

UNDERSTANDING CORPORATE SOCIAL
RESPONSIBILITY AND BRAND EQUITY: AN
INVESTIGATION OF RESTAURANT BRAND
ATTRIBUTES AND CUSTOMER TRAITS

By

SHIJUN “MICHAEL” LIN

Bachelor of Science in Hospitality Administration

Oklahoma State University

Stillwater, OK

2013

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF SCIENCE
July, 2016

UNDERSTANDING CORPORATE SOCIAL
RESPONSIBILITY AND BRAND EQUITY: AN INVESTIGATION OF
RESTAURANT BRAND ATTRIBUTES AND CUSTOMER TRAITS

Thesis Approved:

Dr. Yeasun Chung

Thesis Adviser

Dr. Jerrold Leong

Dr. Jing Yang

ACKNOWLEDGEMENTS

Foremost, I would like to express my sincere gratitude to my advisor Dr. Yeasun Chung for her continuous support of my Master's study and research, and for her patience, motivation, enthusiasm, and immense knowledge. Her guidance helped me in all of the research and writing of this thesis. I could not have imagined having a better advisor and mentor for my Master's study.

Besides my advisor, I would like to thank the rest of my thesis committee, Dr. Jerrold Leong and Dr. Jing Yang, for their encouragement and insightful comments.

My sincere appreciation also goes to Dr. Ben Goh, Dr. Hailin Qu, and Dr. Frank Tsai for offering me numerous precious opportunities in the School of Hotel and Restaurant Administration and enriching my experiences in research, teaching, and service within our school.

I thank my friends at Oklahoma State University, Tian, Chang, Reginald, Seza, Borham, Haemi, and Jin Young, for the stimulating discussions and for all the fun we have had in the last two years. Particularly, I am grateful to Dr. Jingyan Liu and Dr. Hui Fu from Sun Yat-Sen University for enlightening me with my first glance into research.

Last but not least, I would like to thank my family: my parents for giving birth to me in the first place and supporting me spiritually throughout my life, and particularly my wife, Xinyi Cai, for her consistent love and understanding through my Bachelor's and Master's study.

Name: SHIJUN “MICHAEL” LIN

Date of Degree: JULY, 2016

Title of Study: UNDERSTANDING CORPORATE SOCIAL RESPONSIBILITY AND BRAND EQUITY: AN INVESTIGATION OF RESTAURANT BRAND ATTRIBUTES AND CUSTOMER TRAITS

Major Field: HOSPITALITY ADMINISTRATION

Abstract: There has been raising awareness of social responsibility from stakeholders, especially from customers, in the restaurant industry. The extant research still needs a better understanding of multi-level corporate social responsibility (CSR) and the relationship between CSR and brand equity, which includes perceived quality, brand awareness, brand image, and brand loyalty. This study focused on four distinct types of CSR (food, employment, community, and environment) and included a control scenario with no CSR practices involved. The purposes of this study were: 1) to investigate the impact of CSR on brand equity and whether a particular CSR affects brand equity differently; and 2) to examine whether brand attributes and customer traits (which are brand size, brand segment, brand identity and self-perception on health and environment) affect the relationship between CSR and brand equity. This study distributed scenario-based surveys to United States restaurant patrons and collected 348 usable responses. Factorial Analysis of Variance (ANOVA) was used to examine the purposes of this study. The results indicated that food, employment, community, and environment CSR practices could positively impact customers' perceived quality and brand image. Exclusively, food CSR practices could positively affect customers' brand loyalty. Further, the findings indicated that brand size, brand segment, and brand identity change the amounts or types of CSR effects. This study contributed to the understanding of the relationship between CSR and brand equity in the restaurant industry and raised restaurant owners and managers' attentions on the importance and impact of CSR on their business.

TABLE OF CONTENTS

CHAPTER I INTRODUCTION	1
Background: Corporate Social Responsibility and Brand Equity	2
Purpose	3
CHAPTER II LITERATURE REVIEW	5
Corporate Social Responsibility (CSR)	6
Brand Equity	9
The Relationship of CSR and Brand Equity	10
Brand Size	12
Restaurant Segment.....	13
Brand Identity.....	14
Self-perception	15
CHAPTER III METHODS.....	18
Research Design.....	19
Instrument	22
CHAPTER IV RESULT.....	25
Pilot study.....	26
Respondents' demographic profile	26
Measurements of brand equity	27
Hypotheses Testing	29
Perceived Quality.....	30
Brand Awareness	32
Brand Image.....	33
Brand Loyalty	34
Moderation on the relationship between CSR and brand equity.....	36
Brand size as a moderator	37
Brand segment as a moderator.....	40
Brand identity as a moderator	44
Health and environmental consciousness as moderators.....	47
CHAPTER V CONCLUSION AND DISCUSSION	51
Conclusion.....	52
The impacts of CSR practices on brand equity.....	56
The impacts of corporate and personal traits on brand equity	57
Theoretical contributions and managerial implications	60
Theoretical contributions	60
Managerial Implications	61
Limitation and further research.....	61
REFERENCE	63
APPENDICES	73

LIST OF TABLES

Table	Page
1 CSR subjects and supporting literatures.....	20
2 CSR scenario	21
3 Variable details.....	23
4 Respondents' demographic information	27
5 Exploratory factor analysis (EFA) for brand equity attributes.....	28
6 Descriptive statistics for perceive quality by CSR types (H1a)	31
7 ANOVA test for perceived quality by CSR types (H1a)	31
8 Post hoc test result for perceived quality between CSR types (H1a).....	31
9 Descriptive statistics for brand awareness by CSR types (H1b)	32
10 ANOVA test for brand awareness by CSR types (H1b)	32
11 Descriptive statistics for brand image by CSR types (H1c).....	33
12 ANOVA test for brand image by CSR types (H1c)	33
13 Post hoc test result for brand image between CSR types (H1c).....	34
14 Descriptive statistics for brand loyalty by CSR types (H1d)	35
15 ANOVA test for brand loyalty by CSR types (H1d).....	35
16 Post hoc test result for brand loyalty between CSR types (H1d)	35
17 Descriptive statistics for brand equity by CSR types and brand size (H2a-H2d)	37
18 Main effects and interaction results for brand equity by CSR types and brand size (H2a-H2d)	38
19 Descriptive statistics for brand equity by CSR types and brand segment (H3a-H3d) ..	41
20 Main effects and interaction results for brand equity by CSR types and brand segment (H3a-H3d)	43
21 Descriptive statistics for brand equity by CSR types and brand identity(H4a-H4d) ..	44
22 Main effects and interaction results for brand equity by CSR types and brand identity (H4a-H4d)	46
23 Descriptive statistics for brand equity by CSR types and health consciousness (H5a- H5d)	48
24 Descriptive statistics for brand equity by CSR types and environmental consciousness (H6a-H6d)	48
25 Main effects and interaction results for brand equity by CSR types and health consciousness(H5a-H5d)	50
26 Main effects and interaction results for brand equity by CSR types and environmental consciousness(H6a-H6d)	50
27 Hypotheses test results	53

LIST OF FIGURES

Figure	Page
1 Scree plot for exploratory factor analysis	29
2 Interaction between CSR types (scenarios) and brand size on brand equity	40
3 Interaction between scenario and brand segment on brand equity	43
4 Interaction between scenario and brand identity on brand equity	47

CHAPTER I

INTRODUCTION

This chapter introduces the background of corporate social responsibility (CSR) and brand image in the restaurant industry, the research and contentions of CSR events and their impact on brand equity. Problem statement, purpose, objectives, and significance of this study are discussed in this chapter to summarize this study briefly.

Background: Corporate Social Responsibility and Brand Equity

In recent decades, corporate social responsibility (CSR) has become a popular topic among corporate firms. In response to increasing awareness of social responsibility from stakeholders, especially customers, firm executives have begun to shift their attention toward developing effective CSR practices (Luo & Bhattacharya, 2006). In doing so, they seek to use CSR practices to boost customer satisfaction in order to ultimately develop market value.

The restaurant industry, the second largest private sector employer in the United States, has a major impact on the US economy. In 2015, the industry contributed USD \$709.2 billion and employed 15.7 million personnel (NRA, 2015). Not only are there more than 1 million restaurant locations in the United States, but the US restaurant industry occupies a great number of physical stores where diverse customers interact with companies. However, according to Madison Gas and Electric (2010), those restaurants consume three times more energy per square foot than most other types of commercial buildings, despite current customers' rising expectations that restaurants engage CSR practices. McDonald's 2014 Good Business Report highlighted that McDonald's restaurants served 30% more healthy food in 2014 than in 2012. They also purchased 132,186 pieces of energy-efficient equipment and saved \$14.2 million in energy costs during the last few years. As part of McDonald's CSR activities, Ronald McDonald House Charities served 5.7 million children and their families in 2016 (McDonald's, 2016). In effect, McDonald's example shows how highly restaurant corporations esteem CSR practices.

Implementing CSR is not only an obligation to be met by firms, but can also be a strategic management process for businesses. From a strategic perspective, CSR is not a short- or midterm investment, but a long-term one. CSR practices tend to gradually benefit a business and help to build intangible value in the form of brand equity over time. In turn, brand equity, as an intangible asset, can foster sustainable competitive advantage that is difficult to mimic and can benefit business in the long term.

Purpose

This study intends to understand the relationship between types of CSR and brand equity. For one, the level of corporate attributes, including brand size and restaurant segment, and personal traits, including brand identity and perceptions of health and the environment, can affect that relationship.

This study has two major purposes. First, it aims to examine the impacts of restaurant industry-specific CSR activities on brand equity. Although previous studies on CSR have tended to adopt dimensions developed in other industries, this study claims that restaurant businesses' CSR practices and their impacts on brand equity should be understood with more industry-specific categories. For example, food quality and healthy consumption are core outcomes of the restaurant business, although CSR literature has hardly focused on those topics. As such, this study's findings can equip researchers with a better understanding of different aspects of CSR practices in the restaurant industry. Therefore, one objective is to investigate how particular types of CSR exert different impacts on brand equity in the restaurant industry.

Second, this study aims to test the relationship between CSR and brand equity according to levels of four internal and external factors: brand size, restaurant segment,

brand identity, and perceptions of health and the environment. All of those factors can help to clarify how brand equity is built by practicing CSR. Based on that purpose, this study seeks to examine whether brand size, restaurant segment, brand identity, and perceptions of health and the environment moderate the relationship between CSR and brand equity.

CHAPTER II

LITERATURE REVIEW

This chapter introduces past academic literature on research of corporate social responsibility (CSR), brand equity, and their association in the restaurant industry. Brand size, restaurant segment, corporate ability, customer self-perception, and their moderating effects are discussed.

Corporate Social Responsibility (CSR)

For decades, CSR has been a popular topic in business that has recently gained momentum. The first definition of *CSR* dates back to Bowen (1953), who wrote, “Corporate social responsibility expresses a fundamental morality in the way a company behaves toward society. It follows ethical behavior toward stakeholders and recognizes the spirit of the legal and regulatory environment” (p. 13). More recently, Dahlsrud (2008) summarized that CSR has five dimensions: the environmental, social, and economic, as well as stakeholder concerns and voluntariness. Based on this study’s analysis, the definition used most frequently for *CSR* has been “a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis” (Commission of the European Communities, 2001). That definition includes all five dimensions of CSR to explain how corporations adopt CSR activities. By extension, this study adopts that definition to explain CSR practices.

In past research, CSR practices have been examined with different focuses. Namkung and Jang (2013) studied green practices in the restaurant industry with various restaurant types. In their study, *green practices* partly coincides with the term used in this study, which indicates that green practices focus only on environmental and social dimensions, such as locally grown, healthy, and sustainably produced products. Roberts (1992) used stakeholder theory to explain how CSR practices suit corporate strategies to satisfy the goals of stakeholders, who exert an external impact on a corporation’s CSR practices toward pursuing better outcomes. Furthermore, having conducted a qualitative study involving interviews with socially responsible firms’ founders to justify the

importance of CSR and business ethics, Joyner and Payne (2002) categorized corporate responsibilities as discretionary, ethical, legal, or economic.

This study explains CSR practices in terms of four aspects: food, employment, community, and environment. Of course, food is the core product of the restaurant industry. If a food crisis or scandal arises for a restaurant, its brand could suffer from financial loss and disrepute (Berg, 2004; Ortega, Wang, & Wu, 2011). By the same token, firms can also improve their bottom lines and reputations with positive acts of CSR. For example, McDonald's (2016) served 30% more healthy food in 2014 than in 2012, and Yum! (2016) aimed for "15% of our menu items in each category being at one-third of the Recommended Daily Allowance in every country in which we operate by the end of 2015."

The restaurant industry is a labor-intensive industry involving diverse labor and human rights issues. Since customers' primary interactions with a restaurant brand are with employees on the front line, food- and employment-related CSR practices are effective ways for a restaurant brand to build up a reputation that can weather potential scandal. Darden (2016) has reported that its restaurants' workforce is 52% women and 45% minorities and that the firm provides great internal promotion for employees. Similarly, McDonald's (2016) has striven to increase its employees' satisfaction, and 83% of its managers considered McDonald's to be a great place to work in the firm's 2014 report.

Community-responsive CSR practices revolve around local community support and financial donations. Restaurants earn business from consumers who are physically near their locations, and through community-based CSR, they can enhance consumer awareness of particular brands to prompt purchase intentions. Yum! (2016) has donated

“more than \$600 million, equivalent to nearly 2.4 billion meals since 2007” and “tracked more than 30,000 employee and franchisee volunteer hours.” Moreover, Darden (2016) established restaurant community grants totaling \$2.2 million that are available to more than 1,135 nonprofit organizations.

Lastly, environmental CSR practices are critical to the restaurant industry. The National Restaurant Association (2015a) published a forecast of 2016 restaurant industry trends, among which sustainability is a top priority. It called upon restaurant owners and managers to start reducing their businesses’ energy consumption and waste and to protect the environment. Environmental CSR practices can support restaurant brands with positive public images. Darden (2016) improved water conservation by 23.7%, reduced greenhouse gas emissions by 16.4%, and enhanced energy efficiency by 12.5% from 2008 to 2014. As another example, McDonald’s (2016) saved \$14.2 million in energy costs during 2015 by installing 132,186 pieces of energy-efficient. In sum, Maloni and Brown (2006) have suggested that food health and safety, labor and human rights, community, and environment are critical factors of CSR in food-industry supply chains, even if those four factors emerge in different aspects of those chains.

The ultimate goal of adopting CSR practices is to maximize a corporation’s value (Luo & Bhattacharya, 2006; McGuire, Sundgren, & Schneeweis, 1988; Servaes & Tamayo, 2013), which matches the goal of a corporation’s shareholders. Researchers have claimed that shareholders believe that CSR can accumulate long-term value for a corporation by building positive public impressions (Neu, Warsame, & Pedwell, 1998). Such public impressions can create a competitive advantage in light of brand differentiation among competitors.

Brand Equity

Amid fierce competition, brand value has become an essential topic for corporations that can add great value to their businesses. For one, higher brand value can increase the long-term profitability of a corporation (Aaker, 1991). Often been used interchangeably with *brand value* (Kamakura & Russell, 1993; Keller, 1993; Stahl, Heitmann, & Neslin, 2012), *brand equity* as defined by Aaker (1991, p. 15) is “a set of brand assets and liabilities linked to a brand, its name and symbol, that adds to or subtracts from the value provided by a product or service to a firm and/or to the firm’s customers.” Per that definition, brand equity is a valuable asset that adds value to a firm.

Researchers have primarily studied one of three views of brand equity: the product view (Park & Srinivasan, 1994), the financial view (Mahajan, Rao, & Srivastava, 1993; Simon & Sullivan, 1993), and the customer-based view (Aaker, 1991; Keller 1993). Of course, each view has its strengths and weaknesses. The product view focuses on ongoing market activities in order to estimate brand equity, whereas the financial view draws upon current subjective judgments and objective measures to assess brand equity in the future. By contrast, the customer-based view evaluates brand equity in terms of customers’ familiarity with, awareness of, and preference for a particular brand (Ailawadi, Lehmann, & Neslin, 2003). By extension, this study, which focuses on customers’ perceptions, adopts customer-based brand equity to explain brand equity.

Customer-based brand equity consists of four components: perceived quality, brand awareness, brand image, and brand loyalty (Hyun & Kim, 2011; Kim & Kim, 2005; Yoo, Donthu, & Lee, 2000). *Perceived quality* refers to customer judgments on a product’s or service’s overall features provided by the restaurant and focuses on

subjective assessments of a product or service instead of objective measurements of quality (Yoo, Donthu, & Lee, 2000). Such a definition indicates that the perceived quality of a product or service can vary based on different customers' perspectives. By extension, Yoo, Donthu, and Lee (2000) explained that the level of perceived quality determines the level of brand equity.

Aaker (1996) has defined *brand awareness* as “the strength of a brand’s presence in the customer’s mind.” Brand awareness emphasizes the recognition of a brand when customers purchase a product or service. Higher brand awareness leads to customers’ having higher purchase intentions (Aaker, 1991; Hutter, Hautz, Dennhardt, & Füller, 2013).

Brand image refers to “perceptions about a brand as reflected by the brand associations held in consumer memory” (Keller, 1993, p. 3). Customer preference for a brand can create a positive brand image, which can in turn stimulate customer loyalty and enhance their word-of-mouth behavior (Jalilvand, & Samiei, 2012; Martenson, 2007).

Lastly, *brand loyalty* is defined as a deep commitment to purchasing favorable products consistently from the same brand in the future (Oliver, 1999). A high level of brand loyalty can mean customer retention, although other brands’ marketing strategies can encourage customers’ switching behavior. Brand loyalty furthermore exerts a strong positive impact on a corporation’s profitability in the long term, which can add value to the corporation.

The Relationship of CSR and Brand Equity

The relationship of a corporation’s CSR practices and its brand equity has been demonstrated by researchers (He & Lai, 2014; Lai, Chiu, Yang, & Pai, 2010). According

to such research, a halo effect is a cognitive bias because a measure of a trait can flow over into a measure of another trait in psychology (Thorndike, 1920). In business, the halo effect can be a holistic or partial measure of a corporation's spilling over into a specific measure. For example, fair-traded coffee beans from Starbucks might prompt customers to extend that CSR image to the taste and quality of Starbucks's products. In other words, CSR practices can cultivate a halo effect on brand equity by extending components into other domains (Klein & Dawar, 2004).

Resource-based view (RBV) theory supports the relationship between CSR and brand equity (McWilliams & Siegel, 2010). RBV considers a firm to be a bundle of tangible and intangible resources that provide competitive advantages (Wernerfelt, 1984). Sustainable competitive advantages can be gained when those resources are heterogeneous, scarce, or immobile. CSR can also cultivate positive reputations and improve brand images and loyalty, which are dimensions of brand equity. Such intangible resources are difficult to mimic and can create sustainable competitive advantage for a firm (Jones & Bartlett, 2009). Therefore, the relationship between CSR and brand equity contributes strategic value to a firm.

Thus far, research has examined the relationship between CSR and each dimension of brand equity. For instance, He and Lai (2014) found that CSR practices can positively influence brand loyalty with the mediating effect of brand functional and symbolic images. In addition, Hsu (2012) showed that CSR practices exert indirect effects on brand loyalty via brand identity and customer satisfaction. Moreover, Lai, Chiu, Yang, and Pai (2010) tested the direct relationship between CSR and brand equity in terms of the four dimensions listed above, as well as examined the indirect relationship

between the two constructs via corporate reputation. Based on the literature review, four hypotheses were proposed to examine whether the impact of CSR on brand equity and whether a particular CSR affect differently:

H1a: There are differences in perceived quality level between CSR types.

H1b: There are differences in brand awareness level between CSR types.

H1c: There are differences in brand image level between CSR types.

H1d: There are differences in brand loyalty level between CSR types.

** CSR types include food, employment, community, environment, and non-CSR control type.*

Brand Size

Brand size is a critical concept when researchers examine the relationship between brand and other business components (McWilliams & Siegel, 2000). Burke, Logsdon, Mitchell, Reiner, and Vogel (1986) claim that as a company grows, it attracts more attention from outside stakeholders. The big companies have to adopt CSR practices to satisfy those stakeholders' needs. Prior researchers define firm size as the firm's number of employees or total assets (Peng & Luo, 2000; Schmidt & Fowler, 1990; Tsoutsoura, 2004). In this study, brand size is defined as the number of physical units within a particular brand.

Researchers have utilized firm size as a part of CSR studies. Stanwick and Stanwick (1998) use firm size as an independent variable to examine its relationship with corporate social performance. McWilliams and Siegel (2000) test the relationship between CSR and corporate social performance, with firm size as a mediator. In addition, Chauvey and Giordano-Spring (2014) conduct legitimacy analysis of CSR disclosures, with firm size a major independent variable. In this study, we attempt to test the impact of

CSR on brand equity. Bigger size allows a brand to have more exposure to customers and more opportunities to build brand equity from CSR practices. Based on the literature review, four hypotheses were proposed to examine whether brand size affect the relationship between CSR and brand equity:

H2a: CSR conducted by a large brand leads to a higher level of perceived quality than by a small brand size.

H2b: CSR conducted by a large brand leads to a higher level of brand awareness than by a small brand size.

H2c: CSR conducted by a large brand leads to a higher level of brand image than by a small brand size.

H2d: CSR conducted by a large brand leads to a higher level of brand loyalty than by a small brand size.

Restaurant Segment

Restaurants are often divided into smaller groups. The restaurant industry is segmented according to the service customers receive in a restaurant or the average amount of the check (Knutson, Stevens, & Patton, 1996; Namkung & Jang, 2013). Restaurants in a segment tend to target similar markets and compete for similar resources. In food service research, restaurant segment plays an essential role as a category to analyze the different levels of dependent variables. It is not accurate to treat the restaurant industry as a whole when researchers intend to investigate customers' perceptions or opinions. Empirical studies show that different restaurant segments have customers with divergent expectations of food and service quality (Harrington, 2001; Knutson, Stevens, & Patton, 1996). These differences can vary upon how CSR practices explain brand

equity. Namkung and Jang (2013) prove that perceived quality, green brand image, and customer green behavioral intentions have significant differences among different restaurant segments: upscale casual, casual, and fast food. In this study, restaurant segments are categorized into limited service restaurant and full service restaurant. Based on the literature review, four hypotheses were proposed to examine whether brand segment affect the relationship between CSR and brand equity:

H3a: CSR conducted by different restaurant segments leads to different level of perceived quality.

H3b: CSR conducted by different restaurant segments leads to different level of brand awareness.

H3c: CSR conducted by different restaurant segments leads to different level of brand image.

H3d: CSR conducted by different restaurant segments leads to different level of brand loyalty.

Brand Identity

According to social identity theory, an individual tends to search and identify with a social category; this social category can enhance this individual's self-esteem (Brown, 2000). In other words, this individual tries to connect with other favored components in order to satisfy his/her personal needs. This identity process can encourage an individual to behave positively.

In the business field, Bhattacharya and Sen (2003) argue that a firm or its brand can be an attractive and meaningful social category with which an individual can identify. Therefore, brand identity is defined as customer involvement with and acknowledgement

of a specific brand. Customers with strong brand identity are more willing to support this company and engage in their activities. He and Li (2011) test the indirect relationship between brand identity with brand loyalty via customer satisfaction. Brand identity cannot relate to brand equity without actual company activities, such as CSR practices. This study argues that customers with higher brand identity can better react to a restaurant brand's CSR practice and build brand equity accordingly. Based on the literature review, four hypotheses were proposed to examine whether brand identity affect the relationship between CSR and brand equity:

H4a: CSR observed by customers with high brand identity leads to a higher level of perceived quality than by customers with low brand identity.

H4b: CSR observed by customers with high brand identity leads to a higher level of brand awareness than by customers with low brand identity.

H4c: CSR observed by customers with high brand identity leads to a higher level of brand image than by customers with low brand identity.

H4d: CSR observed by customers with high brand identity leads to a higher level of brand loyalty than by customers with low brand identity.

Self-perception

Customer perception affects their purchasing behavior via forming a set of values in their mind. Self-perception has been examined as an important precedent on impacting customer attitudes about products or services, which further influences purchasing behavior (Cook, Kerr, & Moore, 2002; Sparks & Shepherd, 1992). Self-perception is how people acknowledge their self-identity in value sets. People with high self-perception in a specific area will pay more attention to products or services related to that area. Health

and environment are two major factors in the restaurant customers' decision making process (Tarkiainen & Sundquist, 2009; Wilkins & Hillers, 1994). In these studies, health-consciousness and environmental-consciousness are adopted to analyze customer self-perception.

Namkung and Jang (2013) conclude that customers with higher health-consciousness and environmental-consciousness levels act more positively in perceived quality, green brand image, and green behavioral intentions. The level of self-perception impacts the level of brand image and perceived quality under the same level of CSR. In this study, we predict that health consciousness has a moderating effect on the relationship between food CSR practice and brand equity, while environmental consciousness has a moderating effect on the relationship between environment CSR practice and brand equity. Based on the literature review, eight hypotheses were proposed to examine whether customer self-perception affect the relationship between CSR and brand equity:

H5a: CSR observed by customers with high health consciousness leads to a higher level of perceived quality than by customers with low health consciousness.

H5b: CSR observed by customers with high health consciousness leads to a higher level of brand awareness than by customers with low health consciousness.

H5c: CSR observed by customers with high health consciousness leads to a higher level of brand image than by customers with low health consciousness.

H5d: CSR observed by customers with high health consciousness leads to a higher level of brand loyalty than by customers with low health consciousness.

H6a: CSR observed by customers with high environmental consciousness leads to a higher level of perceived quality than by customers with low environmental consciousness.

H6b: CSR observed by customers with high environmental consciousness leads to a higher level of brand awareness than by customers with low environmental consciousness.

H6c: CSR observed by customers with high environmental consciousness leads to a higher level of brand image than by customers with low environmental consciousness.

H6d: CSR observed by customers with high environmental consciousness leads to a higher level of brand loyalty than by customers with low environmental consciousness.

CHAPTER III

METHODS

This chapter discusses the research design of a sampling method and literature support on scenario items. Further, procedures and instruments in this study are specifically described in this chapter.

Research Design

The target population in this study was restaurant patrons in the United States. A scenario-based self-administered survey was distributed via Amazon Mechanical Turk, which is a popular crowdsourcing marketplace. Many researchers have used this tool to collect primary data. According to Paolacci, Chandler, and Ipeirotis (2010), Amazon Mechanical Turk has a similar level of effect compared to other traditional methods, such as university students and Internet Boards. Further, it is cost-efficient and has a higher completion rate.

The survey was comprised of three sections. The first section questions asked respondents about their most recent restaurant experience. The second provided one of four scenarios showing that the restaurant visited takes responsibility for their impact on food, employment, community, or the environment. Then, questions about perceived quality, brand awareness, brand image, and brand loyalty were asked. The last section included demographic questions.

This study proposed four dimensions of restaurant CSR practices: food, employment, community, and the environment. These four categories were identified based on industry news and previous literature (Choi & Parsa, 2007; Hartmann, Heinen, Melis, & Simons, 2013; Namkung & Jang, 2007; Oberseder, Schlegelmilch, & Murphy, 2013; O'Connor and Spangenberg, 2008). Table 1 demonstrated CSR practices in four categories and supporting literatures. Four scenarios manipulated the type of CSR practices in restaurants: food, employment, community, and the environment. In the food category, CSR practices included providing nutrition information, offering healthy options, serving quality products, sourcing organic substitutes, and securing fresh

ingredients. Further, providing adequate training and fair pay, assuring employee diversity and a great work environment, as well as responsible management of employees were key CSR practices in the employment category. Under the community category, major CSR practices supported local food sources and businesses, donated to charity organizations, volunteered in the community, and supported education. Finally, environmental CSR practices protected environments, reduced energy consumption, limited pollution and waste discharge, and invested in R&D for the environment. This study utilized all of these subjects to build up scenarios about CSR practices for manipulation.

Table 1, CSR subjects and supporting literatures		
Category	Subject	Authors
Food	Nutrition Information	Choi and Parsa (2007)
Food	Healthy Options	Namkung and Jang (2007)
Food	Quality Product	Namkung and Jang (2007)
Food	Organic	Choi and Parsa (2007)
Food	Fresh	Namkung and Jang (2007)
Employment	Adequate training	O'Connor and Spangenberg (2008)
Employment	Diversity	Oberseder, Schlegelmilch, and Murphy (2013)
Employment	Fair pay	Hartmann, Heinen, Melis, and Simons (2013)
Employment	Work environment	Hartmann, Heinen, Melis, and Simons (2013)
Employment	Responsibility	O'Connor and Spangenberg (2008)
Community	Local food	Hartmann, Heinen, Melis, and Simons (2013)
Community	Charity	Hartmann, Heinen, Melis, and Simons (2013)
Community	Involvement	Hartmann, Heinen, Melis, and Simons (2013)
Community	Local business	O'Connor and Spangenberg (2008)
Community	Education support	Oberseder, Schlegelmilch, and Murphy (2013)
Environment	Protection	Hartmann, Heinen, Melis, and Simons (2013)
Environment	Energy	O'Connor and Spangenberg (2008)
Environment	Pollution	Oberseder, Schlegelmilch, and Murphy

		(2013)
Environment	Waste	Oberseder, Schlegelmilch, and Murphy (2013)
Environment	R&D in environment protection	Oberseder, Schlegelmilch, and Murphy (2013)

At the beginning of the survey, respondents were asked to answer about their self-perception of health and the environment. Respondents were asked to recall the restaurant they most recently visited and their identity of this restaurant brand. After the first session, they were randomly assigned to one five groups of respondents reading a distinct scenario: food, employment, community, the environment, or the control, which would not read any scenario (See Table 2).

Each scenario adopted attributes from the literature listed in table 1 and real CSR practices from current restaurant brands. These scenarios directed respondents to the most recent restaurant that conducts CSR practices. Respondents were asked to read the scenario carefully and picture it with their previous dining experience. Finally, they were asked to rate the restaurant brand equity items after a hypothetical scenario is given. The combination with given scenario and restaurant patron experience could ensure respondents articulate the perception on CSR practices of the distinct category.

Table 2, CSR scenarios	
Food	Suppose that the restaurant you visited undertakes social responsibility initiative by promoting a balance and healthy eating. The restaurant offers healthy options, such as low fat and low-calorie menu items. Nutrition information is provided for all the menu items. Organic substitute item are also available upon request. The restaurant always tries to select good suppliers or distributors to ensure that your food is made with fresh, high-quality ingredients.
Employment	Suppose that the restaurant you visited undertakes social responsibility initiative through employee relation activities such as welfare, training and development, promotion, recruitment and work environment. The restaurant strives for hiring diversified employees with fair pay. They build up an adequate training and ensure good

	work environment for their employees.
Community	Suppose that the restaurant you visited undertakes social responsibility initiative through community related activities. The restaurant supports local community through local food use, donation, and employee engagement in community service. The restaurant also sponsors local events, and provides funding for nonprofits and schools in needs.
Environment	Suppose that the restaurant you visited makes efforts to o reduce food waste and reduce the use of chemicals, while also conserving energy and water. The restaurant utilizes eco-friendly products to protect environment. Some of their investment specially goes to environmentally friendly production and energy saving equipment.

Instrument

This study also used both survey measurements and secondary data to accomplish objectives. Brand size and restaurant segment were measured by using secondary data from corporate 10-K reports. This study defined a restaurant brand that has more than 50 physical units in the United States as a large brand; those with fewer than 50 physical units are a small brand. Further, this study defined a restaurant brand that asks customers to pay after eating as full service restaurant, while a restaurant that requires customers to pay before eating was branded a limited service restaurant (Barber, Barth, & Blum, 2011). Based on the restaurant the respondents selected, the brand size and restaurant segment of those brands were found.

This study adopted previously justified and validated items for brand identity, self-perception, and brand equity from previous studies and modifies to better match this study's scenarios. For survey measurements, all items used 7-point Likert scale questions, with 1 representing "strongly disagree" and 7 representing "strongly agree". X represents the brand respondents choose. For brand identity, this study utilized He and Li's (2011) measures. Instruments consisted of "When someone criticizes X, it feels like a personal insult", "I am very interested in what others think about X", "X's successes are my

successes", "When someone praises X, it feels like a personal compliment", "If a story in the media criticized X, I would feel embarrassed". Further, This study measured health and environmental consciousness from Namkung and Jang (2013). Instruments included "I choose food carefully to ensure it is good" and "I think of myself as a health conscious consumer" for health consciousness, as well as "I always buy products that are friendly to the environment" and "I think of myself as an environmentally friendly consumer" for environmental consciousness. In addition, this study adopted brand awareness, brand image, perceived quality, and brand loyalty by a series of 7-point Likert scale questions, with 1 representing "strongly disagree" and 7 representing "strongly agree". Examples of questions included "Some characteristics of X come to my mind quickly" for brand awareness, "This brand is familiar to me" for brand image, "The food quality of the restaurant is good" for perceived quality, and "I intend to visit this restaurant again" for brand loyalty. Table 3 lists the measures or instruments of each variable.

Table 3, Variable details		
Variables	Measures/instruments	Data Sources
Brand size	The number of physical unit of a particular brand	10-K, industry news, trade journal
Restaurant segment	A restaurant customer pay before or after dining	10-K, industry news, trade journal
Brand Identity	1. When someone criticizes this brand, it feels like a personal insult 2. I am very interested in what others think about this brand 3. This brand's successes are my successes 4. When someone praises this brand, it feels like a personal compliment 5. If a story in the media criticized this brand, I would feel embarrassed	He and Li (2011)
Health consciousness	1. I choose food carefully to ensure good health 2. I think of myself as a health conscious consumer.	Namkung and Jang (2013)

Environmental consciousness	<ol style="list-style-type: none"> 1. I always buy products that are friendly to the environment 2. I think of myself as an environmentally friendly consumer. 	Namkung and Jang (2013)
Brand awareness	<ol style="list-style-type: none"> 1. I know what this brand looks like. 2. I can recognize this brand among other competing brands. 3. We have no difficulties in imagining this brand in mind. 4. Some characteristics of this brand come to my mind quickly. 5. The name of brand is well known in our industry. 	Yoo, Donthu, and Lee (2000) Lai <i>et al</i> (2010)
Brand image	<ol style="list-style-type: none"> 1. It has a differentiated image from other restaurant brands. 2. It tastes good compared with price. 3. It has a very clean image. 4. It has a cheerful and enchanting atmosphere. 5. This brand is familiar to me 	Kim and Kim (2004)
Perceived quality	<ol style="list-style-type: none"> 1. The physical facilities are visually appealing. 2. The appearance of staff members (clean, neat, appropriately dressed). 3. The staff is always willing to help customers. 4. The staff served ordered food accurately. 5. The food quality of the restaurant is good. 	Kim and Kim (2004) Kim and Kim (2005)
Brand loyalty	<ol style="list-style-type: none"> 1. I regularly visit this restaurant. 2. I intend to visit this restaurant again. 3. I usually use this restaurant as my first choice compared to other restaurants. 4. I would recommend this restaurant to others. 5. I would not switch to another restaurant the next time. 	Kim and Kim (2005)

For the data analysis, this study conducted analysis of variance (ANOVA) and factorial ANOVA to complete the objectives. One-way ANOVA examined the association between CSR and brand equity, via testing H1. Further, factorial ANOVAs were used to test H2, H3, H4, and H5. The analyses examined brand size, restaurant segment, brand identity, and self-perception's interaction effect on the association between CSR and brand equity.

CHAPTER IV

RESULT

This chapter presents the results of the pilot study, demographics, and exploratory factor analysis. Analysis of variance and the Tukey post-hoc test are utilized to test the hypotheses.

Pilot study

Before implementing the actual survey, a pilot study was conducted to refine survey questions and the survey's structure. The survey developed was reviewed by the hospitality faculty of a Midwest university and the content validity was established by their examination. After revising survey format and questions based on the faculty panel's feedback, the self-administered survey via paper and pencil method was distributed to students at a university in the Midwest of the United States, not only to test the reliability of survey items but to also check the length of completion time and wording. Ninety-five responses were collected. First, Cronbach's alpha for each construct was calculated to test the internal reliability when a construct is measured by multiple items in a study (Hair, Black, Babin, Anderson, & Tatham, 2006). Hair et al. (2006) suggest that the threshold for Cronbach's alpha is 0.70. All the constructs have alpha values higher than 0.70, ranging from 0.774 to 0.909. According to the faculty's suggestions, brand loyalty items are modified to better fit the definition of brand loyalty.

Respondents' demographic profile

The study's self-administered surveys were distributed via Amazon Mechanical Turk. Each respondent received 50 cents as a reward. A total of 380 responses were collected and 348 responses were usable. Table 1 shows the demographic information of respondents. This study has slightly more male (58.6%) respondents than female (40.2%). The vast majority of respondents were in the 18 to 44 age group (84.7%), followed by the 45 to 54 age group (7.8%), the 55 to 64 age group (6.0%), and the 65 or over age group (0.9%). Caucasians made up the majority of respondents (70.7%) and Asians and

Hispanics accounted for 10.1% and 9.2%, respectively. Respondents with a household income under \$30,000, \$30,000 - 49,999, \$50,000 - \$89,999, \$80,000 - \$119,999, and over \$120,000 were 29.6%, 36.2%, 18.4%, 10.1%, and 5.7%, respectively.

Approximately two-thirds of the respondents (71.8%) had at least an associate's degree: 2-year college degree (23.3%), 4-year college degree (39.9%), and a graduate degree (8.6%).

Table 4
Respondents' demographic information (n=348)

Item	Frequency (Percentage)	Item	Frequency (Percentage)
Gender		Age	
Male	204 (58.6)	18 - 24	63 (18.1)
Female	140 (40.2)	25 - 34	163 (46.8)
Missing	4 (1.1)	35 - 44	69 (19.8)
Ethnicity		45 - 54	27 (7.8)
African American	19 (5.5)	55 - 64	21 (6.0)
Asian	35 (10.1)	65 or over	3 (0.9)
Caucasian	246 (70.7)	Missing	2 (0.6)
Hispanic	32 (9.2)	Household Income	
Multiracial	8 (2.3)	Under \$30,000	103 (29.6)
Native American	6 (1.7)	\$30,000 - \$49,999	126 (36.2)
Other	2 (0.6)	\$50,000 - \$89,999	64 (18.4)
Education		\$80,000 - \$119,999	35 (10.1)
Less than High School	2 (0.6)	Over \$120,000	20 (5.7)
High School	96 (27.6)		
2-year college degree	81 (23.3)		
4-year college degree	139 (39.9)		
Master Degree	29 (8.3)		
Doctoral Degree	1 (0.3)		

Measurements of brand equity

Exploratory factor analysis (EFA) was conducted in order to identify underlying dimensions of brand equity operationalized by 16 items. Based on the result of EFA, four

factors were extracted: brand awareness, perceived quality, brand image, and brand loyalty. These factors were matched with what this study proposed based on previous literature. One item, “The food quality of the restaurant is good” was dropped from the EFA. While three out of four underlying factors had eigenvalues above 1.0, the fourth factor had a contiguous eigenvalue (0.88). Another way to determine how many factors should be kept is using a scree plot where researchers can visually assess factors in the steep curve before the first point that starts the flat line trend. The scree plot in this study’s factor analysis indicated that the fourth factor could be the turning point, like an “elbow” in the scree plot. Four factors accounted for 72.95% of the variance of all 15 items. The factor loadings of attributes varied from 0.59 to 0.89, which was above the recommended cutoff point of 0.3 that meets the requirements of statistical significance (Hair et al., 2006). The Cronbach's alpha of four factors ranged between 0.83 to 0.87, which was above the threshold of 0.7 to have high reliability and internal consistency.

Table 5
Exploratory factor analysis (EFA) for brand equity attributes

Factor	Eigenvalue	% of Variance	Cronbach's α	Factor Loading
Factor 1: Brand Awareness	6.432	42.88	0.87	
I know what this brand looks like				0.86
I can recognize this brand among other competing brands				0.85
We have no difficulties in imagining this brand in mind				0.83
Some characteristics of this brand come to my mind quickly				0.79
The name of brand is well known in the restaurant industry				0.70
Factor 2: Perceived Quality	2.328	15.52	0.83	
The staff is always willing to help customers				0.82
The appearance of staff members				0.78

(clean, neat, appropriately dressed)				
The staff serves ordered food accurately				0.77
The physical facilities are visually appealing				0.65
Factor 3: Brand Loyalty	1.340	8.94	0.83	
I usually use this restaurant as my first choice compared to other restaurants				0.89
I visit this restaurant more frequently than other restaurants				0.86
I consider myself to be loyal to this brand				0.71
Factor 4: Brand Image	0.841	5.61	0.85	
This brand has a good image in the minds of consumers				0.79
I have a good impression of this brand				0.77
I believe that this brand has a better image than its competitors				0.59

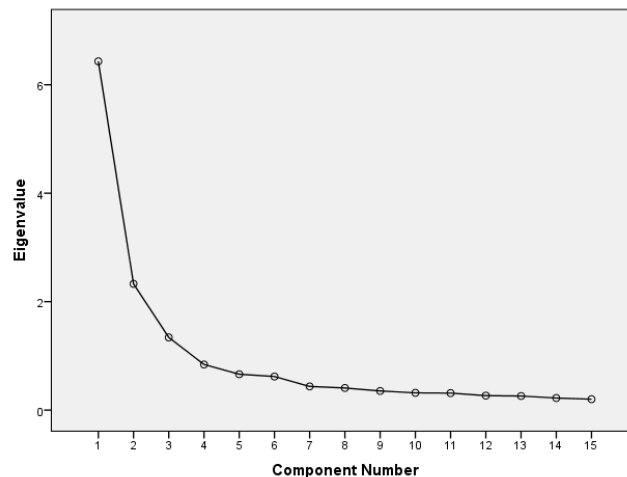


Figure 1: Scree plot for exploratory factor analysis

Hypotheses Testing

Differences in brand equity across different types of CSR

In this study, responses were collected from five different surveys having a scenario of each CSR (i.e., food related, employment-related, community-related, or

environment-related) conducted by a restaurant. Experimental conditions using five scenarios in surveys led to a categorical variable with five categories: food, employment, community, environment, and non-CSR. To examine the effects of the CSR categorical variable on four brand equity variables (i.e., perceived quality, brand awareness, brand image, and brand loyalty), this study employed an ANOVA test that detected differences in brand equity across CSR categories. Specifically, four one-way ANOVA and post hoc Tukey's tests were conducted to examine the group mean differences in perceived quality, brand awareness, brand image, and brand loyalty across CSR types. The results were able to provide statistical support for hypothesis H1a, H1b, H1c, and H1d.

Perceived Quality

The descriptive statistics for perceived quality for each CSR are listed in table 6. The number of each scenario ranged from 63 to 74. Their means of perceived quality ranged from 5.1032 to 5.6182. Further, their standard deviation and standard error of perceived quality distributed from 0.79 to 1.047 and from 0.093 to 0.132, respectively.

Table 7 illustrates the results of one-way ANOVA for perceived quality mean differences between CSR types. There were five types of CSR scenarios, so between the groups the degree of freedom was 4. The number of total usable responses was 348; thus, the total degree of freedom was 347. The F-test value was 3.63 and the level of significance was 0.007. This indicated that perceived quality means were significantly different between CSR types, supporting H1a.

Tukey's post hoc test provided more specific information about the overall differences between groups, which were revealed by an analysis of variance (see table 8). The perceived quality of the non-CSR scenario significantly differed from perceived

quality of CSR scenarios. The largest mean difference existed between non-CSR and community (.52, $p=.010$); food, employment, and environment had a significantly higher perceived quality than non-CSR (mean difference = 0.49, 0.48, and 0.43, respectively; $p=0.019$, 0.023 and 0.047, respectively). All other mean differences of perceived quality among CSR types had levels significantly higher than 0.05. Therefore, food, employment, community, and environment CSR scenario respondents had higher perceived quality than non-CSR scenario respondents.

Table 6: Descriptive statistics for perceived quality by CSR types (H1a)

CSR Type	N	Mean	Std. Deviation	Std. Error
Non-CSR	63	5.10	1.05	.13
Food	69	5.59	1.00	.12
Employment	69	5.58	.86	.10
Community	74	5.62	.87	.10
Environment	73	5.54	.79	.09

Table 7: ANOVA test for perceived quality by CSR types (H1a)

CSR Type	Sum of Squares	df	Mean Squares	F	Sig.
Between Groups	12.15	4	3.04	3.63	.007
Within Groups	287.04	343	.84		
Total	299.18	347		Levene's test	.223

Table 8: Post hoc test result for perceived quality between CSR types (H1a)

(i)CSR Type	(j)CSR Type	Mean Difference (i-j)	Sig.
Non-CSR(5.10)	Food (5.59)	-.49	.019
	Employment (5.58)	-.48	.023
	Community (5.62)	-.52	.010
	Environment (5.54)	-.43	.047
Food (5.59)	Non-CSR(5.10)	.49	.019
	Employment (5.58)	.01	1.000
	Community (5.62)	-.02	1.000
	Environment (5.54)	.06	.996
Employment (5.58)	Non-CSR(5.10)	.48	.023
	Food (5.59)	-.01	1.000
	Community (5.62)	-.04	.999

	Environment (5.54)	.05	.998
Community (5.62)	Non-CSR(5.10)	.52	.010
	Food (5.59)	.02	1.000
	Employment (5.58)	.04	.999
	Environment (5.54)	.08	.984
Environment (5.54)	Non-CSR(5.10)	.44	.047
	Food (5.59)	-.06	.996
	Employment (5.58)	-.05	.998
	Community (5.62)	-.08	.984

Brand Awareness

The range of each scenario's mean of brand awareness was from 5.44 to 5.73, as shown in Table 9. Standard deviation and standard error of brand awareness were distributed from 0.93 to 1.10 and from 0.108 to 0.128, respectively.

Table 10 presents the one-way ANOVA result for brand awareness differences between CSR types. The F-test value was 0.856 and the level of significance was 0.490. This indicated that brand awareness was not significantly different between CSR types. Therefore, H1b was not supported.

Table 9: Descriptive statistics for brand awareness by CSR types (H1b)

CSR Type	N	Mean	Std. Deviation	Std. Error
Non-CSR	63	5.44	1.01	.127
Food	69	5.54	.97	.117
Employment	69	5.73	.95	.114
Community	74	5.67	1.10	.128
Environment	73	5.59	.93	.108

Table 10: ANOVA test for brand awareness by CSR types (H1b)

CSR Type	Sum of Squares	df	Mean Squares	F	Sig.
Between Groups	3.39	4	0.85	0.86	.490
Within Groups	338.97	343	0.99		
Total	342.36	347		Levene's test	.683

Brand Image

Mean values and standard deviations of brand image for each CSR type are presented in table 11. Each scenario's mean of brand image ranged from 4.9206 to 5.7252. In addition, their standard deviation and standard error of brand image distributed from 0.80591 to 1.02952 and from 0.09103 to 0.12971, respectively.

The ANOVA result in Table 12 showed there were significant differences between CSR types in terms of brand image ($F=7.72$, $p=.000$). H1c was supported.

Tukey's post hoc test helped compare the mean differences of brand image by CSR types (see table 13). The significant mean differences were between non-CSR and CSR scenarios. The mean differences between non-CSR and food, employment, community, and environment were 0.67, 0.67, 0.80, and 0.56, respectively, and the levels of significance were 0.000, 0.001, 0.000, and 0.003, respectively. All other mean differences of brand image among CSR types had levels significantly higher than 0.05. Therefore, food, employment, community, and environment CSR scenario respondents had higher brand image than non-CSR scenario respondents.

Table 11: Descriptive statistics for brand image by CSR types (H1c)

CSR Type	N	Mean	Std. Deviation	Std. Error
Non-CSR	63	4.92	1.03	.130
Food	69	5.59	1.01	.121
Employment	69	5.55	.89	.108
Community	74	5.73	.81	.094
Environment	73	5.48	.78	.091

Table 12: ANOVA test for brand image by CSR types (H1c)

CSR Type	Sum of Squares	df	Mean Squares	F	Sig.
Between Groups	25.21	4	6.30	7.72	.000
Within Groups	280.26	343	0.82		

Total	305.48	347	Levene's test	.216
-------	--------	-----	---------------	------

Table 13: Post hoc tests result for brand image between CSR types (H1c)

(i)CSR Type	(j)CSR Type	Mean Difference (i-j)	Sig.
Non-CSR(4.92)	Food (5.59)	-.67	.000
	Employment (5.55)	-.63	.001
	Community (5.73)	-.80	.000
	Environment (5.48)	-.56	.003
Food (5.59)	Non-CSR(4.92)	.67	.000
	Employment (5.55)	.04	.999
	Community (5.73)	-.14	.898
	Environment (5.48)	.11	.951
Employment (5.55)	Non-CSR(4.92)	.63	.001
	Food (5.59)	-.04	.999
	Community (5.73)	-.18	.760
	Environment (5.48)	.07	.992
Community (5.73)	Non-CSR(4.92)	.80	.000
	Food (5.59)	.14	.898
	Employment (5.55)	.18	.760
	Environment (5.48)	.25	.468
Environment (5.48)	Non-CSR(4.92)	.56	.003
	Food (5.59)	-.11	.951
	Employment (5.55)	-.07	.992
	Community (5.73)	-.25	.468

Brand Loyalty

The descriptive statistics for brand loyalty by CSR types are presented in table 14. Each scenario's mean of brand loyalty ranged from 4.1005 to 4.8599. In addition, their standard deviation and standard error of brand loyalty was distributed from 1.32150 to 1.47712 and from 0.15362 to 0.18128, respectively.

Table 15 shows the result of a one-way ANOVA test for brand loyalty mean differences by CSR type. The F-test value was 3.576 and the level of significance was 0.007. This indicated that brand loyalty means were significant different among CSR types. H1d was supported.

Tukey's post hoc test helped compare the mean differences of brand loyalty by CSR types (see table 16). The only significant mean differences were between non-CSR scenarios and food CSR scenarios. The mean difference between non-CSR and food was 0.75937 and the level of significance was 0.018. All other mean differences of brand loyalty by CSR type had levels of significance higher than 0.05. Therefore, there was statistically no difference.

Table 14: Descriptive statistics for brand loyalty by CSR types (H1d)

CSR Type	N	Mean	Std. Deviation	Std. Error
Non-CSR	63	4.10	1.44	.181
Food	69	4.86	1.39	.167
Employment	69	4.75	1.48	.178
Community	74	4.73	1.32	.154
Environment	73	4.32	1.43	.167

Table 15: ANOVA test for brand loyalty by CSR types (H1d)

CSR Type	Sum of Squares	df	Mean Squares	F	Sig.
Between Groups	28.44	4	7.11	3.58	.007
Within Groups	681.96	343	1.99		
Total	710.40	347		Levene's test	.724

Table 16: Post hoc tests result for brand loyalty by CSR types (H1d)

(i)CSR Type	(j)CSR Type	Mean Difference (i-j)	Sig.
Non-CSR(4.10)	Food (4.86)	-.76	.018
	Employment (4.75)	-.65	.063
	Community (4.73)	-.63	.072
	Environment (4.32)	-.22	.895
Food (4.86)	Non-CSR(4.10)	.76	.018
	Employment (4.75)	.11	.992
	Community (4.73)	.13	.982
	Environment (4.32)	.54	.153
Employment (4.75)	Non-CSR(4.10)	.65	.063
	Food (4.86)	-.11	.992
	Community (4.73)	.02	1.000

	Environment (4.32)	.43	.356
Community (4.73)	Non-CSR(4.10)	.63	.072
	Food (4.86)	-.13	.982
	Employment (4.75)	-.02	1.000
	Environment (4.32)	.41	.397
Environment (4.32)	Non-CSR(4.10)	.22	.895
	Food (4.86)	-.54	.153
	Employment (4.75)	-.43	.356
	Community (4.73)	-.41	.397

In this study, the possible relationships between CSR types and brand equity were tested by a one-way ANOVA. While differences between non-CSR restaurants and CSR restaurants exist in terms of perceived quality, brand image, and brand loyalty, this study did not find brand equity differences between food-related, employment-related, environment-related, and community-related CSR.

Moderation on the relationship between CSR and brand equity

A moderator variable explains under what condition an independent variable affects a dependent variable. This study hypothesized that brand size, brand segment, brand identity, health consciousness, and environment consciousness moderate the effect of CSR on brand equity. Since there are four CSR types (i.e., environment, employment, food, and community), this study used five independent variables with two categories in a variable: non-CSR and each CSR. The survey asked respondents the name of the restaurant they visited most recently. Brand size and brand segment information was searched online and the number of physical units and whether or not customers pay before they eat were recorded. A restaurant having more than 50 chains was recorded as a large brand and a restaurant having less than 50 chains was recorded as a small brand. A restaurant where customers pay before eating was recorded as a limited service restaurant

and a restaurant where customers pay after eating was recorded as a full service restaurant. For brand identity and health/environmental consciousness, the mean of responses to survey questions was calculated. Respondents who had scores higher than the mean were categorized into a high level group, while the others were categorized into a low level group.

Moderation effects are often tested by multiple regressions or analysis of variance (ANOVA), depending on the scales of variables used. This study adopted a two-way ANOVA depending on the scales of moderator variables (i.e., brand size, segment, identity, health consciousness, environment consciousness) and independent variables (i.e., food CSR, employment CSR, community CSR, environment CSR). These variables are all categorical variables.

Brand size as a moderator

The restaurants specified by respondents were grouped into a small brand and large brand in terms of the number of physical unit of the particular restaurants in order to create a dichotomous variable. Table 17 shows the descriptive statistics for brand equity by CSR types and brand size. There were 116 respondents who visited small-size restaurant and 232 participants who visited large size ones. The means of perceived quality, brand awareness, brand image, and brand loyalty for respondents visited small brand size restaurants were 5.56, 5.22, 5.62, and 4.73, respectively, and the means for respondents who visited large brand size restaurants were 5.46, 5.79, 5.39, and 4.48, respectively.

Table 17: Descriptive statistics for brand equity by CSR types and brand size (H2a-H2d)

Small Brand Size (n=116)									
CSR Type	n	Perceived Quality		Brand Awareness		Brand Image		Brand Loyalty	
		Mea	Std.	Mea	Std.	Mea	Std.	Mea	Std.
		n	Deviation	n	Deviation	n	Deviation	n	Deviation
Non-CSR	18	5.32	1.08	5.11	1.06	5.44	.73	4.09	1.60
Food	18	5.36	1.30	5.10	1.15	5.52	1.30	4.80	1.64
Employment	22	5.53	.88	5.11	.995	5.68	.85	4.99	1.39
Community	33	5.77	.77	5.32	1.24	5.77	.81	4.96	1.42
Environment	25	5.64	.83	5.33	.85	5.59	.70	4.60	1.39
Average		5.56	.95	5.22	1.06	5.62	.87	4.73	1.48
Large Brand Size (n=232)									
Scenario Type		Perceived Quality		Brand Awareness		Brand Image		Brand Loyalty	
CSR Type	n	Mean	Std.	Mea	Std.	Mea	Std.	Mea	Std.
			Deviation	n	Deviation	n	Deviation	n	Deviation
Non-CSR	45	5.02	1.03	5.57	.96	4.71	1.06	4.10	1.39
Food	51	5.68	.87	5.69	.87	5.61	.90	4.88	1.30
Employment	47	5.61	.86	6.02	.78	5.48	.92	4.65	1.52
Community	41	5.50	.93	5.96	.90	5.69	.81	4.55	1.22
Environment	48	5.48	.78	5.73	.94	5.42	.82	4.17	1.44
Average		5.46	.92	5.79	.90	5.39	.97	4.48	1.40

The results for main effects and interaction of CSR and brand size on brand equity are presented in Table 18. First, significant interactions were found between food CSR and brand size ($F=4.50$, $p<0.036$) and between community CSR and brand size ($F=4.08$, $p<0.045$). H2c, stating the moderation effect of brand size on the relationship between CSR and brand image, was partially supported; and H2a, H2b, and H2d - including other brand equity variables - were not supported. As shown in Figure 2, in general, brand image increased as food and community CSR was conducted by a restaurant. However, a large restaurant's increase in image was higher than in a small restaurant.

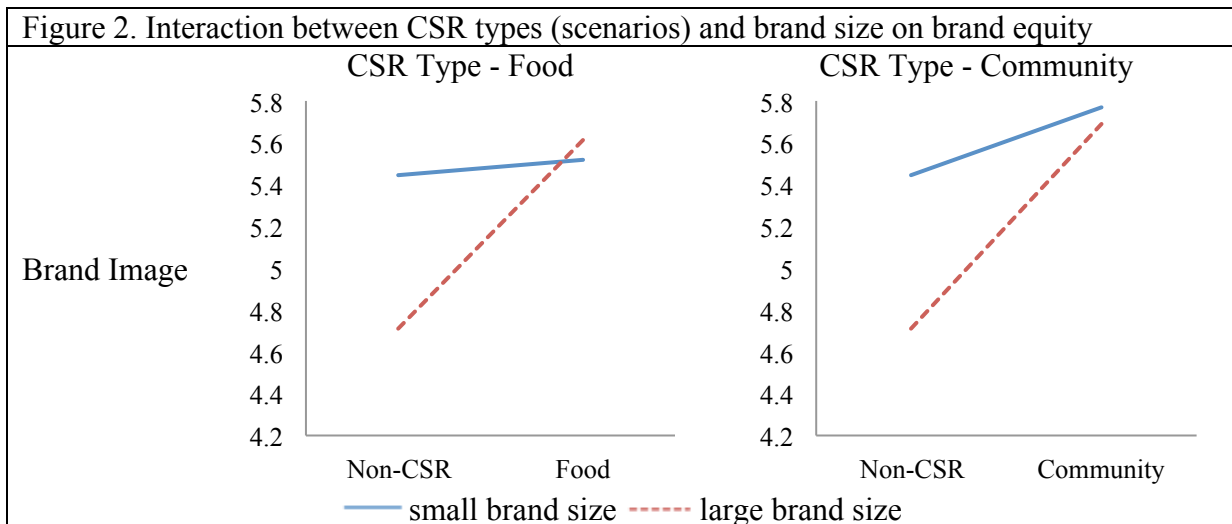
Further, the main effects for those non-significant interactions were investigated. The main effects of most CSR types on perceived quality, brand image, and brand loyalty were significant, while the main effect of CSR on brand awareness was not statistically significant (See Table 21). The main effects of brand size on brand awareness was significant, while it was not significant on perceived quality and brand loyalty. This means the study confirmed that the perceived quality of non-CSR restaurants is statistically different from perceived quality of employment CSR ($F=4.89$, $p<0.029$), community CSR ($F=7.18$, $p<0.008$), and environment CSR ($F=5.29$, $p<0.023$). The brand image of no-CSR differed from that of employment ($F=8.01$, $p<0.005$) and environment ($F=6.83$, $p<0.010$). The brand loyalty of non-CSR differed from that of food ($F=7.10$, $p<0.009$), employment ($F=6.62$, $p<0.011$), and community ($F=6.80$, $p<0.010$) at the 0.05 level.

In addition, in terms of brand size, the main effects of most CSR types on brand awareness and brand image were significant, whereas the main effects of CSR on brand awareness and brand loyalty were not statistically significant. The means differences of brand awareness between no-CSR and food ($F=7.72$, $p<0.006$), employment ($F=15.25$, $p<0.000$), community ($F=8.55$, $p<0.004$), and environment ($F=6.02$, $p<0.015$); brand image between no-CSR and employment ($F=6.86$, $p<0.010$) and environment ($F=7.51$, $p<0.007$) were significant at the 0.05 level.

Table 18: Main effects and interaction results for brand equity by CSR types and brand size (H2a-H2d)

Brand Equity	(j)CSR Type	CSR main effect		Brand size main effect		CSR * Brand size	
		F	Sig.	F	Sig.	F	Sig.
Perceived	Food	3.01	.081	.001	.975	2.40	.124

Quality	Employment	4.89	.029	.40	.528	1.06	.305
Levene's test	Community	7.18	.008	2.68	.104	.012	.914
.314	Environment	5.29	.023	1.79	.183	.184	.668
Brand	Food	.078	.781	7.72	.006	.114	.736
Awareness	Employment	1.58	.210	15.25	.000	1.61	.206
Levene's test	Community	2.50	.116	8.55	.004	.21	.646
.182	Environment	1.14	.289	6.02	.015	.026	.872
Brand	Food	6.24	.014	2.66	.106	4.49	.036
Image	Employment	8.01	.005	6.86	.010	2.25	.137
Levene's test	Community	16.07	.000	6.21	.014	4.08	.045
.394	Environment	6.83	.010	7.51	.007	3.04	.084
Brand	Food	7.10	.009	.03	.862	.018	.893
Loyalty	Employment	6.62	.011	.35	.557	.40	.530
Levene's test	Community	6.80	.010	.65	.422	.72	.397
.841	Environment	1.17	.282	.60	.439	.67	.415



Brand segment as a moderator

Brand segment was coded as limited service and full service. Coding was done based on whether they pay before or after they eat. Table 19 shows descriptive statistics for brand equity for each CSR type and brand segment. A total of 201 respondents visited limited service restaurants most recently and 147 respondents visited full service restaurants. The means of perceived quality, brand awareness, brand image, and brand

loyalty for respondents who visited limited service restaurants were 5.328, 5.729, 5.378, and 4.426, respectively; the means for respondents who visited full service restaurants were 5.726, 5.419, 5.585, and 4.744, respectively.

Table 19: Descriptive statistics for brand equity by CSR types and brand segment (H3a-H3d)

Limited Service (n=201)									
CSR Type	n	Perceived Quality		Brand Awareness		Brand Image		Brand Loyalty	
		Mea	Std.	Mea	Std.	Mea	Std.	Mea	Std.
		n	Deviation	n	Deviation	n	Deviation	n	Deviation
Non-CSR	36	4.91	1.05	5.61	.87	4.63	1.12	3.86	1.26
Food	44	5.55	.95	5.58	.91	5.70	.94	5.02	1.25
Employment	38	5.43	.85	5.99	.80	5.41	.94	4.68	1.45
Community	44	4.48	.92	5.77	1.08	5.68	.80	4.47	1.24
Environment	39	5.19	.74	5.71	.96	5.33	.80	3.99	1.43
Average		5.33	.93	5.73	.93	5.38	.99	4.43	1.38
Full Service (n=147)									
Scenario Type	n	Perceived Quality		Brand Awareness		Brand Image		Brand Loyalty	
		Mea	Std.	Mea	Std.	Mea	Std.	Mea	Std.
		n	Deviation	n	Deviation	n	Deviation	n	Deviation
Non-CSR	27	5.36	1.00	5.22	1.15	5.31	.75	4.42	1.62
Food	25	5.68	1.10	5.46	1.10	5.40	1.12	4.59	1.59
Employment	31	5.77	.85	5.41	1.03	5.71	.82	4.85	1.53
Community	30	5.82	.77	5.53	1.13	5.79	.83	5.11	1.37
Environment	34	5.93	.66	5.46	.89	5.65	.73	4.70	1.35
Average		5.73	.88	5.42	1.05	5.59	.86	4.74	1.48

According to the results of two-way ANOVA tests, there were interaction effects between brand segment and food CSR on brand image ($F=7.55$, $p<0.007$) and brand loyalty ($F=3.89$, $p<0.050$). The rest of the interactions were not statistically significant. Therefore, the findings partially support H3c and H3d, which state the moderation of brand segment on the relationship between CSR and brand equity. H3a and H3b specify other brand equity variables, perceived quality and brand awareness, and were not statistically significant. As shown in Figure 3, the lines intersect, indicating disordinal

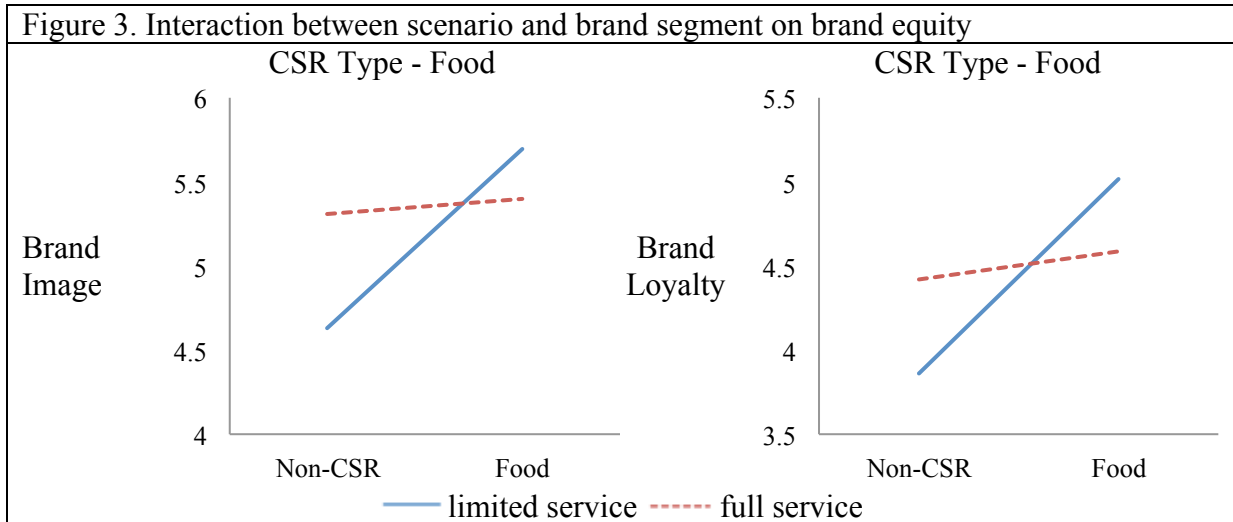
interactions. Whether or not brand image and loyalty of food CSR restaurants are higher than those of non-CSR restaurants depends on the restaurant's segment (i.e., limited or full service). Non-CSR restaurants have higher levels of brand image and loyalty when they provide full services than when they provide limited services, but food-CSR restaurants have higher levels of brand image and loyalty when they are in the limited service industry than in the full service industry.

Further, the CSR and brand segment main effects for non-significant interactions should be discussed to test for group differences. The main effects of CSR include: the mean differences of perceived quality between no-CSR and food ($F=6.91$, $p<0.010$), employment ($F=7.90$, $p<0.006$), community ($F=9.87$, $p<0.002$), and environment ($F=8.03$, $p<0.005$); the mean differences of brand image between no-CSR and employment ($F=13.06$, $p<0.000$), community ($F=24.42$, $p<0.000$), and environment ($F=11.92$, $p<0.001$); and the mean differences of brand loyalty between no-CSR and employment ($F=5.92$, $p<0.016$) and community ($F=7.63$, $p<0.007$). These were all significant at the 0.05 level.

In terms of brand segment: the mean differences of perceived quality between no-CSR and employment ($F=5.61$, $p<0.019$), community ($F=5.75$, $p<0.018$), and environment ($F=15.63$, $p<0.018$); the mean differences of brand awareness between no-CSR and employment ($F=8.34$, $p<0.005$); the mean differences of brand image between no-CSR and employment ($F=8.89$, $p<0.003$), community ($F=6.43$, $p<0.012$), and environment ($F=10.81$, $p<0.001$); the mean differences of brand loyalty between no-CSR and community ($F=6.50$, $p<0.012$) and environment ($F=6.72$, $p<0.011$). All were significant at the 0.05 level.

Table 20: Main effects and interaction results for brand equity by CSR types and brand segment (H3a-H3d)

Brand Equity	(j)CSR Type	CSR main effect		Brand segment main effect		CSR * Brand segment	
		F	Sig.	F	Sig.	F	Sig.
Perceived	Food	6.91	.010	2.60	.109	.76	.385
Quality	Employment	7.90	.006	5.61	.019	.13	.719
Levene's test	Community	9.87	.002	5.75	.018	.13	.720
.167	Environment	8.03	.005	15.63	.000	.92	.338
Brand	Food	.34	.546	1.98	.162	.59	.446
Awareness	Employment	2.88	.092	8.34	.005	.36	.552
Levene's test	Community	1.65	.201	2.94	.089	.14	.790
.587	Environment	1.08	.302	3.69	.057	.15	.697
Brand	Food	10.65	.001	1.16	.284	7.55	.007
Image	Employment	13.06	.000	8.89	.003	1.36	.246
Levene's test	Community	24.42	.000	6.43	.012	3.40	.067
.401	Environment	11.92	.001	10.81	.001	1.46	.228
Brand	Food	7.00	.009	.07	.795	3.89	.050
Loyalty	Employment	5.92	.016	2.05	.154	.57	.453
Levene's test	Community	7.63	.007	6.50	.012	.03	.861
.806	Environment	.70	.406	6.72	.011	.09	.765



Brand identity as a moderator

Brand identity was separated into low brand identity and high brand identity. The results were coded based on the mean of five questions related to brand identity. Table 21 lists the descriptive statistics for brand equity by CSR types and brand identity. Therefore, 202 participants were categorized into low brand identity, whereas 146 participants were categorized into high brand identity. The means of perceived quality, brand awareness, brand image, and brand loyalty for respondents with low brand identity were 5.35, 5.63, 5.31, and 4.10, respectively, and the means for respondents with high brand identity were 5.70, 5.55, 5.68, and 5.19, respectively.

Table 21: Descriptive statistics for brand equity by CSR types and brand identity(H4a-H4d)

		Low Brand Identity (n=202)							
CSR Type	n	Perceived Quality		Brand Awareness		Brand Image		Brand Loyalty	
		Mea	Std.	Mea	Std.	Mea	Std.	Mea	Std.
		n	Deviation	n	Deviation	n	Deviation	n	Deviation
Non-CSR	41	5.07	1.16	5.62	.88	4.83	1.13	3.73	1.53
Food	35	5.41	1.10	5.44	1.00	5.45	1.09	4.40	1.48
Employment	41	5.47	.92	5.87	.99	5.40	.91	4.37	1.49
Community	44	5.45	.75	5.75	1.11	5.64	.78	4.28	1.34
Environment	41	5.34	.88	5.46	.99	5.24	.76	3.76	1.45
Average		5.35	.97	5.63	1.00	5.31	.97	4.10	1.47
		High Brand Identity (n=146)							
Scenario Type	n	Perceived Quality		Brand Awareness		Brand Image		Brand Loyalty	
		Mea	Std.	Mea	Std.	Mea	Std.	Mea	Std.
		n	Deviation	n	Deviation	n	Deviation	n	Deviation
Non-CSR	22	5.17	.81	5.12	1.16	5.09	.81	4.79	.96
Food	34	5.78	.86	5.64	.96	5.74	.91	5.33	1.12
Employment	28	5.75	.76	5.52	.87	5.76	.83	5.32	1.29
Community	30	5.87	.98	5.57	1.10	5.84	.84	5.38	1.01
Environment	32	5.80	.59	5.77	.81	5.78	.70	5.03	1.05
Average		5.70	.83	5.55	.99	5.68	.85	5.19	1.10

Table 22 lists the results for main effects and interaction results for brand equity by CSR types and brand identity provided statistical support for testing H4a-H4d. First, the significant interactions between CSR types and brand identity were non-CSR and food CSR practices in brand awareness ($F=3.89$, $p<0.050$). Hence, H4b - stating the moderation effect of brand identity on the relationship between CSR and brand awareness - was supported. In contrast, H4a, H4c, and H4d - specifying the moderation effect on the relationship between CSR and other brand equity variables - were not supported. As shown in Figure 4, the lines do not intersect on the left, illustrating an ordinal interaction; the lines intersect on the left graph, indicating a disordinal interaction. Brand awareness increased as food CSR was conducted by a restaurant. However, a high brand identity customer increase in awareness was higher than a low brand identity customer. Conversely, whether or not brand awareness of environment CSR restaurants was higher than those of non-CSR restaurants depended on the brand identity. High brand identity customers had higher levels of brand awareness when they were exposed to an environment CSR restaurant than a non-CSR restaurant. However, low brand identity customers had higher levels of brand awareness when they were exposed in a non-CSR restaurant than an environment CSR restaurant.

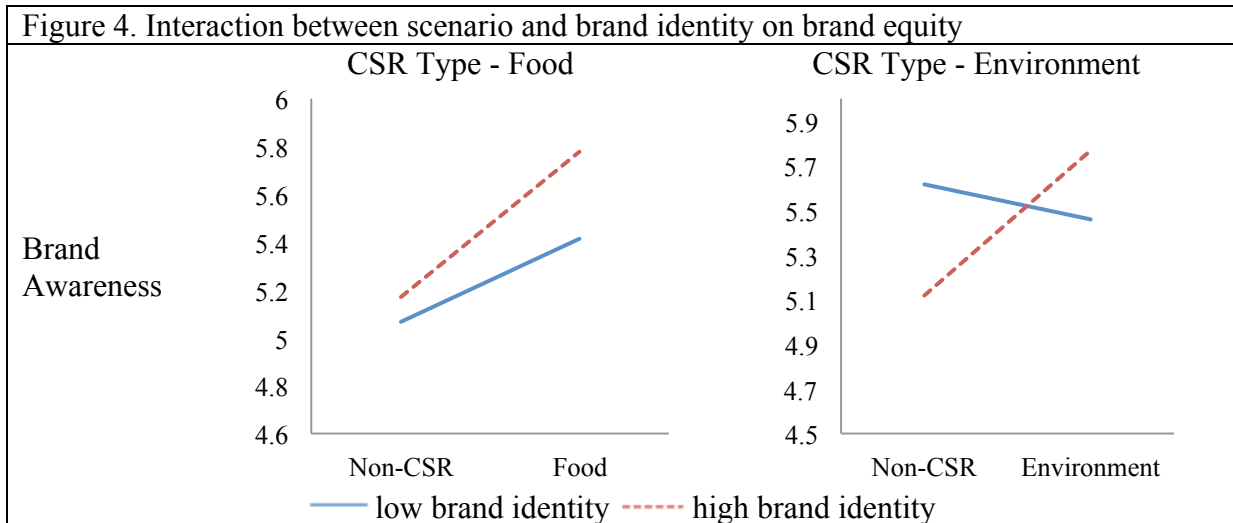
In addition, the CSR and brand identity main effects for those non-significant interactions should be discussed to test the group differences. For CSR main effects: the mean differences of perceived quality between no-CSR and food ($F=6.863$, $p<0.010$), employment ($F=8.11$, $p<0.005$), community ($F=10.24$, $p<0.002$), and environment ($F=7.70$, $p<0.006$); the mean differences of brand image between no-CSR and food

($F=12.04$, $p<0.001$), employment ($F=12.97$, $p<0.000$), community ($F=23.31$, $p<0.000$), and environment ($F=12.46$, $p<0.001$); the mean differences of brand loyalty between no-CSR and food ($F=6.47$, $p<0.012$), employment ($F=5.47$, $p<0.021$) and community ($F=6.35$, $p<0.013$). All were significant at the 0.05 level.

Furthermore, in terms of low and high brand identity respondents, brand awareness of non-CSR restaurants was statistically different from employment ($F=5.91$, $p<0.016$) at the 0.05 level. Brand image of non-CSR restaurants statistically differed from environment ($F=6.51$, $p<0.012$), and brand loyalty of non-CSR restaurants statistically differed from food ($F=17.37$, $p<0.000$), employment ($F=16.23$, $p<0.000$), community ($F=22.25$, $p<0.000$), and environment ($F=24.63$, $p<0.000$) at the 0.05 level.

Table 22: Main effects and interaction results for brand equity by CSR types and brand identity (H4a-H4d)

Brand Equity	(j)CSR Type	CSR main effect		Brand identity main effect		CSR * Brand identity	
		F	Sig.	F	Sig.	F	Sig.
Perceived	Food	6.86	.010	1.65	.202	.51	.475
Quality	Employment	8.11	.005	1.24	.268	.26	.608
Levene's test	Community	10.24	.002	2.39	.124	.87	.352
.023	Environment	7.70	.006	3.07	.082	1.23	.269
Brand	Food	.95	.331	.74	.392	3.89	.050
Awareness	Employment	3.58	.061	5.91	.016	.19	.667
Levene's test	Community	2.41	.123	3.27	.073	.72	.397
.816	Environment	2.16	.144	.31	.581	5.74	.018
Brand	Food	12.04	.001	2.28	.134	.01	.943
Image	Employment	12.97	.000	3.30	.072	.09	.768
Levene's test	Community	23.31	.000	2.03	.157	.04	.851
.211	Environment	12.46	.001	6.51	.012	.78	.380
Brand	Food	6.47	.012	17.37	.000	.07	.797
Loyalty	Employment	5.47	.021	16.23	.000	.04	.841
Levene's test	Community	6.35	.013	22.25	.000	.01	.941
.034	Environment	.35	.557	24.63	.000	.20	.653



Health and environmental consciousness as moderators

Health and environmental consciousness were coded into low and high levels. The results were coded based on the mean of two questions for each variable related to self-perception. Tables 23 and 24 show the descriptive statistics for brand identity by CSR types and brand size. Therefore, 48 participants were categorized into low health consciousness, whereas 82 participants were categorized into high health consciousness. In addition, 82 participants were categorized into low environmental consciousness, whereas 54 participants were categorized into high environmental consciousness. The means of perceived quality, brand awareness, brand image, and brand loyalty for respondents with low health consciousness were 5.10, 5.46, 5.00, and 4.18, respectively, and the means for respondents with high health consciousness were 5.36, 5.51, 5.46, and 4.68, respectively. Furthermore, the means of perceived quality, brand awareness, brand image, and brand loyalty for respondents with low environmental consciousness were

5.19, 5.45, 5.13, and 4.01, respectively, and the means for respondents with high environmental consciousness were 5.56, 5.64, 5.36, and 4.53, respectively.

Table 23: Descriptive statistics for brand equity by CSR types and health consciousness(H5a-H5d)

		Low Health Consciousness (n=48)							
CSR Type	n	Perceived Quality		Brand Awareness		Brand Image		Brand Loyalty	
		Mea n	Std. Deviation n	Mea n	Std. Deviation n	Mea n	Std. Deviation n	Mea n	Std. Deviation n
Non-CSR	25	4.94	.99	5.61	1.01	4.73	1.08	3.99	1.49
Food	23	5.32	1.16	5.76	1.21	5.47	1.24	4.16	1.42
Average		5.10	1.08	5.46	1.11	5.00	1.18	4.18	1.45
		High Health Consciousness (n=82)							
Scenario Type		Perceived Quality		Brand Awareness		Brand Image		Brand Loyalty	
CSR Type	n	Mea n	Std. Deviation n	Mea n	Std. Deviation n	Mea n	Std. Deviation n	Mea n	Std. Deviation n
Non-CSR	38	5.21	1.08	5.33	1.01	5.04	.99	4.18	1.42
Food	46	5.80	.88	5.63	.82	5.87	.85	5.06	1.32
Average		5.36	1.01	5.51	.92	5.43	.97	4.68	1.44

Table 24: Descriptive statistics for brand equity by CSR types and environmental consciousness(H6a-H6d)

		Low Environmental Consciousness (n=82)							
CSR Type	n	Perceived Quality		Brand Awareness		Brand Image		Brand Loyalty	
		Mea n	Std. Deviation n	Mea n	Std. Deviation n	Mea n	Std. Deviation n	Mea n	Std. Deviation n
Non-CSR	45	5.01	.97	5.48	1.06	4.93	.96	4.07	1.33
Environment	37	5.41	.88	5.41	1.04	5.37	.75	3.95	1.41
Average		5.19	.95	5.45	1.04	5.13	.89	4.01	1.36
		High Environmental Consciousness (n=54)							
Scenario Type		Perceived Quality		Brand Awareness		Brand Image		Brand Loyalty	
CSR Type	n	Mea n	Std. Deviation n	Mea n	Std. Deviation n	Mea n	Std. Deviation n	Mea n	Std. Deviation n

		n		n		n		n	
Non-CSR	18	5.35	1.21	5.33	.89	4.91	1.23	4.19	1.72
Environment	36	5.67	.68	5.79	.76	5.59	.80	4.70	1.36
Average		5.56	.89	5.64	.83	5.36	1.00	4.53	1.50

The results for main effects and interaction results for brand equity by CSR types and health and environmental consciousness provided statistical support for testing H5a-H5d and H6a-H6d (see table 25 and 26). However, there were no significant interactions between CSR types and self-perception at the 0.05 level. In other words, H5a-H5d and H6a-H6d - specifying the moderation effect of self perception, health, and environmental consciousness on the relationship between CSR and brand equity - were not supported.

Further, the CSR and brand identity main effects for those non-significant interactions should be discussed to test the group differences. In health consciousness, for CSR main effects, between no-CSR and food, the mean differences of perceived quality ($F=5.702$, $p<0.018$), brand image ($F=11.682$, $p<0.001$), and brand loyalty ($F=6.790$, $p<0.010$) were significant at the 0.05 level. Alternatively, between low and high health consciousness respondents, the mean differences of perceived quality ($F=4.221$, $p<0.042$) and brand image ($F=4.304$, $p<0.040$) were significant at the 0.05 level.

In environmental consciousness, for CSR main effects, between no-CSR and environment, the mean differences of perceived quality ($F=4.470$, $p<0.031$) and brand image ($F=11.704$, $p<0.001$) were significant at the 0.05 level. Conversely, between low and high environmental consciousness respondents, there were no mean differences significant at the 0.05 level.

Table 25: Main effects and interaction results for brand equity by CSR types and health consciousness(H5a-H5d)

CSR Type: Food						
Brand Equity	CSR main effect		health consciousness main effect		CSR * health consciousness	
	F	Sig.	F	Sig.	F	Sig.
Perceived Quality Levene's test .399	5.70	.018	4.22	.042	.34	.562
Brand Awareness Levene's test .212	.01	.972	.06	.814	3.18	.077
Brand Image Levene's test .377	11.68	.001	4.30	.040	.14	.705
Brand Loyalty Levene's test .762	6.79	.010	3.08	.082	1.03	.313

Table 26: Main effects and interaction results for brand equity by CSR types and environmental consciousness(H6a-H6d)

CSR Type: Environment						
Brand Equity	CSR main effect		Environmental consciousness main effect		CSR * Environmental consciousness	
	F	Sig.	F	Sig.	F	Sig.
Perceived Quality Levene's test .036	4.47	.031	3.20	.076	.07	.794
Brand Awareness Levene's test .281	1.16	.283	.44	.507	2.34	.128
Brand Image Levene's test .110	11.70	.001	.39	.536	.54	.465
Brand Loyalty Levene's test .601	.60	.442	2.89	.092	1.54	.217

CHAPTER V

CONCLUSION AND DISCUSSION

This chapter concludes the hypothesis testing in Chapter 4 and provides a comprehensive explanation and discussion. It also discusses theoretical contributions to the extant research body and implies managerial implications for the restaurant industry. Limitations and future research are specified at the end of this chapter.

Conclusion

Table 27 summarizes the results of the hypotheses tests in chapter 4. H1a, H1c, and H1d were statistically supported. Food, employment, and environment had significantly higher perceived quality and brand image than non-CSR. Further, food had a significantly higher brand loyalty than non-CSR.

In addition, H2c, H3c, H3d, and H4b were partially supported. That is, large brand size restaurants increase in brand image was significantly higher than small brand size restaurants in food and community CSR types. Limited service restaurants increase in brand image and brand loyalty were significantly higher than full service restaurants in food CSR type. Lastly, high brand identity restaurant customers increase in brand awareness was significantly higher than low brand identity restaurant customers in food and environment CSR types.

Table 27 Hypotheses test results

Hypotheses	Structural relationship	Result	Significant result
H1a	CSR → Perceived quality (PQ)	Partially Supported	PQ _{food-CSR} > PQ _{non-CSR} , PQ _{employment-CSR} > PQ _{non-CSR} , PQ _{community-CSR} > PQ _{non-CSR} , PQ _{environment-CSR} > PQ _{non-CSR}
H1b	CSR → Brand Awareness	Not Supported	n/a
H1c	CSR → Brand Image (BI)	Partially Supported	BI _{food-CSR} > BI _{non-CSR} , BI _{employment-CSR} > BI _{non-CSR} , BI _{community-CSR} > BI _{non-CSR} , BI _{environment-CSR} > BI _{non-CSR}
H1d	CSR → Brand Loyalty	Partially Supported	BL _{food CSR} > BL _{non-CSR}
H2a	CSR x brand size → Perceived quality	Not Supported	n/a
H2b	CSR x brand size → Brand Awareness	Not Supported	n/a
H2c	CSR x brand size → Brand Image	Partially Supported	Ordinal interaction meaning the amount of food and community CSR effect on brand image depends on brand size: BI _{food-CSR} >> BI _{non-CSR} for large brands BI _{food-CSR} > BI _{non-CSR} for small brands BI _{community-CSR} >> BI _{non-CSR} for large brands BI _{community-CSR} > BI _{non-CSR} for small brands
H2d	CSR x brand size → Brand Loyalty	Not Supported	n/a
H3a	CSR x brand segment →	Not Supported	n/a

H3b	CSR x brand segment → Brand Awareness	Not Supported	n/a
H3c	CSR x brand segment → Brand Image	Partially Supported	Disordinal interaction meaning the type of food CSR effect on brand image depends on brand segment: BI _{full} < BI _{limited} when food CSR is used BI _{full} > BI _{limited} when non-CSR is used
H3d	CSR x brand segment → Brand Loyalty (BL)	Partially Supported	Disordinal interaction meaning the type of food CSR effect on brand loyalty depends on brand segment: BI _{full} < BI _{limited} when environment CSR is used BI _{full} > BI _{limited} when non-CSR is used
H4a	CSR x brand identity → Perceived quality	Not Supported	n/a
H4b	CSR x brand identity → Brand Awareness (BA)	Partially Supported	Ordinal interaction meaning the amount of food CSR effect on brand awareness depends on brand identity BA _{food-CSR} >> BA _{non-CSR} for high brand identity BA _{food-CSR} > BA _{non-CSR} for low brand identity
			Disordinal interaction meaning the type of environment CSR effect on brand awareness depends on brand identity: BI _{low} < BI _{high} when environment CSR is used BI _{low} > BI _{high} when non-CSR is used
H4c	CSR x brand identity → Brand Image	Not Supported	n/a
H4d	CSR x brand identity → Brand Loyalty	Not Supported	n/a
H5a	CSR x health consciousness → Perceived quality	Not Supported	n/a
H5b	CSR x health consciousness → Brand Awareness	Not Supported	n/a

H5c	CSR x health consciousness → Brand Image	Not Supported	n/a
H5d	CSR x health consciousness → Brand Loyalty	Not Supported	n/a
H6a	CSR x environmental consciousness → Perceived quality	Not Supported	n/a
H6b	CSR x environmental consciousness → Brand Awareness	Not Supported	n/a
H6c	CSR x environmental consciousness → Brand Image	Not Supported	n/a
H6d	CSR x environmental consciousness → Brand Loyalty	Not Supported	n/a

The impacts of CSR practices on brand equity

Previously, Aaker (1991) developed a multi-dimensional concept of brand equity, which was composed of perceived quality, brand awareness, brand image, and brand loyalty. The extant research has examined the relationship between a particular category of CSR practices and brand equity. Several studies like the work of Namkung and Jang (2013), which focused the links between green and environment CSR practices and customer-based brand equity perceived quality, brand awareness, and behavioral intentions. However, in hospitality research, we still have little research on other CSR dimensions or CSR as a whole. Therefore, this study is an attempt to examine how brand equity is developed by all the key operation-related CSR practices commonly used in the restaurant industry: food-related, employment-related, community-related, and environment-related CSR.

The results indicate that food, employment, community, and environment CSR practices can positively impact customers on their perceived quality and brand image. In fact, the study found that no matter what kind of CSR is done, CSR make differences in perceived quality and brand image. It is known that the value of CSR is product quality signaling and the halo effect. Thus, customers tend to think that restaurants doing good things provide good quality products and services, and a particular favorable activity like CSR could help enhance the overall image of the restaurant brand. Among the impacts of four types of CSR, restaurants undertaking community CSR programs attained the largest increase in perceived quality and brand image compared to restaurants not employing any CSR program. Community CSR, including charitable donations and volunteer community services, can shorten the psychological distance between customers and the

company. This is an effective way to distinguish a brand from others (Brunk, 2010; Wu & Wang, 2014). These activities will make people think this restaurant does good things for society and will create a good impression of the brand to both existing and potential consumers. Therefore, community CSR practices can significantly influence restaurant brand image.

Further, food CSR practices can positively and significantly influence customers' brand loyalty. Food is the core product of restaurants, and Selnes (2013) suggested that a good performance of the core product can drive the increase in brand reputation and brand loyalty. In this case, food CSR practices ensure food freshness and quality, which offer a better perceived performance to customers. This performance can enhance customer's brand loyalty. Moreover, the loyalty is a behavioral attitude measure, compared to other brand equity measures. This means that making an actual action to choose a restaurant could largely depend on the core products customers receive.

The impacts of corporate and personal traits on brand equity

This study utilizes five corporate and customer personal traits to examine whether they enhance or reduce the impact of CSR on brand equity. The findings indicate that brand size, brand segment, and brand identity change the amounts or types of CSR effects. This study finds that a restaurant can enhance its brand image by undertaking food or community CSR, but the magnitude of the increase is higher for a small restaurant. Burke, Logsdon, Mitchell, Reiner, and Vogel (1986) claim that a company attracts more attention from outside stakeholders when it grows. Therefore, they tend to invest in marketing such as advertisements or promotions. As shown in the result tables and figures, a large restaurant already has a pretty high level of brand image regardless of

CSR, compared to a small restaurant. Therefore, the amount of CSR impact becomes larger in a small restaurant. It appears that customers tend to focus more on CSR types they can easily observe, such as food- or community-related CSR. Environment or employment CSR mostly happen internally, indicating it might be hard for customers to observe and link to their own lives. Conversely, food or community services are what they directly experience. Therefore, linking brand size and CSR to evaluate brand image is likely to occur in the case of food and community CSR. In conclusion, the results revealed that small brand size restaurant should pay more attention to food and community CSR types to enhance their brand image. Food is the core product of restaurants and community services may be missing when a restaurant brand grows larger. Therefore, large brand size restaurants should focus on maintaining good food quality and promoting a healthy and balanced eating style. Furthermore, they should concentrate on developing community services, donating to local charitable organizations, and sourcing local food and suppliers. Food and community CSR could be an opportunity for a small restaurant to effectively increase its image to a higher level, like a large restaurant.

The findings of this study interestingly indicate that the types of food-related CSR impacts on brand image and loyalty depend on brand segment. Specifically, a limited service restaurant has positive food-CSR impacts on brand image and loyalty, but the opposite kind of effect in a full-service restaurant. A possible explanation is that consumers using full service, especially high-end markets or luxury brands, tend to think luxury and social responsibility are at odds with each other and may lose the uniqueness of the experience at the restaurants (Jacoda, 2011). The uniqueness of customer

experience is normally related to a restaurant brand image. Due to the weaker brand image, brand loyalty can be affected in the long term.

For brand identity, food and environment CSR observed by customers with high brand identity led to a higher level of brand awareness than by customers with low brand identity. High brand identity customers are known to have a higher sense of belonging and brand acknowledgement. Those customers are proven to have a higher level of brand equity (He and Li, 2011). Organic food substitutes, healthy dining style, energy efficient equipment, and waste control have been some of the top trends for restaurant innovations. They are mostly related to food and environment CSR practices. Restaurants can refresh high brand identity customers' mindsets and raise their awareness if they start to follow those trends.

For self-perception, health and environmental consciousness did not impact the relationship between CSR practices and brand equity. Although self-perception variables are not statistically significant moderators, the figures in the analyses are similar to the findings from Namkung and Jang (2013). This study indicates that respondents with high health consciousness have significantly higher scores in perceived quality and brand image than those with low health consciousness. In contrast, respondents with high environmental consciousness had significantly higher scores in perceived quality and brand loyalty than those with low environmental consciousness.

Theoretical contributions and managerial implications

Theoretical contributions

Theoretically, previous research has considered CSR practices as a single-dimension variable (He & Lai, 2014; Pai, Lai, Chiu, & Yang, 2015) or focusing on green practices (Namkung & Jang, 2013). This study expanded different dimensions of CSR practices into four dimensions, which gave researchers a better understanding of the impact of CSR practices in the restaurant industry. The impacts vary from different CSR types based on the results. Food related CSR tends to be more critical in the restaurant industry, which should attract more attentions for future research.

This study also added brand size and brand identity to examine whether they impact the relationship between different CSR practices and brand equity. Playing a critical role in corporate ability, brand size can influence the amount of resources that a restaurant brand has and utilize. Larger brand size restaurants could have more resources to develop their business. On the other hand, brand identity evaluates how customers involve and acknowledge a brand. It can foster customer sense of belonging and possible frequent purchase behavior. This study utilizes these traits to better understand the relationship between different CSR practices and brand equity.

Last but not the least, this study provides evidence support for the constructs of brand equity, which are perceived quality, brand awareness, brand image, and brand loyalty. Future research can utilize these constructs from this study when concerning about

Managerial Implications

Managerially, this study raised restaurant managers and owners' attention to the impact of CSR practices on brand equity. All four types of CSR practices, especially food CSR practices, are worth of investing to enhance restaurant perceived quality and brand image. In addition, food CSR practices, such as healthy food menu, fresh and nutritious ingredient, and organic substitutes, can increase customer brand loyalty. It can benefit restaurant business in the long term.

Restaurant managers and owners should select CSR practices based on their brand size and segment. Large brand size restaurant should choose food and community CSR practices, whereas limited service restaurant should focus on food CSR practices. Furthermore, restaurant managers should develop the relationship with their customers to increase their brand identity, which can enhance customers' perceived quality, brand image, and brand loyalty.

Limitation and further research

Although this study provided multiple theoretical contributions and managerial implications, it was not free from limitations. First, this study did not consider the subsequences of the constructs of brand equity and viewed these constructs as parallel variables. Future studies can try to examine the relationship between CSR practices and the variables of brand equity with a certain subsequence. In this case, how CSR practices gradually build up brand equity can be observed.

Second, this study was distributed in Amazon MTurk. More than half of the respondents were considered low income family (low than \$50,000 annual income per household). These respondents may not represent the whole United States restaurant

patrons well in terms of their understanding of social responsibility. Different distribution methods are recommended in future study to confirm this study's findings.

Last but not least, factorial ANOVA was used to examine how CSR practices affect brand equity and whether brand attributes and customer traits have impacts on this relationship. However, no casual relationships were tested in this study. More advance statistic techniques, such as regression and structural equation modeling, can be utilized to test the casual relationship between CSR and brand equity in the future.

REFERENCE

- Aaker, D. A. (1991). *Managing brand equity*. Simon and Schuster.
- Aaker, D. A. (1996). Measuring brand equity across products and markets. *California Management Review* 38 (3): 102-20.
- Ailawadi, K. L., Lehmann, D. R., & Neslin, S. A. (2003). Revenue premium as an outcome measure of brand equity. *Journal of Marketing*, 67(4), 1-17.
- Arendt, S., & Brettel, M. (2010). Understanding the influence of corporate social responsibility on corporate identity, image, and firm performance. *Management Decision*, 48(10), 1469-1492.
- Barber, N., Barth, S., & Blum, S. (2011). Risk-Reduction Strategy for Investing in Restaurant Stocks: A Portfolio Approach. *Journal of Foodservice Business Research*, 14(1), 33-46.
- Berg, L. (2004). Trust in food in the age of mad cow disease: a comparative study of consumers' evaluation of food safety in Belgium, Britain and Norway. *Appetite*, 42(1), 21-32.
- Bhattacharya, C. B., & Sen, S. (2003). Consumer-company identity: A framework for understanding consumers' relationships with companies. *Journal of marketing*, 67(2), 76-88.

- Bowen HR. 1953. *Social Responsibilities of the Businessman*. Harper and Row: New York.
- Brown, R. (2000). Social identity theory: Past achievements, current problems and future challenges. *European journal of social psychology*, 30(6), 745-778.
- Brown, T. J., & Dacin, P. A. (1997). The company and the product: Corporate associations and consumer product responses. *The Journal of Marketing*, 68-84.
- Brunk, K. H. (2010). Exploring origins of ethical company/brand perceptions—A consumer perspective of corporate ethics. *Journal of Business Research*, 63(3), 255-262.
- Burke, L., Logsdon, J. M., Mitchell, W., Reiner, M., & Vogel, D. (1986). Corporate Community Involvement in the San Francisco Bay Area. *California Management Review*, 28(3).
- Carroll, A. B., & Shabana, K. M. (2010). The business case for corporate social responsibility: a review of concepts, research and practice. *International Journal of Management Reviews*, 12(1), 85-105.
- Chen, A. (2001). Using free association to examine the relationship between the characteristics of brand associations and brand equity. *Journal of product & brand management*, 10(7), 439-451.
- Choi, G., & Parsa, H. G. (2007). Green Practices II: Measuring Restaurant Managers' Psychological Attributes and Their Willingness to Charge for the “Green Practices”. *Journal of Foodservice Business Research*, 9(4), 41-63.
- Commission of the European Communities. 2001. *Promoting a European Framework for Corporate Social Responsibilities*, COM (2001) 366 final, Brussels.

- Cook, A. J., Kerr, G. N., & Moore, K. (2002). Attitudes and intentions towards purchasing GM food. *Journal of Economic Psychology*, 23(5), 557-572.
- Cranage, D. A., Conklin, M. T., & Lambert, C. U. (2005). Effect of nutrition information in perceptions of food quality, consumption behavior and purchase intentions. *Journal of Foodservice Business Research*, 7(1), 43-61.
- Dahlsrud, A. (2008). How corporate social responsibility is defined: an analysis of 37 definitions. *Corporate social responsibility and environmental management*, 15(1), 1.
- Darden. (2016). 2014 Citizenship Report. Retrieved from <https://www.darden.com/citizenship/reporting-library>
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). Multivariate data analysis (6th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Harrington, R. (2001). Environmental uncertainty within the hospitality industry: Exploring the measure of dynamism and complexity between restaurant segments. *Journal of Hospitality & Tourism Research*, 25(4), 386-398.
- Hartmann, M., Heinen, S., Melis, S., & Simons, J. (2013). Consumers' awareness of CSR in the German pork industry. *British Food Journal*, 115(1), 124-141.
- He, H., & Li, Y. (2011). CSR and service brand: The mediating effect of brand identity and moderating effect of service quality. *Journal of Business Ethics*, 100(4), 673-688.

- He, Y., & Lai, K. K. (2014). The effect of corporate social responsibility on brand loyalty: the mediating role of brand image. *Total Quality Management & Business Excellence*, 25(3-4), 249-263.
- Hsu, K. T. (2012). The advertising effects of corporate social responsibility on corporate reputation and brand equity: Evidence from the life insurance industry in Taiwan. *Journal of business ethics*, 109(2), 189-201.
- Hutter, K., Hautz, J., Dennhardt, S., & Füller, J. (2013). The impact of user interactions in social media on brand awareness and purchase intention: the case of MINI on Facebook. *Journal of Product & Brand Management*, 22(5/6), 342-351.
- Hyun, S. S., & Kim, W. (2011). Dimensions of brand equity in the chain restaurant industry. *Cornell Hospitality Quarterly*, 52(4), 429-437.
- Jalilvand, M. R., & Samiei, N. (2012). The effect of electronic word of mouth on brand image and purchase intention: An empirical study in the automobile industry in Iran. *Marketing Intelligence & Planning*, 30(4), 460-476.
- Jones, K., & Bartlett, J. L. (2009). The strategic value of corporate social responsibility: a relationship management framework for public relations practice. *PRism*, 6(1).
- Joyner, B. E., & Payne, D. (2002). Evolution and implementation: A study of values, business ethics and corporate social responsibility. *Journal of Business Ethics*, 41(4), 297-311.
- Kamakura, W. A., & Russell, G. J. (1993). Measuring brand value with scanner data. *International Journal of Research in Marketing*, 10(1), 9-22.
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *the Journal of Marketing*, 1-22.

- Kim, H. B., & Kim, W. G. (2005). The relationship between brand equity and firms' performance in luxury hotels and chain restaurants. *Tourism management*, 26(4), 549-560.
- Kim, H. B., & Kim, W. G. (2005). The relationship between brand equity and firms' performance in luxury hotels and chain restaurants. *Tourism management*, 26(4), 549-560.
- Klein, J., & Dawar, N. (2004). Corporate social responsibility and consumers' attributions and brand evaluations in a product-harm crisis. *International Journal of research in Marketing*, 21(3), 203-217.
- Knutson, B. J., Stevens, P., & Patton, M. (1996). DINESERV: Measuring service quality in quick service, casual/theme, and fine dining restaurants. *Journal of hospitality & leisure marketing*, 3(2), 35-44.
- Lai, C. S., Chiu, C. J., Yang, C. F., & Pai, D. C. (2010). The effects of corporate social responsibility on brand performance: The mediating effect of industrial brand equity and corporate reputation. *Journal of business ethics*, 95(3), 457-469.
- Luo, X., & Bhattacharya, C. B. (2006). Corporate social responsibility, customer satisfaction, and market value. *Journal of marketing*, 70(4), 1-18.
- Mahajan, V., Rao, V. R., & Srivastava, R. K. (1994). An approach to assess the importance of brand equity in acquisition decisions. *Journal of Product Innovation Management*, 11(3), 221-235.
- Maloni, M. J., & Brown, M. E. (2006). Corporate social responsibility in the supply chain: an application in the food industry. *Journal of business ethics*, 68(1), 35-52.

Martenson, R. 2007. Corporate brand image, satisfaction and store loyalty: A study of the store as a brand, store brands and manufacturer brands. *International Journal of Retail and Distribution Management* 35 (7): 544-55.

McDonald's. (2016). 2014 Good Business Report. Retrieved from http://www.aboutmcdonalds.com/mcd/sustainability/sustainability_CR_reports.html

McGuire, J. B., Sundgren, A., & Schneeweis, T. (1988). Corporate social responsibility and firm financial performance. *Academy of management Journal*, 31(4), 854-872.

McWilliams, A. and Siegel, D. (2000), "Corporate social responsibility and financial performance: correlation or misspecification?", *Strategic Management Journal*, Vol. 21, pp. 603-9.

McWilliams, A., & Siegel, D. S. (2010). Creating and capturing value: Strategic corporate social responsibility, resource-based theory, and sustainable competitive advantage. *Journal of Management*, 0149206310385696.

MGE (Maddison Gas and Electric). (2010). Managing energy costs in restaurants. Retrieved from <https://www.mge.com/images/PDF/Brochures/business/ManagingEnergyCostsInRestaurants.pdf>

Namkung, Y., & Jang, S. (2007). Does food quality really matter in restaurants? Its impact on customer satisfaction and behavioral intentions. *Journal of Hospitality & Tourism Research*, 31(3), 387-409.

- Namkung, Y., & Jang, S. S. (2013). Effects of restaurant green practices on brand equity formation: Do green practices really matter?. *International Journal of Hospitality Management*, 33, 85-95.
- National Restaurant Association (NRA). (2015a). Facts at a Glance. 2015 Forecast Summary. Retrieved from <http://www.restaurant.org/News-Research/Research/Facts-at-a-Glance>
- National Restaurant Association (NRA). (2015b). Looking for 2016's top food trends? Yep, sustainability!. Retrieved from <http://www.restaurant.org/News-Research/News/sustainable-food-trends-in-2016>
- National Restaurant News. (Jun 2015). 2015 Top 100: Restaurant chain countdown. Retrieved from http://nrn.com/top-100/2015-top-100-restaurant-chain-countdown#slide-0-field_images-136081
- Neu, D., Warsame, H., & Pedwell, K. (1998). Managing public impressions: environmental disclosures in annual reports. *Accounting, organizations and society*, 23(3), 265-282.
- Oberseder, M., Schlegelmilch, B. B., & Murphy, P. E. (2013). CSR practices and consumer perceptions. *Journal of Business Research*, 66(10), 1839-1851.
- O'Connor, M., & Spangenberg, J. H. (2008). A methodology for CSR reporting: assuring a representative diversity of indicators across stakeholders, scales, sites and performance issues. *Journal of Cleaner Production*, 16(13), 1399-1415.
- Oliver, R. L. 1999. Whence consumer loyalty? *Journal of Marketing* 63 (5): 33-44.

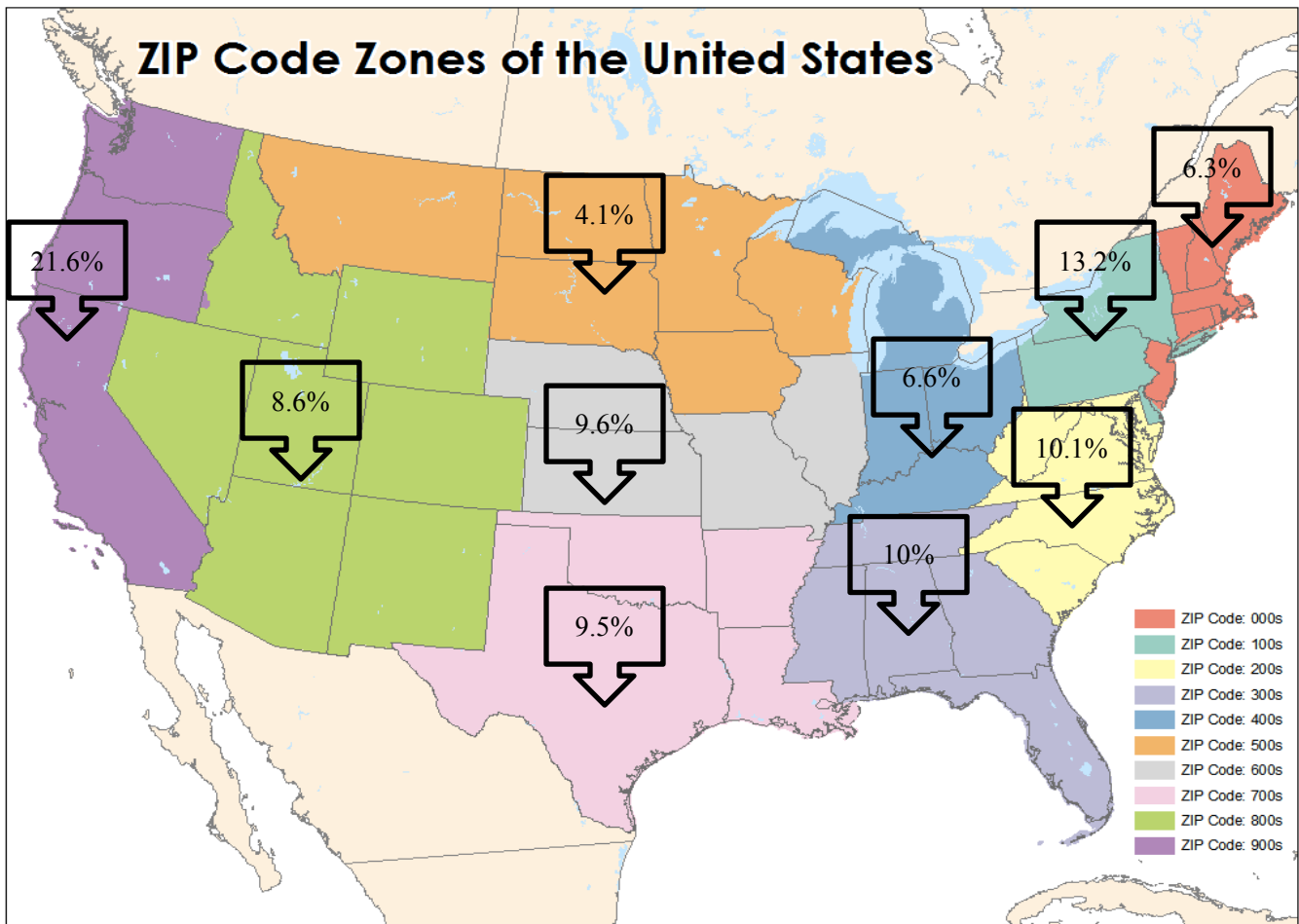
- Ortega, D. L., Wang, H. H., Wu, L., & Olynk, N. J. (2011). Modeling heterogeneity in consumer preferences for select food safety attributes in China. *Food Policy*, 36(2), 318-324.
- Pai, D. C., Lai, C. S., Chiu, C. J., & Yang, C. F. (2015). Corporate social responsibility and brand advocacy in business-to-business market: The mediated moderating effect of attribution. *Journal of Business Ethics*, 126(4), 685-696.
- Paolacci, G., Chandler, J., & Ipeirotis, P. G. (2010). Running experiments on amazon mechanical turk. *Judgment and Decision making*, 5(5), 411-419.
- Park, C. S., & Srinivasan, V. (1994). A survey-based method for measuring and understanding brand equity and its extendibility. *Journal of marketing research*, 271-288.
- Peng, M. W., & Luo, Y. (2000). Managerial ties and firm performance in a transition economy: The nature of a micro-macro link. *Academy of management journal*, 43(3), 486-501.
- Roberts, R. W. (1992). Determinants of corporate social responsibility disclosure: an application of stakeholder theory. *Accounting, Organizations and Society*, 17(6), 595-612.
- Schmidt, D. R., & Fowler, K. L. (1990). Post-acquisition financial performance and executive compensation. *Strategic Management Journal*, 11(7), 559-569.
- Selnes, F. (2013). An examination of the effect of product performance on brand reputation, satisfaction and loyalty. *Journal of Product & Brand Management*.

- Seo, S., & Jang, S. S. (2013). The roles of brand equity and branding strategy: a study of restaurant food crises. *International Journal of Hospitality Management*, 34, 192-201.
- Servaes, H., & Tamayo, A. (2013). The impact of corporate social responsibility on firm value: The role of customer awareness. *Management Science*, 59(5), 1045-1061.
- Simon, C. J., & Sullivan, M. W. (1993). The measurement and determinants of brand equity: a financial approach. *Marketing science*, 12(1), 28-52.
- Sparks, P., & Shepherd, R. (1992). Self-Identity and the Theory of Planned Behavior: Assessing the Role of Identity with "Green Consumerism". *Social Psychology Quarterly*, 388-399.
- Stahl, F., Heitmann, M., Lehmann, D. R., & Neslin, S. A. (2012). The impact of brand equity on customer acquisition, retention, and profit margin. *Journal of Marketing*, 76(4), 44-63.
- Stanwick, P. A., & Stanwick, S. D. (1998). The relationship between corporate social performance, and organizational size, financial performance, and environmental performance: An empirical examination. *Journal of business ethics*, 17(2), 195-204.
- Tarkiainen, A., & Sundqvist, S. (2009). Product involvement in organic food consumption: Does ideology meet practice?. *Psychology & Marketing*, 26(9), 844-863.
- Thorndike, E. L. (1920). A constant error in psychological ratings. *Journal of applied psychology*, 4(1), 25-29.

- Tsoutsoura, M. (2004). Corporate social responsibility and financial performance. *center for responsible business*.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, 5(2), 171-180.
- Wilkins, J. L., & Hillers, V. N. (1994). Influences of pesticide residue and environmental concerns on organic food preference among food cooperative members and non-members in Washington State. *Journal of Nutrition Education*, 26(1), 26-33.
- Wu, S. I., & Wang, W. H. (2014). Impact of CSR perception on brand image, brand attitude and buying willingness: a study of a global café. *International Journal of Marketing Studies*, 6(6), 43.
- Yoo, B., & Donthu, N. (2001). Developing and validating a multidimensional consumer-based brand equity scale. *Journal of business research*, 52(1), 1-14.
- Yoo, B., Donthu, N., & Lee, S. (2000). An examination of selected marketing mix elements and brand equity. *Journal of the academy of marketing science*, 28(2), 195-211.
- Yum!. (2016). 2014 Corporate Social Responsibility Report. Retrieved from http://www.yumcsr.com/pdf/2014_CSR_Report_040115.pdf

APPENDICES

APPENDIX A: Respondents zip code distribution



Appendix B: Survey sample with all five scenarios

Note: The survey below has all five scenarios. During the distribution, only one of five scenarios was randomly assigned to each respondent. In other word, each respondent could only read one of five scenarios.

This survey is used to examine corporate social responsibility (CSR) and brand equity. This survey takes you about 10 minutes to complete. Your responses will be kept strictly confidential and only used for research purposes. Thank you very much for your participation.

To what extent do you agree or disagree with each statement regarding your awareness? (Please circle one answer in each line across):

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
I choose food carefully to ensure good health	1	2	3	4	5	6	7
I think of myself as a health conscious consumer	1	2	3	4	5	6	7
I always buy products that are friendly to the environment	1	2	3	4	5	6	7
I think of myself as an environmentally friendly consumer	1	2	3	4	5	6	7

What restaurant have you most recently visited? Please specify the name of restaurant (e.g. McDonald's, Panera, Olive garden)

Please read the following scenario carefully.

Food: Suppose that the restaurant you most recently visited undertakes social responsibility initiative by promoting a balance and healthy eating. The restaurant brand offers healthy options, such as low fat and low-calorie menu items. Nutrition information is provided for all the menu items. Organic substitute item are also available upon request. The restaurant brand always tries to select good suppliers or distributors to ensure that your food is made with fresh, high-quality ingredients.

Employment: Suppose that the restaurant you most recently visited undertakes social responsibility initiative through employee relation activities such as welfare, training and development, promotion, recruitment and work environment. The restaurant brand strives for hiring diversified employees with fair pay. They build up an adequate training and ensure good work environment for their employees.

Community: Suppose that the restaurant you most recently visited undertakes social responsibility initiative through community related activities. The restaurant brand supports local community through local food use, donation, and employee engagement

in community service. The restaurant brand also sponsors local events, and provides funding for nonprofits and schools in needs.

Environment: Suppose that the restaurant you most recently visited undertakes social responsibility initiative through community related activities. The restaurant brand supports local community through local food use, donation, and employee engagement in community service. The restaurant brand also sponsors local events, and provides funding for nonprofits and schools in needs.

Control (Non-CSR): Suppose that the restaurant you most recently visited is not engaged in any social responsible activities related to food, employment, community, and the environment.

To what extent do you agree or disagree with each statement regarding the restaurant brand that you most recently visited? (Please circle one answer in each line across):

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
When someone criticizes this brand, it feels like a personal insult	1	2	3	4	5	6	7
I am very interested in what others think about this brand	1	2	3	4	5	6	7
This brand's successes are my successes	1	2	3	4	5	6	7
When someone praises this brand, it feels like a personal compliment	1	2	3	4	5	6	7
If a story in the media criticized this brand, I would feel embarrassed	1	2	3	4	5	6	7

In answering the following questions, assume that the scenario above is an accurate and actual description of the restaurant that you specified (the restaurant you most recently visited). To what extent do you agree or disagree with each statement about your awareness of the restaurant brand? (Please circle one answer in each line across):

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
I have a good impression of this brand.	1	2	3	4	5	6	7
In my opinion, this brand has a good image in the minds of consumers.	1	2	3	4	5	6	7
I believe that this brand has a better image than its competitors.	1	2	3	4	5	6	7
Please select "Disagree" for this statement	1	2	3	4	5	6	7

In answering the following questions, assume that the scenario above is an accurate and actual description of the restaurant that you specified (the restaurant you most recently visited). To what extent do you agree or disagree with each statement about the quality of what the restaurant brand provides? (Please circle one answer in each line across):

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
The physical facilities are visually appealing	1	2	3	4	5	6	7
The appearance of staff members (clean, neat, appropriately dressed)	1	2	3	4	5	6	7
The staff is always willing to help customers	1	2	3	4	5	6	7
The staff serves ordered food accurately	1	2	3	4	5	6	7
The food quality of the restaurant is good	1	2	3	4	5	6	7

In answering the following questions, assume that the scenario above is an accurate and actual description of the restaurant that you specified (the restaurant you most recently visited). To what extent do you agree or disagree with each statement about your loyalty of the restaurant brand? (Please circle one answer in each line across):

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
I visit this restaurant more frequently than other restaurants	1	2	3	4	5	6	7
I usually use this restaurant as my first choice compared to other restaurants	1	2	3	4	5	6	7
I consider myself to be loyal to this brand	1	2	3	4	5	6	7

What is your gender?

☐ Male ☐ Female

What is your current age?

☐ 18 to 24 ☐ 25 to 34 ☐ 35 to 44

☐ 45 to 54 ☐ 55 to 64 ☐ 65 or over

What is your annual household income?

☐ Under \$30,000 ☐ \$30,000 - \$59,999 ☐ \$60,000 - \$89,999

☐ \$90,000 - \$119,999 ☐ Over \$120,000

What is your ethnicity?

☐ African American ☐ Asian ☐ Caucasian ☐ Hispanic

☐ Multiracial ☐ Native American ☐ Other

What is the highest level of education you have completed? Less than High School

☐ High School ☐ 2-year College Degree ☐ 4-year College Degree

☐ Masters Degree ☐ Doctoral Degree

Please provide your zip code

VITA

Shijun “Michael” Lin

Candidate for the Degree of

Master of Science

**Thesis: UNDERSTANDING CORPORATE SOCIAL RESPONSIBILITY AND
BRAND EQUITY: AN INVESTIGATION OF RESTAURANT BRAND
ATTRIBUTES AND CUSTOMER TRAITS**

Major Field: Hospitality Administration

Biographical:

Education:

Completed the requirements for the Master of Science in hospitality administration at Oklahoma State University, Stillwater, Oklahoma in July, 2016.

Completed the requirements for the Bachelor of Science in your hotel and restaurant administration at Oklahoma State University, Stillwater, Oklahoma in May, 2013.

Experience: Graduate Assistant (Spring 2015 to Spring 2016) at Oklahoma State University; Sustainability Coordinator at Oklahoma State University Dining Services (May 2014 to December 2014); General Manager Trainee at Sonic Drive-in (May 2013 to May 2014); Manager at Westside Café in Oklahoma State University (January 2012 to January 2013).

Professional Memberships: Phi Kappa Phi; American Hotel and Lodging Association