the store are more likely to choose an advertised brand than an unadvertised one because the most familiar or recognizable brand name will provide customers' confidence in the decision process.
		Financial Responses	
Agrawal and Kamakura (1995)	Advertising celebrity endorsers	An event study analysis	Advertising has a significant impact on stock market returns.
Erickson and Jacobson (1992)	Advertising and stock returns of firm value	Manufacturers	Advertising spending has a negative effect on firms' financial performance
Jashi and Hanssens (2010)	Advertising and firm value	Athletic shoes and PC	Advertising can positively affect firms' financial performance
Keel and Bourdeau (2014)	Advertising during recessions	Service firms	Experience-based service firms benefit financially from adopting the advertising "prescription" that encourages firms to increase advertising during recessions.

Table 1. Literature Review on the Advertising Effectiveness (continued)

Study	Construct	Context	Key Findings
Peterson and Jeong (2010)	R&D, advertising, brand value, financial performance	125 firms from Interbrand Group's annual reports of the 100 most valuable brands	R&D and advertising have a positive impact on brand value, the resultant brand value increases a firm's financial performance. It is proposed that there exist lagged relationships between expenditures and brand value, brand value and firm financial performance.
Sethuraman, Tellis, and Briesch (2011)	Brand advertising elasticity	Meta-Analysis of 751 short-term and 402 long-term direct-to-consumer brand advertising elasticities estimated in 56 studies published between 1960 and 2008.	There has been a decline in the advertising elasticity over time; advertising elasticity is higher for yearly data than for quarterly data
Tuli et al. (2012)	Advertising spending and same-store sales growth	Retail	The effect of advertising on the stock price performance depends on both retailers' financial conditions and the entire competitive environment facing by them.

HYPOTHESES

To uncover a comprehensive picture of advertising's effect on retail performance in this study, we use two types of response metrics to assess the effectiveness of the retailer's advertising: market responses and financial responses.

Advertising Expenditure, Advertising Concentration, and Retailer's Market Performance

Advertising plays a key role in communicating product features and benefits, and in building a brand's image. Through a meta-analysis, Sethuraman et al. (2011) found that advertising can influence sales both in the short term (current period) and in the long term (current and future periods). For example, retail advertising can deliver immediate effects by informing consumers of the product availability in the store. Advertising can also enhance a retailer's brand awareness, and consequently increase the brand's likelihood of being included in a consumer's consideration set, thereby influencing consumer decisions in the future (Krishnan and Chakravati 1993). Thus, consistent with previous literature, we hypothesize that in the retail setting, advertising has both current effects and carryover effects.

> *H1: A retailer's advertising expenditure is positively associated with its short-term market performance (quarterly sales).*
>
> *H2: A retailer's advertising expenditure is positively associated with its long-term market performance (yearly sales).*
>
> *H3: Sales are also associated with a retailer's prior advertising effort (carryover effect).*

Advertising concentration refers to the extent to which a retailer evenly allocates its advertising budget throughout the year. Due to the carryover effect of advertising, we predict that advertising concentration does not significantly impact a retailer's sales.

H4: A retailer's advertising concentration is not significantly associated with its sales.
Advertising Expenditure, Advertising Concentration, and Retailer's Financial Performance

Advertising can also create market-based assets that may accelerate firms' financial performance (Srivastava et al. 1998). We select shareholder value and return on assets as indicators of a firm's financial performance because they been widely used in the marketing literature to measure profitability and a firm's financial efficiency (i.e. Rust et al. 2004; Srinivasan and Hanssens 2009).

Shareholder value is defined as the sum of present value of cash flows during the value growth period and the terminal value at the end of the value growth period (Day and Fahey 1988; Rappaport 1986). Srinivasan and Sihi (2012) found that firms with high advertising expenditures can deliver a signal to stock market participants that they anticipate their advertising to be effective and that their future performances are going to be superior. Thus, we propose that

H5: Advertising expenditure is positively associated with shareholder value (Tobin's q).

H6: Advertising expenditure is positively associated with firm's profitability (ROA).

Although the role of advertising timing in its effectiveness has not been systematically studied, some research has looked at *when* to advertise as a crucial strategic decision. D'Souza and Rao (1995) find that for a particular advertising campaign, the timing of the campaign plays a significant role in its success. In addition, many studies have explored one particular type of timing strategy for advertising: whether or not to increase advertising in recessions. Though the conventional belief is that advertising should be reduced during recessions because sales are

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lower and consumers are less likely to be influenced by advertising in a period of recession than in a period of expansion, researchers found that a company that advertises heavily during a recession can actually stand out compared to its competitors and has much better financial performance when the economy recovers (e.g. Barwise 1999; Keel and Bourdeau 2014).

Another factor in *when* to advertise involves the retailer's advertising timing strategy. High advertising concentration indicates the retailer spends their advertising intensively in one particular time period, which could actually decrease advertising effectiveness for several reasons.

First, during the peak season, because nearly all retailers heavily invest on advertising, much advertising cancels out. Due to the competitive environment, it is difficult for consumers to process the message and recognize the brand name (Yoo et al. 1994). Second, prior studies find that increasing advertising frequency influences the brand choice at a decreasing rate (Tellis 2009), suggesting that it becomes less efficient to continue spending on advertising within one period.

Retailers who have low advertising concentration, indicating that they evenly allocate their advertising budgets across the year and spend less during the peak season but more during the off season, can benefit from this advertising strategy. It is easy to draw consumer's attention during the off season because there are much fewer interruptions from the competitors; the brand will be in consumers' minds as well as in the consideration set. In addition, increasing the advertising budget in the off season can also help to enhance the effectiveness of advertising during the peak season.

Research regarding advertising during recessions found that a company that advertises heavily during the recession season can actually stand out compared to its competitors (Keel and

Bourdeau 2014). Likewise, retailers taking advantage of the off-season advertising can establish

a strong foundation for their brand awareness and brand image, resulting in increased

effectiveness of advertising during the peak season because studies show that for well-

recognized brands, the advertising is more effective (Campbell and Keller 2003). Such marketing

effectiveness can further enhance shareholder value and increase firm's profitability (Srivastava

et al. 1998). Therefore, we propose that,

> *H7: Advertising concentration is negatively associated with shareholder value (Tobin's q).*

> *H8: Advertising concentration is negatively associated with firm's profitability (ROA).*
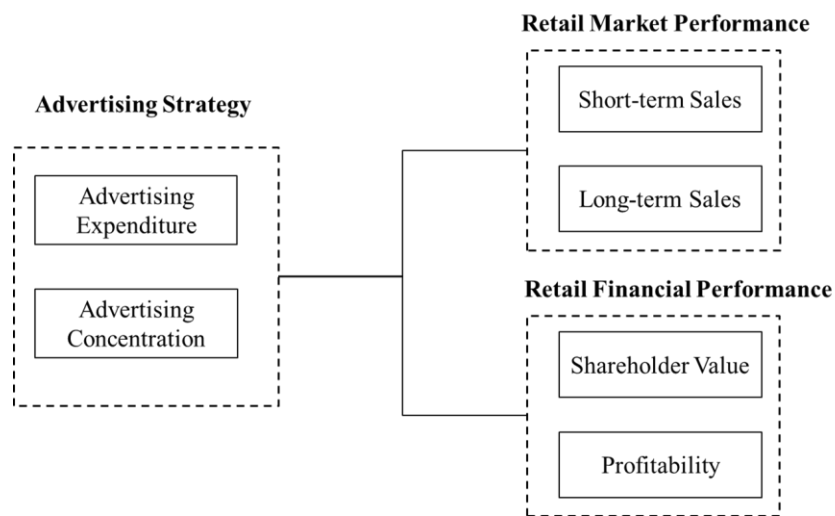
The research model is shown in Figure 1.

Figure 1. Retail Advertising Strategy and its Firm Performance

RESEARCH METHODOLOGY

Data. We collected the data for publicly listed firms belonging to the retail sector (firm listed in SIC codes 5000-5999) (Tuli et al. 2012). The sample consists of two cross-listed databases. The firms' financial data was obtained from Standard & Poor's COMPUSTAT dataset while we obtained the firms' quarterly advertising expenditure from Kantar Media's Ad Spender dataset. After combining data from these two datasets our sample contains 2675 firm-quarter observations for 113 retailers from 2008 to 2015. After removing observations with missing data and keeping only firms that have at least four consecutive quarters of data, our final sample contains 2502 firm-quarter observations and 625 firm-year observations. See *Appendix* for the examples of firms included in our sample.

Measures. We measured retailers' short-term and long-term market performances by using quarterly sales and yearly sales, respectively. Consistent with prior research, retailers' quarterly advertising expenditure and yearly advertising expenditure are directly obtained from the datasets. Advertising concentration was calculated by using the Hirschman-Herfindahl Index (HHI) to capture how evenly a retailer allocates the advertising budget across the year. High advertising concentration indicates the retailers spend their advertising intensively in one particular time period. The average advertising concentration in our dataset is 0.38, with the maximum at 0.99 and the minimum at 0.25.

We measured retailers' financial performance by using their yearly return on assets (ROA) and Tobin's q (Rao et al. 2004). These measures are not only advocated by researchers but are

also widely used to assess firms' performances in practice. ROA is a key profitability indicator widely used by managers, investors, and researchers (e.g. Lehmann and Reibstein 2006). We used the COMPUSTAT yearly fundamentals database, which provides accounting and operating data for these firms, to compute a retailer's ROA. We calculated the return on assets as the ratio of the firm's income before extraordinary items to the firm's total assets.

Tobin's q compares a firm's market value with the replacement cost of its asset. This is a forward-looking measure of firm performance by economists as well as marketing researchers (Anderson et al. 2004; Torres and Tribo 2011; Lewellen and Badrinath 1997; Morgan and Lego 2009). Along with COMPUSTAT data, we used Chung and Pruitt's (1994) method to calculate Tobin's q as follows.

Tobin's Q= (market value of the firm's common stock shares + book value of the firm's preferred stocks + book value of the firm's long-term debt+ book value of the firm's inventories + book value of the firm's current liabilities − the book value of the firm's current assets/(book value of the firm's total assets).

Tobin's q greater than 1.0 indicates the retailer's intangible assets is a positive value. The average Tobin's q in our dataset is 1.26, with the maximum is 22.84 and the minimum is -0.61.

Control Variables. To control for the effects of different circumstances facing retailers, we included several firm level covariates to control for other factors that are commonly known to influence firms' financial or market performance. Because we examined the effect merely in the retail sector, we can rule out those industry-specific covariates. We controlled the retailer size by using the number of employees on a log scale as well as the retailer's total assets. We also included the ratio of total debt to total assets as a measure of the degree of leverage in a firm's

capital structure. Table 2 and 3 summarize correlations and descriptive statistics for each of the

variables.

Table 2. Descriptive Statistics

Variable	M	SD	Min	Mdn	Max
Retail Performance					
Tobin's q	1.26	1.77	-.61	.93	22.84
Sales	10889.23	21128.02	1.35	3451.67	153290
ROA	.02	.64	-14.82	.06	.33
Advertising Strategy					
Advertising expenditure	186.06	31.7952	.035	73.9	3800
Advertising Concentration	.38	.16	.25	.32	.99
Firm Covariates					
Total Asset	7.42	1.67	-.75	7.46	11.44
Size (number of employee)	48.25	71.40	.017	19.3	400
Leverage	-.34	27.21	-556.98	.21	264.72

Table 3. Correlation Matrix

	X1	X2	X3	X4	X5	X6	X7	X8
X1 Advertising Expenditure	1.00							
X2 Advertising concentration	-.16	1.00						
X3 Sales	.77	-.14	1.00					
X4 Tobin's q	.09	-.02	-.08	1.00				
X5 ROA	.15	-.01	.24	-.49	1.00			
X6 Number of Employee	.69	-.14	.90	-.06	.22	1.00		
X7 Total Assets	.77	-.14	.95	.03	.30	.90	1.00	
X8 Leverage	.02	.03	-.01	.04	.01	.05	-.01	1.00

Model Specification

In our research, we collected 2502 firm-quarter observations and 625 firm-year observations from 2008 to 2015 to test our hypotheses. This approach introduced several econometrics estimation concerns, such as heteroscedasticity, serial correlation, unobserved firm-specific heterogeneity, yearly-specific heterogeneity, and endogeneity. For example, error terms of sales associated with very large retailers might have larger variances than that associated with smaller retailers, because sales of larger retailers are more volatile. In order to address these concerns, we introduced an error component model (Baltagi 2001). Our model specifications are as following.

Advertising expenditure and retailer's short-term performance

$$(1)\ SaleQ_{it} = \beta_0 + \beta_1\,Ad_{it} + \beta_2\,Ad_{it-1} + \beta_3\,Ad_{it-2} + \beta_4\,Ad_{it-3} + \beta_5 FirmSize_{it} + \sum_{k=1}^{4} \beta_{6k}$$

$$QuarterDummy_{kit} + \sum_{k=2008}^{2015} \beta_{7k}\,YearDummy_{kit} + \eta_i + \varepsilon_{it}\ ,$$

where *i* stands for firm and *t* for time (quarter); *SaleQ* represent retailer's quarterly sales. *Ad* represents retailer's quarterly advertising expenditure. *Firmsize* is a control variable as described previously. $\sum_{k=2008}^{2015} YearDummy_{kit}$ and $\sum_{k=1}^{4} QuarterDummy_{kit}$ represent a set of mutually exclusive quarter dummies and year dummies, respectively. η_i represents time-invariant unobservable factors to control for the unobserved firm specific heterogeneity. ε_{it} is i.i.d error.

Advertising Expenditure, Advertising Concentration, and Retailer's Long-Term Performance

$$2a)\ SaleY_{it} = \beta_0 + \beta_1\,SaleY_{it-1} + \beta_2\,Ad_{it} + \beta_3\,FirmSize_{it} + \beta_4\,HHI\_Ad + \sum_{k=2008}^{2015} \beta_{5k}$$

$$YearDummy_{kit} + \eta_i + \varepsilon_{it}\ ,\ and$$

$$2b)\ Tobinq_{it} = \beta_0 + \beta_1\,Tobinq_{it-1} + \beta_2\,Ad_{it} + \beta_3\,FirmSize_{it} + \beta_4\,HHI\_Ad + \beta_5\,Leverage +$$

$$\sum_{k=2008}^{2015} \beta_{6k}\,YearDummy_{kit} + \eta_i + \varepsilon_{it}\ ,\ and$$

2c) $ROA_{it} = \beta_0 + \beta_1 ROA_{it-1} + \beta_2 Ad_{it} + \beta_3 FirmSize_{it} + \beta_4 HHI\_Ad + \beta_5 Leverage +$

$\sum_{k=2008}^{2015} \beta_{6k} YearDummy_{kit} + \eta_i + \varepsilon_{it}$

where *i* stands for firm and *t* for time (yearly); *SaleY* represents retailer's quarterly sales. *Ad* represents retailer's yearly advertising expenditure. *Firmsize* and leverage are control variables, as described previously. $\sum_{k=2008}^{2015}$ *YearDummy$_{kit}$* represents a set of mutually exclusive year dummies. η_i represents time-invariant unobservable factors to control for those unobserved firm specific heterogeneity. ε_{it} is i.i.d error.

Our model specification has several benefits. Firstly, it alleviates serial correction concerns by including a one-period lagged dependent variable (Kennedy 2003; Wooldridge 2006). In addition, in order to rule out the concern that our dependent variable may have an impact on advertising expenditure and concentration (reverse causality), the analysis relied on a dependent variable led by one period (Wooldrige 2008). Moreover, this model specification accounts for time-invariant unobserved firm-specific heterogeneity. We also used log-transformation variables with skewed distribution. Lastly, the variance inflation statistics (VIF) for each model is less than the threshold 5.0 (Judge et al. 1988), suggesting that the multicollinearity is not a concern for the proposed model specification.

RESULTS AND DISCUSSION

Advertising Expenditure and Retailer's Short-Term Performance

In our first model, three lag structures (time-based relationships) were investigated. These structures are given below as Table 4, *t* here presents a particular quarter. The structures allow the inferences about the effects of simultaneity and the lagged (cause) impact of one variable on another. We use a fixed-effects time-series panel model to estimate M1. The results are consistent with previous literature that the advertising has both immediate effect and carryover effect. Retailer's sales in the current quarter are not only influenced by the advertising expenditure within this quarter ($\beta_1 = .01$, *p<.05),* but also by the previous quarter ($\beta_2 = .04$, *p<.001).* Moreover, consistent with Leone's finding (1995), such carryover effect is decaying ($\beta_3 = -.01$, *p>.10).* Thus, both H_1 and H_2 are supported. Our findings are also consistent with previous studies that the carryover elasticity of advertising in is generally larger than the current effect, and that advertising's effects on sales would disperse after six to nine months (Leone 1995).

Table 4. Quarterly Advertising on Sales

Quarterly Advertising	Quarterly Sales	β (t-value)
t	t	.01 (2.07)
t-1	t	.04 (8.45)
t-2	t	-.01 (-1.06)
t-3	t	-.02 (-3.91)

a. Number of observation: 1815; R-square = .33

Advertising Expenditure, Advertising Concentration, and Retailer's Long-Term Performance

We use the dynamic panel data model to examine the impact of advertising on firms'

market and financial performance. By incorporating one lagged dependent variable, the model

allows us for a partial adjustment mechanism (Baum 2013). By doing so in a Generalized

Method of Moments (GMM) context, this model can have more efficient estimates (Baum 2013).

We also used a Windmeijer bias-corrected (WC) estimator to get the cluster-robust standard

error estimation (Arellano 1987; Pertersen 2009). By using this model, it can relax the

assumption of error independence and allows for correlation within a cluster.

The Wald test confirms that our model specification fits the data well. The results suggest

that a retailer's advertising expenditure is positively associated with its market performance (β

$= .07$, $p<.001$). Advertising concentration does not have any significant impact on its sales (β

$= .02$, $p> .05$). The reason could be the carryover effect of advertising as we found in the model

one that advertising has both immediate effect and carryover effect on sales.

In terms of the effectiveness on firms' financial performance, marketing expenditure is

not significantly associated with the shareholder value ($\beta = -.15$, $p>.10$); however, advertising

concentration has a negative impact on shareholder value ($\beta = .67$, $p<.05$), suggesting that evenly

allocated advertising expenditure is positively related to retailer's intangible asset. Moreover,

advertising concentration is negatively associated with a retailer's profitability ($\beta = - .40$, $p<.05$).

This effect is also moderated by the overall advertising expenditure. Compared to retailers with a

larger advertising budget, advertising concentration had a greater influence on retailers with

lower advertising expenditure ($\beta = .09$, $p<.001$).

The results are summarized in table 5.

Table 5. Advertising Expenditure, Advertising Concentration and Retail Performance

	M1 Market Performance Yearly Sales	M2 Financial Performance (Shareholder Value) Tobin's Q	M3 Financial Performance (Profitability) ROA
Lagged Sales	.38 (.20) *		
Lagged q		.48 (.05) ***	
Lagged ROA			-.03 (.17)
Advertising Expenditure	.07 (.04) **	-.15 (.09)	-.05 (.04)
Advertising Concentration	.02 (.07)	-.67 (.33) **	-.40 (.17) **
Ad Expenditure x Ad Concentration			.09 (.04) ***
Controls			
Number of Employee	.38 (.10)***	.22 (.30)	
Total Assets			1.61(.84)**
Leverage		.001 (.001) **	.001(.001)
Number of firms (observations)	61 (277)	56 (258)	68 (299)
Wald χ^2 (d.f.)	615.67 (11) ***	289.38 (11)***	29.53 (12)***

*p<.10
**p<.05
***p<.01
Notes: Coefficients (WC-Robust Standard Errors) are in the columns.

Additional Analysis

To enhance the strength of our findings and explore the reason behind the effectiveness of advertising concentration, we tested the model from consumers' perspectives. We used EquiTrend Brand Equity scores from 2008 to 2012 to examine further the relationship between the effects of timing of advertising on retail brand performance. Harris Interactive databases have been widely used in academic research as they provide longitudinal data sets for brand equity (Bharadwaj et al, 2011; Rego et al. 2009). Specifically, we explored the relationship between advertising concentration and brand awareness, brand quality and retail brand equity. After

merging these three datasets, we have 37 observations. The sample size is limited due to the data availability.

The results reveal that advertising expenditure is positively related to the brand awareness (β =.19, t=8.65) and retail brand equity (β =6.78, t=5.40). In addition, advertising concentration is negatively associated with the brand awareness (β =-.64, t=-3.12) and retail brand equity (β =-21.89, t=-1.72). In other words, regarding the effectiveness of advertising on creating retail brand equity, allocating advertising evenly across the year works more effectively than intensively spending the advertising budget in one particular time period. Lastly, we find that in the retail sector, the effect of advertising on retail quality perception is not significant.

IMPLICATIONS

This study examines the effect of timing of advertising on a retailer's market and financial performance over time. We view this study as an important first step in establishing that timing is an important aspect when firms are crafting their advertising strategy. Our study adds a new dimension to advertising research by providing empirical evidence of how the timing of advertising can influence the effectiveness of advertising on a retailer both in the short-term and long-term. Our findings make three main contributions to the literature.

First, this research contributes to the advertising literature by examining the timing of advertising, which has thus far been neglected. Second, our findings provide important new empirical evidence to support the long-term effect of advertising in brand-building. Due to the competitiveness among the retail sector, retail branding is extremely important (Ailawadi and Keller 2004). Thirdly, our research also contributes new insights to retail literature. Most prior research on the effectiveness of advertising has mainly focused on the manufacturing industry (Tuli et al. 2012). As retailers have significantly different communication purposes than manufacturers, whether the general principles will also work in retail remains unclear. Our research indicates that heavily spending the advertising budget in one peak season, the holiday season in most cases, cannot bring firms much benefits in terms of financial performance.

By integrating product market and financial metrics into one study, our research also responds to Gupta and Zeithaml's (2006) call for more research on linking marketing metrics to

a firm's financial performance. Our work underscores the importance of advertising concentration to unravel a more comprehensive picture of how retail advertising really works.

Given the increasing calls for the accountability of marketing activities, our results provide several important implications for marketing practitioners.

First, our research suggests that the effectiveness of advertising depends not only about the advertisement itself but also on the entire market environment. Secondly, our results point out the importance of the decision-making on advertising timing. Instead of allocating advertising budget based on prior sales, retailers need to carefully monitor and consider their competitors' responses to make a well-informed decision. Thirdly, when evaluating the effectiveness of advertising, retailers should not only use short-term marketing metrics, but should also consider the long-term financial impact of the advertising effort. Following this logic, our findings also shed light on the long-lasting question that whether advertising is a cost or an investment. Our results suggest that in the retail setting, advertising is an investment because it can contribute to the intangible assets and thus further increase shareholder value and the firm's profitability.

LIMITATIONS AND FUTURE RESEARCH

Several limitations of our study should be noted. First, given data source availability constraints, we focused on the aggregated data of advertising expenditure. We measured the retailers' advertising using aggregated, quarterly and annual dollar amounts. However, advertising effectiveness depends not only on the amount invested but also on the types of messages communicated (Martinez et al., 2009). Future research can examine the moderate effect of different types of messages on the relationship between advertising timing and its effectiveness. Secondly, because of data source limitation, our sample contains only large, publicly traded retailers in the United States. Whether our results can be generalizable to smaller retailers should be explored in the future. Thirdly, we only used one strategy to measure the timing of advertising, thus failing to capture the dynamic process of advertising. For example, our measurement cannot distinguish retailers who spend the majority in the off season from those that spend in the peak season, even though the former is rare in the marketplace.

Our work also reveals several important new avenues for future research, such as examining the impact of firm and industry boundary conditions. For example, we found that compared to retailers with a larger advertising budget, advertising concentration had a greater influence on retailers with lower advertising expenditure. Therefore, it would be interesting to explore whether this effect remains true for small size retailers when they have more limited resources. Moreover, it will also be important to examine whether findings hold in other sectors such as manufacturing or service companies.

In summary, in this paper, we do not aim to propose a one-size-fits-all advertising strategy. Instead, we view this study as an important first step in establishing that timing is an important aspect when firms create their advertising strategy.

CONCLUSION

Using longitudinal data of 113 retailers from 2008-2015, this study is the first to empirically examine whether the timing of advertising can influence a retailer's performance, and in what way. By integrating product market and financial metrics into one study, our research underscores the importance of advertising concentration and provides a more comprehensive picture of advertising effectiveness in the retail setting.

Our results indicate that a retailer's advertising has both an immediate effect and long-term effect. Specifically, it can influence a retailer's sales in the short-term, while also having a strong carryover effect. However, merely increasing advertising investments cannot enhance the shareholder value (Tobin's q) nor the firm's profitability (ROA). Advertising concentration, which reflects when a retailer advertises and how it allocates the advertising budget, has a significant impact on shareholder value and profitability. Retailers who allocate their advertising evenly can achieve a better financial result. Notably, this effect is moderated by the overall advertising expenditure. Compared to retailers with a larger advertising budget, advertising concentration had a greater influence on retailers with lower advertising expenditure.

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LIST OF APPENDICES

APPENDIX A

Examples of Retailers Included in Our Sample

2-Digit SIC	Firm Names
52	Calloway's Nursery, Home Depot, Lowe's
53	Neiman Marcus, Dollar Tree, Family Dollar Stores, Five Below,Tuesday Morning
54	GNC, Vitamin Shoppe, Kroger, Publix, Whole Foods
55	Caseys General Stores, Advance Auto Parts, Autozone
56	Burlington, Express, Mens Wearhouse, Ann Inc, Abercrombie & Fitch, Gap, Ross Stores
57	Bed Bath & Beyond, Container Store, Pier 1 Imports, Sears, Mattress Firm, Best Buy, Hhgregg
58	Aramark
59	CVS, Barnes & Noble, Office Depot, Staples, Blue Nile, Tiffany & Co, Toys R Us, Amazon.com, Overstock.com, Wayfair

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PROFESSIONAL AFFILIATIONS
American Marketing Association
Academy of Marketing Science
Society for Marketing Advances

PROFESSIONAL SERVICE ACTIVITIES
Reviewer, 2016 VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations
Reviewer, American Marketing Association Summer Marketing Educator's Conference
Reviewer, 2016 American Marketing Association Winter Marketing Educator's Conference
Reviewer, 2015 American Marketing Association Winter Marketing Educator's Conference
Reviewer, 2015 Society for Marketing Advances Conference
Reviewer, 2015 Academy of Marketing Science Annual Conference
Reviewer, 2014 Society for Consumer Psychology Annual Conference
Reviewer, 2014 Society for Marketing Advances Conference
Reviewer, 2013 International Conference on Marketing Studies

CONFERENCE PRESENTATIONS
- Zhang, C. & King, R. (2015). What Do We Know About Online Exclusive and In-store Only Promotions? Omni-channel Retailer Pricing Strategy Effects on Consumer Search Efforts and Expectation. AMA Summer Marketing Educator's Conference. Chicago, IL.
- Zhang, C, Vorhies, D & Morgan, N (2015). An Empirical Examination of the Antecedents of Retail Brand Equity. AMA Winter Marketing Educator's Conference. San Antonio, TX.

- Zhang, C., Kashmiri, S. & Cinelli, M. D (2015). How Does Brand Age Influence Consumers' Attitudes to Firm's Unethical Behaviors? 2015 Academy of Marketing Science (AMS). Denver, CO.
- Zhang, C., Du, L., Ezell, D. & Hou,J.(2015). Donating Your Money and Words: Determining the Antecedents of Positive Word of Mouth for Non-Profit Organizations. Society for Marketing Advances Conference (SMA). San Antonio, TX.
- Zhang, C. & Cinelli, M. D. (2015). How Does Online Observational Learning Influence Consumers' Purchase Decisions? Society for Marketing Advances Conference (SMA). San Antonio, TX.
- Zhang, C. & Cinelli, M. D. (2014). The Effect of Non-Monetary and Monetary Threshold-based Promotions on Product Perceived Quality. Society for Marketing Advances Conference (SMA). New Orleans, LA.
- Zhang, C. & Cinelli, M. D. (2014). Suddenly, It Becomes Better: the Effect of Threshold-Based Shipping on Product Perceived Quality. Society for Consumer Psychology (SCP), Miami, FL.
- Zhang, C. Howie, K.& Carmona, B. (2013). Purchase Decision Making of Private Label Brands: The Moderating Role of PLB-Store Association. Southeast Marketing Symposium (SMS). Baton Rouge, LA.

HONORS AND AWARDS
Inaugural AMS Doctoral Consortium Fellow, May 2015
Academy of Marketing Science Travel Grant, May 2015
Society for Marketing Advances Doctoral Consortium Fellow, November 2014
Alpha Iota Delta (honored for academic excellence in the decision sciences), March 2011
Beta Gamma Sigma (premier honor society for academic excellence in business school), 2011
HUST Graduate Student Scholarship, September 2009 & 2010

COURSES TAUGHT
Marketing Principles
Advertising and Promotion