CREATING AND VALIDATING A MEASURE OF CUSTOMER EQUITY IN HOSPITALITY BUSINESSES: LINKING SHAREHOLDER VALUE WITH RETURN ON MARKETING

Sunghyup Hyun

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Dr. Richard R. Perdue, Co-Chair
Dr. Suzanne K. Murrmann, Co-Chair
Dr. Joseph M. Sirgy
Dr. Ken W. McCleary

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ABSTRACT

Understanding the contribution of marketing to the shareholder value of a company has been a major challenge for marketing research. The purpose of this dissertation was creating and validating an attitudinal measure of customer equity in hospitality businesses, thus providing a link between return on marketing and the shareholder value of a company. The theoretical background of the customer equity construct was examined, and then systematic scale development processes were initiated. The results produced two concise scales: (1) 17 items that represent the six dimensions of customer equity in the restaurant industry and (2) 19 items that represent the six dimensions of customer equity in the hotel industry. Six dimensions of customer equity achieved strong convergent validity, discriminant validity, and internal consistency, indicating unidimensionality of the constructs. To further validate the newly developed scale, criterion validity was checked in correlation with six criterion measures using data collected from 590 hospitality industry consumers. The results demonstrate that customer equity closely reflects the shareholder value of a company. Also, it was found that value equity, brand equity, relationship equity, and service quality are significantly and positively correlated with overall customer equity of a company. In conclusion, customer equity represents the long-term value of a company, and reflects shareholder value of the company, thus providing a link with return on marketing investments. Theoretical and managerial implications are discussed.

DEDICATIONS

This dissertation is dedicated to my wife, Taekyong Kim, for her endless love and support and my son, Kevin Jihoon Hyun, who taught me what true happiness is. Also, I would like to dedicate this work to my precious people - my father, mom, mother in law, and father in law.

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CHAPTER I

INTRODUCTION

Statement of Problem

The fundamental goal of a business is to increase shareholder value (Kaplan and Norton, 1992). Shareholder value forecasts future cash flows and discounts them into an estimate of current value, thus representing the long-term value of the company (Rappaport, 1986). As the hospitality business environment becomes ever more competitive, identifying investments that best enhance a firm's shareholder value is a major concern (Lehmann, 2002). Hospitality companies have limited amount of capital, whereas, there are various alternative investments, including but not limited to investments in physical facilities, human resources, and market development. Hospitality business managers are under increasing pressure to develop procedures and measures to help forecast return on these various investments.

Within this framework, it is increasingly important to be able to measure the contribution of hospitality marketing investments to shareholder value (Doyle, 2000). At the moment, which marketing strategy is the best investment for our company? This has long been a critical question. Historically, various techniques and measures have been used to assess marketing effectiveness (e.g. Srivastava, Shervani, and Fahey, 1998; Ambler, 2003; Lehmann, 2004). Over the history of marketing thought, these measures have evolved from focusing on sales to emphasizing consumer satisfaction. More recently, as marketing thought has changed from focusing on transactions to emphasizing customer relationships, there is a growing interest in measuring the value of a company's relationships with its customers and understanding how marketing strategies contribute to those relationships. The concept of customer equity has been proposed as a measure of the value of a company's relationships with its customers (Rust et al., 2000). However, there is currently a lack of a validated and reliable measure of customer equity. Hence, the purpose of this dissertation will be to develop and validate a measure of customer equity in a hospitality context.

The following sections of this chapter provide further background to the concept of customer equity, focusing first on the evolution of marketing thought and the related measures of marketing effectiveness. Next, an overview of the current customer equity research is reviewed. The chapter concludes by stating the specific objectives of this research.

The Evolution of Hospitality Marketing Thought

Marketing has been recognized as an independent area of management from the beginning of the twentieth century. In the first three quarters of the twentieth century, hospitality marketing theory focused primarily on individual transactions between businesses and their customers (Sheth and Parvatiyar, 1995). According to this transaction-oriented marketing thought, the market is a place where buyers and sellers exchange utility (Webster, 1992). Suppliers offer products/services, and buyers create demand. In the marketplace, buyers and sellers pursue their self-interest at each transaction point (Ivang and Sorensen, 2005). This transaction-oriented marketing philosophy was the base for three distinct “eras of marketing”: (1) production, (2) sales, and (3) customer eras (Crane, 1993, Kotler, Bowen, and Makens, 1998).

Production Era

In the 1920s, hospitality business managers believed that production was a seller's market. There was a shortage of hospitality products/services relative to demand. Consumers favored products/services that were available and highly affordable; consequently, the primary goals of a hospitality business were production, manufacturing and efficiency (Fullerton, 1988; Kotler, Bowen, and Makens, 1998). During this era, a firm’s success was measured primarily in terms of production and effectiveness of the distribution system. This production-oriented philosophy dominated marketing thought up to the mid 1950s.

Sales Era

The second era of marketing appeared in the 1950s, as companies started to produce more products/services than consumers demanded (Crane, 1993). Consumers were offered many choices from various suppliers, so competition increased. Hospitality business managers were under pressure to sell their products/service. The primary focus of marketing moved from distribution to sales. Hospitality businesses had to concentrate marketing activities (e.g. advertising and skillful personal selling) on selling their product under the premise that various marketing activities influence customer behaviors, consequently enhancing sales of a company (Kotler, Bowen, and Makens, 1998; Rust, Ambler, Carpenter, Kumar, and Srivastava, 2004). Sales are directly related to the revenue of a company and are financially accountable; therefore sales were widely used as a measure of marketing strategy effectiveness (Cooper and Nakanishi, 1988; Powell and Allgaier, 1998). Various types of sales related measure – product sales, market share, return on investment, and cash flow – were proposed as measures of marketing success (e.g. Dekimpe and Hanssens, 1995; Powell and Allgaier, 1998). This sales-oriented philosophy was prevalent between the mid 1950s and the early 1970s.

Customer era

Beginning in the 1920's, competition dramatically increased and a buyers' market was created in many product categories. In the buyer's market, hospitality business managers realized that simply selling their product/service was not enough for a firms' value creation. They realized that a better strategy was needed to attract and keep customers; therefore firms started to consider what the customers needed before production began and created brand portfolios to satisfy various wants (Crane, 1993; Kotler, Bowen, and Makens, 1998). During this process, marketers realized that they should know consumers' needs and satisfy them (Oliver, 1980). Oliver postulated that a firm's success and marketing effectiveness should be evaluated from the customer perspective and suggested that customer satisfaction should be the key measure of marketing tactics. Satisfaction measures a customer's pleasure fulfillment with a purchase and, consequently, measures transaction-based marketing effectiveness. The customer-oriented concept of satisfaction dominated marketing research well into the 1980s.

Transition from Transaction Marketing to Relationship Marketing

Over the last 25 years, the central orientation of marketing theory has shifted from transactions to relationships (Webster, 1992). It was recognized that building long-term relationships are a key determinant of business success (Berry, 1983). Transaction-oriented marketing viewed self-interest as the primary driver of value creation (Sheth and Parvatiyar, 1995); a company and consumers are independent parties who seek to maximize their self-interest at each transaction point. In contrast, relationship marketing attempts to involve and integrate customers into a firm's marketing activities (McKenna, 1991; Shani and Chalasani, 1991). Such involvement results in close interactive relationships based on economic, emotional and structural bonds between businesses and customers (Berry, 1983).

Many hospitality companies invest marketing expenditure (e.g. customer database management, customized service, loyalty program) into relationship building with customers; the value of these relationships are recognized as a key measure of long-term marketing success (Yesawitch, 1991).

Key Principles of Relationship Marketing

In the literature, there is a little agreement on the definition of relationship marketing. However, researchers agree on six key principles: (1) getting information about customers, (2) investments in customers, (3) providing customized service, (4) interaction with customers, (5) integration of customers, and (6) intention of a unique relationship (e.g. Diller 2000). Integrating the six principles, the key philosophy of relationship marketing is that the customer is an entity that provides the firm with a stream of revenue over time. Therefore long-term customer relationship value becomes an integral component in the tabulation of a firm's long-term net worth (Berger et al., 2002). Also, cumulative relationship value is an overall measure of the company's marketing success. Consequently, 'How to measure relationship value' is a key issue in relationship marketing. The existing research has largely focused on, two measures of the value of the relationships between a firm and its customers: (1) repeat visitation and (2) brand loyalty.

Existing Measures of Relationship Value in Hospitality Business

Repeat visitation

Using repeat visitation as a measure of the relationship value between a hospitality company and a customer is rooted in continuity. Continuity refers to the parties' willingness to keep the relationship or prolong the cooperation (Heide & George, 1990). In this regard, repeat visitation is widely accepted as an important measure of relationship value in hospitality business. Previous studies (e.g. Kim, Han, and Lee, 2001) empirically verified that a hotel brand which has high relationship value with its customers has a larger number of repeat guests and a higher customer retention rate. Furthermore, it is strongly believed that repeat visitation is a key antecedent of a firm's long term value creation (Grant and Schlesinger, 1995). Consequently, much of the previous relationship marketing research has focused on how to make customers revisit or repurchase (e.g. Schmittlein, Morrison, and Colombo 1987; Schmittlein and Peterson 1995).

Brand loyalty

Brand loyalty is another frequently used measure of customer relationship value. The central premise of this work is that strong customer relationship value between a company and its customers results in loyalty (Foster & Cadogan, 2000). Loyal customers show a deeply held commitment to rebuy or patronize a preferred product/service, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts that have the potential to cause switching behavior (Oliver, 1999). Loyal customers provide a firm with a stream of revenue over time, and, thus, are an important determinant of a company's overall net worth (Berger et al., 2002). In the hospitality industry, the airline industry was the first segment that adopted loyalty programs and strategies to enhance relationship value by providing customers with enhanced services and rewards for loyal behavior (Kim, Han, and Lee, 2001).

Limitations of Repeat Visitation and Loyalty as Measures of Relationship value

Repeat visitation and brand loyalty have been used as measures of a company's customer relationship value. However, these measures have limitations. Repeat visitation is one of the indicators of relationship value, but high repeat visitation does not necessarily result in high relationship value. Large numbers of repeat visitors go to the same hotel not because of high relationship value, but because of other factors-such as low-price or accessibility. These repeat visitors could switch if they are given better offer or incentives (Oliver, 1999). In this regard, researchers called repeat visitation 'behavioral loyalty' and behavioral loyalty alone is not an accurate measure of customer relationship value (Hammond et al., 1996).

The other measure, brand loyalty, does not accurately reflect the contribution of the customer value to the company's shareholder value. Brand loyalty measures a customer's psychological commitment to rebuy or patronize a preferred product/service (Oliver, 1999), but does not consider physical commitments such as purchase amount, purchase frequency, and length of the relationship, all of which are key determinants of shareholder value (Berger et al., 2006). For example, a loyal customer visits a hotel every other week and always stays in a lower–priced room with discount rate. In contrast, another loyal customer visits the same hotel every other month and stays in a suite room, which is more expensive than a regular room. From the perspective of a company's shareholder value, which customer's value is higher? Because of this reason, the concept of brand loyalty does not measure the customer's true contribution to the company.

Basically, the relationship between customers and a hospitality firm is expected to follow the phases in sequential order: (1) customer acquisition, (2) customer retention, (3) relationship expansion (development), and (4) defection (Kumar and Petersen, 2005; Rust, Lemon, and Zeithaml, 2004; Berger et al., 2006). These phases are referred to as customer lifetime value (Gupta and Lehmann, 2005). In order to accurately measure the relationship value between a company and its customers, customer lifetime value should be considered. It is necessary to propose a new concept that measures customer lifetime value. Based on this logic, the notion of customer equity was proposed as a measure of relationship value.

The Concept of Customer Equity

Customer equity is defined as the total of the discounted lifetime values summed over all of a firm's customers (Blattberg and Deighton, 1996). Customer equity measures customer relationship value based on not only that customer's current profitability, but also her/his lifetime contribution. Recently, firms have focused increasingly on long-term customer relationships and long-term shareholder value when planning, marketing and managing, and evaluating (Bruhn, Georgi, & Hadwich, 2006). Rust et al. (2000) stated "the long-term value of the company is largely determined by the value of the company's customer relationships, which is called customer equity" (p. 4). Thus, managing and maximizing customer equity influences the long-term shareholder value of the company (Rust, Zeithaml, and Lemon 2000). Previous studies have empirically verified that customer equity is directly related to shareholder value (e.g. Gupta, Lehmann, and Stuart, 2004; Berger et al., 2006; Wiesel and Skiera, 2005). In this sense, customer equity is: (1) an overall measure of relationship value, (2) an overall measure of the marketing success of a company, and (3) should be directly related to the shareholder value of a company.

Problems with the current measure of customer equity – need for a new measure

The biggest challenge in the existing studies is that customer equity is not a well-developed concept; the measurement method is not yet well established. Researchers (e.g. Rust et al., 2000, Dwyer, 1989; Berger and Nasr, 1998) have proposed formulae to calculate customer equity on the basis of sales value. For example, Rust and his colleagues' (2000) formula calculates customer equity on the basis of sales value.

- Customer equity (customer lifetime value) = $\sum_{t=0}^{T}[(1+d)^{-t} F_{it} S_{it} \pi_{it}]$

Note: T: the length of the planning horizon, t: time period, F_{it}: expected frequency of the customer's purchases/visit per time period, π_{it}: the customer's average spending/contribution per visit, S_{it}: the probability of return, d: the company's discount rate.

Other researchers (e.g. Dwyer, 1989; Berger and Nasr, 1998) also propose sales value measures of customer equity. Previous studies (e.g. Gupta, Lehmann, and Stuart, 2004; Berger et al., 2006; Wiesel and Skiera, 2005) empirically verified that these sales-based customer equity measures closely approximated the shareholder value of the firms.

However, these studies have not demonstrated the relationship between these sales-based customer equity measures and return on marketing investments. Customer equity has been proposed as an overall measure of relationship value, which is a key determinant of long-term marketing success (Gupta et al., 2006). Customer equity impacts a firm's financial value, but it is a consequence of marketing actions (Berger et al., 2006). Further research is needed to examine the relationship between customer equity and return on marketing actions, specifically customer satisfaction and quality of relationships. By providing this link, hospitality business managers can have a practical model for linking marketing investments and shareholder value. This is the focus of this dissertation. This requires not only a sales based measure of customer equity, but also an attitudinal measure.

Objective of the Study

Measuring marketing effectiveness has long been a critical marketing research issue. Over the years, numerous concepts have been suggested to measure marketing effectiveness, reflecting the various eras of marketing theory. The early research focused on transaction oriented measures, particularly customer satisfaction. Due to the growing focus on relationship marketing, repeat visitation and customer loyalty have been suggested. More recently, the concept of customer equity has evolved. This dissertation aims to create an attitudinal measure of customer equity and to examine the relationship between that measure and selected measures of marketing effectiveness, customer relationships, and shareholder value. Specifically, the objectives of this dissertation are:

- To develop an attitudinal scale for measuring customer equity in hospitality businesses
- To examine the relationship between this attitudinal measure and shareholder value of selected hospitality firms
- To assess the relationship between the customer equity scale and the selected criterion measures (including the sales based measures of customer equity)

Definitions of Terms

Advocacy is defined as a customer's willingness to recommend and make referrals, due to the widely held belief that referrals are the most important method of obtaining new customers (Raymond and Tanner, 1994).

Awareness is defined as the strength of a brand's presence in the customer's mind (Aaker, 1996)

Brand association refers to the informational nodes linked to the brand node in a customer's memory (Berger et al, 2006).

Brand equity is defined as the customers' subjective and intangible assessment of the brand above and beyond its objectively perceived value (Rust, Zeithaml, & Lemon, 2000)

Commitment is defined as an enduring desire to maintain a valued relationship (Moorman et al. 1992, p.316).

Concurrent validity refers a classification of criterion validity whereby a new measure correlate with a criterion measure taken at the same time (Zikmund, 2003).

Criterion validity is defined as the ability of some measure to correlate with other measures of the same construct (Zikmund, 2003).

Cross-buying is defined as the customer's practice of buying additional products and services from the existing service provider in addition to the ones s/he currently has (Ngobo, 2004, p.1129).

Customer acquisition is defined as part of the customer-firm relationship that begins with the consumers' first interaction with the firm and proceeds through the first purchase until the first repeat purchase (Thomas, 2001).

Customer defection is defined as customers forsaking one service provider for another (Garland, 2002, p. 318).

Customer equity is defined as the total of the discounted lifetime values summed over all of the firm's customers (Blattberg & Deighton, 1996).

Customer relationship expansion (development) refers to increasing purchases either of new products or the same products previously bought from the firm (Berger et al., 2006 p.157).

Customer retention is defined as a customer's repeat purchase of the product(s) from the firm (Berger et al., 2006).

Involvement is defined as a state that indicates the amount of arousal, interest, or drive evoked by a particular stimulus or situation (Mitchell, 1979).

Lifetime value is defined as the total net contribution that a customer generates during his/her lifetime on a house-list or customer database (Bitran and Mondschein, 1997, p. 109).

Loyalty refers a deeply held commitment to rebuy or patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior (Oliver, 1999).

Predictive validity refers a classification of criterion validity whereby a new measure predicts a future event or correlates with a criterion measure administered at a later time (Zikmund, 2003).

Relationship equity is defined as a customer’s tendency to continue purchasing a particular brand above and beyond the objective and subjective assessment of the brand (Lemon et al., 2001).

Satisfaction is defined as pleasurable fulfillment and emphasized the importance of making customers content with the purchase of their products (Oliver, 1999).

Shareholder value is defined as the part of its capitalization that is equity as opposed to long-term debt (Wikepedia, 2008).

Value equity is defined as the customer’s objective assessment of the utility of a brand based on perceptions of what is given up by the customer for what is received (Rust et al, 2000).

CHAPTER II

LITERATURE REVIEW

Introduction

The purpose of this chapter is to provide a review of background literature pertaining to the constructs of the theoretical model proposed in this study. As relationship marketing has evolved, the importance of measuring customer relationship value has been cited. Previous studies have proposed the concepts of repeat visitation and brand loyalty as measures of relationship value. However, these measures pose a number of critical limitations. This dissertation proposes that the concept of customer equity is an advanced measure of relationship value, due to its relationship to a company's financial valuation and return on marketing actions. This chapter first reviews the evolution of relationship marketing. Then, existing concepts for measuring relationship values and their limitations are discussed. Finally, literature pertaining to the concepts of relationship marketing, customer equity, and customer lifetime value are assimilated to form the rationale for the model, propositions, and methodology that will be discussed in Chapter III.

Relationship Marketing

The Evolution of Relationship Marketing

In the history of marketing thought, traditional transaction-oriented marketing has largely been replaced by customer-oriented relationship marketing (Aijo, 1996; Payne et al. 1995; Sheth and Parvatiyar, 1995; Zeithaml and Bitner, 2003). Researchers (e.g. Gronroos, 1994; Hollensen, 2003; Brink and Berndt, 2004) have postulated three reasons for this transition. First, since the beginning of the post-industrial era, there has been tremendous growth of service industries, including the hospitality industry (Sheth and Parvatiyar, 1995). In 1999, the service sector represented 80 percent of total employment and at least 78 percent of the gross domestic product of the United States, and the service industry is expected to continue to grow (Zeithaml and Bitner, 2003). Oftentimes in both service and hospitality marketing, no separation exists between production, delivery, and consumption. The buyer-seller interaction must therefore be considered a marketing function (Gronoos, 1990). This interaction consists of psychological communication, and can only be fulfilled in a good relationship with the customer. Traditional transactional marketing concepts have omitted or ignored the buyer-seller interaction (Aijo, 1996). As a result, new customer relationship-oriented marketing concepts were required as marketing concepts have evolved. One proposed solution is that of relationship marketing (Gronroos, 1994).

Another reason for the increase in customer-oriented relationship marketing pertains to the fact that the traditional, transaction-oriented marketing concept is rooted in the marketing mix and "4Ps": (price, product, place, and promotion). Theoretically, managing the marketing mix and the "4Ps" has meant relying on mass marketing techniques, in which customers become merely numbers for marketing specialists, whose strategies are based on market statistics (Gronroos, 1994). Consequently, these strategies are not truly customer-oriented and the tactics employed are not customized.

For this reason, transactional marketers might satisfy customers with standardized marketing tactics in the short term, but often fail to maintain the relationship over the long term. In the hotel industry, for example, while guests may express a high degree of satisfaction with a particular hotel, a number of them nonetheless visit different hotel brands when a better offer is provided (Shoemaker and Lewis, 1999). Failure to receive customized service from a hotel brand prevents customers from differentiating one hotel brand from another, and an emotional attachment to a particular hotel brand is not achieved in the absence of that relationship. Similarly, some satisfied guests choose a different hotel brand due to novelty-seeking behavior. These customer behaviors are forcing marketers to adopt high-variety strategies (e.g. brand portfolio strategies) or relationship marketing strategies (e.g. customized marketing, loyalty program) (Sawhney, 1998). Based on these results, hospitality industry marketers have realized the necessity of providing customized service and building a solid relationship between a hospitality brand and its customers in order to encourage customers to revisit the brand over the long term.

Finally, service industries and hospitality markets have matured in general and there is now little possibility for long-term product differentiation Customer retention and long-term relationship building are therefore more critical to brand success (Hollensen, 2003; Brink and Berndt, 2004). Based on the three issues described above, critics have indicated that traditional transaction marketing is an inappropriate strategy for the current state of hospitality and service marketing, in which the establishment of longer-term relationships with customers is critical to organizational success (Payne et al. 1995).

Key Concepts and Theories of Relationship Marketing

The key philosophy of relationship marketing is that the customer is an entity that provides a company with a stream of revenue such that a long-term relationship value with customers becomes an integral component in the tabulation of a company’s long-term net worth (Berger et al., 2002). From a managerial perspective, the main focus of relationship marketing strategies is individual customer profitability and the benefits that can be created from customer relationships (Coviello et al., 1997; Gronroos, 1997, 2004; Gummesson, 1987, 1999; Webster, 1992). To this end, relationship marketers emphasize the use of interactive marketing activities and the management of marketing dimensions such as people, processes, and physical evidence with the aim of establishing, developing, and maintaining mutually beneficial, cooperative customer relationships (Gronroos, 1997, 2004). Rather than conducting traditional one-way marketing or mass marketing tactics such as the “4Ps”, relationship marketing attempts to involve and integrate customers into a company's marketing activities, using customized marketing tactics (McKenna, 1991; Shani and Chalasani, 1991).

Diller (2000) specifically suggests six key principles of relationship marketing:

1. Obtaining information about customers;
2. Investing in customers;
3. Providing customized service;
4. Interacting with customers;
5. Customer integration;
6. Intention of a unique relationship.

The first principle states that relationship marketing is based on the concept of cooperation with customers. Consequently, companies should obtain necessary information about their customers (Gronroos, 1996). For this reason, relationship marketers develop customer information databases in order to provide customized service and engage in relationship-oriented customer interactions. For example, restaurant operators gather point-of-sale information about patrons at the point of purchase or by placing customer comment cards on dining tables in a restaurant (Kotler, Bowen, & Makens, 1998). Restaurant marketers compile collected information into a customer database and utilize it for relationship marketing purposes (Kasavana & Knutson, 2000). It is also necessary to determine which customers are valuable and worth a continued investment. Investing in all customers is an inefficient strategy, and maintaining all customer relationships is not possible in light of a company's limited resources. Customer value calculations are therefore an important aspect of relationship marketing (Blattberg and Thomas, 1998). For example, in the restaurant industry, based on the customer databases that restaurant marketers compile, restaurants select valuable customers (e.g. frequent diners or loyal customers) and invest marketing expenditures (e.g. providing incentives to frequent diners, dissemination of points for purchases, mailing birthday cards, special offers, free gifts, promotions, events, complaint handling etc.) to these targeted customers (Kasavana & Knutson, 2000).

According to Diller's third principle, customers often cannot be viewed as similar to one another in terms of preferences, thus necessitating that a company provides individual and customized service (Diller, 2000). For example, restaurants provide customized meals for vegetarian or customers with special preferences. The fourth principle states that long-term relationship building is possible when based on communication and interaction with customers. Researchers (e.g. Gronroos, 1996) have noted that seeking direct contact with customers in order to maintain long-term relationships is an important aspect of relationship marketing. For this reason, hotels operate 24-hour customer service center and leave guest comment cards in the guest rooms. This way, guests can communicate with the hotel whenever necessary. Such communication and interaction with customers are critical factors for relationship marketing success.

Diller's fifth principle underscores the importance of integrating customers into value-creation processes (Diller, 2000), allowing marketers to get closer to their customers and enhance relationship value. For example, the Cheesecake Factory donates 25 cents for every cheesecake slice sold to *Feeding America:The Nation's Food Bank Network*. Whenever patrons buy the cheesecake, the patrons feel that they making a beneficial contribution to society. Consequently, customers are integrated into value-creation process, allowing the company to get closer to their customers.

Finally, the sixth principle states that it is necessary to pursue relationship marketing with the intention of having a unique business relationship with customers that will distinguish a company from its competitors. For example, Marriott hotel's redesign of the guest check-in process allows loyal guests to skip check-in process. The Marriott hotel company keeps records of loyal guests' credit card information and room preferences, permitting them to no longer have to show a credit card or wait for check-in at the front-desk. Instead, arriving guests receive their personalized package, including room information, and may proceed directly to their favorite room (Berry & Lampo, 2000). This specialized service differentiates Marriott's service from that of any other hotel.

Understanding the Value of Customer Relationships

A key premise of relationship marketing is to build successful long-term relationships with customers with the goal of achieving long-term profits. These relationships are therefore a critical component of a company's financial performance (Berger et al., 2002) and should be positively related to the shareholder value of a company (Berger et al., 2006; Gupta et al., 2004; Kim, Mahajan, and Srivastava, 1995; Wiesel and Skiera, 2005). Blattberg, Getz, and Thomas (2001) stated that customer relationship value is a long-term asset that companies should measure, manage, and maximize like any other asset.

One of the most important goals of relationship marketing is to enhance customer relationship value (Payne et al., 1995). Relationship marketers must continuously seek out marketing investments that can maximize customer relationship value (Peck et al., 1999). Within this framework, it is increasingly important to be able to measure the contribution of marketing investments to relationship value enhancement. Previous studies have postulated the importance of developing a measure of the value of a company's relationships with its customers. The measure should both provide evidence of the effectiveness of a company's marketing activities (Peck et al., 1999) and relate to the overall shareholder value and perceived quality of a company (Berger et al., 2002). By determining relationship value, hospitality business managers can make a practical link between marketing investments and shareholder value, thus identifying investments that best enhance a company's shareholder value.

Existing Measures of Relationship Value

With the evolution of relationship marketing, the importance of measuring customer relationship value has been addressed. Previous studies have proposed two measures of relationship value: repeat visitation and brand loyalty.

Repeat Visitation Research

Since continuity is a key premise of relationship value between two parties (Heide & George, 1990), a company's repeat visitation by customers has been widely used as an important measure of customer relationship value. Studies have postulated that repeat visitation is related to both customer relationship value and to a company's profitability (Reichheld and Kenny, 1990; Reichheld, 1996; Schmittlein, 1995). Figure 1 describes the relationships between customer relationship value, repeat visitation, and firm profitability.

Figure 1. Repeat visitation as a measure of relationship value

It is commonly proposed that a high repeat visitation rate can enhance a company's profitability, primarily by reducing the costs associated with the acquisition of new customers (Reichheld and Kenny, 1990; Reichheld, 1996; Schmittlein, 1995). From the perspective of marketing efficiency, the results of empirical research have verified that a five percent increase in repeat visitation can increase a company's profits by 25 to 85 percent (Reichheld and Sasser, 1990; Shoemaker and Lewis, 1999). It has been further argued that repeat visitors tend to create positive word-of-mouth referrals and positive brand images, thereby encouraging other customers' curiosity and having a positive impact on a company's profitability.

In addition, studies (e.g. Naude and Buttle, 2000; Kim, Han, and Lee, 2001) have postulated that customer relationship value is highly related to repeat visitation rate. For example, in the hospitality industry, a hotel brand with a high customer relationship value typically has a larger number of repeat guests and a higher customer retention rate. (Kim, Han, and Lee, 2001). Kim and Cha (2002) empirically tested the relationship between customer relationship value and hotel guests' revisit intention. Based on data collected from customers of the 12 five-star hotels, they concluded that higher customer relationship value resulted in high repeat visit intention. In the restaurant industry, Kim and Ok (2009) examined how customer relational benefit increases restaurant patrons' repeat visitation rate. They analyzed data collected from 411 patrons of full-service restaurants and found that customer relational benefits trigger customers' perceptions of being favorably treated, thus increasing revisit intention to the restaurants. Repeat visitation has therefore been recognized as a key measure of relationship value, and a large number of studies have been conducted to determine methods to maintain current customers and increase the length of their customer relationships in order to increase repeat visitation.

However, repeat visitation has two key limitations as a measure of relationship value. First, while repeat visitation is theoretically a sufficient condition for measuring relationship value, it is not a necessary condition. In particular, repeat visitation is one indicator of relationship value, yet high repeat visitation does not necessarily result in high relationship value. While repeat visitation rate is widely recognized in the hotel industry as a one indicator of relationship quality, large numbers of repeat visitors may go to the same hotel not due to high relationship value, but because of other factors, such as accessibility or low pricing. These repeat visitors could potentially patronize alternative hotel brands if given better offers or incentives from competing brands (Oliver, 1999).

For the above-stated reasons, researchers have cited repeat visitation as behavioral loyalty, which in itself is insufficient as an accurate measure of customer relationship value (Hammond et al., 1996). Another limitation of repeat visitation is that the concept does not accurately reflect a company's shareholder value. While repeat visitation is strongly believed to enhance the financial performance of a company (Best, 2000), however, theoretically it is one of indicators that increases shareholder value (Berger et al., 2006). Theoretically, shareholder value is more influenced by a customer's purchase amount and revisit frequency (Berger et al, 2006), which are not taken into account in the concept of repeat visitation. The concept of repeat visitation alone therefore does not accurately measure the contribution of customer relationship value to the shareholder value.

Brand Loyalty

Oliver (1999) defined loyalty as "a deeply held commitment to rebuy or patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior" (p. 34). This definition has been widely used in literature regarding the concept of branding (e.g., Chaudhuri & Holbrook, 2001). Brand loyalty has become an increasingly important marketing concern as companies view customers as a part of their assets (Shugan, 2005). Theoretically, the number of returning customers, the number of customers who become more attached to a brand over time, and the amount of money spent by those customers significantly influence a company's revenues.

Oliver (1999) postulated four stages of loyalty: cognitive loyalty, affective loyalty, conative loyalty, and action loyalty. Cognitive loyalty demonstrates a psychological preference for one brand over alternative brands, and is created primarily through experience-based information such as prior experience or brand belief. The depth of loyalty is based only on performance, so at this stage of loyalty, satisfaction dictates the customer's future behavior. Affective loyalty is a more developed sense of loyalty and is created on the basis of cumulatively satisfying experiences that develop into a liking or attitude toward a particular brand. There is a psychological commitment; however, customers with this form of commitment to a brand are nonetheless subject to changing loyalties.

The next stage of loyalty is conative loyalty, which is developed through repeated episodes of positive effect toward the brand. In this phase, customers have a deeply held psychological commitment to buy a particular brand. Finally, action loyalty indicates a strong psychological commitment on the behalf of the customer, coupled with the overcoming of obstacles or switching incentives offered by competing brands.

In summary, brand loyalty is concerned with the level of psychological commitment to rebuy or patronize a preferred brand, and indicates the strength of relationship value

(Oliver, 1999). Using this rubric, researchers have postulated that brand loyalty is a key measure of customer relationship value for two reasons. First, brand loyalty can demonstrate the strength of relationship value between a brand and its customers (Foster & Cadogan, 2000). Second, loyal customers have strong inclinations to rebuy the brand (Oliver, 1999), and thereby provide a company with a revenue stream over time. Empirical studies in hospitality segment support these statements. For example, Kim, Lee, and Yoo (2006) analyzed data collected from 887 restaurant patrons. Based on structural equation modeling analysis, they found that customer relationship value significantly and positively influences loyalty generation. Sigala's (2005) study further examined the role of customer relationship value in loyalty generation. She analyzed 84 hotels' customer relationship management strategies, and concluded that the customer satisfaction and loyalty are the most important reasons for pursuing customer relations value in the hotel segment. Similarly, in the restaurant segment, Mattila (2001) showed that patrons' emotional attachment to the company leads to higher degrees of resistance to switching restaurants, thus generating customer loyalty. Sui and Baloglu (2003) analyzed 293 slot club members of casinos, and found that emotional attachment to a company plays an important role in customers' behavioral loyalty to casinos.

Furthermore, empirical studies verified that the brand loyalty has a strong positive impact on a company's profitability. For example, Hallowell (1996) examined the relationship between customer loyalty and a company's profitability. According to OLS regression analysis, they found that customer loyalty explained approximately 40 percent of the variance of a company's profitability. Similarly, Reichheld and Sasser (1990) empirically verified that a 5 per cent increase in customer loyalty can enhance firm profit by 25 percent to 85 percent. In this sense, Berger et al. (2002) stated that brand loyalty is an important determinant of a company's overall net worth. Figure 2 describes the relationships between strong relationship value, brand loyalty, and firm profitability.

Figure 2. Brand loyalty as a measure of relationship value

However, brand loyalty possesses two key limitations as a measure of relationship value between a company and its customers. First, it does not accurately reflect the contribution of the customer value to the company's shareholder value. While brand loyalty measures a customer's psychological commitment to rebuy or patronize a preferred product or service, (Oliver, 1999), it does not take into consideration physical factors such as purchase amount and frequency, which are key determinants of shareholder value (Berger et al., 2006). However, conceptually, psychological commitment is a factor that influences consumer behavior and is thus partially related to shareholder value. Brand loyalty therefore can be one of indicators that enhance shareholder value, but it is difficult to predict shareholder value based on brand loyalty, and the link between the two is relatively weak.

For example, an airline company could have two hypothetical loyal customers that always patronize the company for every flight and never fly with a competitor. One customer travels once per month and flies economy class. In contrast, the other loyal customer flies on business trips six times per year, but always purchases a business-class ticket that is three times more costly than an economy class ticket. From the perspective of a company's shareholder value, which customer's value is higher? The concept of brand loyalty does not take into consideration purchase amount and purchase frequency, so it does not accurately measure the customer's true contribution to the shareholder value of company.

The second limitation of brand loyalty is that the concept does not accurately reflect a customers' future contribution. Brand loyalty measures a customer's psychological commitment to rebuy a particular brand (Oliver, 1999), but does not consider the length of the commitment or relationship, which is an important factor for predicting shareholder value (Berger et al., 2006). How long does the psychological commitment continue? As previous researchers (e.g. Ind, 2003) have noted, loyalty is a psychological state, and is thus inherently impermanent. Loyalty can be strengthened or weakened, or may be eliminated altogether. Shareholder value forecasts future cash flows and discounts them into an estimate of current value, thus representing the long-term value of the company (Rappaport, 1986). If brand loyalty were a valid measure, it would accurately reflect a customer relationship value's future contribution to shareholder value. However, the concept of brand loyalty does not accurately measure the contribution of customer relationships to shareholder value.

Figure 3 visually describes the limitations of repeat visitation and brand loyalty. Partition A represents customers with low repeat visitation and low brand loyalty. These customers do not visit a given hotel or restaurant frequently, and they easily switch brands if another company provides a better offer. They spend a small amount of money when they do patronize a particular company, and rarely recommend the hotel or restaurant to others. This group demonstrates a low relationship value and its contribution to shareholder value is low. In contrast, Partition D represents customers with high repeat visitation and high brand loyalty. These customers visit a given hotel or restaurant frequently, and are psychologically involved with a brand and thus less likely to be persuaded to switch to other hotels or restaurant brands. They spend a large amount of money whenever they patronize a particular restaurant or hotel, and recommend the brand to others. This group demonstrates a high relationship value and makes a high contribution to shareholder value. Thus, repeat visitation and brand loyalty measure customers' contribution to a company.

Figure 3. The limitations of repeat visitation and brand loyalty

		Brand Loyalty	
		Low	High
Repeat Visitation	Low	A	B
	High	C	D

However, with regard to Partitions B and C, it is challenging to measure customers' contribution to shareholder value. Partition C represents customers with a high repeat visitation rate and low brand loyalty. These customers visit a given hotel or restaurant frequently, but they are easily persuaded to change brands if other companies provide incentives. They visit a particular hotel or restaurant very frequently, but spend a small amount of money at each visit, and rarely recommend the brand to others. In contrast, Partition B customers have a deeply held trust and commitment to a preferred company. When these customers travel or dine out, they visit only the preferred hotel or restaurant. They possess a very positive attitude towards toward the hotel or restaurant, and recommend the brands to others. However, these customers rarely take a trip or rarely dine out, so they do not visit the hotel or restaurant frequently. Using the concept of repeat visitation and customer loyalty, it is difficult to calculate the contribution of these two groups (partitions B and C) to a company.

In the history of relationship marketing, several concepts for measuring customer relationship value have been suggested, but all possess limitations. Thus, it is necessary to develop a new concept to measure relationship value more accurately. To this end, researchers recently have proposed the concept of customer equity as an overall measure of relationship value (e.g. Berger et al., 2006; Rust, Lemon, and Zeithaml, 2004; Srivastava, Shervani, and Fahey, 1998). The concept of customer equity not only considers customer repeat purchase behavior and customer loyalty, but also takes into account a customer's average spending, frequency of repeat visitation, probability of return, and length of relationship, which are all key determinants of shareholder value (Rust et al., 2000). This way, customer equity measures customer relationship value more accurately and closely measures customers' contribution to shareholder value.

Customer Equity as an Advanced Measure of Customer Relationship Value

Previous researchers (e.g. Blattberg & Deighton, 1996) defined customer equity as the total of the discounted lifetime values summed over all of the firm's customers. Customer equity attempts to measure customer relationship value based on not only a customer's current profitability, but also the customer's long-term profit value. Researchers (Rust et al., 2000; Gupta et al., 2006) have proposed that customer equity is a key measure of customer relationship value, which is critical determinant of the long-term value of a hospitality company.

This dissertation proposes that customer equity more accurately measures customer relationship value than previous measures for three reasons. First, customer equity accurately reflects the contribution of customer relationship value to the company's shareholder value. The concept of customer equity not only considers repeat purchase behavior, but also takes into account a customer's average spending, frequency of repeat visitation, probability of return, and length of relationship, which are all key determinants of shareholder value (Rust et al., 2000). Moreover, previous studies (e.g. Gupta, Lehmann, and Stuart, 2004; Berger et al., 2006; Kim, Mahajan, and Srivastava, 1995; Wiesel and Skiera, 2005) have empirically verified through the use of different data sets from different industries that customer equity closely approximates a company's shareholder value The existing measures of brand loyalty and repeat visitation did not provide a link with shareholder value and thus are invalid measures.

Second, customer equity attempts to measure customer relationship value based on not only a customer's current profitability, but also the customer's future profit value. By considering the concept of customer lifetime value, customer equity measures a customer's lifetime financial contribution, which is composed of the customer's current value and future value. Measures of brand loyalty and repeat visitation do not accurately determine a customer's future contribution, whereas customer equity considers it. Finally, customer equity provides evidence of the effectiveness of a company's marketing activities. Previous studies have empirically verified that customer equity directly reflects on a company's marketing actions and indicates the effectiveness of its marketing efforts. Specifically, promotion strategy (Lewis, 2006), pricing strategy (Thomas, Blattberg, and Fox, 2004;

Anderson and Simester, 2004), direct mailing marketing (Reinartz and Kumar, 2003), and loyalty programs (Bolton, Kannan, and Bramlett, 2000) have been proven to enhance a company's customer equity.

Customer Equity

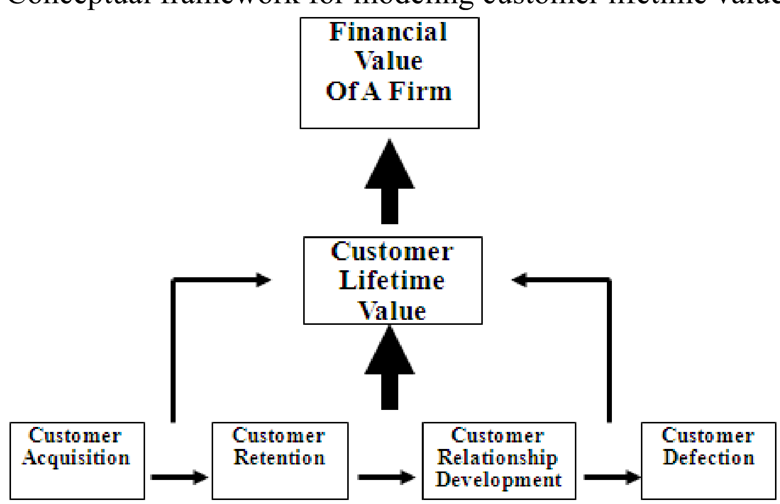
Customer equity is based on the concept of equity in finance and economics. In economic and financial research, equity is defined as "the sum of the value of all of a firm's warrants and the value of all its common stock" (Black and Scholes 1973; Galai and Schneller 1978). Based on this definition, Blattberg and Deighton (1996) have defined customer equity as the total of the discounted lifetime values summed over all of a company's customers. By reflecting a customer's true lifetime contribution to a company, customer equity provides a theoretical framework for making a company truly customer-centered (Rust, Lemon, and Zeithaml, 2004). Customer equity is also strongly related to a company's financial value (Wiesel and Skiera, 2005). Rust, Lemon, and Zeithaml (2004) have postulated that companies can increase financial accountability by enhancing their customer equity. The concept of customer equity is one of the most important determinants of the long-term value of a company, and it is applicable to a wide variety of market contexts and industries (Lemon, Rust, and Zeithaml, 2001).

Domain of Customer Equity Construct

Customer Lifetime Value

As stated in the definition, customer lifetime value is a core concept of customer equity. Customer lifetime value is a customer's lifetime contribution to a company, and it has been used as a measure of a company's success (Gupta et al., 2006). A customer's lifetime contribution to a firm is expected to follow four phases in a sequential order: (1) customer acquisition, (2) customer retention, (3) relationship expansion (development), and (4) defection (Gupta and Lehmann, 2005; Kumar and Petersen, 2005; Rust, Lemon, and Zeithaml, 2004; Berger et al., 2006). Figure 4 shows conceptual framework for modeling customer Lifetime value (Gupta et al., 2006).

Figure 4. [used with permission]
Conceptual framework for modeling customer lifetime value



Customer Acquisition

Customer acquisition is defined as the part of the customer/company relationship that begins with the consumer's first interaction with the company and proceeds through the first purchase until the first repeat purchase (Thomas, 2001). Customer acquisition research has focused on the impact of marketing variables (e.g. price, promotion, discounts) on customer acquisition. Also, many studies examined how these customer acquisition strategies influence customer lifetime value. For example, Lewis (2006) examined the relationships between a company's customer acquisition promotion strategies and its customer lifetime value. The results of the study demonstrate that customers acquired through promotional efforts tend to have a lower repurchase rate and shorter lifetime values.

Similarly, Thomas, Blattberg, and Fox (2004) have examined the impact of product and service pricing on customer lifetime value. The study resulted in the conclusion that low pricing can help companies acquire customers; however, these customers tend to have shorter lifetime with the company. A study by Anderson and Simester (2004) found that a discounting strategy can be positive factor for first-time buyers but a negative factor for customer retention. Lewis (2005) explained that first-time buyers are more price sensitive, however, that sensitivity decreases with customer retention. Therefore, for customer retention, it is necessary to provide a series of diminishing discounts rather than a single deep discount. As a result of such empirical findings, researchers have suggested that the customer acquisition processes employed by a company influence its customer retention and customer lifetime value (e.g. Thomas, 2001). For many years, a great deal of customer value research focused on customer retention rather than customer acquisition (e.g. Reichheld and Sasser, 1990; Schmittlein, Morrison, and Colombo 1987; Schmittlein and Peterson 1995). It is now apparent that customer acquisition comes before customer retention and has strong impact on customer retention rate and customer lifetime value.

Customer Retention

Customer retention is defined as a customer's repeat purchase of a company's products or services (Berger et al., 2006). Customer retention is a key antecedent of customer value creation (Grant and Schlesinger, 1995) and customer lifetime value is highly influenced by customer retention (Reichheld, 1996). Using the case study of a Canadian grocery chain, Grant and Schlesinger (1995) explained that increasing customer retention by 5% would increase the current value of customers, thus enhance the firm's profit by 300%. In this regard, for many years, companies emphasized the value of current customers and attempted to enhance customer retention rates (Bolton, Lemon, and Verhoef, 2004). It is commonly argued by researchers that maintaining current customers costs less than attracting new customers (e.g. Reichheld and Sasser, 1990). Therefore, customer retention research has focused on how to maintain current customers and increase the length of customer/company relationships (e.g. Schmittlein, Morrison, and Colombo 1987; Schmittlein and Peterson 1995).

Many studies have examined the factors that make the length of the customer relationship longer, since it is critical factor for customer value creation. For example, Reinartz and Kumar's (2003) study indicated that direct mailing and loyalty programs make the length of relationships longer. Many studies conceptually have postulated that retention is an important factor that could increase customer lifetime value; however, it should be noted that longer customer relationships do not necessarily increase a company's financial value (Reinarts and Kumar 2000). By analyzing the data collected from a sample of 9,167 households, Reinarts and Kumar (2000) found a low Pearson correlation coefficient between the length of customer relationship and firm profitability. Furthermore, they found that 18.7% of customers generate relatively high profits for the company even though the customer tenure is short. In contrast another 21.2% of customers generate relatively low profits even though they exhibit a long lifetime. Some customers who remain as returning customers may nonetheless make small financial contributions to the company. For this reason, the concept of customer relationship development (or expansion) has been deemed critical.

Customer Relationship Expansion (Development)

Customer relationship expansion refers to "increasing purchases either of new products or the same products previously bought from the firm" (Berger et al., 2006 p.157). There are two different types of relationship development: depth and breadth (Verhoef, 2001). Depth of relationship indicates the frequency of product purchases over time, or a customer's upgrade towards purchasing premium products. As the relationship between the company and a customer becomes more entrenched, the customer tends to buy the company's product(s) more frequently. The customer also tends to purchase premium products that provide a larger profit margin for the company.

In contrast, the breadth of a relationship is reflected in cross-buying (Bolton, Lemon, and Verhoef, 2004) in which customers purchase different products from the same company. For instance, a customer could purchase groceries from Wal-Mart for many years and then may eventually decide to also purchase tires from the company. Customer retention helps a firm maintain their customers, while, customer relationship development helps to promote increased spending. Previous studies have examined many factors that may influence the development of the customer relationship (e.g. satisfaction, price, promotion). For example, Bolton and Lemon (1999) have found that customer satisfaction and price perceptions positively influence relationship development. By analyzing data collected from 490 customers, they found that customers who have high levels of cumulative satisfaction tend to buy higher usage levels of the service in subsequent time periods. Also, they found that higher price is associated with lower usage. Similarly, the results of a study by Bolton, Kannan, and Bramlett (2000) indicate that a loyalty program positively influences relationship development. They analyzed cross-sectional, time-series data from a worldwide financial services company that offered a loyalty program. Their data analysis indicates that loyalty program members tend to spend more money than non-members.

Customer Defection

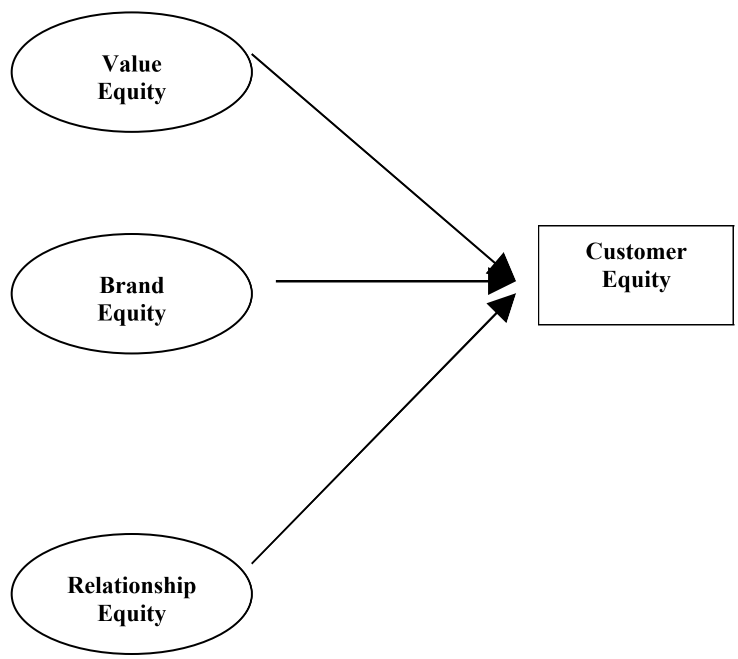
Customer defection is defined as "customers forsaking one service provider for another" (Garland, 2002, pp. 318). For many years, customer defection research has been in the spotlight because of the suggestion that customer defection is strongly related to a firm's profitability (e.g. Reichheld and Sasser, 1990; Reichheld, 1996). For example, Reichheld and Sasser (1990) postulated that reducing customer defection by 5 percent can increase profit by 25 percent to 85 percent across several industries. As the customer defection drops, the average life span of customers increase, thus enhance the value of the customers. Consequently, the company's long-term profit increases. For this reason, researchers examined factors influencing customer defection (e.g. Capraro et al., 2003). Large numbers of studies have suggested that customer satisfaction is a key antecedent of customer defection (Rust and Zahorik, 1993; Fornell, 1992). Theoretically, satisfied customers tend to revisit/repurchase products/services from the same company, therefore customer defection rate decreases. In contrast, other researchers (e.g. Reichheld, 1996) argued that satisfaction is a weak predictor of customer defection. Reichheld (1996) stated that 65 to 85 percent of customers defect despite being satisfied. Similarly, Hennig-Thurau and Klee (1997) stated that large numbers of dissatisfied customers still repurchase the company's products/services. In summary, researchers agreed that customer defection is a one of the key determinant of customer lifetime value/customer equity and it is strongly related to the company's profitability. However, regarding factors influencing customer defection, different researchers suggested different reasons.

In summary, customer lifetime value is a core concept of customer equity, and is composed of three components: customer acquisition, customer retention, and customer relationship development.

Existing Model of Customer Equity

The existing model of customer equity is made up of three drivers: value equity, brand equity, and relationship equity (Lemon, Rust, & Zeithaml 2001; Leone, Rao, Keller, Luo, McAlister, and Srivatstava 2006; Rust, Zeithaml, & Lemon, 2000, 2004). Figure 5 describes the three drivers of customer equity (Rust et al., 2000).

Figure 5. [used with permission]
Three drivers of customer equity



Value Equity

Value equity is defined as the customer's objective assessment of the utility of a brand based on perceptions of what is given up by the customer for what is received (Rust et al, 2000). Customers' evaluations of a product/service are highly influenced by perceptions of value. Value equity is the keystone of customer equity, since if a company's product value does not meet the customers' assessment, the firm's brand strategy and relationship marketing strategy will be insufficient to enhance customer equity. In the following five situations, value equity has been demonstrated to bear a stronger impact on customer equity enhancement than any other determinants:

1. When discernable differences exists between competing products;
2. In complex decision processes;
3. In business-to-business purchases;
4. When providing innovative products;
5. When revitalizing mature products (Lemon et al., 2001).

The three key drivers of value equity are quality, price, and convenience (Lemon, Rust, and Zeithaml 2001, Rust, Zeithaml, and Lemon 2000, 2004, Leone, Rao, Keller, Luo, McAlister, Srivatstava 2006). This is the cognitive aspect of customer equity.

Goal and action identification theories provide a conceptual background for the relationship between value equity and customer relationship value. Such theories (Carver & Scheier, 1990; Vallacher & Wegner, 1987) suggest three things:

1. Consumer behaviors are highly influenced by their goals;
2. There are superordinate goals at the highest level, and subordinate goals at the lowest level;
3. Consumer behaviors are more influenced by superordinate goals. In particular, superordinate goals regulate subordinate goals, while subordinate goals serve instrumental roles.

Perceived value is a superordinate goal (Sirdeshmukh et al., 2002), in the sense that customers are value-maximizers who pursue a provider with maximal value (Kotler, 2000). Value is a customer's objective assessment regarding what is given up for what is received (Rust et al, 2000), and therefore is the highest level goal (Sirdeshmukh et al., 2002). In contrast, customer relationship is a subordinate goal in marketing, since a customer will maintain a relationship with a company as long the relational exchanges provide superior value (Sirdeshmukh et al., 2002). Therefore, customer relationship is a subordinate goal determined by the superordinate goal of perceived value . In other words, if the perceived value is high, a customer may maintain a relationship with the company.

Brand Equity

Brand equity is defined as the customer's subjective and intangible assessment of the brand above and beyond its objectively perceived value (Rust, Zeithaml, & Lemon, 2000). Brand equity influences customer equity formation in three ways: it provides a stimulus to consumers and helps to attract new consumers to the company, it provides a reminder to customers concerning the company's products/services in order to encourage repurchases/revisits, and it provides an emotional bridge between the customer and the brand (Rust et al., 2000).

In addition, it has been suggested that brand equity is a key antecedent of customer relationship value and of the financial performance of a company (e.g. Keller, 1993; Kim and Kim; 2005; Rust et al., 2000). Brand equity creates specific brand associations in consumers' minds and indicates a general market signal about the credibility of a particular brand (Erdem & Swait, 1998). Consequently, it helps to create a customer's desire to continue a relationship with a seller (Moorman et al., 1992; Bolton et al., 2002; Martenson, 2007; Tepeci, 1999). Martenson (2007) has stated that a brand consists of perceptions about a specific company, and influences consumer behavior regarding the maintenance of a relationship with that company. Tepeci (1999) has stated that branding is a prerequisite of relationship building.

In many cases, customers tend to purchase, recommend, and continue purchasing a particular company's product as a result of brand equity. Kim and Kim (2005) have investigated the relationship between the brand equity of hotel chains and the companies' financial performance. According to their multiple regression analysis results, brand equity has a significant positive relationship with financial performance of chain restaurants (R^2=0.573) and of luxury hotels (R^2=0.622). Three key levels of brand equity are customer brand awareness, customer brand attitudes, and customer perception of brand ethics (Lemon, Rust, and Zeithaml 2001, Rust, Zeithaml, and Lemon 2000, 2004, Leone, Rao, Keller, Luo, McAlister, Srivatstava 2006). This is the affective aspect of customer equity.

Relationship Equity

Relationship equity is defined as a customer's tendency to continue purchasing a particular brand above and beyond the objective and subjective assessment of the brand (Lemon et al., 2001). The concept of relationship equity includes the belief that significant brand and value equity may not be sufficient to maintain a customer. Lemon et al. (2001) have proposed that marketers should strive to achieve a bond that makes customers loyal to their brand. Relationship equity enhances customer equity in three ways: it maximizes customer probability of return for future purchases, it maximizes the future purchase amount, and it minimizes the possibility that a customer will purchase from competitors (Blattberg et al., 2001).

Four key measures of relationship equity are loyalty programs, special recognition and treatment programs, community-building programs, and knowledge-building programs.

(Lemon, Rust, and Zeithaml 2001, Rust, Zeithaml, and Lemon 2000, 2004, Leone, Rao, Keller, Luo, McAlister, Srivatstava 2006). This is the conative aspect of customer equity. In summary, there are three key drivers of customer equity that operate both independently and together. By improving these three drivers, firms can enhance overall customer equity.

Rust and his colleagues (2000) developed measurement items for measuring value, brand, and relationship equity of an airline company (Table 1).

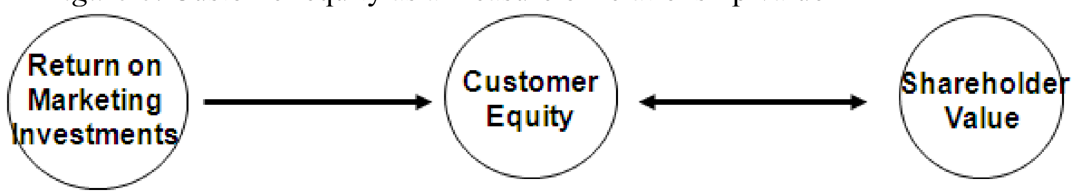
Table 1
Three drivers of customer equity: Measurement Items (Rust et al., 2000)

Construct and Scale Item
Value Equity
How would you rate the overall quality of the airline?
To what extent is the quality of the airline worth the price paid?
How would you rate the competiveness of the price of the airline?
The airline flies when and where I need to go
It is easy to make reservations with the airline.
Please rate the regular price charged by the airline company
Please rate the discounted price offered by the airline company
Brand Equity
My attitude toward the airline is extremely favorable.
I often notice and pay attention to the airline's media advertising.
I often notice and pay attention to information the airline sends to me.
The airline is well known as a good corporate citizen.
The airline is an active sponsor of community events.
The airline has high ethical standards with respect to its customers and employees.
The image of this airline fits my personality well.
I have positive feelings toward the airline.
Relationship Equity
I have a big investment in the airline's loyalty (frequent flyer) program.
The preferential treatment I get from this airline's loyalty program is important to me.
I know this airline's procedure well.
The airline knows a lot of information about me.
This airline recognizes me as being special.
I feel a sense of community with other passengers of this airline.

Theoretical Background of Customer Equity as a Measure of Relationship Value

In recent years, researchers have proposed the concept of customer equity as an overall measure of relationship value (e.g. Berger et al., 2006; Rust, Lemon, and Zeithaml, 2004; Srivastava, Shervani, and Fahey, 1998). Customer equity both provides evidence of the effectiveness of a company's marketing activities and relates to a company's shareholder value (Figure 6). In this sense, this dissertation re-defines customer equity as the long-term customer relationship value that links shareholder value with return on marketing investments.

Figure 6. Customer equity as a measure of relationship value



Theoretical Link between Customer Equity and a Company's Marketing Actions

Gupta et al. (2006) have proposed a model of customer lifetime value that demonstrates the ways in which a company's marketing activities (e.g. advertising, promotion, service improvement, etc.) influence customer lifetime behaviors, (such as acquisition, retention, relationship development) that in turn affect customer equity.

As previously mentioned, customer equity/customer lifetime value can be explained by four behaviors: acquisition, retention, expansion (development), and defection. These four lifetime behaviors are affected by customer mindset. As Keller and Lehmann (2003) have posited, “Customer behavior is consequence of customer mindset toward the firm’s products and service” (Berger et al., 2006 p.158). According to Keller and Lehmann (2003), conceptually, customer mindset is a key driver of customer behavior and thus has a positive impact on a company’s shareholder value. Customer mindset is conceptualized as psychological feelings, beliefs, or opinions that resides in a customer’s mind towards a company, and specifically is composed of five components: awareness (brand awareness), associations (brand association), attitude, loyalty (attachment), and advocacy (willingness to recommend). Previous studies have postulated that these five components of mindset are influenced or altered by a company’s marketing actions, thus influencing customer equity.

Brand Awareness

Brand awareness is defined as the strength of a brand’s presence in the customer’s mind (Aaker, 1996). Rossiter and Percy (1987) have stated that brand awareness is related to the strength of the brand node or trace in memory, enabling consumers to identify the brand under different conditions. Keller (1993) has suggested three important roles of brand awareness in marketing:

1. Brand awareness increases the possibility of a brand being included in a consumer’s consideration set;
2. Brand awareness influences consumer decisions about brands in a consideration set;
3. Brand awareness influences the formation and strength of brand associations in the brand image, consequently affecting consumer decision making, consumer retention, and buying behavior.

Awareness is also recognized as a prerequisite for brand loyalty (Aaker, 1991). At the low awareness stage, customers simply acknowledge a particular brand. As awareness increases, so does the possibility that customers will remember, purchase, and remain loyal to the brand (Tepeci, 1999). Along these lines, previous studies have proposed that brand awareness is one of the factors that increase customer acquisition, customer retention, customer relationship development, loyalty formation, and customer equity (e.g. Tepeci, 1999). A company's marketing actions (e.g. advertising, direct mail, trade press, word-of-mouth communication, and promotion activities) enhance brand awareness, consequently increasing customer acquisition, retention, and customer equity (Grover and Srinivasan, 1992).

Brand Association

Brand association refers to the informational nodes linked to the brand node in a customer's memory (Berger et al, 2006). Keller (1993) has stated that consumer knowledge of a brand is based on a set of associations related to features, benefits, users, and overall attitude. The customer's brand knowledge stems from their exposure to a company's brand marketing activities and from the effectiveness of advertising and promotion efforts (Richards, Foster, and Morgan, 1998). Brand association is the differential effect of this brand knowledge on consumer response to the brand's marketing activities. Therefore, conceptually, marketing activities such as advertising, promotion, and pricing strategies create brand associations in consumers' minds. These brand associations indicate a general market signal about the credibility of a particular brand, thus influences customer acquisition, retention, customer relationship development, and customer equity (Del Rio, Vazquez, and Iglesias, 2001). Del Rio, Vazquez, and Iglesias (2001) analyzed data from 400 consumer interviews, and found that brand association enhances customer willingness to pay a price premium, to accept other products from the company, and to recommend the brand to other people.

Brand Attitudes

In consumer behavior literature, it is strongly posited that consumers' attitudes towards a brand, company, or product are a key determinant of customer behavior (e.g. Fishbein and Ajzen, 1975). Brand attitudes are defined as consumers' overall evaluation of a brand (Wilkie, 1986). Different theories and models have proposed the relationship between attitude and behavior; however, it is widely accepted that brand attitudes are a function of the associated attributes and benefits that are salient for a brand (Keller, 1993). Keller has suggested that attitudes are created based on the salient belief that a consumer has about a product and the evaluative judgment of those beliefs. Fishbein (1963) postulated that the beliefs are mediators of attitude formation, and attitude influences consumer behavior.

Brand attitude is highly influenced by a company's marketing actions, such as advertising, promotion, and corporate ethics (Park and Young 1986, Chattopadhyay, 1998). For example, Park and Young (1986) showed how TV commercials play a role in brand attitude formation. They conducted a series of experiments with 120 women obtained from consumer panel. Based on the experiment results, it was found that background music in TV commercials had a facilitative effect on brand attitude for subjects in the low involvement condition and a distracting effect for those in the low involvement condition.

Similarly, Chattopadhyay (1998) found that advertisements are effective in changing consumers' brand attitude.

Loyalty (Attachment)

Oliver (1999) defined loyalty as "a deeply held commitment to rebuy or patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior" (p.34). As stated in the definition, loyalty is critical determinant of customer retention. In addition, loyal customers are psychologically involved with a brand, and thus are less likely to be persuaded to change their attitudes and behavior (Petty & Cacioppo, 1980). Moreover, previous studies postulated that loyalty influences customer purchase amounts (e.g. Magi, 2003). Specifically, Magi (2003) analyzed data collected from 1600 households and found that customers who belong to the loyalty program purchase larger amounts than other customers. In this sense, loyalty is a factor that influences customer lifetime value.

Both researchers and brand marketers have attempted to determine which marketing actions create and influence loyalty formation. Marketing actions such as loyalty programs, membership programs, and reward programs have been recognized as antecedents of customer loyalty formation (e.g. Oliver, 1999; Sharp and Sharp, 1997). For example, Sharp and Sharp (1997) examined the effectiveness of companies' loyalty programs on customer loyalty formation. They analyzed data collected from 745 consumers, and found that loyalty programs help to increase customers' repeat purchase loyalty over time.

Advocacy

Advocacy is the extent to which a customer would and does recommend a company's products to others (Berger et al., 2006). A large numbers of studies have discussed the importance of advocacy, defined as a customer's willingness to recommend and make referrals, due to the widely held belief that referrals are the most important method of obtaining new customers (Raymond and Tanner, 1994). Jones and Sasser (1995) determined that companies achieve approximately 60% of their new customers via referrals.

Researchers have identified two antecedents that evoke advocacy and the willingness to make recommendations to others: product performance and the company's marketing activities. Previous studies have suggested that willingness to recommend is influenced by product or service performance (Tanner, 1996), perceived value (e.g. Hartline and Jones 1996), and customer satisfaction (e.g. Engel et al., 1969). Other researchers have proposed that a company's marketing activities (e.g. advertising, promotion, relationship marketing programs) can enhance customers' willingness to recommend. For example, Bayus (1985) analyzed empirical data collected from a large-scale-marketing experiment project in U.S., and found that frequent repetitive advertising can significantly increase word of mouth and willingness to recommend. Kim, Han, and Lee's 2001 study analyzed data collected from 579 hotel guests, and found that a company's relationship marketing activities can enhance relationship quality between the customer and the firm, consequently creating customers' willingness to recommend.

In summary, a company's marketing actions are believed to influence the consumer mindsets of brand awareness, brand association, attitude, loyalty, and advocacy. (Keller and Lehmann, 2003; Berger et al., 2006). These five factors in turn are believed to influence the three key components of customer equity: customer acquisition, customer retention, and relationship development (Keller and Lehmann, 2003). Customer equity therefore is influenced by a company's marketing activities.

Link between Customer Lifetime Value and a Company's Market Value

Researchers have postulated that customer lifetime value and customer equity should be highly related to a company's shareholder value (e.g. Gupta, Lehmann, and Stuart, 2004; Berger et al., 2006). Gupta, Lehman, and Stuart (2004) found significant and positive relationships between customer lifetime value and a company's market value. Specifically, analysis of data from five companies indicated that a 1% improvement in customer retention improves a company's market value by 5 %, while a 1% improvement in customer acquisition can improve the market value by 1%. Kim, Mahajan, and Srivastava (1995) have examined the relationships between the number of a company's customers, the net present value of cash flows, and stock prices. The study indicates that, as the number of a company's customers increases, customer lifetime value also increases. Consequently, the net present value of cash flow and stock prices increase as well. Wiesel and Skiera's 2005 study demonstrates a close relationship between customer lifetime value and a company's financial value. According to data analysis based on two Internet companies, the customer equity of the two companies closely approximated their market value . The customer equity/customer lifetime value of a firm therefore is highly correlated with a company's shareholder value (Hogan et al., 2002). The next section discusses the methods by which customer equity has been calculated in previous studies.

Existing Measures of Customer Equity

Previous researchers measured customer equity on the basis of sales value: a number of different approaches have been employed (e.g., Barbarosogilu & Tuelin, 2000; Berger & Nasr, 1998; Dwyer, 1997; Rust et al., 2000; Sargeant, 2001) (Table 2).

Table 2
Customer Equity/Customer Lifetime Value Measurement Model

Authors	Approach
Sargeant, 2001	Four approaches based on two dimensions: the time perspective and the unit of analysis
Barbarosogilu & Tuelin, 2000	Analytic hierarchy process approach
Dwyer, 1997	Calculating customer equity with a migration model.
Berger & Nasr, 1998	Calculating customer equity with four retention models and one migration model.
Rust, Zeithaml, & Lemon (2000)	Proposed formula for calculating customer lifetime value, which is composed of the average contribution, the expected frequency, length of the planning horizon, discount rate, and share of wallet.

For example, Dwyer (1997) has employed a migration model, while Berger and Nasr (1998) have utilized four retention models and one migration model for measuring customer equity on the basis of sales value. Retention model is an approach that calculates customer equity under the assumption that customer behavior can be predicted based on the customers' purchase history. This model estimates a customers' retention rate/future spending based on the company's historical data. Therefore, customer equity is calculated based on the customer's historical (past) financial contribution to the company. In contrast, a customer migration model considers the always-a-share case (Berger and Nasr, 1998). In the migration model, the recency of last purchase is used to predict the customer's probability of revisit in a period. These two models have their own benefits and drawbacks. Retention model is useful in cases where switching cost is high and customer commitment is a long-term one. Because, in this case, long-term purchase history of the customer closely approximates future purchase of the customer. In contrast, in cases when customers frequently discontinue their purchase of a particular product only temporally, the customer migration model is more appropriate. These two models provided foundations for sales-basis customer equity calculation.

Sargeant (2001) extended those two basic models and suggested four different approaches for measuring customer equity based on two dimensions: time perspective and unit of analysis. With regard to time perspective, there are two ways of calculating customer equity: the use of historic value or projected future value. Historic value is an analysis of customers' past worth in a company's sales. In contrast, projected future value is the measure of customers' future value in a company's sales. Another dimension of measurement concerns the unit of analysis in which organizations calculate customer equity based on either an individual basis or on specific groups of customers.

Differently, Barbarosogilu and Tuelin (2000) calculated customer equity on the basis of sales value using an analytic hierarchy process approach. They designed customer value assessment hierarchy model which is composed of four-levels: the top level represents customer value assessment and the last level consists of customer portfolio. This way, they calculated customers' financial contribution to a company from the supplier's point of view.

By integrating previous approaches, Rust et al. (2000) have proposed the following formula for calculating customer lifetime value in the service industry:

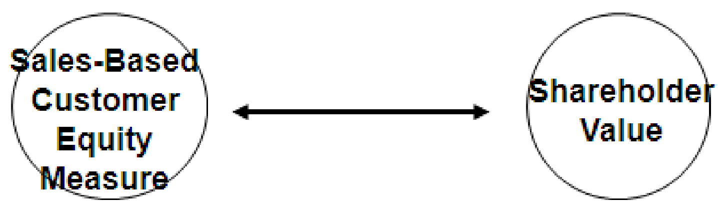
- Customer equity (customer lifetime value) = $\sum_{t=0}^{T}[(1+d)^{-t} F_{it} S_{it} \pi_{it}]$

Note: T: the length of the planning horizon, t: time period, F_{it}: expected frequency of the customer's purchases/visit per time period, π_{it}: the customer's average spending/contribution per visit, S_{it}: the probability of return, d: the company's discount rate.

This formula utilizes an individual-basis approach and calculates projected future value, taking into consideration the length of the planning horizon (T), the time period (t), the expected frequency of the customer's purchases/visit per time period (F_{it}), and the customer's average spending/contribution per visit (π_{it}). The model also accounts for a company's discount rate (d), since a large number of companies provide discounts to attract returning customers. The higher a company's discount rate, the greater the decrease in the lifetime value of the customer. Another important concept in this formula is the probability of return (S_{it}): Since many suppliers exist in a given market, customers typically have a variety of choices. Customers may choose a particular product at one time, then switch to an alternative brand for a number of reasons. Consequently, a customer's brand selection can be expressed as the probability of return.

In summary, the existing customer equity models, including the formula developed by Rust et al. in 2000, have focused on calculating customer equity on the basis of sales value. It has been determined that these sales-based customer equity measures closely approximates a company's shareholder value (Gupta, Lehmann, and Stuart, 2004; Berger et al., 2006; Wiesel and Skiera, 2005). The previous studies provide a theoretical background regarding the relationship between sales-based customer equity measures and shareholder value. Figure 7 describes the relationship between sales-based customer equity measure and shareholder value.

*Figure 7.*Correlation between sales-based customer equity measure and shareholder value

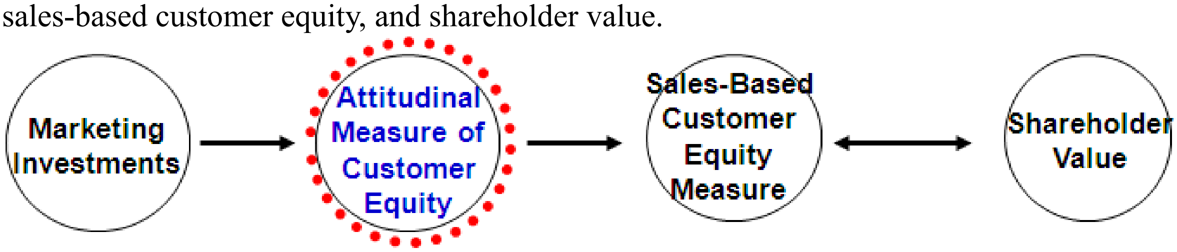


New Attitudinal Measure Proposal

The existing studies have proposed various measures of customer equity on the basis of sales value, and these measures are fundamentally linked to the shareholder value of a company. One limitation of the existing literature on customer equity is that the studies have not examined the relationship between these sales-based customer equity measures and the return on marketing investments. As a result, business managers lack a method for understanding the ways in which marketing strategies contribute to shareholder value. Customer equity has been proposed as an overall measure of relationship value, which is a key determinant of long-term marketing success (Gupta et al., 2006). Customer equity impacts a firm's financial value, but is a consequence of marketing actions (Berger et al., 2006). Theoretically, a link should exist between return on marketing investments and a company's shareholder value, and further research is required in order to examine the relationship between customer equity and return on marketing actions, specifically relationship value. Providing such a link would provide hospitality business managers with a practical model for linking marketing investments and shareholder value.

Focusing on relationship value requires not only a sales-based measure but also an attitudinal measure. This dissertation proposes a new attitudinal measurement scale of customer equity to link financial measurement of customer equity with the return on marketing actions (Figure 8).

Figure 8. A new attitudinal measurement scale linking return on marketing investments, sales-based customer equity, and shareholder value.



Criterion Validity

Any newly developed measurement or scale is required to possess an empirical association with some criterion or "gold standard". This is known as criterion validity (DeVellis, 1991), and is defined as the ability of some measure to correlate with other measures of the same construct (Zikmund, 2003). Criterion validity refers to the statistical equivalence between estimates and true, known parameters (Carmines and Zeller, 1979). There are two types of criterion validity: (1) concurrent validity and (2) predictive validity

(Zikmund, 2003). Concurrent validity refers a classification of criterion validity whereby a new measure correlates with a criterion measure taken at the same time. In contrast, predictive validity refers to a classification of criterion validity whereby a new measure predicts a future event or correlates with a criterion measure administered at a later time. This dissertation theorizes that a newly developed attitudinal measure of customer equity can predict the contribution of hospitality marketing investments to shareholder value. Therefore, criterion validity should be achieved in the scale development process.

From the perspective of criterion validity, the degree to which scores on the instruments of customer equity should be in agreement with some given criterion measures. To establish criterion validity for new instruments of customer equity, three steps should be executed: (Benton, 1982)

1. The instrument is administered to a group of individuals.
2. Values of criterion measures are obtained.
3. The instrument and criterion measures are correlated.

When a criterion validity study is conducted, the resulting correlation, or validity coefficient is an indication of the criterion validity of the customer equity instrument (Benton, 1982). The validity coefficient ranges from .00 (indicating no relationship between the two measures) to 1.00 (indicating that two measures are perfectly correlated). However, the biggest challenge in establishing criterion validity is the difficulty in obtaining a criterion measure (Thorndike and Hagen, 1969).

Criterion Measure for Checking Criterion validity

This dissertation aims to develop a new attitudinal measurement for linking marketing investments and shareholder value. Therefore, this study proposes three criterion measures for verifying criterion validity: shareholder value, SERVPERF instrument, and existing sales-based customer equity measures. In the case of the first criteria, a critical financial goal of companies is to improve shareholder value (Kaplan and Norton, 1992). Shareholder value analysis (SVA) forecasts future cash flows and discounts them into an estimate of current value. Day and Fahey (1988) and Day (1992) have stated that shareholder value is a measure of firm performance: "Managers of diversified companies are rapidly replacing their measures of performance, such as market share, growth in sales, or return on investment with abilities to enhance shareholder value" (p.45). In this regard, if a newly developed attitudinal measurement scale of customer equity is a valid measure, it should be able to predict the criterion measure of shareholder value.

Cronin and Taylor (1994)'s SERVPERF is the second criteria. Perceived service quality is a form of attitude, a long-run overall evaluation of the company, whereas satisfaction is a transaction-specific measure (Bitner 1990; Bolton and Drew 1991; Parasuraman, Zeithaml, and Berry 1988). Cronin & Taylor (1994) have reasoned that this is due to the fact that satisfaction is a short-term transaction-specific measure, while service quality (as measured by their SERVPERF scale) is a long-term attitudinal measure towards a brand or company. Therefore, if the newly developed attitudinal measurement scale of customer equity is a valid measure, it should be able to predict a long-run overall evaluation of the company-SERVPERF instrument.

The third criterion is the existing customer equity measure (Rust et al.'s 2000 formula). Previous studies (e.g. Gupta, Lehmann, and Stuart, 2004; Berger et al., 2006; Wiesel and Skiera, 2005) have verified empirically that the existing sales-based customer equity measure closely approximates a company's shareholder value. Therefore, if the newly developed attitudinal measurement scale of customer equity is a valid measure, it should be able to predict the existing sales-based customer equity measure.

Other than these three criterion measures, according to the existing model of customer equity (Lemon, Rust, & Zeithaml 2001; Leone, Rao, Keller, Luo, McAlister, and Srivatstava 2006; Rust, Zeithaml, & Lemon, 2000, 2004), there are three conceptual drivers of customer equity: (1) value equity, (2) brand equity, and (3) relationship equity. Therefore, these three conceptual drivers will be used as criterion measures.

Research Hypotheses

Through the integration and analysis of background literature pertaining to relationship marketing, this research culminates in the proposal of six hypotheses:

•Hypothesis 1: As a company's customer equity increases, the company's shareholder value also increases.

•Hypothesis 2: There is a significant and positive correlation between attitudinal customer equity and sales-basis customer equity.

•Hypothesis 3: There is a significant and positive correlation between SERVPERF and attitudinal customer equity.

•Hypothesis 4: There are significant and positive correlations between three conceptual drivers of customer equity and attitudinal customer equity

-Hypothesis 4A: There is a significant and positive relationship between value equity and attitudinal customer equity

-Hypothesis 4B: There is a significant and positive relationship between brand equity and attitudinal customer equity

-Hypothesis 4C: There is a significant and positive relationship between relationship equity and attitudinal customer equity

To test the above hypotheses, data were collected from 590 patrons of six national chain restaurant and hotel companies. Hypothesis 1 was tested by MANOVA test. The other hypotheses were tested by a series of Pearson correlation analyses. Chapter 3 discusses details of hypotheses testing processes.

CHAPTER III

METHODOLOGY AND RESULTS

Introduction

This chapter discusses the methodology and data analyses employed to achieve the purpose of this dissertation: to develop and validate a measure of customer equity. The methodology section was executed in two phases. The first phase focused upon the development of new scales to measure customer equity, while the second phase investigated the criterion validity of the newly developed measure. The discussion of Phase 1 of the research addresses the initial measurement item generation and questionnaire development processes. The discussion of Phase 2 addresses the scale validation, unidimensionality check, and hypotheses testing.

Phase 1: Scale Development

The first phase of this dissertation focused on development of an attitudinal scale to measure customer equity. DeVellis (1991) and Hinkin, Tracey, and Enz (1997) have suggested seven steps for scale development.

Step 1: Item Generation
Step 2: Content Adequacy Assessment
Step 3: Questionnaire Administration
Step 4: Factor Analysis (Exploratory and Confirmatory)
Step 5: Internal Consistency Assessment
Step 6: Construct Validity
Step 7: Replication

Following these guidelines, two studies were designed and conducted in Phase 1.

Study 1- Initial Item Generation and Validation

Introduction

The identification of scale items that reflect customer equity is a critical factor for the success of this dissertation. Theoretically, customer equity is the total of a firm's customer lifetime value, and is comprised of four dimensions: customer acquisition, customer retention, customer relationship expansion, and defection. Through the literature review process, it was indicated that none of existing scales were as exactly appropriate in the context of the four dimensions of customer equity. Hence, it was decided to develop a new scale. By taking an eclectic approach to scale development, this dissertation integrates these four constructs, and initial items were prepared.

Methodology

Item Generation

To generate initial items, an extensive review of literature was conducted in the broad contexts of customer relationship management (Reinartz et al., 2004; Foss et al., 2002; Payne et al., 2005; Wangenheim et al., 2007; Ngobo, 2004; Bolton et al., 2004), relationship marketing (Hennig-Thurau and Klee, 1997; Moorman et al., 1992; Morgan et al., 1994; Boon, 1994; Crosby et al., 1990; Kaufmann, 1988), psychology (McGee, 1987; Meyer, 1993; Shaver et al., 1987), service (Harrison-Walker, 2001; Helm, 2003; Danaher et al., 1996; Mittal et al., 1998; Berger et al., 2006; Zeithaml, Berry, and Parasuraman, 1996), business (Garland, 2002; Reichheld, 1996; Thomas et al., 2002; Berne et al., 2001; Verhoef et al., 2001; Delvin et al., 1993), and general marketing (Evans et al., 2000; Anderson et al., 2004; Erdogan, 1999; Kumar et al., 1995; Frazier et al., 1989; Ramsey et al., 1997). Through this process, 97 initial items were generated. Items that were not relevant in the hospitality industry or to the concept of customer equity were deleted based upon the definitions of each dimension as well as the researcher's own understanding of the content area. Consequently, 14 items supporting customer acquisition, 21 items supporting customer retention, 16 items supporting customer relationship expansion, and 12 items supporting customer defection remained (Table 3).

Table 3
Initial 63Items Supporting Four Dimensions of Customer Equity

Attitudinal Customer equity (Initial Items)

Customer Acquisition
My first impression was that the company was friendly (Evans, Klein, and Landry, 2000).
My first impression was that the company was appealing (Evans, Klein, and Landry, 2000).
I had already seen the company's advertisement before my first visit (Evans, Klein, and Landry, 2000).
I heard about the company from other people before my first visit (Evans, Klein, and Landry, 2000).
The company's price discount encouraged my first visit/purchase (Anderson and Simester, 2004).
The company's promotional email encouraged my first visit/purchase (Anderson and Simester, 2004).
The company's promotional mail encouraged my first visit/purchase (Anderson and Simester, 2004).
The company's celebrity endorsers (e.g. actors, singers in the advertisements) encouraged my first visit/purchase (Erdogan, 1999).
It was easy to find the contact information about the company when I first visited (Reinartz, Kraft, and Hoyer, 2004).
It was easy to make the first-time reservation/purchase with the company (Reinartz, Kraft, and Hoyer, 2004).
My first interaction with an employee of the company was nice (Evans, Klein, and Landry, 2000).
I was satisfied with my first visit to/purchase from the company (Wangeheim and Bayton, 2007).
I was pleased with my first visit to/purchase from the company (Wangeheim and Bayton, 2007) .
I got a good deal on my first purchase from the company (Wangeheim and Bayton, 2007).

Customer Retention
When I travel/dine out, this hotel/restaurant is my first choice (Zeithaml, Berry, and Parasuraman, 1996).
I like visiting the hotel/restaurant (Foss and Stone, 2002).
To me, this hotel/restaurant is the best one to do business with (Zeithaml, Berry, and Parasuraman, 1996).

I believe that this is my favorite hotel/restaurant (Foss and Stone, 2002).
I visit this hotel/restaurant more frequently than other restaurants/hotels (Zeithaml, Berry, and Parasuraman, 1996).
I don't usually visit other restaurants/hotels (Zeithaml, Berry, and Parasuraman, 1996).
During my lifetime, I want to keep my relationship with the company (Reinartz e al., 2004).
As long as the present service continues, I will keep going to this hotel/restaurant (Reinartz e al., 2004).
I spend a larger amount of money in this hotel/restaurant than in other hotels/restaurants (Foss and Stone, 2002).
I am a member of this hotel's/restaurant's membership club (Foss and Stone, 2002).
Whenever I ask for information, the hotel/restaurant provides necessary information to me (Foss and Stone, 2002).
Whenever I complain, the hotel/restaurant resolves the issue properly (Foss and Stone, 2002).
I pay attention to the hotel's/restaurant's announcements (Foss and Stone, 2002).
The hotel/restaurant is honest with me about problems (Moorman et al., 1992; Morgan and Hunt, 1994).
I can trust the hotel/restaurant to treat me fairly (Ramsey and Sohi, 1997; Kumar et al., 1995; Boon, 1994).
I feel emotionally attached to the hotel/restaurant (Meyer et al., 1993; Kumar et al., 1995).
I continue to go to the hotel/restaurant because I like being associated with them (Meyer et al., 1993; Kumar et al., 1995).
I am content with the hotel's/restaurant's performance (Danaher and Haddrell, 1996; Delvin et al., 1993; Shaver et al., 1987).
I use the hotel's/restaurant's mileage/point program (Foss and Stone, 2002).
The hotel/restaurant provides customized service for me (Reinartz e al., 2004).
The hotel/restaurant satisfies my expectations (Hennig-Thurau and Klee, 1997).

Customer Relationship Expansion
I want to try the company's premium product (e.g. suite room, high-price menu) (Verhoef, Franses, and Hoekstra, 2001).
I want to try other services/products provided by the company (Bolton, Lemon, and Verhoef, 2004).
If the company opens a new branch/store, I want to visit it (Berger et al., 2006).
I want to visit the hotel/restaurant more frequently (Verhoef, Franses, and Hoekstra, 2001).
When I go to the hotel/restaurant, I want to bring my friends/relatives/other people (Berger et al., 2006).
I want to invest money in purchasing the company's stock (Verhoef, Franses, and Hoekstra, 2001).
I would suggest the hotel/restaurant to my friends/relatives (Harrison-Walker, 2001).
If somebody says something negative about the company, I am willing to defend it (Berger et al., 2006).
I will post good things about the hotel/restaurant on the Internet website (e.g. blog) (Harrison-Walker, 2001).
I mention this hotel/restaurant to others quite frequently (Harrison-Walker, 2001).
I mention this hotel/restaurant to people more than other hotels/restaurants (Harrison-Walker, 2001).
When I tell others about this hotel/restaurant, I tend to talk about the hotel/restaurant in great detail (Harrison-Walker, 2001).
Once I get talking about this hotel/restaurant, it is hard for me to stop (Harrison-Walker, 2001).
I have only good things to say about this hotel/restaurant (Harrison-Walker, 2001).
I am proud to tell others that I use this hotel/restaurant (Harrison-Walker, 2001).
I am willing to say good things about the hotel/restaurant (Harrison-Walker, 2001).

Customer Defection
Next time I travel/dine out, I will consider switching to another company (Berne, Mugica, and Yague, 2001).
I will switch if other restaurants/hotels provide better offers (Mittal and Lassar, 1998).
I like the hotel/restaurant, but I want to try different hotels/restaurants next time (Berne, Mugica, and Yague, 2001).
I will not visit/dine out at the hotel/restaurant in the near future (Berne, Mugica, and Yague, 2001).

I will visit another hotel/restaurant when they provide incentive for first time customers (Reichheld, 1996).
I started to feel bored by the same services provided by the hotel/restaurant (Berne, Mugica, and Yague, 2001).
I will switch if the hotel/restaurant increases its prices in the future (Reichheld, 1996).
The hotel/restaurant company is not honest about its problems (Moorman et al. 1992; Morgan & Hunt 1994; Crosby et al. 1990).
I believe the hotel/restaurant company has been involved in ethical problems in management (Thomas, Vitell, Gilbert, and Rose, 2002).
I am angry with the hotel/restaurant (Frazier, Gill, and Kale, 1989; Kauftmann and Stern, 1988; Kumar, Scheer, and Steenkamp, 1995).
I am frustrated with the hotel/restaurant (Frazier, Gill, and Kale, 1989; Kauftmann and Stern, 1988; Kumar, Scheer, and Steenkamp, 1995).
I am annoyed with the hotel/restaurant (Frazier, Gill, and Kale, 1989; Kauftmann and Stern, 1988; Kumar, Scheer, and Steenkamp, 1995).

Content Adequacy Assessment

The next step in the scale development process was the analysis of content adequacy (Hinkin, Tracey, and Enz, 1997). According to Hinkin, Tracey, and Enz (1997), there are three methodologies for assessing content adequacy. First, experts can sort items based on their similarity to construct definitions. Second, experts can use both sorting and factor analysis to quantitatively assess content adequacy. Third, variance analysis can be utilized. Before collecting data, content adequacy for this dissertation was verified through the first methodology. Specifically, informed judges conducted content adequacy assessment, and acceptable items were then retained. Content adequacy was conducted via the instrument in Appendix A.

With this methodology, the selection of qualified judges was a critical issue for success. A total of 16 judges were selected based on three standards:

1) Academic experience: published a minimum of ten research papers regarding relationship marketing/consumer behavior

2) Industry experience: possessed a minimum of ten years of professional experience in the hospitality industry, particularly in the marketing-related department/consumer related department
3) Teaching experience: possessed a minimum of ten years of experience in teaching marketing at the university level.

Table 4 provides descriptive information regarding the 16 informed judges.

Table 4
Descriptive Information about Informed Judges

Judge Number	Gender	Qualification	Current Position
1	Male	Editor of top-tier journal. Thirty years teaching experience at the university level.	Professor, Department Head, Virginia Tech
2	Male	Twenty-five years of teaching experience at the university level. More than ten academic publications in the area of consumer behavior/relationship marketing.	Professor, Department Head, Virginia Tech
3	Male	Forty years of professional experience in hospitality sales, marketing, hotel operations, and conventions.	Virginia Tech
4	Female	Ten years of professional work experience in club management, marketing, and hospitality sales. Thirty years of teaching experience at the university level. Received Ph.D. with dissertation regarding scale development.	Dean, Virginia Tech
5	Female	Editor of top-tier journal. More than ten academic publications in the area of consumer behavior/service marketing. Thirty years of expeirence teaching marketing at the university level.	Professor of Marketing, University of Massachusetts
6	Male	More than 15 academic publications in the area of consumer behavior/relationship marketing area. Twenty years of experience teaching marketing at the university level.	Department Head, Professor of Marketing, University of Massachusetts
7	Male	More than 20 academic publications in the area of consumer behavior/relationship marketing.	Assistant professor, Kansas State University
8	Male	More than ten academic publications in the area of consumer behavior/relationship marketing area.	Kansas State University
9	Male	More than 20 academic publications in the area of consumer behavior/relationship marketing. Thirty years of experience teaching marketing at the university level.	Professor of marketing, Virginia Tech
10	Male	Ten years of professional experience in the areas of golf, club, and hospitality.	General manager of Blacksburg Country Club
11	Male	Thirty years of professional experience in hotel/resort management.	Virginia Tech
12	Male	Twenty-five years of professional experience in hospitality consulting. Eighteen years of professional	Professor of marketing, Virginia Tech.

		experience as a bed-and-breakfast owner, sales manager in the hotel industry, and manager. Twenty-five years of experience teaching marketing at the university level.	
13	Male	More than ten academic publications in the area of consumer behavior/service marketing. Six years of professional experience in the restaurant/hotel industry.	Assistant professor, Virginia Tech
14	Female	Ten years of experience in teaching consumer behavior.	Assistant professor, Virginia Tech
15	Female	Academic publications in the consumer behavior area. Experience teaching at university level.	Assistant professor, Virginia Tech
16	Male	Forty years of experience in hospitality consulting and marketing. Forty years of experience teaching marketing at the university level. More than ten academic publications in the area of consumer behavior/relationship marketing area.	Professor of marketing, Virginia Tech.

Figure 9 shows an example of a content adequacy questionnaire completed by a respondent. On the left-hand side of the questionnaire, four determinants of customer equity were defined. On the right-hand side, initial items were given. Judges were asked to read through the four determinants on the left-hand side of the page, and then match each item on the right to the determinant to which it most closely corresponded. If the item did not correspond to any of the four determinants, they were instructed to select the response "This item does not correspond to any of the above four determinants at all."

For the content adequacy assessment, items were screened based on a standard-agreement index of 0.6 (Clemenz and Weaver, 2003). In other words, in order to retain an item, at least 60% of the judges (at least ten out of 16) would have to agree that the item was relevant for measuring the dimension. Using this criterion, 48 items (76.2%) were retained (Table 5). The following numbers of items were paired with a given dimension by at least 60% of the judges: 14 items for customer acquisition, 11 items for customer retention, 15 items for customer relationship expansion, and 8 items for customer defection.

Figure 9. An example of completed content adequacy questionnaire

A. Customer Acquisition: Part of the customer-firm relationship that begins with the consumers' first interaction with the firm and proceeds through the first purchase until the first repeat purchase.

B. Customer Retention: A customer's repeat purchase of the product(s) from the firm.

C. Customer Relationship Expansion: Increasing purchases either of new products or the same products previously bought from the firm. Willingness to recommend and make referrals.

D. Customer Defection: Customers' forsaking one service provider for another.

E. This item <u>does not</u> correspond to any of the above four determinants <u>at all</u>

8. D___ I will switch if other restaurants/hotels provide better offers.

9. E___ My first impression was that the company was appealing

10. B___ If the company opens a new branch/store, I want to visit it.

11. C___ I believe that this is my favorite hotel/restaurant.

12. C___ I visit this hotel/restaurant more frequently than other restaurants/hotels

13. B___ I want to visit the hotel/restaurant more frequently.

14. A___ I had already seen the company's advertisement before my first visit.

15. C___ I don't usually visit other restaurants/hotels.

16. C___ When I go to the hotel/restaurant, I want to bring my friends/relatives/other people.

17. D___ I like the hotel/restaurant, but I want to try different hotels/restaurants next time.

Table 5
Items Indicated by a Minimum of 60% of Respondents as Conceptually Associated with a Given Dimension of Customer Equity (n=16)

Items	Frequency	%
Customer Acquisition		
My first impression was that the company was friendly.	16	100%
The company's promotional email encouraged my first visit/purchase.	16	100%
The company's price discount encouraged my first visit/purchase.	15	93.6%
I got a good deal on my first purchase from the company.	14	87.5%
My first impression was that the company was appealing.	14	87.5%
I had already seen the company's advertisement before my first visit.	14	87.5%
It was easy to find the contact information about the company when I first visited.	14	87.5%
It was easy to make the first time reservation/purchase with the company.	14	87.5%
My first interaction with an employee of the company was nice.	14	87.5%
The company's promotional mail encouraged my first visit/purchase.	13	81.3%
The company's celebrity endorsers (e.g. actors, singers in the advertisements) encouraged my first visit/purchase.	13	81.3%
I was satisfied with my first visit to/purchase from the company.	12	75.0%
I was pleased with my first visit to/purchase from the company.	11	68.8%
I heard about the company from other people before my first visit.	11	68.8%
Customer Retention		
When I travel/dine out, this hotel/restaurant is my first choice.	15	93.8%
As long as the present service continues, I will keep going to this hotel/restaurant.	14	87.5%
I like visiting the hotel/restaurant.	13	81.3%
During my lifetime, I want to keep my relationship with the company.	13	81.3%
I continue to go to the hotel/restaurant because I like being associated with them.	12	75.0%

I don't usually visit other restaurants/hotels.	11	68.8%
I visit this hotel/restaurant more frequently than other restaurants/hotels.	11	68.8%
I spend a larger amount of money in this hotel/restaurant than in other hotels/restaurants.	10	62.5%
I use the hotel's/restaurant's mileage/point program.	10	62.5%
I believe that this is my favorite hotel/restaurant.	10	62.5%
To me, this hotel/restaurant is the best one to do business with.	10	62.5%
Customer Relationship Expansion		
I am proud to tell others that I use this hotel/restaurant.	15	93.8%
I am willing to say good things about the hotel/restaurant.	15	93.8%
When I go to the hotel/restaurant, I want to bring my friends/relatives/other people.	15	93.8%
I would suggest the hotel/restaurant to my friends/relatives.	15	93.8%
I want to try the company's premium product (e.g. suite room, high price menu).	14	87.5%
I mention this hotel/restaurant to people more than other hotels/restaurants.	14	87.5%
I want to try other services/products provided by the company.	13	81.3%
If the company opens a new branch/store, I want to visit it.	13	81.3%
I mention this hotel/restaurant to others quite frequently.	13	81.3%
I have only good things to say about this hotel/restaurant.	13	81.3%
When I tell others about this hotel/restaurant, I tend to talk about the hotel/restaurant in great detail.	13	81.3%
Once I get talking about this hotel/restaurant, it is hard for me to stop.	12	75.0%
I will post good things about the hotel/restaurant on the Internet website (e.g. blog).	12	75.0%
If somebody says something negative about the company, I am willing to defend it.	11	68.8%
I want to visit the hotel/restaurant more frequently.	10	62.5%
Customer Defection		

Next time I travel/dine out, I will consider switching to another company.	16	100.0%
I will switch if other restaurants/hotels provide better offers.	15	93.8%
I like the hotel/restaurant, but I want to try different hotels/restaurants next time.	15	93.8%
I will switch if the hotel/restaurant increases its prices in the future.	14	87.5%
I will visit another hotel/restaurant when they provide incentive for first-time customers.	14	87.5%
I will not visit/dine out at the hotel/restaurant in the near future.	12	75.0%
I started to feel bored by the same services provided by the hotel/restaurant.	11	68.8%
I am angry with the hotel/restaurant.	10	62.5%

Study 1:Results

Based on an extensive review of literature in the broad contexts of customer relationship management, relationship marketing, psychology, service, business, and general marketing, 97 initial items were generated. Through the initial screening process, 63 items supporting four dimensions of customer equity remained: customer acquisition (14 items), customer retention (21 items), customer relationship expansion (16 items), and customer defection (12 items). Sixteen informed judges conducted content adequacy assessment for these items. Consequently, 48 items were retained: 14 items supporting customer acquisition, 11 items for customer retention, 15 items for customer relationship expansion, and 8 items for customer defection.

Study 2: Questionnaire Administration

Introduction

Next, a series of systematic processes were conducted to create two different sets of questionnaire. The initial 48 items identified via the content adequacy assessment were incorporated into a questionnaire (Table 6). SERVPERF construct is measured with items developed by Cronin and Taylor (1994). Items for measuring value, brand, and relationship equity are adapted from Rust et al. (2000). Shareholder value is calculated by the number of outstanding shares times current share price (Wikepedia, 2009). Lastly, items for calculating sales-based customer equity are adapted from Rust et al. (2000). Table 6 shows initial items for measuring constructs in this dissertation. Regarding attitudinal customer equity, SERVPERF, value equity, brand equity, and relationship equity, all items were assessed on five-point Likert-type scales ranging from 1 ('strongly disagree') to 5 ('strongly agree'). Regarding Shareholder value, outstanding share information was obtained from the 10-K annual report of each company and the average share price (from January 2008 to December 2008) was used in this dissertation.

Table 6.
Initial Items for measuring constructs

Construct and Scale Item
Attitudinal Customer equity (Initial Items identified via the content adequacy assessment)
Customer Acquisition
My first impression was that the company was friendly.
The company's promotional email encouraged my first visit/purchase.
The company's price discount encouraged my first visit/purchase.

I got a good deal on my first purchase from the company.
My first impression was that the company was appealing.
I had already seen the company's advertisement before my first visit.
It was easy to find the contact information about the company when I first visited.
It was easy to make the first time reservation/purchase with the company.
My first interaction with an employee of the company was nice.
The company's promotional mail encouraged my first visit/purchase.
The company's celebrity endorsers (e.g. actors, singers in the advertisements) encouraged my first visit/purchase.
I was satisfied with my first visit to/purchase from the company.
I was pleased with my first visit to/purchase from the company.
I heard about the company from other people before my first visit.

Customer Retention
When I travel/dine out, this hotel/restaurant is my first choice.
As long as the present service continues, I will keep going to this hotel/restaurant.
I like visiting the hotel/restaurant.
During my lifetime, I want to keep my relationship with the company.
I continue to go to the hotel/restaurant because I like being associated with them.
I don't usually visit other restaurants/hotels.
I visit this hotel/restaurant more frequently than other restaurants/hotels.
I spend a larger amount of money in this hotel/restaurant than in other hotels/restaurants.
I use the hotel's/restaurant's mileage/point program.
I believe that this is my favorite hotel/restaurant.
To me, this hotel/restaurant is the best one to do business with.

Relationship Expansion
I am proud to tell others that I use this hotel/restaurant.
I am willing to say good things about the hotel/restaurant.
When I go to the hotel/restaurant, I want to bring my friends/relatives/other people.
I would suggest the hotel/restaurant to my friends/relatives.
I want to try the company's premium product (e.g. suite room, high price menu).
I mention this hotel/restaurant to people more than other hotels/restaurants.
I want to try other services/products provided by the company.
If the company opens a new branch/store, I want to visit it.
I mention this hotel/restaurant to others quite frequently.
I have only good things to say about this hotel/restaurant.
When I tell others about this hotel/restaurant, I tend to talk about the hotel/restaurant in great detail.
Once I get talking about this hotel/restaurant, it is hard for me to stop.
I will post good things about the hotel/restaurant on the Internet website (e.g. blog).
If somebody says something negative about the company, I am willing to defend it.
I want to visit the hotel/restaurant more frequently.

Defection
Next time I travel/dine out, I will consider switching to another company.
I will switch if other restaurants/hotels provide better offers.
I like the hotel/restaurant, but I want to try different hotels/restaurants next time.
I will switch if the hotel/restaurant increases its prices in the future.
I will visit another hotel/restaurant when they provide incentive for first-time customers.

I will not visit/dine out at the hotel/restaurant in the near future.
I started to feel bored by the same services provided by the hotel/restaurant.
I am angry with the hotel/restaurant.

SERVPERF

The hotel/restaurant has up-to-date equipment
The hotel/restaurant's physical facilities are visually appealing
The hotel/restaurant's employees are well dressed and appear neat
The appearance of the physical facilities of the hotel/restaurant is in keeping with the type of service provided
When the hotel/restaurant promises to do something by a certain time, it does so
When you have problems, the hotel/restaurant is sympathetic and reassuring
The hotel/restaurant is dependable
The hotel/restaurant provides its services at the time it promises to do so
The hotel/restaurant keeps its records accurately
The hotel/restaurant does not tell its customers exactly when services will be performed
You do not received prompt service from the hotel/restaurant employees
Employees of the hotel/restaurant are not always willing to help customers
Employees of the hotel/restaurant are too busy to respond to customer requests promptly
You can trust employees of the hotel/restaurant
You can feel safe in your transactions with the hotel/restaurant's employees
Employees of the hotel/restaurant are polite
Employees get adequate support from the hotel/restaurant to do their jobs well
The hotel/restaurant does not give you individual attention
Employees of the hotel/restaurant do not give you personal attention
Employees of the hotel/restaurant do not know what your needs are
The hotel/restaurant does not have your best interests at heart.
The hotel/restaurant does not have operating hours convenient to all their customers.

Sales-based customer equity

How much do you spend each time on average when you visit the hotel/restaurant?
How many times do you visit the hotel/restaurant per month/year?
The next time you eat-out/travel, what is the probability that you will visit the restaurant brand/hotel brand?
How much of discount rate does the restaurant brand/hotel brand usually offer?
How many years, in your lifetime, would you expect that you will continue going to the restaurant brand/hotel brand?

Value Equity

How would you rate the overall quality of the company?
To what extent is the quality of the company worth the price paid?
How would you rate the competiveness of the price of the company?
The company's hotel/restaurant is located in convenient location.
It is easy to make reservations with the company.
The regular price charged by the company is lower than other companies.
The discounted price offered by the company is lower than other companies.

Brand Equity

My attitude toward the company is extremely favorable.
I often notice and pay attention to the company's media advertising.
I often notice and pay attention to information the company sends to me.
The company is well known as a good corporate citizen.
The company is an active sponsor of community events.
The company has high ethical standards with respect to its customers and employees.
The image of this company fits my personality well.
I have positive feelings toward the company.

Relationship Equity

I have a big investment in the company's loyalty (frequent guest) program.
The preferential treatment I get from this company's loyalty program is important to me.
I know this company's procedure well.
The company knows a lot of information about me.
This company recognizes me as being special.
I feel a sense of community with other customers of this company.

Shareholder Value

The number of outstanding shares
Current share price

Methodology

Selection of Two Target Companies

In order to create the questionnaires, two target companies were selected based on customer familiarity level. A self-report questionnaire was distributed to 144 students registered in an sophomore level, hospitality course at Virginia Tech (Appendix B). The level of familiarity was measured with two items:

1) "Please select only one hotel/restaurant that you know the most about."

2) "Please select only one hotel/restaurant that you know the least about."

For the hotel questionnaire, the hotels Holiday Inn, Comfort Inn, Days Inn, Super 8 Motel, and Hampton Inn were given as choices. For the restaurant questionnaire, the restaurants Papa John's, Domino's Pizza, Pizza Inn, Outback Steak House, and Panera Bread were given as choices. These hotels/restaurants were chosen because (1) they are well-known national chain hotel/restaurant brands and (2) they are popular with Virginia Tech students in the research area.

An e-mail survey was sent to all registered students in the course. Fifty-four students returned surveys (a response rate of 37.5%). A total of 79.6% of respondents answered that they knew the most about Holiday Inn Hotels, indicating that this company's familiarity was very high. A total of 29.6% of respondents answered that they knew the most about Panera Bread, indicating that this company's familiarity was the highest (Table 7).

Table 7
Customer Familiarity with hotels/Restaurants (N=54)

Hotel	n	Percentage
Holiday Inn	43	79.6
Comfort Inn	5	9.3
Hampton Inn	5	9.3
Super 8 Motel	1	2.0
Total	54	100.0

Restaurant	n	Percentage
Panera Bread	16	29.6
Outback Steakhouse	15	27.8
Papa John's	11	20.4
Domino's Pizza	11	20.4
Pizza Inn	1	1.9
Total	54	100.0

Using these two most familiar companies, two different draft questionnaires were created: one for the hotel industry (Holiday Inn), and one for the restaurant industry (Panera Bread). Section I of the questionnaire consisted of the sales-based customer equity measurement items. Section II of the questionnaire consisted of the newly developed attitudinal customer equity measure items. Section III consisted of the SERVERF, value, brand, and relationship equity measure items.

Pre-Test

A pre-test was subsequently conducted using eight graduate students and two faculty members in the hospitality and tourism management department at Virginia Tech. The purpose of the pre-test was to detect potential problems in questionnaire design, clarity, and wording (Zikmund, 2003). Pre-test respondents suggested some changes in the questionnaires. Through this process, items which were not clear, or were not relevant to the hotel/restaurant industry, were re-worded or deleted.

Focus Group Discussion

Next, a focus group discussion was conducted with three student consumers that had indicated high familiarity with Holiday Inn and Panera Bread. A focus group discussion is "an unstructured, free-flowing interview with a small group of people" (Zikmund, 2003, pp.117). Focus group discussions are not rigidly constructed question-and-answer sessions, but rather a flexible format that encourage the discussion of new concepts, issues, research, or subjects. As a result, this format enables participants to discuss their true feelings, anxieties, and frustrations, and to express the depth of their convictions in their own words. For this reason, focus group discussion is a commonly used method in the scale development process.

The three students consumers were recruited to participate in the focus group based on their previous experiences with Holiday Inn and Panera Bread. They had indicated that they visit a Holiday Inn monthly andvisit a Panera Bread at least two to three times per week. The draft questionnaires were reviewed question by question, and the focus group process was audio-taped. Subsequent analysis of the focus group proceedings resulted in the identification of areas in the questionnaire in which additional wording changes were required. The questionnaires were re-worded accordingly and then deemed completed (see Appendix C).

IRB Approval

To protect the rights of and ensuring the safety of human subjects involved in research, the two questionnaires were sent to Institutional Review Board (IRB) at Virginia Tech for review. Accordingly to IRB review, the survey questionnaires were harmless to respondents, therefore approved (see Appendix D).

Survey

After obtaining IRB approval, the questionnaires were administered to 296 students registered in a freshman level hospitality course at Virginia Tech. One hundred forty-eight students were selected alphabetically and received the questionnaire that pertained to the hotel industry. The remaining 148 students received the questionnaire that pertained to the restaurant industry. Extra credit was given to participating students as a response incentive.

One hundred thirty-three of the 148 restaurant segment questionnaires were returned, for an 89.9% response rate. In order to control response bias, the data were screened. After eliminating responses with missing information and extreme answers, 114 usable responses remained (a usable response rate of 77.0%). For the hotel segment questionnaire, 120 out of 148 were returned, for an 81.1% response rate. The data from these questionnaires were also screened to eliminate bias. After eliminating responses with missing information and extreme answers, 104 usable responses remained (a usable response rate of 70.3%).

Exploratory Factor Analysis: Item Evaluation

Hinkin et al. (1997) have stated that "item evaluation through factor analysis is one of the most critical steps in determining the viability of the scale" (p. 108). Factor analysis defines the underlying structure in a data matrix, thus aiding in item evaluation (Hair, Anderson, Tatham, & Black, 1995). Specifically, Hinkin et al. (1997) have suggested using both exploratory and confirmatory factor analysis for the scale development process. For this dissertation, exploratory factor evaluation (EFA) was conducted first for item evaluation. Hinkin et al (1997) have postulated that a factor loading of lower than .40 does not constitute a meaningful contribution. Items with low factor loadings were therefore eliminated. Next, step-by-step internal consistency assessment and CFA were conducted.

Exploratory Factor Analysis: Restaurant Segment

The data collected from the returned questionnaires were subjected to EFA. Recommendations regarding sample sizes for factor analysis ranged from a minimum of 50 total observations to 20 cases for each variable. Generally, however, researchers (e.g. Hair et al., 1998) have recommended the use of 50 observations to be the lower boundary, with a preferable size of 100 or more cases. Therefore, there was no problem conducting exploratory factor analysis with regard to sample size.

With regard to the critical assumptions underlying factor analysis, Hair et al. (1998) have stated that they are more conceptual than statistical. However, it is necessary to verify the existence of the underlying structure called for in the examination of the data matrix. There are two ways to determine the factorability of an intercorrelation matrix: Bartlett's Test of Sphericity, and the Kaiser-Meyer-Olkin (KMO) Measuring Sampling Adequacy (Hair et al., 1998).

According to Bartlett's Test of Sphericity, the null hypothesis, 'data matrix is an identity matrix' was rejected. Consequently, it can be interpreted that, when significant data correlations exist, data factorability is indicated. With the KMO method of testing the structural assumption of factor analysis is the KMO (Measuring Sampling Adequacy) test. The KMO measures the sampling adequacy, which should be greater than 0.5 for a satisfactory factor analysis to proceed (Hair et al., 1998). The KMO value was 0.847, thus indicating that acceptable sampling adequacy had been achieved.

Exploratory factor analysis with principal components extraction and varimax rotation was conducted with the 41 items. Eight factors were selected that possessed an eigenvalue higher than 1.0, the threshold value suggested by Hair et al. (1998). This factor solution accounted for 66.5% of the total variance, which is a satisfactory solution in social science research (Hair et al., 1998). After the first factor solution, factor analysis was conducted using more and less than eight factors. As Hair et al. (1998) have concluded based on the results of extensive trials, the best representation of a data set can be selected by examining the factor matrices. A nine-factor solution accounted for 68.9% of the total variance, while a seven-factor solution accounted for 63.8% of the total variance.

Ultimately, the six-factor solution was selected for three reasons:

1) The nine-factor and 10-factor solutions included factor(s) with an eigenvalue lower than 1.0, which is not recommended in scale-development literature (e.g. Hair et al., 1998).
2) The eight-factor solution included a factor(s) with a single variable. The purpose of this dissertation is to create a new measure. A single variable representing a dimension is unreliable for this purpose (Nunnally, 1978).
3) The seven-factor solution included cross-loaded items. According to Hair et al (1998), each factor should be orthogonal. Cross-loading items therefore negatively influenced the validity of the scale. In addition, some dimensions of the seven-factor solution possessed a Cronbach's alpha score lower than 0.7, indicating that reliability of the dimension was not achieved.

The six-factor solution accounted for 70.0% of total variance, which is acceptable in the social science (Hair et al., 1998). Table 8 provides the results of the extraction of six component factors of customer equity in restaurant segment (n=114).

Table 8
Results of the Extraction of Six Component Factors of Customer Equity (Restaurant Segment)

Factors	Eigenvalues	% of variance	Cumulative % of variance
1	6.244	31.2	31.2
2	2.498	12.5	43.7
3	1.755	8.8	52.5
4	1.403	7.0	59.5
5	1.088	5.4	64.9
6	1.018	5.1	70.0

Based on the factor loadings, the six factors (Table 8) were titled:

1) commitment
2) first interaction
3) defection
4) word of mouth (WOM)
5) cross-buying
6) motivation

The purpose of the exploratory factor analysis in the scale development study is item evaluation/purification (Hinkin et al., 1997). Through the exploratory factor analysis, (1) only items that have meaningful contribution can be retained and (2) items that negatively influence validity/reliability of the scale can be deleted (Hinkin et al., 1997). This dissertation generated 41 items via literature review. Based on three standards, items were evaluated and purified: (1) items with factor loadings of less than .4 were deleted due to their lack of meaningful contribution to the each dimension, (2) cross-loading items negatively influence validity of scale, so those items were deleted, and (3) based on Cronbach's alpha, items that negatively influence reliability of each dimension were deleted (Hair et al., 1998). Based on these standards, 21 items were deleted. Table 9 shows the remaining 20 items with their standardized factor loadings.

Table 9

Factor Analysis: Customer Equity – Six Factors Solution: Restaurant Segment (n=114)

Customer Equity	Factor 1 Commitment	Factor 2 First Interaction	Factor 3 Defection
Eigenvalues	6.244	2.498	1.755
Cronbach's Alpha	0.801	0.723	0.801
When I dine out, Panera Bread is my first choice	0.801		
As long as the current level of service continues, I will keep going to Panera Bread	0.719		
I don't usually visit other restaurants	0.702		
I visit Panera Bread more frequently than I do other restaurants	0.580		
On first impression, I found atmosphere at Panera Bread friendly		0.793	
On first impression, I found the environment at Panera Bread appealing.		0.660	
I was satisfied with my first visit to Panera Bread		0.647	
My first interaction with the staff at Panera Bread was pleasant		0.603	
I started to feel bored by the same service provided by Panera Bread			0.875
I will visit another reputable restaurant over Panera Bread if they provide incentive for first-time customers			0.836
Next time I dine out, I will choose another reputable restaurant over Panera Bread			0.701

Continue-Table 9

Factor Analysis: Customer Equity – Six Factors Solution: Restaurant Segment (n=114)

Customer Equity	Factor 4 WOM	Factor 5 Cross-Buying	Factor 6 Motivation
Eigenvalues	1.403	1.088	1.018
Cronbach's Alpha	0.799	0.708	0.710
I suggest Panera Bread to others quite frequently	0.889		
When I tell others about Panera Bread, I tend to talk about Panera Bread in great detail	0.875		
Once I get talking about Panera Bread, it is hard for me to stop	0.459		
I want to try Panera Bread's premium product line (e.g. higher price menu)		0.792	
I want to visit Panera Bread more frequently		0.786	
If Panera Bread opens in a new location, I want to visit it		0.507	
I got a good deal on my first purchase from Panera Bread			0.885
It is easy to find Panera Bread restaurant			0.777
I heard about Panera Bread from other people before my first visit			0.594

KMO=0.801

Bartlett Test of Sphericity Chi-Square=1042.247, df = 190, prob < .000

Internal Consistency Assessment: Restaurant Segment.

To access the internal consistency of the six sub-dimensions of customer equity, Cronbach's alpha was estimated (Table 10). All of the Cronbach's alpha values were higher than .7, which is the acceptable threshold (Hair et al., 1998).

Table 10
Cronbach Alpha Scores for Each of the Six Dimensions of Customer Equity (Restaurant Segment)

Dimensions (Customer Equity)	Cronbach's Alpha
Commitment	0.801
First Interaction	0.723
Defection	0.801
Word Of Mouth	0.799
Cross-Buying	0.708
Motivation	0.710

It was known that the results of exploratory factor analysis results bear a highly significant theoretical implication. The existing theoretical background supports the concept that customer equity is a multi-dimensional construct composed of four sub-dimensions: customer acquisition, customer retention, customer relationship development, and customer defection (e.g. Gupta and Lehmann, 2005; Kumar and Petersen, 2005; Rust, Lemon, and Zeithaml, 2004; Berger et al., 2006). However, the EFA results indicated that there were six sub-dimensions of customer equity:

1) first interaction
2) motivation
3) commitment

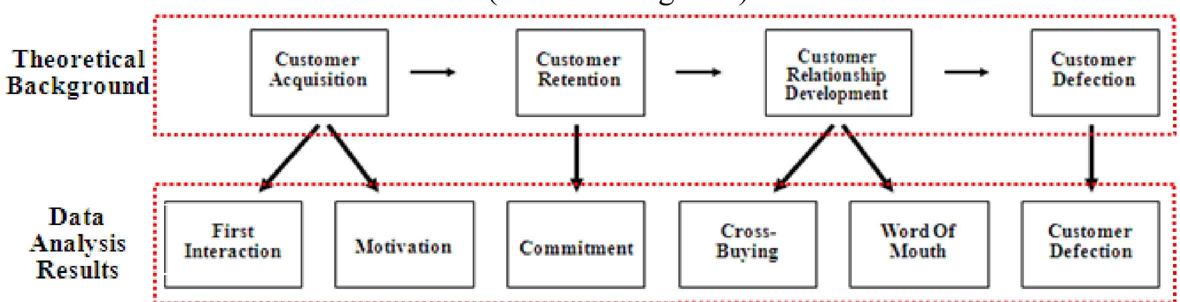
4) cross-buying

5) word of mouth

6) customer defection

Customer acquisition is not a uni-dimensional construct; it is a multi-dimensional construct comprised of (1) first interaction and (2) motivation. In addition, customer relationship expansion is not a unidimensional construct, but a multi-dimensional construct that is comprised of (1) cross-buying and (2) word of mouth. Figure 10 describes the existing four theoretical sub-dimensions of customer equity, and the segmentation of the four into six based on the EFA results.

Figure 10. The existing four theoretical dimensions of customer equity and six new dimensions derived from EFA results (restaurant segment)



Exploratory Factor Analysis: Hotel Segment

Using the same process employed for the restaurant segment questionnaire, the hotel (Holiday Inn) data from the collected questionnaires were factor analyzed. Of the 148 hotel segment questionnaires, 120 were returned, representing an 81.1% response rate. In order to control response bias, the data were screened. After eliminating those questionnaires with missing information and extreme answers, 104 usable responses remained, with a usable response rate of 70.3%.

Using Bartlett's Test of Sphericity, the null hypothesis, 'data matrix is an identity matrix' was rejected. It was consequently interpreted that significant data correlations existed, thus indicating data factorability. In addition, it was determined that the 0.753 KMO value achieved acceptable sampling adequacy.

Exploratory factor analysis with principal components extraction and varimax rotation were then conducted with the 42 items. Eleven factors with an eigenvalue higher than 1.0 were selected. This factor solution accounted for 69.0% of the total variance, a satisfactory solution in social science research (Hair et al., 1998). After the first factor solution, factor analysis was conducted using greater than and less than 11 factors. The factor matrices were examined and the best representation of the data set was selected. During this process, items with factor loadings of less than .4 were deleted due to their lack of meaningful contribution to the each dimension (Hair et al., 1998).

It was ultimately determine that ten-factor solutions explained 66.5% of the total variance, nine-factor solutions explained 63.9% of the total variance, eight-factor solutions explained 61.1% of the total variance, and seven-factor solutions explained 58.0% of the total variance.

The six-factor solution was selected for three reasons:

1) The 12-factor solution and 13-factor solution included factor(s) with eigenvalues lower than 1.0, which are not recommended in scale-development literature (e.g. Hair et al., 1998)

2) The 11-, 10-, and nine-factor solutions included a factor(s) with single variable. The purpose of this dissertation is to create a new measure. If a single variable represents a dimension, this is unreliable (Nunnally, 1978).

3) The eight-factor solutions and seven-factor solutions included cross-loaded items. Each factors should be orthogonal (Hair et al., 1998), so cross-loading items negatively influence validity of scale. Also, some dimensions had Cronbach's alpha lower than 0.7. This means that reliability of the dimension was not achieved.

The six-factor solution accounted for 64.9% of the total variance, which is acceptable in the social science (Hair et al., 1998). Table 11 provides the results of the extraction of six component factors of customer equity in the hotel segment (n=104).

Table 11
Results of the Extraction of Six Component Factors of Customer Equity (Hotel Segment)

Factors	Eigenvalues	% of Variance	Cumulative % of Variance
1	5.672	24.7	24.7
2	2.697	11.7	36.4
3	2.213	9.6	46.0
4	1.726	7.5	53.5
5	1.448	6.3	59.8
6	1.179	5.1	64.9

Based on the factor loadings, the six factors (Table 11) were titled:

1) first interaction
2) commitment
3) word of mouth (WOM)
4) cross-buying
5) defection
6) motivation

The purpose of the exploratory factor analysis in the scale development study is item evaluation/purification (Hinkin et al., 1997). Through the exploratory analysis, (1) only items that have meaningful contribution can be retained and (2) items that negatively influence validity/reliability of the scale can be deleted (Hinkin et al., 1997). This dissertation generated 42 items via literature review. Based on three standards, items were evaluated and purified: (1) items with factor loadings of less than .4 were deleted due to their lack of meaningful contribution to the each dimension, (2) cross-loading items negatively influence validity of scale, so those items were deleted, and (3) based on Cronbach's alpha, items that negatively influence reliability of each dimension were deleted (Hair et al., 1998). Based on these standards, 19 items were deleted. Table 12 shows the remaining 23 items with their standardized factor loadings.

Table 12
Factor Analysis: Customer Equity – Six Factors Solution: Hotel Segment (n=104)

Customer Equity	Factor 1 First Interaction	Factor 2 Commitment	Factor 3 WOM
Eigenvalues	5.672	2.597	2.213
Cronbach's Alpha	0.756	0.841	0.791
I was satisfied with my first visit to Holiday Inn.	0.764		
My first impression was that the staff at the Holiday Inn was friendly.	0.750		
My first impression was that Holiday Inn was appealing.	0.664		
I got a good deal on my first purchase from Holiday Inn.	0.638		
My first interaction with an employee of Holiday Inn was pleasant.	0.570		
I spend more money in Holiday Inn than in other hotels.		0.818	
I don't usually visit other hotels.		0.769	
I visit Holiday Inn more frequently than other hotels.		0.745	
When I travel, Holiday Inn is my first choice.		0.694	
I would suggest Holiday Inn to my friends/relatives.			0.795
I am willing to say good things about Holiday Inn.			0.766
If somebody says something negative about Holiday Inn, I defend it.			0.730
I mention Holiday Inn to others quite frequently.			0.694

Table 12, continued

Factor Analysis: Customer Equity – Six Factors Solution: Hotel Segment (n=104)

Customer Equity	Factor 4 Cross-Buying	Factor 5 Defection	Factor 6 Motivation
Eigenvalues	1.726	1.448	1.179
Cronbach's Alpha	0.712	0.704	0.705
If Holiday Inn opens a new hotel, I want to visit it.	0.791		
I want to visit Holiday Inn more frequently.	0.734		
I would try other services/products (e.g. sports bar) provided by Holiday Inn.	0.492		
When I go to Holiday Inn, I like to bring my friends/relatives/other people.	0.438		
I like Holiday Inn, but I want try different hotels next time.		0.801	
I will not visit Holiday Inn in the near future.		0.772	
Next time I travel, I will consider another hotel brand over Holiday Inn.		0.723	
I had seen an advertisement for Holiday Inn before my first visit.			0.777
It was easy to find the contact information for Holiday Inn when I first visited.			0.772
It was easy to make a reservation/purchase with Holiday Inn the first time.			0.714

KMO=0.764

Bartlett Test of Sphericity Chi-Square=937.240, df = 253, prob < .000

Internal Consistency Assessment: Hotel Segment

To access the internal consistency of the seven sub-dimensions of customer equity, Cronbach's alpha was estimated (Table 13). All of the Cronbach's alpha values were higher than the commonly accepted (Hair et al., 1998) threshold of .7.

Table 13
Cronbach Alpha Scores for Each of the Six Dimensions of Customer Equity (Hotel Segment)

Dimensions (Customer Equity)	Cronbach's Alpha
First interaction	0.756
Commitment	0.841
Word of mouth	0.791
Cross-buying	0.712
Defection	0.704
Motivation	0.705

In the hotel segment, the exploratory factor analysis revealed showed similar results as for the restaurant segment. As previously reported for the restaurant section (Figure 10), data analysis resulted in splitting the existing four dimensions of the hotel segment into six. Customer acquisition in the hotel segment was deemed a multi-dimensional construct that comprised of (1) first interaction and (2) motivation. Customer relationship expansion was assessed as a multi-dimensional construct comprised of (1) cross-buying and (2) word of mouth. Not all, but most items loaded on the same dimensions when compared to the restaurant side. The differences between the hotel scale and the restaurant scale are below:

(1) Motivation: the hotel scale includes the item 'It was easy to make a reservation/purchase with Holiday Inn the first time'. However, this item is not

included in the restaurant scale, because customers usually make a reservation before they visit a hotel, but rarely make a reservation when they go to a restaurant.

(2) First interaction dimension: the hotel scale includes the item 'I got a good deal on my first purchase from Holiday Inn'. However, this item is not included in the restaurant scale. Hotel price highly changes due to seasonal factor. So, sometimes, a guest purchases a room at a regular price. In contrast, sometimes, he/she got an excellent deal. However, in the restaurant segment, such a price variation is much smaller than the hotel price. Due to this reason, this item was included in the hotel segment, but it was not included in the restaurant segment.

(3) Commitment dimension: the hotel scale includes the item 'I spend more money in Holiday Inn than in other hotels'. Instead of this item, the restaurant scale includes 'As long as the current level of service continues, I will keep going to Panera Bread. In other words, to measure commitment, the hotels scale includes an item that measure a patrons' spending, but the restaurant scale includes an item that measures a patrons' continuity. Possible interpretation is that hotel guest visit hotel when they take a vacation. But, they go to restaurant in their everyday life. So, to measure commitment, spending is more relevant in the hotel segment, in contrast, continuity is more relevant in the restaurant segment. The difference was reflected to the each scale.

(4) WOM dimension: the hotel scale includes the item 'If somebody says some negative about Holiday Inn, I defend it'. However, this item is not included in

the restaurant scale. Hotel guests evaluate the hotel largely based on the condition of a room, which is a very standardized product. In contrast, restaurant patrons evaluate the restaurant largely based on the quality of food. The quality of food can be sometimes changed due to the freshness of grocery or hiring a new chef etc. In this sense, hotels sell more standardized products than restaurants. So, if a guest's experience with a hotel was good, the hotel guest can defend the hotel based on their experience. In contrast, if restaurant patrons hear bad things about their favorite restaurant, they would think that there might be another reason (e.g. chef was changed, food was overcooked by mistake, waitress made a mistake etc). For this reason, this item is more close to hotel industry.

(5) Cross-buying dimension: the hotel scale includes the item 'When I go to Holiday Inn, I like to bring my friends/relatives/other people'. However, this item is not included in the restaurant scale. This difference arises due to student sample. Students never go to a hotel alone. Only business travelers go to hotel alone. In contrast, many students go to restaurant alone. In this sense, data analysis revealed that this item is more relevant to the hotel segment. In phase 2, this item will be evaluated again using consumer sample via confirmatory factor analysis.

Exploratory Factor Analysis: SERVPERF Scale.

SERVPERF is a multi-dimensional construct composed of five sub-dimensions: tangibles, reliability, responsiveness, assurance, and empathy (Cronin and Taylor, 1994). The SERVERF scale was originally developed using data collected from consumers of a credit card company, bank, and a telephone company. For this reason, the underlying structure of SERVPERF in the hospitality industry can be different from the original SERVPERF. For this reason, this dissertation conducted EFA with SERVPERF items in order to determine the underlying structure of SERVPERF in the restaurant/hotel industry, with the following results:

Restaurant segment: Cronin and Taylor's (1994) SERVPERF includes 22 items. Through the pre-test and focus group discussion, it was decided that five items were not relevant to the restaurant industry. Therefore those five items were deleted as follows:

(1) 'The restaurant keeps its records accurately' (Reliability): Based on pre-test and focus group discussion, it is hard for restaurant patrons to know how the restaurant keeps its records. In this sense, this item is inappropriate, thus deleted.

(2) 'Employees get adequate support from the restaurant to do their jobs well' (Assurance): Based on pre-test and focus group discussion, it is hard for restaurant patrons to know how the restaurant supports its employees. In this sense, this item is inappropriate, thus deleted.

(3) 'You can trust employees of the restaurant' (Assurance): Based on pre-test and focus group discussion, in the restaurant industry, it is hard to say patrons 'trust' waiter/waitress in the restaurant. Focus group interviewees mentioned that they

can trust ‘food quality’ or ‘food safety’ of the restaurant, but ‘trustworthy’ of employee should not be an issue in the restaurant industry.

(4) ‘The restaurant does not tell its customers exactly when services will be performed’ (Responsiveness): Based on pre-test and focus group discussion, limited number of restaurants (e.g. Pizza restaurant) tells its customers exactly when services will be performed. Another item ‘I do not receive prompt service from the restaurant’s employees’ should be more appropriate in the restaurant industry, thus included in the measurement items.

(5) ‘The restaurant provides its services at the time it promises to do so’ (Reliability): Based on pre-test and focus group discussion, currently, only Pizza restaurants to do so in the restaurant industry. Therefore, this item was also deleted.

Therefore 17 items remained. Exploratory factor analysis with principal components extraction and varimax rotation was then employed to reduce these items into three scales accounting for 58.1% of the variance. During this process, items with factor loadings of less than .4 were deleted due to their lack of meaningful contribution to the each dimension (Hair et al., 1998). Also, cross-loading items negatively influence validity of scale, so those items were deleted (Hair et al., 1998). In total, 4 items were deleted as follows: ‘I feel safe in my transactions with the restaurant’s employees’, ‘Employees of the restaurant do not give me personal attention’, ‘The restaurant’s employees are well dressed and appear neat’, and ‘The restaurant does not have operating hours’ convenient to all their customers’. Table 13 shows the remaining 13 items with their standardized factor loadings. Based on the factor loadings, the three dimensions were titled ”responsiveness”, “tangibles”, and “reliability” (Table 14). Regarding the “responsiveness” factor, this factor includes ‘Panera Bread does not have my best interests at heart’ and ‘Employees of Panera Bread do not know what my needs are’. These two items are originally under “empathy” dimension (Cronin and Taylor, 1994). However, based on brain storming process, this dissertation included these two items under “responsiveness” dimension due to two reasons: (1) in the restaurant segment, these two items reflect how the service provider catch the customers’ needs correctly and quickly, thus provide immediate service to patrons and (2) according to data analysis results, it was found that patrons perceive these items as a “responsiveness” concept. The Cronbach alpha was then utilized to examine the internal consistency of the resulting scales.

Hotel segment: Using the same process, SERVPERF items were reduced into 13 items. Through the pre-test and focus group discussion, it was decided that nine items were not relevant to the hotel industry. Therefore those nine items were deleted as follows:

(1) ‘The hotel does not have operating hours convenient to all their customers’ (Empathy): This question is inappropriate in the hotel industry, because hotel is 24/7 business.

(2) ‘The hotel keeps its records accurately’ (Reliability): Based on pre-test and focus group discussion, it is hard for hotel customers to know how the hotel keeps its records.

(3) ‘Employees get adequate support from the hotel/restaurant to do their jobs well’ (Assurance): Based on pre-test and focus group discussion, it is hard for hotel customers to know how the hotel supports its employees.

(4) ‘You can feel safe in your transactions with the hotel’s employees’ (Assurance): Based on pre-test and focus group discussion, it is hard to say that hotel customers feel safe in transactions with the hotel’s employees, thus this item was deleted. Another item “I can trust employees of the hotel’ should be more appropriate, thus included in the measurement items.

(5) ‘When the hotel promises to do something by a certain time, it does so’ (Reliability): Based on pre-test and focus group discussion, hotel rarely promises to do something by a certain time to its customers. Morning call could be an exception, but, recently, customers rarely use morning call because cell phone has the function. Therefore, this question is not appropriate in the recent hotel industry.

(6) ‘The hotel provides its services at the time it promises to do so’ (Reliability): Based on pre-test and focus group discussion, hotel rarely promises to do something by a certain time to its customers.

(7) ‘The hotel does not tell its customers exactly when services will be performed’ (Responsiveness): Based on pre-test and focus group discussion, hotel rarely tells customers exactly when services will be performed.

(8) ‘The hotel does not give you individual attention’ (Empathy): Based on focus group discussion, this item is very similar to the item ‘Employees of the hotel do

not have my best interests at heart.' For this reason, focus group interviewees mentioned this item is redundant.

(9) Employees of the hotel/restaurant do not give you personal attention (Empathy): Based on focus group discussion, this item is very similar to the item 'Employees of the hotel do not have my best interests at heart'. Thus, deleted.

Therefore 13 items remained in the hotel side. Exploratory factor analysis with principal components extraction and varimax rotation was then carried out to reduce the SERVPERF items into three scales accounting for 59.1% of the variance. During this process, an item with factor loadings of less than .4 was deleted due to its lack of meaningful contribution to the dimension (Hair et al., 1998). Also, a cross-loading item negatively influences validity of scale, so the item was deleted (Hair et al., 1998). Consequently, 2 items were deleted as follows: 'Employees of the hotel do not know what my needs are' and 'The hotel's employees are well-dressed and appear neat'. Table 15 shows the remaining 11 items with their standardized factor loadings. Based on the factor loadings, the three dimensions were titled "reliability", "responsiveness", and "tangibles" (Table 15). Regarding the "reliability " factor, this factor includes 'Employee of Holidy Inn are polite' and 'I can trust employees of Holiday Inn'. These two items are originally under "assurance" dimension (Cronin and Taylor, 1994). However, based on the brain storming process, this dissertation included these two items under "reliability" dimension due to the following reason: in the hotel industry, reliability and assurance are not different concepts. Actually, Cronin and Taylor (1994)'s "reliability" dimension demonstrates how service providers provide their services at the time they promise to do. However, hotel rarely promises to do something by a certain time to its customers. Morning call could be an exception, but, recently, customers rarely use morning call because cell phone has the function. In this sense, to the hotel guests, reliability and assurance of services are similar concept. Also, according to exploratory factor analysis, it was found that guests perceive these two dimensions as one concept.The Cronbach alpha was then utilized to examine the internal consistency of the resulting scales.

Table 14
Exploratory Factor Analysis: SERVPERF-Restaurant Segment (n=112)

Customer Equity	Factor 1 Responsiveness	Factor 2 Tangibles	Factor 3 Reliability
Eigenvalues	4.498	1.804	1.251
Cronbach's Alpha	0.769	0.774	0.720
Panera Bread does not have my best interests at heart.	0.759		
Employees of Panera Bread are not always willing to help customers.	0.735		
Employees of Panera Bread do not know what my needs are.	0.692		
I do not receive prompt service from Panera Bread's employees.	0.658		
Employees of Panera Bread are too busy to respond to customer requests promptly.	0.641		
Panera Bread is consistent in its food quality.		0.773	
Panera Bread has a nicely decorated environment (e.g. decoration, painting).		0.754	
Panera Bread has comfortable seating.		0.690	
Panera Bread's has visually appealing ambiance.		0.688	
When I have problems with its food, Panera Bread's managerial staff is sympathetic and reassuring.			0.838
When Panera Bread promises to do something by a certain time, it does so.			0.777
Panera Bread has dependable service.			0.534
Employees of Panera Bread are polite.			0.437
% of Variance Explained	34.602	13.876	9.624
Cum. % of Variance Explained	34.602	48.478	58.103

KMO=0.803
Bartlett Test of Sphericity Chi-Square=473.179, df = 78, prob < .001

Table 15
Exploratory Factor Analysis: SERVPERF-Hotel Segment (n=102)

Customer Equity	Factor 1 Reliability	Factor 2 Responsiveness	Factor 3 Tangibles
Eigenvalues	3.553	1.646	1.306
Cronbach's Alpha	0.721	0.758	0.716
Holiday Inn provides dependable service.	0.757		
Employees of Holiday Inn are polite.	0.750		
The front desk employee is friendly while checking me in.	0.636		
The appearance of the environment of Holiday Inn is in keeping with the type of service provided.	0.602		
I can trust employees of Holiday Inn.	0.570		
Employees of Holiday Inn are too busy to respond to customer requests promptly.		0.810	
Employees of Holiday Inn are not always willing to help customers.		0.808	
I do not receive prompt service from Holiday Inn's employees.		0.739	
Holiday Inn does not have my best interests at heart.		0.585	
Holiday Inn's physical facilities (e.g. room, lobby) are visually appealing.			0.860
Holiday Inn has up-to-date, renovated rooms.			0.855
% of Variance Explained	32.299	14.963	11.871
Cum. % of Variance Explained	32.299	47.262	59.133

KMO=0.768
Bartlett Test of Sphericity Chi-Square=290.745, df = 55, prob < .001

Phase 1 Summary

A series of scale development processes were conducted and an attitudinal customer equity scale developed in the restaurant and hotel segments. For both the restaurant and hotel samples, the underlying structure of customer equity was the same and was composed of six sub-dimensions: first interaction, commitment, word of mouth, cross-buying, customer defection, and motivation. However, with regard to specific items, the two industry segments a small degree of difference. For example, the "word of mouth" factor in the hotel sample ('customers post good things about Holiday Inn on the Internet') had validity and reliability. In contrast, in the restaurant sample, this item was found to be an invalid/unreliable variable. One possible interpretation of these results is that customer behavior varies between the two different, even though underlying structure of customer equity in both industries is the same.

It was also discovered that the SERVPERF was composed of three sub-dimensions in the restaurant/hotel segment: responsiveness, tangibles, and reliability. In contrast, the original SERVPERF scale is composed of five sub-dimensions. For further validation, these scales were slated to be incorporated into confirmatory factor analysis in phase 2.

Phase 2-CFA and Criterion validity Check

The second phase focused on assessing the validity of the newly developed measurement scale. First, the validity and reliability of the measurement scales were verified via CFA (confirmatory factor analysis). Then, to further validate the measurement scales, the criterion validity was assessed. In Chapter 2, six criterion measures were proposed based on the theoretical background literature. In order to determine whether the newly developed attitudinal measurement scale of customer equity was correlated with the existing criterion measures, a series of theoretical hypotheses were proposed. Phase 2 describes the data collection process, a series of analyses, and the results of testing the hypotheses.

Data Collection - Selection of Restaurant and Hotel Companies

Shareholder value is a key criterion measure in this dissertation. Therefore, determining the correlation between customer equity and shareholder value was a critical step in determining the validity of the customer equity scales. In Chapter 2, the following hypothesis was proposed:

- Hypothesis 1: As a company's customer equity increases, the company's shareholder value also increases.

In order to adequately test this hypothesis, regression analysis of 30 to 50 companies would typically be required. However, due to budget limitations, this amount of data could not be collected for this dissertation. Instead, an alternative hypothesis was tested using ANOVA:

- Hypothesis 1A: A company with high shareholder value possesses higher customer equity than a low-customer-equity company.

To test this hypothesis, three pairs of hospitality companies were selected. In the hotel segment, a high shareholder value (SHV) company and a low SHV company were selected. In the restaurant field, various types of categories exist. To control the potential bias resulting from the different restaurant categories, this dissertation considered categorization of restaurants. A high SHV and a low SHV company were selected in both the fast food restaurant segment and the casual dining restaurant segment (Table 16). In the restaurant segment, two categories (fast food and casual dining) were selected due to the fact that they hold the largest market share in the restaurant industry (Walker, 2007).

Table 16
Selected Companies with Differing Levels of Shareholder Value

	Hotel	Fast food Restaurant	Casual dining Restaurant
High SHV	Marriott	McDonald's	Chipotle Mexican Grill
Low SHV	Choice	Burger King	Denny's

Note: Grouping standard: Shareholder value (SHV)

These six companies in Table 16 were selected based on their shareholder value (Table 17 and 18). Table 16 shows major restaurant companies' shareholder values in 2008. Shareholder value was calculated by share price multiplied by outstanding shares. Outstanding share information was obtained from the 10-K annual report of each company.

In the 10-K annual report, the outstanding share information is comprised of the average number of shares from January 2008 to December 2008. To maintain consistency, the average share price (from January 2008 to December 2008) was used in this dissertation.

The Marriott and Choice hotels (Table 17) were selected for the hotel segment due to the fact that Marriott possesses the highest SHV in the hotel segment ($9.9 billion), while Choice has the lowest SHV in the hotel segment ($1.7 billion).

In the restaurant segment, McDonald's was selected because it has the highest shareholder value in the hospitality industry ($63 billion). Burger King was selected both because it falls in the same product category with McDonald's and for its shareholder value ($3.4 billion), which is considerably lower than McDonald's, but higher than any other well-known restaurant brands. Two well-known casual dining restaurants, Chipotle Mexican Grill and Denny's, were also selected, based on their shareholder values. While both chains have a lower shareholder values than Burger King, they nonetheless provide a contrast between a relatively high shareholder value (Chipotle: $2.6 billion) and low shareholder value (Denny's: $190 million) companies.

Table 17
Restaurant Companies Shareholder Value Analysis

Company	Shareprice (U.S. Dollar)	Outstanding Shares	Shareholder Value (Million)
McDonald's	**$57.08**	**1115000000**	**$63641**
Yum	$33.15	499000000	$16539
Starbucks	$13.99	731000000	$10225
Darden	$28.79	140446512	$4043
Burger King	**$25.12**	**135100000**	**$3394**
Chipotle Mexican Grill	**$80.15**	**32766000**	**$2626**
Brinker International	$15.41	101387001	$1562
Panera Bread	$47.71	31708000	$1512
Papa John's Pizza	$24.26	28847782	$700
TexasRoadhouse	$8.81	74611000	$657
Dominos Pizza	$10.09	59627930	$602
Buffalo Wild Wings	$28.84	17554000	$506
Red Robin	$24.28	15477698	$376
Ruby Tuesday	$5.17	52,783,684	$273
Denny's	**$2.00**	**95230000**	**$190**
O'Charley Inc.	$7.82	22154345	$173
California Pizza Kitchen	$12.12	5546657	$67
Pizza Inn	$2.24	9761000	$22

Table 18
Hotel Companies Shareholder Value Analysis

Company	Share price (U.S. Dollar)	Outstanding Shares	Shareholder Value (Million)
Marriott	**$25.21**	**396000000**	**$9982**
MGM Mirage	$30.98	293845623	$9103
Starwood Hotels & Resorts	$31.04	188283927	$5845
Wyndham Worldwide	$14.17	177020748	$2508
Choice Hotels	**$28.65**	**62187995**	**$1781**

Note: Share price is the average annual share price (Jan. 2008 – Dec. 2008)

In summary, the six different hospitality companies (McDonald's, Burger King, Chipotle Mexican Grill, Denny's, Marriott, and Choice) were selected based on their shareholder value. Using the items purified through exploratory factor analysis in Phase 1, six different questionnaires were then created (Appendix E). The questionnaires were distributed to 10,751 hotel/restaurant consumers by an online market research company. From the 10,751 questionnaires distributed, 725 completed responses were collected, for a response rate of 6.7%. To control for response bias, the data were screened. After eliminating responses with missing information and extreme answers, 590 usable responses remained, for a usable response rate of 5.5%. In spite of this low response rate, the primary purpose of this dissertation is scale development and theory testing, not the generalization of population. For this reason, the low response rate was acceptable. Table 19 shows the usable sample size of each company.

Table 19
Usable Sample Size of Six Hospitality Companies (N=590)

Company	Sample Size
McDonald's	n=90
Burger King	n=92
Chipotle Mexican Grill	n=95
Denny's	n=94
Marriott	n=106
Choice	n=113
Total	n=590

Descriptive Statistics

Table 20 shows the respondents' demographic profile. Among the respondents, 49.2 percent were male and 50.8 percent were female. In terms of age, the respondents were fairly evenly distributed from 18 to 91 years old; the mean age was 48.4 years. The majority of respondents were Caucasian (88.1%), and over half of the respondents had bachelors or graduate degrees (31.4% for the former and 19.2% for the latter). In terms of income, the respondents were fairly evenly distributed, with the largest group (18.5%) reporting an income between $25,000 and $39,999 and the smallest group (3.4%) reporting an income of $150,000 or more; 67.8% reported incomes higher than $40,000

Table 20
Sociodemographic Profile of Respondents

Sociodemographic Variable	n	Percentage
Gender		
Male	290	49.2
Female	300	50.8
Income		
Under $25,000	81	13.7
$25,000-$39,999	109	18.5
$40,000-$54,999	102	17.3
$55,000-$69,999	95	16.1
$70,000-$84,999	57	9.7
$85,000-$99,999	57	9.7
$100,000-$149,999	69	11.7
$150,000 and over	20	3.4
Race		
Caucasian/White	520	88.1
African-American	23	3.9
Asian	20	3.4
Hispanic	19	3.2
Other	8	1.4
Education Level		
Less than high school degree	11	1.9
High school degree	77	13.1
Some college, but no degree	204	34.6
Bachelor’s degree	185	31.4
Graduate degree	113	19.2

Mean Age=48.4 years old

Note: The various totals indicate the total numbers of respondents with valid responses.

Descriptive Statistics - Across the Six Sample Groups

It was known that, to control for potential bias, the six sample groups should have similar conditions. As shown in Table 21, the six sample groups fell in a similar age group, income group, ethnic group, and education level. Hence, with regard to sociodemographic conditions, no significant difference was found between the six groups.

Table 21
Sociodemographic Profile of Respondents Across the Six Sample Groups

Sociodemographic Variable	McDonald's N=90	Burger King N=92	Chipotle N=95	Denny's N=94	Marriott N=106	Choice N=113
Gender						
Male	54.4	56.5	52.6	55.3	45.3	34.5
Female	45.6	43.5	47.4	44.7	54.7	65.5
Income						
Under $25,000	23.3	22.8	15.8	16.0	2.8	5.3
$25,000-$39,999	26.7	29.3	12.6	23.4	9.4	12.4
$40,000-$54,999	17.8	15.2	12.6	27.7	12.3	18.6
$55,000-$69,999	12.2	13.0	21.1	16.0	17.0	16.8
$70,000-$84,999	7.8	9.8	9.5	8.5	13.2	8.8
$85,000-$99,999	5.6	5.4	10.5	2.1	18.9	13.3
$100,000-$149,999	4.4	3.3	12.6	4.3	22.6	19.5
$150,000 and over	2.2	1.1	5.3	2.1	3.8	5.3
Race						
Caucasian/White	76.7	87.0	82.1	92.6	93.4	94.7
African-American	7.8	3.3	6.3	3.2	0.9	2.7
Asian	5.6	3.3	7.4	0.0	2.8	1.8
Hispanic	6.7	5.4	2.1	3.2	1.9	0.9
Other	3.3	1.1	2.1	1.1	0.9	0.0
Education Level						
Less than high school degree	4.4	3.3	0.0	3.2	0.9	0.0
High school degree	18.9	15.2	4.2	22.3	9.4	9.7
Some college, but no degree	36.7	40.2	35.8	34.0	29.2	32.7
Bachelor's degree	27.8	25.0	38.9	27.7	36.8	31.0
Graduate degree	12.2	16.3	21.2	12.8	23.6	26.5
Mean Age (years old)	42.8	39.4	41.4	48.9	52.0	53.9

Note: The various totals indicate the total numbers of respondents with valid responses.

Study 1

The existing theoretical background (e.g. Gupta and Lehmann, 2005; Kumar and Petersen, 2005; Rust, Lemon, and Zeithaml, 2004; Berger et al., 2006) supports the concept that customer equity is a multidimensional construct composed of four dimensions. However, the results of exploratory factor analysis indicate that there are six sub-dimensions in the area of customer equity, a finding that is somewhat inconsistent with the theoretical background. Hence, in Study 1, it was decided to verify the unidimensionality of the six dimensions. Specifically, convergent validity, discriminant validity, and internal consistency were checked using consumer data.

Confirmatory Factor Analysis: Restaurant Segment

In Phase 1, a series of scale development processes were conducted and the attitudinal customer equity scale was developed. Through the EFA analysis, the SERVPERF items were reduced into three scales: reliability, responsiveness, and tangibles. To ensure the unidimensionality of the scales measuring each construct and to validate the measurement model, a confirmatory factor analysis (CFA) was conducted. The attitudinal customer equity scales, SERVPERF scales, value equity scale, brand equity scale, and relationship equity scale were utilized in the CFA.

CFA: Six Dimensions of Attitudinal Customer Equity (Restaurant Segment)

The attitudinal customer equity scales were utilized in the CFA. The CFA results indicated a good model fit, with a Chi-Square of 361.506 with 103 degrees of freedom ($p < .001$). CFI= .938, IFI= .939, TLI= .918 and a root mean square error of approximation (RMSEA)= .08

Values of CFI, IFI, and TLI ranged from 0 to 1 with a value close to 1.00 indicating good fit (Byrne, 1998). Ideally, the RMSEA should be less than .10, between .04–.08 (Turner and Reisinger, 2001). Table 22 shows the specific items and first-order factors of the attitudinal customer equity, together with their standardized factor loadings.

Table 22
Confirmatory Factor Analysis: Items and Loadings (Customer Equity-Restaurant Segment)

Construct and Scale Item	Standardized Loading
Customer Equity	
First Interaction	
My first impression with the staff at the restaurant was pleasant.	0.783
On first impression, I found the environment at the restaurant appealing.	0.861
On first impression, I found the atmosphere at the restaurant friendly.	0.924
I was satisfied with my first visit to the restaurant.	0.785
Commitment	
When I dine out, the restaurant is my first choice.	0.837
As long as the current level of service continues, I will keep going to the restaurant.	0.675
I visit the restaurant more frequently than I do other restaurants.	0.810
Cross-Buying	
If the restaurant opens in a new location, I want to visit it.	0.806
I want to visit the restaurant more frequently.	0.861
I want to try the restaurant's premium product line (e.g. higher-price menu).	0.644
Word Of Mouth	
I suggest the restaurant to others quite frequently.	0.895
When I tell others about the restaurant, I tend to talk about the restaurant in great detail.	0.854
Once I get talking about the restaurant, it is hard for me to stop.	0.714
Motivation	
The restaurant's reasonable price encourages my visit.	0.512
The restaurant's convenient location encourages my visit.	0.936
Customer Defection	
Next time I dine out, I will choose another reputable restaurant over the restaurant.	0.728
I will choose another reputable restaurant over the restaurant if the reputable restaurant provides better offers.	0.860

Note: All factors loadings are significant at $p<0.001$. Bold figures represent first-order factor loadings.

All factor loadings were equal to or greater than .512, and significant at $p< .001$ with the t-values (not shown) ranging from 7.861 to 23.825. Table 23 shows the descriptive statistics and associated measures for the constructs. Convergent and discriminant validity of the scales was tested using confirmatory factor analysis (Anderson and Gerbing, 1988). As stated above, all indicators loaded on the proposed constructs were significant at p< .001. The average variance extracted (AVE) was greater than the .50 cutoff for all constructs (Bagozzi and Yi, 1988). Based on the high factor loadings on the intended variables and AVE estimates, convergent validity for the measurement-scale items was achieved (Fornell and Larcker, 1981).

Table 23
Descriptive Statistics and Associated Measures (Customer Equity: Restaurant Segment)

	No. of items	Mean (Std dev.)	AVE	First Interaction	Commitment	WOM	Cross-Buying	Defection	Motivation
First Interaction	4	3.91 (0.74)	0.71	**0.932**[a]	0.608[b]	0.544	0.580	0.607	0.357
Commitment	3	2.77 (0.90)	0.60	0.370[c]	**0.800**	0.885	0.819	0.733	0.701
WOM	3	2.39 (0.98)	0.68	0.296	0.783	**0.848**	0.829	0.680	0.680
Cross-Buying	3	2.85 (0.92)	0.60	0.336	0.670	0.687	**0.794**	0.802	0.664
Defection	2	3.36 (0.92)	0.63	0.368	0.537	0.462	0.643	**0.772**	0.548
Motivation	2	2.53 (0.78)	0.57	0.127	0.491	0.462	0.441	0.300	**0.749**
Goodness-of-fit statistics:									
X^2 (103) = 361.506, $p < .001$									
$X^2/df = 3.51$									
CFI = .938; IFI = .939; TLI=0.918									
RMSEA = .08									

Note: AVE: average variance extracted estimate, CFI: comparative fit index, IFI: Incremental fit index, TLI: Tucker-Lewis Index, RMSEA: root mean square error of approximation.
[a] Composite reliabilities are along the diagonal, [b] Correlations are above the diagonal, and [c] Squared correlations are below the diagonal.

In order to achieve discriminant validity, the squared correlation (R^2) between a pair of constructs should be lower than the AVE for each construct (Fornell and Larcker, 1981). All of the squared correlations (R^2) between a pair of constructs were lower than the AVE for each construct except four pairs: (1) commitment and WOM, (2) commitment and cross-buying, (3) cross-buying and WOM, and (4) cross-buying and customer defection (Table 22). According to Bagozzi and Yi (1988), in this case, discriminant validity between the pairs should be re-examined by combining them into one construct and then performing a $\chi 2$ difference test on the values obtained from the combined and uncombined models.

With regard to the commitment and WOM pair, the resulting $\chi 2$ difference was 43.537 (df = 5), which was significant at $p < .001$. Thus, discriminant validity between 'commitment' and 'WOM' was confirmed. With the commitment and cross-buying pair, the resulting $\chi 2$ difference was 66.174 (df = 5), which was significant at $p < .001$. Discriminant validity between "commitment' and 'cross-buying' was therefore confirmed. The resulting $\chi 2$ difference for the cross-buying and WOM pair was 90.354 (df = 5), which was significant at $p < .001$, thus confirming the discriminant validity. Finally, for the cross-buying and customer defection pair, the resulting $\chi 2$ difference was 55.391 (df = 5), which was significant at $p < .001$. Discriminant validity between the two was therefore confirmed.

In summary, all of the constructs' discriminant validities were strongly supported by the data analysis. Internal consistency of the scales was examined using composite reliabilities. Hair, Anderson, Tatham, and Black (1998) have suggested a threshold value of .70 All of the composite reliabilities were higher than .7, indicating adequate internal consistency.

CFA-SERVPERF Scales (Restaurant Segment)

Using the same process, SERVPERF scales were utilized in the CFA. In phase 1, through EFA, SERVPERF items were purified into 13 items, these items were utilized in the CFA. The CFA results indicated a satisfactory model fit; the Chi-Square was 80.677 with 23 degrees of freedom ($p < .001$). CFI= .966, IFI= .967, TLI= .947 and a root mean square error of approximation (RMSEA)= .08. During confirmatory factor analysis with 13 items, four items were deleted because they negatively influence (1) overall model fit and (2) convergent validity of scales. Two items were deleted from the responsiveness dimension: 'The restaurant does not have my best interests at heart' and 'Employees of the restaurant are not always willing to help customers'. One item was deleted from the tangibles dimension: 'The restaurant is consistent in its food quality'. The other one item was deleted from the reliability dimension: 'Employees of the restaurant are polite'. Consequently, nine items remained. Table 24 shows the specific items and first-order factors of the SERVPERF, together with their standardized factor loadings.

Table 24
Confirmatory Factor Analysis: Items and Loadings (SERVPERF: Restaurant Segment)

Construct and Scale Item	Standardized Loading
SERVPERF	
Responsiveness	
Employees of the restaurant do not know what my needs are.	0.657
I do not receive prompt service from the restaurant's employees.	0.672
Employees of the restaurant are too busy to respond to customer requests promptly.	0.900
Tangibles	
The restaurant has nicely decorated environment (e.g. decoration, painting).	0.952
The restaurant has comfortable seating.	0.591
The restaurant has visually appealing ambiance.	0.940
Reliability	
The restaurant has dependable service.	0.877
When the restaurant promises to do something by a certain time, it does so.	0.580
When I have problems with its food, the restaurant's managerial staff is sympathetic and reassuring.	0.625

Note: All factors loadings are significant at $p<0.001$. Bold figures represent first-order factor loadings.

All factor loadings were equal to or greater than .580 and were significant at $p< .001$ Table 24 shows the descriptive statistics and associated measures for the constructs. The average variance extracted (AVE) was greater than the .50 cutoff for all constructs (Bagozzi and Yi, 1988). Based on the high factor loadings on the intended variables and AVE estimates, convergent validity for the measurement-scale items was achieved (Fornell and Larcker, 1981). All of the squared correlations (R^2) between a pair of constructs were lower than the AVE for each construct, thereby indicating that strong discriminant validity was achieved (Table 25). All composite reliabilities were higher than .7, indicating adequate internal consistency.

Table 25
Descriptive Statistics and Associated Measures (SERVPERF: Restaurant Segment)

	No. of items	Mean (Std dev.)	AVE	Responsiveness	Tangibles	Reliability
Responsiveness	3	3.41 (0.83)	0.56	**0.795**[a]	0.377 [b]	0.644
Tangibles	3	3.43 (0.80)	0.71	0.142 [c]	**0.902**	0.657
Reliability	3	3.45 (0.69)	0.50	0.415	0.432	**0.814**
Goodness-of-fit statistics:						
X^2 (23) = 80.677, $p < .001$						
$X^2/df = 3.51$						
CFI = .966; IFI = .967; TLI=0.947						
RMSEA = .08						

Note: AVE: average variance extracted estimate, CFI: comparative fit index, IFI: Incremental fit index, TLI: Tucker-Lewis Index, RMSEA: root mean square error of approximation.
[a] Composite reliabilities are along the diagonal, [b] Correlations are above the diagonal, and [c] Squared correlations are below the diagonal.

CFA: Theoretical Drivers of Customer Equity (Restaurant Segment)

Using the same process, three drivers of customer equity were utilized in the CFA. The CFA indicated a satisfactory model fit, with a Chi-Square of 88.177 with 24 degrees of freedom (p< .001). CFI= .970, IFI= .970, TLI= .955 and a root mean square error of approximation (RMSEA)= .08. Table 26 shows the specific items of the value equity, brand equity, and relationship equity.

Table 26
Confirmatory Factor Analysis: Items and Loadings (Drivers of Customer Equity: Restaurant Segment)

Construct and Scale Item	Standardized Loading
Three drivers of customer equity	
Value Equity	
I think that the food quality of the restaurant is worth the price paid.	0.902
I think that the service quality of the restaurant worth the price paid.	0.827
I think the price of the restaurant is competitive with other restaurants.	0.767
Brand Equity	
I often notice and pay attention to McDonald's advertising (e.g. billboards, Internet).	0.612
The brand image of the restaurant fits my personality well.	0.858
I have positive feelings toward the restaurant.	0.887
Relationship Equity	
When I go to the restaurant, I often feel a sense of community with other customers in the restaurant.	0.849
I often feel that I am treated as being special in the restaurant.	0.910
I often feel that I receive preferential treatment from the restaurant's employees.	0.741

Note: All factors loadings are significant at $p<0.001$. Bold figures represent first-order factor loadings.

All factor loadings were equal to or greater than .612 and they were significant at $p< .001$. Table 27 shows the descriptive statistics and associated measures for the constructs. The AVE was greater than the .50 cutoff for all constructs (Bagozzi and Yi, 1988). Based on the high factor loadings on the intended variables and the AVE estimates, convergent validity for the measurement-scale items was achieved (Fornell and Larcker, 1981).

Table 27
Descriptive Statistics and Associated Measures (drivers of customer equity: Restaurant Segment)

	No. of items	Mean (Std dev.)	AVE	Value Equity	Brand Equity	Relationship Equity
Value Equity	3	3.61 (0.82)	0.70	**0.893**[a]	0.843[b]	0.566
Brand Equity	3	3.32 (0.86)	0.63	0.711[c]	**0.826**	0.671
Relationship Equity	3	2.61 (0.93)	0.70	0.320	0.450	**0.864**
Goodness-of-fit statistics:						
X^2 (24) = 88.177, $p < .001$						
$X^2/df = 3.67$						
CFI = .970; IFI = .970; TLI=0.955						
RMSEA = .08						

Note: AVE: average variance extracted estimate, CFI: comparative fit index, IFI: Incremental fit index, TLI: Tucker-Lewis Index, RMSEA: root mean square error of approximation.
[a] Composite reliabilities are along the diagonal, [b] Correlations are above the diagonal, and [c] Squared correlations are below the diagonal.

In order to achieve discriminant validity, the squared correlation (R^2) between a pair of constructs should be lower than the AVE for each construct (Fornell and Larcker, 1981). All of the squared correlations (R^2) between a pair of constructs were lower than the AVE for each construct except one pair: value equity and brand equity (Table 27). The discriminant validity between the pair was re-examined by combining them into one construct and then performing a $\chi 2$ difference test on the values obtained from the combined and uncombined models (Bagozzi and Yi, 1988). The resulting $\chi 2$ difference was 100.08 (df = 2), which was significant at p < .001. Thus, discriminant validity between ‘value equity’ and ‘brand equity’ was confirmed. All composite reliabilities were higher than .7, indicating adequate internal consistency.

Summary of CFA in the Restaurant Segment

Using the restaurant consumer data (n=371), unidimensionality of (1) six sub-dimensions of customer equity, (2) three sub-dimensions of SERVPERF, and (3) three drivers of customer equity were assessed. For the restaurant data, it was confirmed that all of these constructs were unidimensional constructs that achieved convergent validity, discriminant validity, and internal consistency.

Confirmatory Factor Analysis: Hotel Segment

For the hotel data, the attitudinal customer equity scales, SERVPERF scales, value equity scale, brand equity scale, and relationship equity scale were also utilized in the CFA.

CFA: Six Dimensions of Customer Equity (Hotel Segment)

The attitudinal customer equity scales were utilized in the CFA. The CFA results indicated a satifactory model fit: the Chi-Square was 351.863 with 137 degrees of freedom ($p < .001$). CFI= .927, IFI= .928, TLI= .909 and a root mean square error of approximation (RMSEA)= .08. Table 28 shows the specific items and first-order factors of the attitudinal customer equity, together with their standardized factor loadings.

Table 28

Confirmatory Factor Analysis: Items and Loadings (Customer Equity: Hotel Segment)

Construct and Scale Item	Standardized Loading
Customer Equity	
First Interaction	
I was satisfied with my first visit to the hotel brand.	0.848
My first interaction with an employee of the hotel brand was pleasant.	0.943
My first impression was that the staff at the hotel brand was friendly.	0.940
My first impression was that the hotel brand was appealing.	0.851
Commitment	
When I travel, the hotel brand is my first choice.	0.941
I visit the hotel brand more frequently than other hotels.	0.884
I spend more money in the hotel brand than in other hotels.	0.534
Cross-Buying	
If the hotel brand opens a new hotel, I want to visit it.	0.808
I want to visit the hotel brand more frequently.	0.856
When I go to the hotel brand, I like to bring my friends/relatives/other people.	0.734
I would try other services/products (e.g. sports bar) provided by the hotel brand.	0.629
Word Of Mouth	
I would suggest the hotel brand to my friends/relatives.	0.885
I am willing to say good things about the hotel brand.	0.874
I mention the hotel brand to others quite frequently.	0.519
Motivation	
The hotel's brand reputation encourages my visit.	0.810
The hotel company's easy reservation process encourages my visit.	0.838
The hotel company's customer service encourages my visit.	0.868
Customer Defection	
I like the hotel brand, but I want to try different hotels next time.	0.744
Next time I travel, I will consider another hotel brand over the hotel brand.	0.850

Note: All factors loadings are significant at $p<0.001$. Bold figures represent first-order factor loadings.

The factor loadings were equal to or greater than .519. All factor loadings were significant at $p< .001$ with the t-values, not shown, ranging from 8.302 to 19.789. Table 29 shows the descriptive statistics and associated measures for the constructs. All of the constructs' AVE were greater than the .50 cutoff, therefore indicating that strong convergent validity was achieved (Fornell and Larcker, 1981). All of the squared correlations (R^2) between a pair of constructs were lower than the AVE for each construct (Table 29), indicating adequate discriminant validity. All composite reliabilities were higher than .7, indicating adequate internal consistency.

Table 29
Descriptive Statistics and Associated Measures (Customer Equity: Hotel Segment)

	No. of items	Mean (Std dev.)	AVE	First Interaction	Commitment	WOM	Cross-Buying	Defection	Motivation
First-Interaction	4	3.89 (0.58)	0.80	**0.974**[a]	0.390[b]	0.703	0.337	0.307	0.558
Commitment	3	2.85 (0.87)	0.65	0.152[c]	**0.833**	0.615	0.699	0.615	0.596
WOM	3	3.40 (0.72)	0.61	0.494	0.378	**0.830**	0.543	0.469	0.752
Cross-Buying	4	2.97 (0.78)	0.58	0.114	0.489	0.295	**0.856**	0.429	0.614
Defection	2	2.83 (0.67)	0.64	0.094	0.378	0.220	0.184	**0.867**	0.474
Motivation	3	3.49 (0.66)	0.70	0.311	0.355	0.566	0.377	0.225	**0.929**
Goodness-of-fit statistics:									
X^2 (137) = 356.863, $p < .001$									
$X^2/df = 2.60$									
CFI = .927; IFI = .928; TLI=0.909									
RMSEA = .08									

Note: AVE: average variance extracted estimate, CFI: comparative fit index, IFI: Incremental fit index, TLI: Tucker-Lewis Index, RMSEA: root mean square error of approximation.
[a] Composite reliabilities are along the diagonal, [b] Correlations are above the diagonal, and [c] Squared correlations are below the diagonal.

CFA-SERVPERF Scales (Hotel Segment)

Using the same process, SERVPERF scales were utilized in the CFA. Through EFA, SERVPERF items were purified into 11 items, these items were utilized in the CFA. CFA results showed a good model fit, with a Chi-Square of 78.233 with 32 degrees of freedom ($p < .001$). CFI= .972, IFI= .972, TLI= .960 and a root mean square error of approximation (RMSEA)= .08 During confirmatory factor analysis with 11 items, one item from the responsiveness dimension was deleted because the item negatively influences (1) overall model fit and (2) convergent validity of scale. The deleted item was: 'The hotel does not have my best interests at heart'. Consequently, ten items remained. Table 30 shows the specific items and first-order factors of the SERVPERF, together with their standardized factor loadings.

Table 30
Confirmatory Factor Analysis: Items and Loadings (SERVPERF: Hotel Segment)

Construct and Scale Item	Standardized Loading
SERVPERF	
Reliability	
The hotel provides dependable service.	0.885
Employees of the hotel are polite	0.851
The front desk employee is friendly while checking me in.	0.858
The appearance of the environment of the hotel is in keeping with the type of service provided.	0.874
I can trust employees of the hotel.	0.674
Responsiveness	
I do not receive prompt service from the hotel's employees.	0.687
Employees of the hotel are not always willing to help customers.	0.855
Employees of the hotel are too busy to respond to customer requests promptly.	0.940
Tangibles	
The hotel's physical facilities (e.g. room, lobby) are visually appealing.	0.905
The hotel has up-to-date, renovated rooms.	0.891

Note: All factors loadings are significant at $p<0.001$. Bold figures represent first-order factor loadings.

Table 31 shows the descriptive statistics and associated measures for the constructs. The AVE was greater than the .50 cutoff for all constructs, indicating acceptable convergent validity (Fornell and Larcker, 1981). In order to achieve discriminant validity, the squared correlation (R^2) between a pair of constructs should be lower than the AVE for each construct (Fornell and Larcker, 1981). All of the squared correlations (R^2) between a pair of constructs were lower than the AVE for each construct except one pair: reliability and tangibles (Table 31). Therefore, the discriminant validity between them was re-examined by combining them into one construct and then performing a $\chi 2$ difference test on the values obtained from the combined and uncombined models. The resulting $\chi 2$ difference was

43.99 (df = 2), which was significant at p < .001 Thus, discriminant validity between 'reliability' and 'tangibles' was confirmed. All composite reliabilities were higher than .7, indicating adequate internal consistency.

Table 31
Descriptive Statistics and Associated Measures (SERVPERF: Hotel Segment)

	No. of items	Mean (Std dev.)	AVE	Responsiveness	Tangibles	Reliability
Responsiveness	3	2.26 (0.93)	0.70	**0.861**[a]	0.237[b]	0.151
Tangibles	2	3.71 (0.93)	0.81	0.056[c]	**0.939**	0.896
Reliability	5	3.81 (0.58)	0.69	0.023	0.803	**0.960**
Goodness-of-fit statistics:						
X^2 (32) = 78.233, $p < .001$						
X^2/df = 3.51						
CFI = .966; IFI = .967; TLI=0.947						
RMSEA = .08						

Note: AVE: average variance extracted estimate, CFI: comparative fit index, IFI: Incremental fit index, TLI: Tucker-Lewis Index, RMSEA: root mean square error of approximation.
[a] Composite reliabilities are along the diagonal, [b] Correlations are above the diagonal, and [c] Squared correlations are below the diagonal.

CFA: Theoretical Drivers of Customer Equity (Hotel Segment)

Using the same process, the three drivers of customer equity were utilized in the CFA. The CFA results showed a good model fit, with a Chi-Square of 176.870 with 50 degrees of freedom (p< .001). CFI= .916, IFI= .916, TLI= .890, and a root mean square error of approximation (RMSEA)= .08. Table 32 shows the specific items of the value equity, brand equity, and relationship equity.

Table 32
Confirmatory Factor Analysis: Items and Loadings (Drivers of Customer Equity: Hotel Segment)

Construct and Scale Item	Standardized Loading
Three drivers of customer equity	
Value Equity	
I think the overall lodging quality of the hotel is high.	0.793
I think that the lodging quality of the hotel is worth the price I pay.	0.692
Generally, the company's hotels are located in convenient locations.	0.671
It is easy to make reservations with the hotel.	0.697
Brand Equity	
My attitude toward the hotel brand is favorable.	0.832
The hotel has high ethical standards with respect to its customers and employees.	0.660
The image of the hotel company fits my personality well.	0.779
I have positive feelings toward the hotel brand.	0.873
Relationship Equity	
When I go to the hotel, I often feel a sense of community with other customers in the hotel.	0.890
The hotel recognizes me as being special.	0.899
The benefit I get from the hotel's loyalty program is important to me.	0.702
I have many Priority Club points with the hotel.	0.672

Note: All factors loadings are significant at $p<0.001$. Bold figures represent first-order factor loadings.

Table 33 shows the descriptive statistics and associated measures for the constructs. The AVE was greater than the .50 cutoff for all constructs, indicating acceptable convergent validity (Fornell and Larcker, 1981).

Table 33
Descriptive Statistics and Associated Measures (SERVPERF: Hotel Segment)

	No. of items	Mean (Std dev.)	AVE	Value Equity	Brand Equity	Relationship Equity
Value Equity	4	3.80 (0.55)	0.51	**0.897**[a]	0.846[b]	0.362
Brand Equity	4	3.59 (0.59)	0.62	0.716[c]	**0.930**	0.414
Relationship Equity	4	2.46 (0.92)	0.64	0.131	0.171	**0.850**
Goodness-of-fit statistics:						
X^2 (50) = 176.870, p < .001						
X^2/df = 3.54						
CFI = .916; IFI = .917; TLI=0.890						
RMSEA = .08						

Note: AVE: average variance extracted estimate, CFI: comparative fit index, IFI: Incremental fit index, TLI: Tucker-Lewis Index, RMSEA: root mean square error of approximation.
[a] Composite reliabilities are along the diagonal, [b] Correlations are above the diagonal, and [c] Squared correlations are below the diagonal.

In order to achieve discriminant validity, the squared correlation (R^2) between a pair of constructs should be lower than the AVE for each construct (Fornell and Larcker, 1981). All of the squared correlations (R^2) between a pair of constructs were lower than the AVE for each construct except one pair: value equity and brand equity (Table 33). Therefore, discriminant validity between them was be re-examined by combining them into one construct and then performing a $\chi 2$ difference test on the values obtained from the combined and uncombined models. The resulting $\chi 2$ difference was 37.01 (df = 2), which was significant at p < .001. Thus, discriminant validity between 'value equity' and 'brand equity' was confirmed. All composite reliabilities were higher than .7, indicating adequate internal consistency.

Summary of CFA in the Hotel Segment

Using the hotel consumer data (n=219), unidimensionality of (1) six sub-dimensions of customer equity, (2) three sub-dimensions of SERVPERF, and (3) three drivers of customer equity were assessed. For the hotel data, it was confirmed that all of the constructs were unidimensional constructs that achieved convergent validity, discriminant validity, and internal consistency.

Study 1 Results

In order to ensure the unidimensionality of the scales measuring each construct and to validate the measurement model, the measurement scales derived from the exploratory factor analysis were utilized in the CFA. For the hotel and restaurant questionnaires, the newly developed attitudinal customer equity measurement scale achieved convergent validity, discriminant validity, and internal consistency. These results indicated that the six sub-dimensions of customer equity were unidimensional constructs that accounted for a large portion of customer equity.

The SERPERF scales, value equity scale, brand equity scale, and relationship equity scale were also utilized in the CFA. These scales achieved convergent validity, discriminant validity, and internal consistency. The results indicated that all the criterion measures were unidimensional constructs with acceptable validity and reliability.

Study 2-Criterion validity Check

From the perspective of criterion validity, the degree to which scores on the instruments of customer equity should be in agreement with some given criterion measures (DeVellis, 1991). In chapter 2, this dissertation selected six criterion measures: (1) shareholder value, (2) sales-basis customer equity, (3) SERVPERF, (4) value equity, (5) brand equity, and (6) relationship equity. Considering the correlations between these criterion measures and a newly developed customer equity measure, six hypotheses were developed. This section conducted the testing of the customer equity instrument developed in Phase 1, the six hypotheses and criterion validity.

Criterion Measure 1 – Shareholder Value

The hypothesis below was proposed in order to test the correlation between the newly developed attitudinal customer equity measure and the shareholder value of a company:

- Hypothesis 1A: A company with high shareholder value possesses higher customer equity than a low shareholder value company.

The hypothesis above was tested by the Multivariate Analysis of Variance (MANOVA) test. The independent variable was the shareholder value (low SHV VS high SHV), while the dependent variable was the six attitudinal customer equity scales. Table 34 shows the six hospitality companies selected for this dissertation. As previously discussed, for the hotel segment of the study, the Marriott (with a high SHV) and Choice (with a low SHV) hotel brands were selected. In the fast food restaurant segment, McDonald's (with a high SHV) and Burger King (with a low SHV) were selected. Lastly, in the casual dining restaurant segment, Chipotle Mexican Grill (with a high SHV) and Denny's (with a low SHV) were selected. The six hospitality companies were selected based on their shareholder value.

Table 34
Six Hospitality Companies' Shareholder Value Analysis

SHV	Company	Shareholder Value (Million)	Industry Segment
High	McDonald's	$63641	Fast food restaurant
Low	Burger King	$3394	

SHV	Company	Shareholder Value (Million)	Industry Segment
High	Chipotle Mexican Grill	$2626	Casual Dining restaurant
Low	Denny's	$190	

SHV	Company	Shareholder Value (Million)	Industry Segment
High	Marriott	$9982	Hotel segment
Low	Choice Hotels	$1781	

Note: Shareholder value is calculated by outstanding shares multiplied by share price (Jan, 2008 – Dec, 2008)

MANOVA Test: Fast Food Restaurant Segment

The statistical assumption of the MANOVA test is the equality of covariance matrices. This assumption can be tested with Box's M test (Hair et al., 1998). As shown in Table 35, the level of significance in Box's M test is .442 (>.05); therefore, the assumption of equal variance was satisfied.

Table 35
Box's Test of Equality of Covariance Matrices (Fast Food Restaurant Segment)

Box's M	F	df1	df2	Sig.
22.062	1.013	21	119044.4	0.442

Table 36 shows the descriptive analysis of the MANOVA test in the fast food restaurant segment. With regard to the six dimensions of customer equity, a high share holder value company possessed a higher mean value than a low shareholder value company in the fast food restaurant segment.

Table 36
Descriptive Analysis: Fast Food Restaurant Segment

	Shareholder Value	Mean	Std. Deviation	N
First Interaction	High	4.06	0.71	90
	Low	3.70	0.72	92
	Total	3.88	0.74	182
Commitment	High	3.06	0.87	90
	Low	2.57	0.90	92
	Total	2.81	0.91	182
Cross-Buying	High	2.97	0.89	90
	Low	2.54	0.87	92
	Total	2.75	0.91	182
Word Of Mouth	High	2.60	1.04	90
	Low	2.18	0.94	92
	Total	2.39	1.01	180
Motivation	High	2.72	0.73	90
	Low	2.34	0.76	92
	Total	2.53	0.76	182
Customer Defection	High	3.46	0.91	90
	Low	3.07	0.95	92
	Total	3.26	0.95	182

As shown in Table 37, all four multivariate statistics indicated that the shareholder value was significantly related to the interrelationship between the six sub-dimensions of customer equity.

Table 37
Multivariate Tests: Fast Food Restaurant Segment

Effect	Test	F	Hypothesis df	Error df	Sig.	Value
Intercept	Pillai's Trace	0.991	3,237.731	6.000	175.000	0.000
	Wilks' Lambda	0.009	3,237.731	6.000	175.000	0.000
	Hotelling's Trace	111.008	3,237.731	6.000	175.000	0.000
	Roy's Largest Root	111.008	3,237.731	6.000	175.000	0.000
Case	Pillai's Trace	0.102	3.310	6.000	175.000	0.004
	Wilks' Lambda	0.898	3.310	6.000	175.000	0.004
	Hotelling's Trace	0.113	3.310	6.000	175.000	0.004
	Roy's Largest Root	0.113	3.310	6.000	175.000	0.004

As shown in Table 38, a significant difference existed between the high SHV company and the low SHV company with regard to the mean ‘first interaction’ ($p<0.01$). A significant difference also existed between the high SHV company and the low SHV company with regard to the mean ‘commitment’ ($p<0.001$). There was a significant difference between the high SHV company and the low SHV company with regard to the mean ‘cross-buying’ ($p<0.01$). There was a significant difference between the high SHV company and the low SHV company with regard to the mean ‘word of mouth’ ($p<0.01$), and to the mean ‘customer defection’ ($p<0.01$).

Table 38
Tests of Between-Subjects Effects (Fast Food Restaurant Segment)

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
Shareholder Value	First Interaction	5.986	1	5.986	11.683	0.001
	Commitment	11.104	1	11.104	14.247	0.000
	Cross-Buying	8.291	1	8.291	10.653	0.001
	Word of Mouth	8.120	1	8.120	8.256	0.005
	Motivation	6.753	1	6.753	12.264	0.001
	Customer Defection	6.932	1	6.932	8.053	0.005

Therefore, in the fast food restaurant segment, a high SHV company had a significantly higher first interaction, commitment, cross-buying, word of mouth, motivation, and customer defection than a low SHV company. In addition, shareholder value was significantly related to the interrelationship between the six sub-dimensions of customer equity.

In conclusion, based on the data analysis, a fast food restaurant company with a high SHV was deemed to have a significantly higher level of customer equity than a low SHV company. H1A was supported in the fast food restaurant segment.

MANOVA Test: Casual Dining Restaurant Segment

As shown in Table 39, the level of significance in Box's M test was .678 (>.05), indicating that the assumption of equal variance was satisfied.

Table 39
Box's Test of Equality of Covariance Matrices (Casual Dining Restaurant Segment)

Box's M	F	df1	df2	Sig.
18.158	0.835	21	128585.2	0.678

Table 40 shows the descriptive analysis of the MANOVA test in the casual dining restaurant segment. With regard to the six dimensions of customer equity, a high share holder value company possessed a higher mean value than a low shareholder value company in the casual dining restaurant segment.

Table 40
Descriptive Analysis: Casual Dining Restaurant Segment

	Shareholder Value	Mean	Std. Deviation	N
First Interaction	High	4.05	0.76	95
	Low	3.83	0.70	94
	Total	3.94	0.74	189
Commitment	High	3.01	0.85	95
	Low	2.43	0.84	94
	Total	2.72	0.89	189
Cross-Buying	High	3.22	0.90	95
	Low	2.66	0.87	94
	Total	2.94	0.93	189
Word of Mouth	High	2.67	1.01	95
	Low	2.10	0.81	94
	Total	2.39	0.96	189
Motivation	High	2.69	0.77	95
	Low	2.38	0.80	94
	Total	2.53	0.79	189
Customer Defection	High	3.65	0.79	95
	Low	3.26	0.92	94
	Total	3.46	0.88	189

As shown in Table 41, all four multivariate statistics indicated that the shareholder value was significantly related to the interrelationship between the six sub-dimensions of customer equity.

Table 41
Multivariate Tests: Casual Dining Restaurant Segment

Effect	Test	F	Hypothesis df	Error df	Sig.	Value
Intercept	Pillai's Trace	0.990	2,970.954	6.000	182.000	0.000
	Wilks' Lambda	0.010	2,970.954	6.000	182.000	0.000
	Hotelling's Trace	97.944	2,970.954	6.000	182.000	0.000
	Roy's Largest Root	97.944	2,970.954	6.000	182.000	0.000
Case	Pillai's Trace	0.123	4.271	6.000	182.000	0.000
	Wilks' Lambda	0.877	4.271	6.000	182.000	0.000
	Hotelling's Trace	0.141	4.271	6.000	182.000	0.000
	Roy's Largest Root	0.141	4.271	6.000	182.000	0.000

As shown in Table 42, there was a significant difference between the high SHV company and the low SHV company with regard to the mean value of ‘first interaction’ ($p<0.05$). A significant difference also existed between the high SHV company and the low SHV company regarding the mean value of ‘commitment’ ($p<0.001$). There was a significant difference between the high SHV company and the low SHV company with regard to the mean value of ‘cross-buying’ ($p<0.001$), and to the mean value of ‘word of mouth’ ($p<0.001$). There was a significant difference between the high SHV company and the low SHV company with regard to the mean values of ‘motivation’ ($p<0.01$) and ‘customer defection’ ($p<0.01$).

Table 42
Tests of Between-Subjects Effects (Casual Dining Restaurant Segment)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Shareholder Value	First Interaction	2.236	1	2.236	4.177	0.042
	Commitment	15.972	1	15.972	22.561	0.000
	Cross-Buying	14.897	1	14.897	19.017	0.000
	Word of Mouth	15.399	1	15.399	18.372	0.000
	Motivation	4.594	1	4.594	7.540	0.007
	Customer Defection	7.459	1	7.459	10.114	0.002

It was determined that, in the casual dining restaurant segment, a high SHV company had a significantly higher ‘first interaction’, ‘commitment’, ‘cross-buying’, ‘word of mouth’, ‘motivation’, and ‘customer defection’ than a low SHV company. In addition, shareholder value was significantly related to the interrelationship between the six sub-dimensions of customer equity.

Based on the results of the data analysis, it was concluded that a casual dining restaurant company with a high SHV has significantly higher level of customer equity than a low SHV company has. H1A was supported in the casual dining restaurant segment.

MANOVA Test: Hotel Segment

As shown in Table 43, the level of significance in Box's M test was .778 (>.05), indicating that the assumption of equal variance was satisfied.

Table 43
Box's Test of Equality of Covariance Matrices (Hotel Segment)

Box's M	F	df1	df2	Sig.
16.328	0.755	21	171698.4	0.778

Table 44 shows the descriptive analysis of the MANOVA test in the hotel segment. Regarding the six dimensions of customer equity, the high SHV company had a higher mean value than the low SHV company in the hotel segment.

Table 44
Descriptive Analysis: Hotel Segment

	Shareholder Value	Mean	Std. Deviation	N
First Interaction	High	4.02	0.60	106
	Low	3.77	0.53	113
	Total	3.89	0.58	219
Commitment	High	2.99	0.84	106
	Low	2.72	0.88	113
	Total	2.85	0.87	219
Cross-Buying	High	3.12	0.77	106
	Low	2.83	0.76	113
	Total	2.97	0.78	219
Word of Mouth	High	3.59	0.72	106
	Low	3.22	0.67	113
	Total	3.40	0.72	219
Motivation	High	3.64	0.67	106
	Low	3.35	0.63	113
	Total	3.49	0.66	219
Customer Defection	High	2.93	0.70	106
	Low	2.74	0.63	113
	Total	2.83	0.67	219

As shown in Table 45, all four multivariate statistics indicated that the shareholder value was significantly related to the interrelationship between the six sub-dimensions of customer equity.

Table 45
Multivariate Tests: Hotel Segment

Effect	Test	F	Hypothesis df	Error df	Sig.	Value
Intercept	Pillai's Trace	0.984	2,123.910	6.000	212.000	0.000
	Wilks' Lambda	0.016	2,123.910	6.000	212.000	0.000
	Hotelling's Trace	60.111	2,123.910	6.000	212.000	0.000
	Roy's Largest Root	60.111	2,123.910	6.000	212.000	0.000
Case	Pillai's Trace	0.076	2.900	6.000	212.000	0.010
	Wilks' Lambda	0.924	2.900	6.000	212.000	0.010
	Hotelling's Trace	0.082	2.900	6.000	212.000	0.010
	Roy's Largest Root	0.082	2.900	6.000	212.000	0.010

As shown in Table 46, there was a significant difference between the high SHV company and the low SHV company with regard to the mean value of 'first interaction' ($p<0.05$), and the mean value of 'commitment' ($p<0.05$). There was also a significant difference between the high SHV company and the low SHV company with regard to the mean values of 'cross-buying' ($p<0.01$) and 'word of mouth' ($p<0.001$). There was a significant difference between the high SHV company and the low SHV company with regard to the mean values of 'motivation' ($p<0.01$) and 'customer defection' ($p<0.05$).

Table 46
Tests of Between-Subjects Effects (Hotel Segment)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Shareholder Value	First Interaction	3.493	1	3.493	10.986	0.001
	Commitment	4.099	1	4.099	5.523	0.020
	Cross-Buying	4.476	1	4.476	7.598	0.006
	Word of Mouth	7.359	1	7.359	15.124	0.000
	Motivation	4.709	1	4.709	11.268	0.001
	Customer Defection	1.890	1	1.890	4.304	0.039

Therefore, in the hotel segment, a high SHV company had a significantly higher 'first interaction', 'commitment', 'cross-buying', 'word of mouth', 'motivation', and 'customer defection' than a low SHV company. In addition, shareholder value was significantly related to the interrelationship between the six sub-dimensions of customer equity.

Based on the results of data analysis, it was concluded that a hotel company with a high SHV has significantly higher level of customer equity than a low SHV company. H1A was supported in the hotel segment.

Criterion Measure 1-Shareholder Value: Data Analysis Results

In order to test the correlation between the newly developed attitudinal customer equity measure and the shareholder value of a company, data were collected from 590 patrons of six national chain restaurant and hotel companies. Based on the results of data analysis, it was found that a company with a high SHV has a significantly higher level of customer equity than a low SHV company in the fast food restaurant, casual dining restaurant, and hotel segments. Hence, Hypothesis 1A was strongly supported.

Criterion Measure 2 – Existing Sales-Based Customer Equity Measure

To test the correlation between the newly developed attitudinal customer equity measure and the existing sales-based customer equity measure, the following hypothesis was proposed:

- Hypothesis 2: There is a significant and positive correlation between attitudinal customer equity and sales-basis customer equity.

Sales-based customer equity was calculated by Rust and his colleagues' 2000 formula, which is widely used to calculate sales-based customer equity in the marketing literature.

- Customer equity = $\sum_{t=0}^{T}[(1+d)^{-t} F_{it} S_{it} \pi_{it}]$

Note: T: the length of the planning horizon, t: time period, F_{it}: expected frequency of the customer's purchases/visit per time period, π_{it}: the customer's average spending/contribution per visit, S_{it}: the probability of return, d: the company's discount rate.

Measurement items were borrowed from Rust et al. (2000) and were re-worded to fit within the hospitality context (Table 47). Specifically, the customer's average spending/contribution per visit was measured with a single item: "On average, how much do you spend on lodging per night when you stay at the hotel?" The expected frequency of the customer's purchases/visits per time period was measured with a single item: "On average, how many nights do you stay in a hotel per year?" The probability of return (share of wallet) was measured with a single item: "The next time you travel, what is the probability that you will stay at the hotel brand?" The discount rate was measured with: "How much of discount rate do you usually receive when you go to the hotel?" Finally, the length of the planning horizon (time) was measured with a single item: "How likely is it that you will continue to visit the hotel in the future?"

Table 47
Measurement Items for Sales-Based Customer Equity

Sales-Based Customer Equity (Restaurant Segment)

How much do you spend each time on average when you visit the restaurant? $______

How frequently do you eat at a restaurant?
a. never b. 1-2 times a week c. 3-4 times a week d. 5-6 times a week
e. 7-8 times a week f. 9-10 times a week g. more than 10 times a week

The next time you dine out, what is the probability that you will go to the restaurant?

a. 0-10%	b. 11-20%	c. 21-30%	d. 31-40%	e. 41-50%
f. 51-60%	g. 61-70%	h. 71-80%	i. 81-90%	j. 91-100%

How much of discount rate does the restaurant usually offer?

a. 0-10%	b. 11-20%	c. 21-30%	d. 31-40%	e. 41-50%
f. 51-60%	g. 61-70%	h. 71-80%	i. 81-90%	j. 91-100%

How likely is it that you will continue to eat at the restaurant in the future?
1 2 3 4 5 6 7 8 9 10

Sales-Based Customer Equity (Hotel Segment)

On average, how much do you spend on lodging per night when you stay at the hotel? $______

On average, how many nights do you stay in a hotel per year?

a. never	b. 1-5 nights	c. 6-10 nights	d. 11- 15 nights
e. 16-20 nights	f. 21-25 nights	g. 26-30 nights	h. 31-35 nights
i. More than 35 nights per year			

How likely is it that you will continue to visit the hotel chain in the future?
1 2 3 4 5 6 7 8 9 10

How much of discount rate do you usually receive when you go to the hotel?

a. 0-10%	b. 11-20%	c. 21-30%	d. 31-40%	e. 41-50%
f. 51-60%	g. 61-70%	h. 71-80%	i. 81-90%	j. 91-100%

The next time you travel, what is the probability that you will stay at the hotel brand?

a. 0-10%	b. 11-20%	c. 21-30%	d. 31-40%	e. 41-50%
f. 51-60%	g. 61-70%	h. 71-80%	i. 81-90%	j. 91-100%

After data collection, the probability of return (share of wallet) was re-coded into as follows: 0.05, 0.15, 0.25, 0.35, 0.45, 0.55, 0.65, 0.75, 0.85, 0.95 The discount rate was re-coded into as follows: 0.05, 0.15, 0.25, 0.35, 0.45, 0.55, 0.65, 0.75, 0.85, 0.95 The customer's average spending/contribution per visit was re-coded as follows: 0, 3, 8, 13, 18, 23, 28, 33, 37. Then, using Rust et al.'s (2000) formula, customer equity was calculated.

Pearson Correlation Analysis: Restaurant Segment

The hypothesis was next tested by Pearson correlation analysis. The variables were: (1) the six customer equity scales and (2) the sales-based customer equity. Based on Pearson correlation analysis (as shown in Table 48), there were significant correlations between sales-based customer equity and 'first interaction' (0.328, $p<0.001$), 'commitment' (0.495, $p<0.001$), 'cross-buying' (0.426, $p<0.001$), 'word of mouth' (0.449, $p<0.001$), 'motivation' (0.353, $p<0.001$), and 'customer defection' (0.315, $p<0.001$). Hence, significant correlations were found between (1) the six customer equity scales and (2) the sales-based customer equity, and Hypothesis 2 was supported in the restaurant segment.

Table 48
Pearson Correlation Analysis between Sales-Based Customer Equity and Attitudinal Customer Equity in the Restaurant Segment

		First Interaction	Commitment	Cross Buying	Word of Mouth	Motivation	Customer Defection
Sales-Based Customer Equity	Pearson Correlation	0.328***	0.495***	0.426***	0.449***	0.353***	.315***
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000
	N	371	371	371	371	371	371

Note: ***p<0.001

Pearson Correlation Analysis: Hotel Segment

The hypothesis was tested by Pearson correlation analysis. The variables were: (1) the six customer equity scales and (2) the sales-based customer equity. Based on Pearson correlation analysis (as shown in Table 49), there was significant correlation between the sales-based customer equity and 'first interaction' (0.233, $p<0.001$), 'commitment' (0.251, $p<0.001$), 'cross-buying' (0.274, $p<0.001$), 'word of mouth' (0.295, $p<0.001$), 'motivation' (0.326, $p<0.001$), and 'customer defection' (0.235, $p<0.001$). Hence, significant correlations were found between (1) the six customer equity scales and (2) the sales-based customer equity, and Hypothesis 2 was supported in the hotel segment.

Table 49
Pearson Correlation Analysis between Sales-Based Customer Equity and Attitudinal Customer Equity in the Hotel Segment

		First Interaction	Commitment	Cross Buying	Word of Mouth	Motivation	Customer Defection
Sales-Based Customer Equity	Pearson Correlation	0.233***	0.251***	0.274***	0.295***	0.326***	.235***
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000
	N	211	211	211	211	211	211

Note: ***$p<0.001$

In summary, there were significant correlations between the customer equity scales and the sales-based customer equity in both the restaurant and the hotel industries, and Hypothesis 2 was supported in these industries.

Criterion Measure 3 –SERVPERF Scale

To test the correlation between the newly developed attitudinal customer equity measure and SERVPERF, the following hypothesis was proposed.

- Hypothesis 3: There is a significant and positive correlation between SERVPERF and attitudinal customer equity.

Pearson Correlation Analysis: Restaurant Segment

Pearson correlation analysis was conducted with two sets of variables: (1) the three SERVPERF scales and (2) the six customer equity scales. Based on Pearson correlation analysis, all of the correlations between SERVPERF scales and customer equity scales were significant at $p < .001$, with the correlation coefficient ranging from 0.205 to 0.610 (Table 50). Thus, hypothesis 3 was supported in the restaurant segment. There were significant correlations between the customer equity scales and SERVPERF scales in the restaurant segment.

Table 50
Pearson Correlation Analysis between SERVPERF and Attitudinal Customer Equity in the Restaurant Segment

	First Interaction	Commitment	Cross Buying	Word of Mouth	Motivation	Customer Defection
Responsiveness	0.364***	0.256***	0.250***	0.205***	0.226***	0.378***
Tangibles	0.537***	0.511***	0.512***	0.469***	0.292***	0.610***
Reliability	0.576***	0.563***	0.553***	0.522***	0.335***	0.633***

Note: ***p<0.001

Pearson Correlation Analysis: Hotel Segment

Pearson correlation analysis was conducted with two sets of variables: (1) three SERVPERF scales and (2) the six customer equity scales. Based on Pearson correlation analysis, all of the correlations between the SERVPERF scales and the customer equity scales were significant at $p < .001$, with the correlation coefficient ranging from 0.232 to 0.648 (Table 51). Thus, hypothesis 3 was supported in the hotel segment and there were significant correlations between the customer equity scales and the SERVPERF scales in the hotel segment.

Table 51
Pearson Correlation Analysis between SERVPERF and Attitudinal Customer Equity in the Hotel Segment

	First Interaction	Commitment	Cross Buying	Word of Mouth	Motivation	Customer Defection
Responsiveness	0.309***	0.586***	0.597***	0.564***	0.429***	0.232***
Tangibles	0.587***	0.383***	0.320***	0.584***	0.555***	0.308***
Reliability	0.648***	0.334***	0.316***	0.598***	0.594***	0.261***

Note: ***p<0.001

In summary, there were significant and positive correlations between the customer equity scales and the SERVPERF scales in the restaurant/hotel industry, and Hypothesis 3 was supported in the restaurant and hotel segments.

Criterion Measure 4 – Theoretical Drivers of Customer Equity

To test the correlation between a newly developed attitudinal customer equity measure and three theoretical drivers of customer equity, the following hypotheses were proposed:

- Hypothesis 4: There are significant and positive relationships between three theoretical drivers of customer equity and attitudinal customer equity
- Hypothesis 4a: There is a significant and positive relationship between value equity and attitudinal customer equity
- Hypothesis 4b: There is a significant and positive relationship between brand equity and attitudinal customer equity
- Hypothesis 4c: There is a significant and positive relationship between relationship equity and attitudinal customer equity

Result: Restaurant Segment

Pearson correlation analysis was conducted with two sets of variables: (1) the six customer equity scales and (2) the value equity scale, brand equity scale, and relationship equity scales. Based on Pearson correlation analysis, all of the correlations between value equity, brand equity, relationship equity, and the six customer equity scales were significant at $p < .001$, with the correlation coefficient ranging from 0.337 to 0.746 (Table 52). Thus, there were significant correlations between the customer equity scales and the three theoretical drivers of customer equity, and Hypothesis 4a, 4b, and 4c were supported in the restaurant segment.

Table 52
Pearson Correlation Analysis between Value, Brand, Relationship Equity and Attitudinal Customer Equity in the Restaurant Segment

	First Interaction	Commitment	Cross Buying	Word of Mouth	Motivation	Customer Defection
Value Equity	0.559***	0.594***	0.543***	0.430***	0.337***	0.636***
Brand Equity	0.609***	0.723***	0.691***	0.607***	0.437***	0.746***
Relationship Equity	0.455***	0.571***	0.597***	0.654***	0.349***	0.502***

Note: ***p<0.001

Result: Hotel Segment

Pearson correlation analysis was conducted with two sets of variables: (1) the six customer equity scales and (2) the value equity scale, brand equity scale, and relationship equity scale. Based on the results of Pearson correlation analysis, all of the correlations between the value equity, brand equity, relationship equity, and six customer equity scales were significant at p< .001, with the correlation coefficient ranging from 0.337 to 0.746 (Table 53). Thus, there were significant correlations between the customer equity scales and the three theoretical drivers of customer equity, and Hypothesis 4a, 4b, and 4c were supported in the hotel segment.

Table 53
Pearson Correlation Analysis between Value, Brand, Relationship Equity, and Attitudinal Customer Equity in the Hotel Segment

	First Interaction	Commitment	Cross Buying	Word of Mouth	Motivation	Customer Defection
Value Equity	0.556***	0.384***	0.377***	0.566***	0.641***	0.354***
Brand Equity	0.597***	0.489***	0.541***	0.717***	0.710***	0.423***
Relationship Equity	0.311***	0.571***	0.524***	0.502***	0.458***	0.271***

Note: ***p<0.001

In summary, Hypothesis 4a, 4b, and 4c were strongly supported in restaurant and hotel industries. There were significant and positive relationships between the customer equity scales and three theoretical drivers of customer equity: (1) value, (2) brand, and (3) relationship equity.

Chapter Summary

The six dimensions of customer equity derived from EFA were incorporated into a confirmatory factor analysis utilizing a consumer sample (n=590). The subsequent CFA revealed that the six constructs all had convergent validity, discriminant validity, and internal consistency. Therefore, the unidimensionality of each of the six constructs was confirmed. Using the newly developed attitudinal customer equity scale, a series of hypotheses was tested. All of the proposed hypotheses were supported based on data analysis (Table 54).

Table 54
Hypotheses Testing Results

Hypothesis	Decision
H1A: A company with high shareholder value possesses higher customer equity than a low-customer-equity company.	Supported
H2: There is a significant and positive correlation between attitudinal customer equity and sales-basis customer equity.	Supported
H3: There is a significant and positive correlation between SERVPERF and attitudinal customer equity.	Supported
H4: There are significant and positive relationships Between three theoretical drivers of customer equity and attitudinal customer equity	Supported
H4A: There is a significant and positive relationship between value equity and attitudinal customer equity	Supported
H4B: There is a significant and positive relationship between brand equity and attitudinal customer equity	Supported
H4C: There is a significant and positive relationship between relationship equity and attitudinal customer equity	Supported

CHAPTER IV

DISCUSSION

Introduction

In Chapter I, three research objectives were proposed:

1) to develop an attitudinal scale for measuring customer equity in hospitality businesses
2) to examine the relationship between this attitudinal measure and shareholder value of selected hospitality firms
3) to assess the relationship between the customer equity scale and the selected criterion measures (including the existing sales based customer equity measure).

Based on guidelines from previous scale-development background literature (e.g. DeVellis, 1991; Hinkin, Tracey, and Enz, 1997), a series of scale development processes were conducted:

1) item generation
2) content adequacy assessment
3) questionnaire administration
4) exploratory factor analysis
5) internal consistency assessment
6) confirmatory factor analysis
7) scale validity/reliability check

Through these systematic processes, an attitudinal measurement scale of customer equity composed of six dimensions was created.

Next, the relationship between these dimensions of customer equity and shareholder value was tested, and significant relationships were discovered. Finally, the criterion validity of the new scale was tested by examining correlations with the six criterion measures. The correlations between the customer equity scale and the criterion measures were all statistically significant in the hypothesized direction.

The final chapter presents and discusses the dissertation findings, as well as, the dimensions in customer equity and supporting indicators. Finally, conclusions concerning theoretical/practical contributions, managerial implications, study limitations, and future research directions are discussed.

Research Objective 1 – Creating a New Measure: Findings

The scale development process was initiated with a definition of theoretical constructs and the generation of items supporting each dimension. A comprehensive list of 97 items was generated from an extensive literature review. Then, a group of experts (n=16) possessing either significant academic or industry experience reviewed the initial items. Based on their judgments, the initial items were purified into 48 items. The 48 retained items were then incorporated into two different questionnaires: (1) hotel segment and (2) restaurant segment. To verify the usability and clarity of the two questionnaires, a pre-test was conducted with two faculty members and eight graduate students in Virginia Tech. In addition, a focus group discussion was conducted and questionnaires were gone over question by question with a group of consumers with significant experience in the hotel and restaurant industries (n=3). Through this process, a number of items were re-worded, and items that were deemed irrelevant to the hotel and restaurant industries were deleted.

The results of subsequent exploratory factor analysis (n=298) indicated that, in the restaurant and hotel segments, customer equity is composed of six sub-dimensions: 'first interaction', 'commitment', 'cross-buying', 'word of mouth', 'motivation', and 'customer defection'. According to Cronbach's alpha values, each of these six constructs possessed strong internal consistency.

This result was deemed somewhat inconsistent with the theoretical background. In particular, the existing customer equity literature (e.g. Gupta and Lehmann, 2005; Kumar and Petersen, 2005; Rust, Lemon, and Zeithaml, 2004; Berger et al., 2006) strongly supports the idea that customer equity is a multidimensional construct composed of four sub-dimensions: customer acquisition, customer retention, customer relationship development, and customer defection. For this reason, it was decided to verify the unidimensionality of those new six dimensions that were derived from EFA with the hotel and restaurant consumer data.

The six dimensions of customer equity derived from EFA were incorporated into a confirmatory factor analysis utilizing a consumer sample (n=590). The subsequent CFA revealed that the six constructs all had convergent validity, discriminant validity, and internal consistency. Therefore, the unidimensionality of each of the six constructs was confirmed. Consequently, this dissertation asserted that customer equity is a multidimensional construct composed of six sub-dimensions: 'first interaction', ‘motivation’, ‘commitment’, ‘cross-buying’, ‘word of mouth’, and ‘customer defection’. Specifically, it was asserted that customer acquisition was not a unidimensional construct, but rather a multidimensional construct comprised of ‘first interaction’ and ‘motivation’. In addition, customer relationship expansion was found to be not a unidimensional construct, but a multidimensional construct comprised of ‘cross-buying’ and ‘word of mouth’.

In both the hotel and restaurant segments, it was found that customer equity is a multidimensional construct composed of six sub-dimensions. However, customer equity in the restaurant segment showed slightly different measurement items from customer equity in the hotel segment.

Dimensions and Indicators of Customer Equity

In both the restaurant and hotel segments, it was found that customer equity is composed of six dimensions: ‘first interaction’, ‘motivation’, ‘commitment’, ‘cross-buying’, ‘word of mouth’, and ‘customer defection’.

First Interaction

According to the results of EFA, the factor of ‘first interaction’ accounted for 12.5% (restaurant segment) and 24.7% (hotel segment) of total variance, which was ranked the highest (hotel segment) and the second highest (restaurant segment) in the degree of correlation with an overall customer equity scale. This result demonstrated that a consumer’s first interaction with a company makes a significant contribution to the overall customer equity of the company. In the hotel industry in particular, the ‘first interaction’ factor bears a stronger impact on customer equity than in the restaurant industry. In confirmatory factor analysis, it was found that the 'first interaction' construct showed strong convergent validity and discriminant validity. Furthermore, its composite reliability was 0.930 (restaurant segment) and 0.974 (hotel segment). These results indicated that 'first interaction' is a unidimensional construct that accounts for a large portion of customer equity.

For many years, researchers (e.g. Rabin and Schrag, 1999) have suggested that consumers possess a cognitive bias that leads them to misinterpret new information (as in the 'first interaction' with a company). It has been further proposed that such a bias induces overconfidence regarding the first interaction with the seller. Consequently, consumers tend to rely highly on their first interaction when they evaluate the seller/company. For this reason, Thomas (2001) has stated that customers' first interaction with a company highly influences customer retention rates and customer lifetime contributions to the company. This dissertation's data analysis supports the existing literature and extends this literature by finding that (1) the 'first interaction' is a key dimension of customer equity, and (2) by confirming that the 'first interaction' is a unidimensional construct that has high convergent validity, discriminant validity, and internal consistency.

Commitment

The 'commitment' construct accounted for 31.2% (restaurant segment) and 11.7% (hotel segment) of total variance, which was ranked the highest (restaurant segment) and the second highest (hotel segment) in the degree of correlation with an overall customer equity scale. This result indicates that the ‘commitment’ construct makes a high contribution to customer equity. Furthermore, in CFA, ‘commitment’ showed high convergent validity and discriminant validity, and its composite reliability was 0.796 (restaurant segment) and 0.827 (hotel segment). These results indicate that the ‘commitment’ construct is a unidimensional construct that accounts for a large portion of a company’s customer equity.

‘Commitment’ is defined as an enduring desire to maintain a valued relationship (Moorman et al. 1992, p.316). Large numbers of marketing studies have suggested that customer commitment has a positive impact on repeat purchase and behavioral intentions (e.g. Garbarino and Johnson, 1999; Sui and Baloglu, 2003), loyalty (e.g. Fullerton, 2003; Pritchard, Havitz, and Howard, 1999), and customer lifetime value (e.g. Berger and Nasr, 1998; Stahl, Matzler, and Hinterhuber, 2003). With the finding that ‘commitment’ is a key dimension of customer equity, this dissertation extends the existing literature. Furthermore, this dissertation extends the existing literature by confirming that ‘commitment’ is a unidimensional construct with high convergent validity, discriminant validity, and internal consistency.

Word of Mouth

It was also found that ‘word of mouth’ (‘WOM’) is an important unidimensional construct that accounts for a meaningful amount of variance in customer equity. According to the data analysis results, ‘WOM’ accounted for 7.0% (restaurant segment) and 9.6% (hotel segment) of the total variance. The CFA results further support ‘WOM’ as a key construct for predicting customer equity. According to the CFA, the factor loadings of 'WOM' indicators ranged from 0.805 to 0.912 (restaurant segment) and from 0.519 to 0.885 (hotel segment). These results indicate that 'WOM' indicators make high contributions to overall customer equity. Furthermore, the 'WOM' construct achieved high convergent validity and discriminant validity, and internal consistency. The composite reliability of the 'WOM' construct is 0.869 (restaurant segment) and 0.830 (hotel segment). Therefore, 'WOM' is a unidimensional construct that reflects a large portion of customer equity.

For many years, researchers have postulated that 'WOM' reflects customer satisfaction (e.g. Anderson, 1998) and is therefore a key indicator of customer relationship marketing success (Gremler, Gwinner, and Brown, 2001). 'WOM' also bears a positive impact on sales (e.g. Chevalier and Mayzlin, 2006), and is thus related to the shareholder value of a company. However, no previous study had verified the unidimensionality of the 'WOM' construct in the hospitality industry. This dissertation contributes to the existing 'WOM' literature by verifying this. Furthermore, with the discovery that 'WOM' is a key dimension of customer equity, this dissertation extends the existing customer equity research.

Cross-Buying

In the product marketing literature, 'cross-buying' has been defined as the customer's practice of buying additional products and services from an existing service provider (Ngobo, 2004). Verhoef (2001) has stated that cross-selling additional service is an important part of customer relationship marketing for a company. From the perspective of the hospitality industry, this dissertation re-defines 'cross-buying' as visiting different branches of the company or increasing the frequency of visitation. It has been widely recognized that cross-buying bears a positive impact on a company's revenue and customer equity (e.g. Kumar, George, and Pancras, 2008; Reinartz and Kumar, 2003). The results of the data analysis confirmed this previous research. According to the EFA, the 'cross-buying' factor accounted for 5.4% (restaurant segment) and 7.5% (hotel segment) of the total variance in customer equity. The CFA further supports the convergent validity, discriminant validity, and internal consistency of this construct. The composite reliability of the 'cross-buying' construct was 0.791 (restaurant segment) and 0.856 (hotel segment). According to the CFA results, the factor loadings of 'cross-buying' indicators ranged from 0.639 to 0.854 (restaurant segment) and from 0.627 to 0.857 These results indicate that 'cross-buying' indicators make a significant contribution to the overall customer equity of a company.

Customer Defection

Data analysis demonstrates that 'customer defection' accounted for 8.8% (restaurant segment) and 6.3% (hotel segment) of the total variance in customer equity. Also, the CFA results demonstrated high convergent validity, discriminant validity, and internal consistency, consequently confirming the unidimensionality of this construct. 'Customer defection' refers to customers' forsaking of one service provider for another (Garland, 2002). Previous studies strongly support the concept that customer defection rates significantly and directly influence the revenue and customer equity of a company (e.g. Reichheld, 1996; Reichheld and Sasser, 1990; Knox and Denison, 2000). In addition, 'customer defection' is the only construct that bears a negative impact on customer equity. Therefore, the issue of how to avoid/reduce customer defection should be of great importance to companies. However, in the hospitality industry, little research has been conducted regarding customer defection. This dissertation found that 'customer defection' is one sub-construct contributing to the overall customer equity of a hospitality company. However, future research is required in order to further examine how a company's marketing actions influence customer defection, and how customer defection influences the overall customer equity of a company.

Motivation

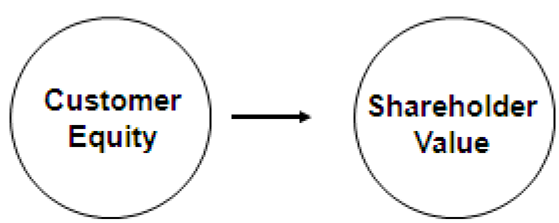
Lastly, the 'motivation' construct accounted for 5.1% (restaurant segment) and 5.1% (hotel segment) of the variance in customer equity. This construct accounted for the least amount of customer equity variance as compared to the other constructs. However, the high factor loadings, acceptable convergent validity, discriminant validity, and internal consistency supports the idea that this construct is a unidimensional construct that contributes to the overall customer equity of a company. Moreover, it has long been discussed theoretically that customer motivation highly influences customer attitude and repurchase intentions (e.g. MacKenzie and Spreng, 1992), thus influencing customers' future behavior. Therefore, the 'motivation' construct is a key construct for understanding customer behavior and for explaining a company's customer equity. However, no previous study has examined how patrons' motivation influences customer equity. Additional research should be conducted to further examine this relationship. Specifically, patrons' motivation highly varies according to demographic factors such as age, income, education, culture, and others. Therefore, the relationship between demographic differences, patrons' motivation, and customer equity should be addressed by future research.

Research Objective 2 –To Validate Customer Equity Scale Against SHV

The first objective of this dissertation was to create a new attitudinal measurement scale of customer equity. A series of scale development processes was conducted and a new customer equity scale was developed. It was then necessary to further validate the newly developed scale against the existing criterion measures.

Based on theoretical background, this dissertation proposed in Chapter 2 that, if customer equity is a valid measure of the long-term value of a company, it should be capable of predicting SHV insofar as SHV represents the long-term financial performance of a company (Figure 11).

Figure 11. The proposed relationship between customer equity and SHV



Therefore, if customer equity scale is valid, it theoretically should be strongly/positively correlated with SHV.

In order to view the relationship between the customer equity and shareholder value, a high SHV company (63 billion) and a low SHV company (3.4 billion) were selected from the fast food restaurant segment. According to the results of data analysis, a high SHV company has significantly higher customer equity than a low SHV company. MANOVA test results indicated that there was significant difference between the high SHV company and the low SHV company with regard to the six customer equity scales at 0.05 level. Therefore, it was concluded that a company with a high shareholder value has higher customer equity than a low shareholder value company in the fast food restaurant segment.

Using the same process, a high SHV company (2.6 billion) and a low SHV company (190 million) were selected from the casual dining restaurant segment. According to the results of data analysis, the high SHV company had significantly higher customer equity than the low SHV company. MANOVA test results indicated that there was a significant difference between the high SHV company and the low SHV company with regard to the six customer equity scales at 0.05 level. It was therefore concluded that a company with a high shareholder value has higher customer equity than a low shareholder value company in the casual dining restaurant segment.

In the hotel segment, a high SHV company (9.9 billion) and a low SHV company (1.7 million) were selected. According to the data analysis, the high SHV company had significantly higher customer equity than the low SHV company. MANOVA test results indicated a significant difference between the high SHV company and the low SHV company with regard to the six customer equity scales at 0.05 level. It was concluded that a company with a high shareholder value has higher customer equity than a low shareholder value company in the hotel segment.

In summary, the results of data analysis supported the concept that a company with a high shareholder value has higher customer equity than a low shareholder value company. This result supports the belief that customer equity is a valid scale. However, due to budget limitations, this dissertation could not test the proposal that, as a company's customer equity increases, the company's shareholder value also increases. To test this relationship, regression analysis with 30 to 50 companies would typically be required. In order to further validate the customer equity scale for future research, it would be necessary to theoretically examine the relationship between customer equity and shareholder value using a large number of companies.

Research Objective 3 - Correlations Between Customer Equity And Selected Criterion Measures

The third objective of this dissertation was to further validate the newly developed scale against the other selected criterion measures. Based on theoretical background, five criterion measures were selected in Chapter 2: value equity, brand equity, relationship equity, sales-basis customer equity, and SERVPERF.

The existing model of customer equity postulated that value, brand, and relationship equity positively influence customer equity (Lemon, Rust, & Zeithaml 2001; Leone, Rao, Keller, Luo, McAlister, and Srivatstava 2006; Rust, Zeithaml, and Lemon, 2000, 2004).

Therefore, if the newly developed customer equity scale of customer equity is valid, it should be correlated with those three theoretical drivers.

Previous studies (e.g. Gupta, Lehmann, and Stuart, 2004; Berger et al., 2006; Wiesel and Skiera, 2005) have verified empirically that the existing sales-based customer equity measure closely approximates a company's shareholder value. Therefore, if the newly developed customer equity is a valid measure of the long-term value of a company, it should be correlated with the existing sales-based customer equity measure.

Additionally, Cronin and Taylor (1994) have postulated that SERVPERF is a long-term attitudinal measure towards a brand or company. To this end, if the newly developed customer equity scale is a valid measure of the long-term value of a company, it should be positively correlated with SERVPERF, or in other words, with value equity, brand equity, relationship equity, sales-basis customer equity, and SERVPERF.

In order to view how the customer equity scale correlated with selected criterion measures, a series of Pearson correlation analyses was conducted. For both the restaurant and the hotel data, the correlations between customer equity and brand equity tended to be stronger than any other correlations (ranging from .423 to .746). For many years, customer equity literature has postulated the relationship between brand equity and customer equity. Rust et al. (2000) proposed that customer equity is influenced by brand equity insofar as customer lifetime value is influenced by customers' brand perceptions. Lemon et al. (2001) have stated that brand equity influences customer equity formation in three specific ways: (1) it provides a stimulus to consumers, so it helps to attract new consumers to a company, (2) it provides a reminder to consumers concerning the company's product/service, so the consumer will repurchase/revisit, and (3) it provides an emotional bridge between the customer and the brand. By empirically testing the correlation between brand equity and customer equity, this dissertation supported the previous conceptual studies and replicated the findings in the hospitality industry.

In addition, a strong correlation was found between the customer equity scales and relationship equity (ranging from 0.271 to 0.654). Previous studies have proposed the correlation between customer equity and relationship equity insofar as building a customer relationship increases the possibility that the customer will continue to choose a particular company, thus increasing the customer lifetime value (Blattberg et al., 2001; Dwyer, 1997; Reichheld, 1996). Rust et al. (2000) have further postulated that relationship equity enhances customer equity in three ways: (1) it maximizes customers' probability of return for future purchases, (2) it maximizes the amount of purchase in the future, and (3) it minimizes the possibility that the customer will purchase from competitors. By empirically testing the relationship between two constructs, this dissertation confirmed previous theoretical statements and replicated the findings in the hospitality industry.

According to the results of Pearson correlation analysis, a strong relationship was also identified between the value equity and customer equity (ranging from .337 to .636). It has been widely recognized that value equity is one of the key antecedents of customer equity in the sense that all customers' customer lifetime value is influenced by their value perception (e.g. Blattberg et al., 2001; Lemon et al., 2001; Rust et al., 2000). Thomas et al. (2004) analyzed data collected from 416 customers and found that customer-perceived value, particularly with regard to price, bears a direct impact on the customer lifetime value and customer equity. The results of data analysis in this dissertation support the previous studies, and replicated them in the hospitality industry.

A moderate correlation was discovered between the newly developed attitudinal customer equity measure and the sales-basis customer equity measure (ranging from .231 to .495). By verifying the correlation between these two constructs, this dissertation showed that the newly developed attitudinal measure reflects the existing sales-based measure.

Lastly, strong correlations between the customer equity scales and SERVPERF scales (ranging from .222 to .648) were found. Service quality has been a key construct in the hospitality industry since it is one of the most powerful indicators of a hospitality company's performance (Cronin and Taylor (1994). For this reason, Cronin and Taylor have suggested that their SERVPERF instrument reflects the long-term performance of a company. This dissertation accordingly employed SERVPERF as one of the criterion measures, and the results of data analysis confirmed that attitudinal customer equity is an indicator of the long-term service performance of a hospitality company.

In conclusion, according to the results of data analysis, there are positive correlations between customer equity and value equity, brand equity, relationship equity, sales-basis customer equity, and SERVPERF. These results strongly support that customer equity is significantly related to selected theoretical criterion measures. Therefore, the results support that the newly developed customer equity scale is valid.

Conclusion

The purpose of this dissertation was to create and validate an attitudinal measure of customer equity in the hospitality businesses. The results produced two sets of concise scales: (1) 17 items representing six dimensions of customer equity in the restaurant industry and (2) 19 items representing six dimensions of customer equity in the hotel industry (See Appendix F). Statistically, these two scales achieved convergent validity, discriminant validity, and internal consistency. It was theoretically confirmed that these scales are significantly and positively related to the existing criterion measures. Thus, this dissertation postulates that the attitudinal customer equity measure is a valid measure.

The six dimensions ('first interaction', 'commitment', 'cross-buying', 'word of mouth', 'motivation', and 'customer defection') reflect customers' attitude with regard to their lifetime contribution to a hospitality company, thus affecting its long-term financial performance. For this reason, the attitudinal customer equity measure reflects the shareholder value of a company. Furthermore, the measure is highly correlated with the long-term service performance of a company-SERVPERF.

This dissertation makes three theoretical and practical contributions.

First, the hierarchical structure of the customer equity scale provides theoretical implications to the existing relationship marketing literature, which heavily focuses upon the impact of marketing variables on customer relationships and the acquisition and retention of customer relationships (e.g. Lewis, 2006; Schmittlein, Morrison, and Colombo 1987; Schmittlein and Peterson 1995). However, there is currently a lack of research regarding how the customer relationship outcome can be transferred to the equity of a firm.

The newly developed attitudinal customer equity scale reveals the hierarchical structure of customer equity formation, thus providing a structural map that explains how the customer relationship outcome is transferred to equity of a firm. The new measure therefore extends the current relationship marketing literature.

Second, the measure is not only valid and reliable, but also parsimonious. So, for researchers, it is easy to conduct quantitative research with this concise scale. Researchers employing this measure may expect better response rates due to the brevity of the questionnaire and the clarity of the items. Furthermore, when practitioners utilize the measure as a tool for evaluating company performance over time, they may identify clearly the area(s) in which the company has succeeded or failed. This is another academic contribution of this dissertation from the perspective of methodological issues.

Lastly, knowledge of the six dimensions that define customer equity can immediately assist hospitality owners/professionals to develop and execute more effective marketing programs. Furthermore, the newly developed measure provides 18 specific marketing variables in the restaurant segment and 21 marketing variables in the hotel segment. Based on these specific marketing items, practitioners can develop practical marketing strategies using the measure.

Limitations

Despite its theoretical implications, this study possesses three limitations that must be addressed. First, based on the theoretical background, this dissertation proposed and sought to test the following hypothesis: As a company's customer equity increases, the company's shareholder value also increases. To test this hypothesis, regression analysis of 30 to 50 companies would be preferable. However, due to the limited budget involved, this dissertation selected six hospitality companies. The hypothesis was revised based on the small sample size to assert: A company with high shareholder value possesses higher customer equity than a low shareholder value company. This hypothesis was tested through MANOVA. While previous scale development studies have employed this same methodology to examine criterion validity (e.g. Zaichkoswsky, 1985), the generalization of the results is inherently limited to some extent.

Second, this dissertation tested the newly developed scale in the fast food restaurant and casual dining restaurant segment. In this sense, the generalization of the results to the entire restaurant industry is somewhat limited. Similarly, regarding hotel segment, the new measurement scale was tested with only two hotel companies. Therefore, for the future research, it is recommended to test the new measurement scale in the different restaurant segment settings. Also, it is recommend to replicate the findings with more number of hotel companies. Third, this dissertation collected data from consumer panels in the United States. As shown in the sociodemographic profile of respondents, 88.6% of respondents were Caucasian. Therefore, the extent to which the measure is cross-culturally generalizable is somewhat limited.

Lastly, regarding the consumer survey, from the 10,751 questionnaires distributed, 590 usable responses were collected, for a usable response rate of 5.5%. Due to the low response rate, sample representativeness could be somewhat limited.

Future Research Directions

Given that there has been little study of customer equity research in the hospitality industry specifically, the new measure created in this study may serve as a guide for future research. Specifically, six directions for future research are recommended.

First, because customer equity impacts a firm's financial value, but is a consequence of marketing actions (Berger et al., 2006), it is necessary to examine which marketing investments maximize customer equity, and consequently shareholder value. In particular, it is recommended to examine how customer satisfaction, service quality, promotion strategies, branding strategies or other marketing variables influence the customer equity of a company.

Second, it would be interesting topic to conduct a longitudinal study to learn how customer equity influences stock prices over time, or vice versa. This dissertation verified that shareholder value (the stock price multiplied by the outstanding shares) is highly correlated to the company's customer equity. Therefore, there should be a causal relationship between customer equity and stock price. If there is a significant relationship between customer equity and stock price, it can be hypothesized that the customer equity of a company psychologically influences its stock prices. Future research can further examine the relationship.

Third, customer equity represents the long-term value of a company. In this sense, it is an interesting research topic to examine how merger and acquisition (M&A) influences the attitudinal customer equity of a company. In particular, it would be useful to answer how brand merger or separation influence customers perception toward a company's value.

Fourth, examining customer equity in different cultures should be an important topic for the future research. For example, Asian culture is closer to collectivism. In contrast, in Western culture is more individualistic. Collectivists tend to focus on group, society, institution, and country rather than on the individual. Therefore, it could be hypothesized that Chinese customers tend to have higher customer equity towards national companies (e.g. Chinese Brand Company) rather than foreign companies (e.g. Marriott). Testing the hypothesis should provide marketing guidance for companies who penetrate to Asian markets.

Fifth, brand portfolio is an important issue in the hospitality industry. Many hospitality firms (e.g. Marriott, Yum, Darden, etc.) have adapted brand portfolio strategies. However, no previous research has examined how those strategies influence the customer lifetime contribution. Therefore, the influence of portfolio strategies on customers' brand perception, customer equity, and the financial performance of the company might be an interesting topic for future research.

Sixth, this dissertation tested the attitudinal customer equity scale with well-known national chain companies. These national chain companies have a large number of branches. Therefore, regarding such a national chain company, "the total of the discounted lifetime values summer over all of a firm's customers" should be higher than a small single unit restaurant/hotel company. However, there are some single unit local restaurant/hotel companies that have long-term relationship value with its customers. In this sense, for the future research, it is an interesting topic to examine the level of customer equity of each unit of hospitality companies.

Lastly, as discussed in the study limitation section, future research is required in order to verify the scale in different industry settings, with a larger number of companies.

I expect that the attitudinal customer equity scale is capable of linking the return on marketing and financial performance of a company and, consequently, contributing to further advancement in the fields of marketing and finance.

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APPENDICES

Appendix A

Customer Equity Questionnaire

Content Assessment

Instructions: Four determinants of customer equity are defined on the left-hand side of the page. On the right-hand side are items that help to support or more fully explain each of the four determinants. First read through all of the four determinants on the left-hand side of the page, and then fill-in the blanks preceding each item on the right with the letter of the determinant (A-D) to which it most closely corresponds. If the item <u>does not</u> correspond to any of the four determinants <u>at all</u>, please select E. Thank you for your time and assistance.

Sean Sunghyup Hyun

A. Customer Acquisition: Part of the customer-firm relationship that begins with the consumers' first interaction with the firm and proceeds through the first purchase until the first repeat purchase.

B. Customer Retention: A customer's repeat purchase of the product(s) from the firm.

C. Customer Relationship Expansion: Increasing purchases either of new products or the same products previously bought from the firm. Willingness to recommend and make referrals.

D. Customer Defection: Customers' forsaking one service provider for another.

E. This item <u>does not</u> correspond to any of the above four determinants <u>at all</u>

1. ___ My first impression was that the company was friendly.
2. ___ When I travel/dine out, this hotel/restaurant is my first choice.
3. ___ I want to try the company's premium product (e.g. suite room, high price menu).
4. ___ Next time I travel/dine out, I will consider switching to another company.
5. ___ I like visiting the hotel/restaurant.
6. ___ To me, this hotel/restaurant is the best one to do business with.
7. ___ I want to try other services/products provided by the company.

A. Customer Acquisition: Part of the customer-firm relationship that begins with the consumers' first interaction with the firm and proceeds through the first purchase until the first repeat purchase.

B. Customer Retention: A customer's repeat purchase of the product(s) from the firm.

C. Customer Relationship Expansion: Increasing purchases either of new products or the same products previously bought from the firm. Willingness to recommend and make referrals.

D. Customer Defection: Customers' forsaking one service provider for another.

E. This item <u>does not</u> correspond to any of the above four determinants <u>at all</u>

8. ___ I will switch if other restaurants/hotels provide better offers.

9. ___ My first impression was that the company was appealing

10. ___ If the company opens a new branch/store, I want to visit it.

11. ___ I believe that this is my favorite hotel/restaurant.

12. ___ I visit this hotel/restaurant more frequently than other restaurants/hotels

13. ___ I want to visit the hotel/restaurant more frequently.

14. ___ I had already seen the company's advertisement before my first visit.

15. ___ I don't usually visit other restaurants/hotels.

16. ___ When I go to the hotel/restaurant, I want to bring my friends/relatives/other people.

17. ___ I like the hotel/restaurant, but I want to try different hotels/restaurants next time.

18. ___ During my lifetime, I want to keep my relationship with the company.

A. Customer Acquisition: Part of the customer-firm relationship that begins with the consumers' first interaction with the firm and proceeds through the first purchase until the first repeat purchase.

B. Customer Retention: A customer's repeat purchase of the product(s) from the firm.

C. Customer Relationship Expansion: Increasing purchases either of new products or the same products previously bought from the firm. Willingness to recommend and make referrals.

D. Customer Defection: Customers' forsaking one service provider for another.

E. This item <u>does not</u> correspond to any of the above four determinants <u>at all</u>

19.___ As long as the present service continues, I will keep going to this hotel/restaurant.

20.___ I want to invest money in purchasing the company's stock.

21.___ I heard about the company from other people before my first visit.

22.___ I spend a larger amount of money in this hotel/restaurant than in other hotels/restaurants.

23.___ I will not visit/dine out at the hotel/restaurant in the near future.

24.___ The company's price discount encouraged my first visit/purchase.

25.___ I am a member of this hotel's/restaurant's membership club.

26.___ I will visit another hotel/restaurant when they provide incentive for first time customers.

27.___ Whenever I ask for information, the hotel/restaurant provides necessary information to me.

28.___ I would suggest the hotel/restaurant to my friends/relatives.

29.___ I started to feel bored by the same services provided by the hotel/restaurant.

A. Customer Acquisition: Part of the customer-firm relationship that begins with the consumers' first interaction with the firm and proceeds through the first purchase until the first repeat purchase.

B. Customer Retention: A customer's repeat purchase of the product(s) from the firm.

C. Customer Relationship Expansion: Increasing purchases either of new products or the same products previously bought from the firm. Willingness to recommend and make referrals.

D. Customer Defection: Customers' forsaking one service provider for another.

E. This item <u>does not</u> correspond to any of the above four determinants <u>at all</u>

30.___ The company's promotional mail encouraged my first visit/purchase.

31.___ Whenever I complain, the hotel/restaurant resolves the issue properly.

32.___ If somebody says something negative about the company, I am willing to defend it.

33.___ I will switch if the hotel/restaurant increases its prices in the future.

34.___ The company's promotional mail encouraged my first visit/purchase.

35.___ I pay attention to the hotel's/restaurant's announcements.

36.___ I will post good things about the hotel/restaurant on the Internet website (e.g. blog).

37.___ The hotel/restaurant company is not honest about its problems.

38.___ The company's celebrity endorsers (e.g. actors, singers in the advertisements) encouraged my first visit/purchase.

39.___ I mention this hotel/restaurant to others quite frequently.

A. Customer Acquisition: Part of the customer-firm relationship that begins with the consumers' first interaction with the firm and proceeds through the first purchase until the first repeat purchase.

B. Customer Retention: A customer's repeat purchase of the product(s) from the firm.

C. Customer Relationship Expansion: Increasing purchases either of new products or the same products previously bought from the firm. Willingness to recommend and make referrals.

D. Customer Defection: Customers' forsaking one service provider for another.

E. This item <u>does not</u> correspond to any of the above four determinants <u>at all</u>

40.___ It was easy to find the contact information about the company when I first visited.

41. The hotel/restaurant is honest with me about problems

42.___ I mention this hotel/restaurant to people more than other hotels/restaurants.

43.___ I believe the hotel/restaurant company has been involved in ethical problems in management.

44.___ It was easy to make the first time reservation/purchase with the company.

45.___ I can trust the hotel/restaurant to treat me fairly.

46.___ When I tell others about this hotel/restaurant, I tend to talk about the hotel/restaurant in great detail.

47.___ Once I get talking about this hotel/restaurant, it is hard for me to stop.

48.___ I am angry with the hotel/restaurant.

49.___ I feel emotionally attached to the hotel/restaurant.

50.___ My first interaction with an employee of the company was nice.

A. Customer Acquisition: Part of the customer-firm relationship that begins with the consumers' first interaction with the firm and proceeds through the first purchase until the first repeat purchase.

B. Customer Retention: A customer's repeat purchase of the product(s) from the firm.

C. Customer Relationship Expansion: Increasing purchases either of new products or the same products previously bought from the firm. Willingness to recommend and make referrals.

D. Customer Defection: Customers' forsaking one service provider for another.

E. This item <u>does not</u> correspond to any of the above four determinants <u>at all</u>

51.___ I was satisfied with my first visit to/purchase from the company.

52.___ I continue to go to the hotel/restaurant because I like being associated with them.

53.___ I have only good things to say about this hotel/restaurant.

54.___ I am frustrated with the hotel/restaurant.

55.___ I was pleased with my first visit to/purchase from the company

56.___ I am content with the hotel's/restaurant's performance.

57.___ I am proud to tell others that I use this hotel/restaurant.

58.___ I am annoyed with the hotel/restaurant.

59. I got a good deal on my first purchase from the company.

60. I use the hotel's/restaurant's mileage/point program.

61. I am willing to say good things about the hotel/restaurant.

62. The hotel/restaurant provides customized service for me.

63. The hotel/restaurant satisfies my expectations.

Appendix B

Hotel/Restaurant Familiarity Survey

Dear Survey Participant,

Thank you for participating in this study to develop an attitudinal measure of customer equity for hospitality businesses. Your help is important for the success of this study and participation is strictly voluntary. Submission of a completed questionnaire indicates your willingness to participate.

There are only 'FOUR' questions. It would take you about 2 minutes to complete this questionnaire. All responses will remain confidential and anonymous. No individual responses, but only aggregate responses will be reported.
Your cooperation and contribution for this study is greatly appreciated.

Sincerely,
Sean Sunghyup Hyun,
PhD Candidate
Virginia Tech

'Hotel/Restaurant Familiarity' Survey

This questionnaire is about your experiences with visiting **hotels and restaurants** in your everyday life.

Hotel familiarity questions

1. Among the five hotels mentioned below, please select only one that you know the most about.
    a. Holiday Inn b. Comfort Inn c. Days Inn d. Super 8 Model e. Hampton Inn

2. Among the five hotels mentioned below, please select only one that you know the least about.
    a. Holiday Inn b. Comfort Inn c. Days Inn d. Super 8 Model e. Hampton Inn

Restaurant familiarity questions

3. Among the five restaurants mentioned below, please select only one that you know the most about.
a. Papa John's b. Domino's Pizza c. Pizza Inn d. Outback Steakhouse e. Panera Bread

4. Among the five restaurants mentioned below, please select only one that you know the least about.
a. Papa John's b. Domino's Pizza c. Pizza Inn d. Outback Steakhouse e. Panera Bread

Appendix C

Customer Equity Questionnaire

Dear Survey Participant,

Thank you for participating in this study of consumer behavior in hotels. Your help is important for the success of this study and participation is strictly voluntary. Submission of a completed questionnaire indicates your willingness to participate.

It should only take about 20 minutes to complete this questionnaire. All responses will remain confidential. I need to collect your student ID number so that you can receive the extra credit, but the data will not be reported at the individual level. All reports derived from this study will be for the respondents as a group. Your cooperation and contribution for this study is greatly appreciated.

Sincerely,
Sean Sunghyup Hyun,
PhD Candidate
Virginia Tech

General questions about your hotel visitation

1. On average, how many nights do you stay in a hotel per year?
   a. never b. 1-5 nights c. 6-10 nights d. 11- 15 nights
   e. 16-20 nights f. 21-25 nights g. 26-30 nights h. 31-35 nights
   i. More than 35 nights per year

2. In average, how much do you spend on lodging per night when you go to a hotel? ______$

Holiday Inn Hotel Survey

Please refer only to your experiences with **Holiday Inn**.

3. How familiar are you with Holiday Inn hotels?
   a. not at all familiar b. slightly familiar c. familiar
   d. very familiar e. extremely familiar

4. Have you ever stayed at a Holiday Inn hotel?
   Yes / no
   If yes, please continue
5. About how many nights have you stayed at a Holiday Inn hotel in the last year?
   ________ nights

6. On average, how much do you spend on lodging per night when you stay at a Holiday Inn? $______

7. Can you recall when you first stayed at a Holiday Inn hotel?
   a. cannot recall
   b. within the last year
   c. 1 to 2 years ago
   d. 3-4 years ago
   e. 5-6 years ago
   f. 7-8 years ago

g. 9-10 years ago
h. more than 10 years ago

8. How likely is it that you will continue to visit Holiday Inn hotels in the future?
(1 = not at all likely 5=neutral 10= extremely likely)

1 2 3 4 5 6 7 8 9 10

9. The next time you travel, what is the probability that you will stay at a Holiday Inn?

a. 0-10%	b. 11-20%	c. 21-30%	d. 31-40%	e. 41-50%
f. 51-60%	g. 61-70%	h. 71-80%	i. 81-90%	j. 91-100%

10. How much of discount rate do you usually receive when you go to Holiday Inn (e.g. coupon, internet discount, promotion, etc.)?

a. 0-10%	b. 11-20%	c. 21-30%	d. 31-40%	e. 41-50%
f. 51-60%	g. 61-70%	h. 71-80%	i. 81-90%	j. 91-100%

Based on your experiences with visiting Holiday Inn, please read each item carefully and circle the appropriate number which best reflects your true opinion or feeling.
(1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree)

My first impression was that the staff at the Holiday Inn was friendly.	1	2	3	4	5
My first impression was that Holiday Inn was appealing.	1	2	3	4	5
I had seen an advertisement for Holiday Inn before my first visit.	1	2	3	4	5
I heard about Holiday Inn from other people before my first visit.	1	2	3	4	5
Holiday Inn’s price discount encouraged my first visit.	1	2	3	4	5
Holiday Inn’s billboards and advertisements encouraged my first visit.	1	2	3	4	5
It was easy to find the contact information for Holiday Inn when I first visited.	1	2	3	4	5
It was easy to make a reservation/purchase with Holiday Inn the first time.	1	2	3	4	5
My first interaction with an employee of Holiday Inn was pleasant.	1	2	3	4	5
I was satisfied with my first visit to Holiday Inn.	1	2	3	4	5
I got a good deal on my first purchase from Holiday Inn.	1	2	3	4	5
When I travel, Holiday Inn is my first choice.	1	2	3	4	5
I like visiting Holiday Inn.	1	2	3	4	5
To me, Holiday Inn is the best hotel.	1	2	3	4	5
Holiday Inn is my favorite hotel.	1	2	3	4	5
I visit Holiday Inn more frequently than other hotels.	1	2	3	4	5
I don’t usually visit other hotels.	1	2	3	4	5
During my lifetime, I want to maintain my relationship with Holiday Inn.	1	2	3	4	5
As long as the present service continues, I will keep going to Holiday Inn.	1	2	3	4	5
I spend more money in Holiday Inn than in other hotels.	1	2	3	4	5
I use Holiday Inn’s Priority Club program.	1	2	3	4	5

I want to try Holiday Inn's premium product (e.g. more expensive room, suite room etc).	1	2	3	4	5
I would try other services/products (e.g. sports bar) provided by Holiday Inn.	1	2	3	4	5
If Holiday Inn opens a new hotel, I want to visit it.	1	2	3	4	5
I want to visit Holiday Inn more frequently.	1	2	3	4	5
When I go to Holiday Inn, I like to bring my friends/relatives/other people.	1	2	3	4	5
I would suggest Holiday Inn to my friends/relatives.	1	2	3	4	5
If somebody says something negative about Holiday Inn, I defend it.	1	2	3	4	5
I post good things about Holiday Inn on the Internet (e.g. blog).	1	2	3	4	5
I mention Holiday Inn to others quite frequently.	1	2	3	4	5
I mention Holiday Inn to people more than other hotels.	1	2	3	4	5
When I tell others about Holiday Inn, I tend to talk about Holiday Inn in great detail.	1	2	3	4	5
Once I get talking about Holiday Inn, it is hard for me to stop.	1	2	3	4	5
I have only good things to say about Holiday Inn.	1	2	3	4	5
I am willing to say good things about Holiday Inn.	1	2	3	4	5
Next time I travel, I will consider another hotel brand over Holiday Inn.	1	2	3	4	5
I will consider other hotel brands if they provide better offers.	1	2	3	4	5
I like Holiday Inn, but I want to try different hotels next time.	1	2	3	4	5
I will not visit Holiday Inn in the near future.	1	2	3	4	5
I will visit other hotel brands over Holiday Inn if they provide incentive for first time customers.	1	2	3	4	5
I will switch if Holiday Inn increases its prices in the future.	1	2	3	4	5
I am upset with service provided by Holiday Inn.	1	2	3	4	5
I think the overall lodging quality of Holiday Inn is high.	1	2	3	4	5
I think that the lodging quality of Holiday Inn is worth the price I pay.	1	2	3	4	5
I think Holiday Inn's prices are competitive.	1	2	3	4	5
Generally, Holiday Inn hotels are located in convenient locations.	1	2	3	4	5
It is easy to make reservations with Holiday Inn.	1	2	3	4	5

The regular price charged by Holiday Inn is

lower than other hotel brands.	1	2	3	4	5
The discounted price offered by the Holiday Inn is lower than other hotel brands.	1	2	3	4	5
My attitude toward Holiday Inn brand is favorable.	1	2	3	4	5
I often notice and pay attention to Holiday Inn's billboards or advertising.	1	2	3	4	5
I often notice and pay attention to information Holiday Inn sends to me.	1	2	3	4	5
I heard that Holiday Inn is a good community partner (e.g. giving back, eco-friendly).	1	2	3	4	5
I heard that Holiday Inn is an active sponsor of community events.	1	2	3	4	5
Holiday Inn has high ethical standards with respect to its customers and employees.	1	2	3	4	5
The image of Holiday Inn brand fits my personality well.	1	2	3	4	5
I have positive feelings toward the Holiday Inn brand.	1	2	3	4	5
I have many Priority Club points with the Holiday Inn.	1	2	3	4	5
The benefit I get from Holiday Inn's loyalty program is important to me.	1	2	3	4	5
I know Holiday Inn's accommodations well.	1	2	3	4	5
Holiday Inn knows a lot about me (e.g. membership).	1	2	3	4	5
Holiday Inn recognizes me as being special.	1	2	3	4	5
When I go to Holiday Inn, I often feel a sense of community with other customers in the Holiday Inn.	1	2	3	4	5
Holiday Inn has up-to-date, renovated rooms.	1	2	3	4	5
Holiday Inn's physical facilities (e.g. room, lobby) are visually appealing.	1	2	3	4	5
Holiday Inn's employees are well-dressed and appear neat	1	2	3	4	5
The appearance of the environment of Holiday Inn is in keeping with the type of service provided.	1	2	3	4	5
The front desk employee is friendly while checking me in.	1	2	3	4	5
Holiday Inn provides dependable service.	1	2	3	4	5
I do not receive prompt service from Holiday Inn's employees.	1	2	3	4	5
Employees of Holiday Inn are not always willing to help customers.	1	2	3	4	5
Employees of Holiday Inn are too busy to respond to customer requests promptly.	1	2	3	4	5
I can trust employees of Holiday Inn.	1	2	3	4	5
Employees of Holiday Inn are polite.	1	2	3	4	5
Employees of Holiday Inn do not know what my needs are.	1	2	3	4	5
Holiday Inn does not have my best interests at heart.	1	2	3	4	5

Thank you so much for your valuable time and effort.

Customer Equity Questionnaire

Dear Survey Participant,

Thank you for participating in this study of consumer behavior in restaurants. Your help is important for the success of this study and participation is strictly voluntary. Submission of a completed questionnaire indicates your willingness to participate.

It should only take about 20 minutes to complete this questionnaire. All responses will remain confidential. I need to collect your student ID number so that you can receive the extra credit, but the data will not be reported at the individual level. All reports derived from this study will be for the respondents as a group. Your cooperation and contribution for this study is greatly appreciated.

Sincerely,
Sean Sunghyup Hyun,
PhD Candidate
Virginia Tech

General questions about your restaurant visitation habits

1. How frequently do you eat at a restaurant?
   a. never b. 1-2 times a week c. 3-4 times a week
   d. 5-6 times a week e. 7-8 times a week
   f. 9-10 times a week g. more than 10 times a week

2. On average, how much do you spend each time you go to a restaurant?
   ______$

Panera Restaurant Survey

Please refer only to your experiences with **Panera Bread**.

3. How familiar are you with Panera Bread restaurants?
   a. not at all familiar b. slightly familiar c. familiar
   d. very familiar e. extremely familiar

4. Have you ever eaten at a Panera Bread restaurant?
   Yes / no
   If yes, please continue

5. About how many times have you eaten at a Panera Bread restaurant in the last year?

   ________ times

6. How much do you spend each time on average when you visit Panera Bread? $______

7. Can you recall when you first ate at a Panera Bread restaurant?
   a. cannot recall
   b. within the last year
   c. 1 to 2 years ago
   d. 3-4 years ago
   e. 5-6 years ago
   f. 7-8 years ago

g. 9-10 years ago
h. more than 10 years ago

8. How likely is it that you will continue to eat at Panera Bread restaurants in the future?
(1 = not at all likely 5=neutral 10= extremely likely)

1 2 3 4 5 6 7 8 9 10

9. The next time you dine out, what is the probability that you will go to Panera Bread?

a. 0-10%	b. 11-20%	c. 21-30%	d. 31-40%	e. 41-50%
f. 51-60%	g. 61-70%	h. 71-80%	i. 81-90%	j. 91-100%

Based on your experiences with Panera Bread, please read each item carefully and circle the appropriate number which best reflects your true opinion or feeling.

(1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree)

On first impression, I found the atmosphere at Panera Bread friendly.	1	2	3	4	5
On first impression, I found the environment at Panera Bread appealing.	1	2	3	4	5
I had seen an advertisement for Panera Bread (e.g. Internet, billboard, newspaper) before my first visit.	1	2	3	4	5
I heard about Panera Bread from other people before my first visit.	1	2	3	4	5
The food displayed in the advertisements for Panera Bread encouraged my first visit.	1	2	3	4	5
It is easy to find Panera Bread restaurants.	1	2	3	4	5
My first interaction with the staff at Panera Bread was pleasant.	1	2	3	4	5
I was satisfied with my first visit to Panera Bread.	1	2	3	4	5
I got a good deal on my first purchase from Panera Bread.	1	2	3	4	5
When I dine out, Panera Bread is my first choice.	1	2	3	4	5
I like visiting Panera Bread.	1	2	3	4	5
To me, Panera Bread is the best place to dine out	1	2	3	4	5
Panera Bread is my favorite restaurant.	1	2	3	4	5
I visit Panera Bread more frequently than I do other restaurants.	1	2	3	4	5
I don't usually visit other restaurants.	1	2	3	4	5
I plan to continue visiting Panera Bread.	1	2	3	4	5
As long as the current level of service continues, I will keep going to Panera Bread.	1	2	3	4	5
I spend more money in Panera Bread than I do in other restaurants.	1	2	3	4	5
I use Panera Bread's Panera Card program (e.g. gift card).	1	2	3	4	5
I want to try Panera Bread's premium product line (e.g. higher price menu).	1	2	3	4	5

I want to try other services/products provided by Panera Bread.	1	2	3	4	5
If Panera Bread opens in a new location, I want to visit it.	1	2	3	4	5
I want to visit Panera Bread more frequently.	1	2	3	4	5
When I go to Panera Bread, I like to bring my friends/relatives/other people.	1	2	3	4	5
I would suggest Panera Bread to my friends/relatives.	1	2	3	4	5
If somebody says something negative about Panera Bread, I defend it.	1	2	3	4	5
I post good things about Panera Bread on the Internet (e.g. in a blog or online review).	1	2	3	4	5
I suggest Panera Bread to others quite frequently.	1	2	3	4	5
I suggest Panera Bread to people more than other restaurants.	1	2	3	4	5
When I tell others about Panera Bread, I tend to talk about Panera Bread in great detail.	1	2	3	4	5
Once I get talking about Panera Bread, it is hard for me to stop.	1	2	3	4	5
I have only good things to say about Panera Bread.	1	2	3	4	5
I am willing to say good things about Panera Bread.	1	2	3	4	5
Next time I dine out, I will choose another reputable restaurant over Panera Bread.	1	2	3	4	5
I will choose another reputable restaurant over Panera Bread if the restaurants provide better offers.	1	2	3	4	5
I like Panera Bread, but I want to try different restaurants next time.	1	2	3	4	5
I will not visit Panera Bread in the near future.	1	2	3	4	5
I will visit another reputable restaurant over Panera Bread if they provide incentive for first time customers.	1	2	3	4	5
I started to feel bored by the same services provided by Panera Bread.	1	2	3	4	5
I will choose another restaurant over Panera Bread if Panera Bread increases its prices in the future.	1	2	3	4	5
I am upset with services provided by Panera Bread.	1	2	3	4	5
I think the overall food quality of Panera Bread is high.	1	2	3	4	5
I think the overall service quality of Panera Bread is high.	1	2	3	4	5
I think that the food quality of Panera Bread is worth the price paid.	1	2	3	4	5
I think that the service quality of the Panera Bread worth the price paid.	1	2	3	4	5
I think the price of the Panera Bread is competitive with other restaurants.	1	2	3	4	5
Panera Bread restaurants are located in convenient locations.	1	2	3	4	5

The regular price charged by Panera Bread is lower than other restaurants.	1	2	3	4	5
The discounted price offered by the Panera Bread is lower than other restaurants.	1	2	3	4	5
My attitude toward the Panera Bread brand is favorable.	1	2	3	4	5
I often notice and pay attention to Panera Bread’s advertising (e.g. billboards, Internet).	1	2	3	4	5
Panera Bread is a good community partner (e.g. giving back, eco-friendly)	1	2	3	4	5
Panera Bread is an active sponsor of community events.	1	2	3	4	5
Panera Bread has high ethical standards with respect to its customers and employees.	1	2	3	4	5
The brand image of Panera Bread fits my personality well.	1	2	3	4	5
I have positive feelings toward Panera Bread.	1	2	3	4	5
I often purchase Panera Bread’s gift card.	1	2	3	4	5
I often feel that I receive preferential treatment from Panera Bread’s employees.	1	2	3	4	5
I am familiar with Panera Bread’s accommodations.	1	2	3	4	5
I am familiar with Panera Bread’s customer service.	1	2	3	4	5
I think Panera Bread collects information about its customers.	1	2	3	4	5
I often feel that I am treated as being special in Panera Bread.	1	2	3	4	5
When I go to Panera Bread, I often feel a sense of community with other customers in the restaurant.	1	2	3	4	5
Panera Bread has nicely-decorated environment (e.g. decoration, painting).	1	2	3	4	5
Panera Bread’s has visually appealing ambiance.	1	2	3	4	5
Panera Bread’s employees are well dressed and appear neat.	1	2	3	4	5
Panera Bread has comfortable seating.	1	2	3	4	5
When Panera Bread promises to do something by a certain time, it does so.	1	2	3	4	5
When I have problems with its food, Panera Bread’s managerial staff is sympathetic and reassuring.	1	2	3	4	5
Panera Bread is consistent in its food quality.	1	2	3	4	5
Panera Bread has dependable service.	1	2	3	4	5
I do not receive prompt service from Panera Bread’s employees.	1	2	3	4	5
Employees of Panera Bread are not always willing to help customers.	1	2	3	4	5
Employees of Panera Bread are too busy to respond to customer requests promptly.	1	2	3	4	5
I feel safe in my transactions with Panera Bread’s employees.	1	2	3	4	5

Employees of Panera Bread are polite.	1	2	3	4	5
Employees of Panera Bread do not give me personal attention.	1	2	3	4	5
Employees of Panera Bread do not know what my needs are.	1	2	3	4	5
Panera Bread does not have my best interests at heart.	1	2	3	4	5
Panera Bread does not have operating hours convenient to all their customers.	1	2	3	4	5

Thank you so much for your valuable time and effort.

Appendix D

IRB Approval Letter

VirginiaTech

Office of Research Compliance
Carmen T. Green, IRB Administrator
2000 Kraft Drive, Suite 2000 (0497)
Blacksburg, Virginia 24061
540/231-4358 Fax 540/231-0959
e-mail ctgreen@vt.edu
www.irb.vt.edu
FWA00000572(expires 1/20/2010)
IRB # is IRB00000667

DATE: April 6, 2009

MEMORANDUM

TO: Richard Perdue
Sunghyup Hyun

FROM: Carmen Green

SUBJECT: **IRB Exempt Approval:** "Creating and Validating a Measure of Customer Equity in Hospitality Businesses" , IRB # 09-195

I have reviewed your request to the IRB for exemption for the above referenced project. The research falls within the exempt status. Approval is granted effective as of April 6, 2009.

As an investigator of human subjects, your responsibilities include the following:

1. Report promptly proposed changes in the research protocol. The proposed changes must not be initiated without IRB review and approval, except where necessary to eliminate apparent immediate hazards to the subjects.

2. Report promptly to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

Appendix E

Customer Equity Consumer Survey Questionnaire (Restaurant side)

McDonald's Restaurant Survey

Dear Survey Participant,

Thank you for participating in this study of consumer behavior in restaurants. Your help is important for the success of this study and participation is strictly voluntary. Submission of a completed questionnaire indicates your willingness to participate.

It should only take about 20 minutes to complete this questionnaire. All responses will remain confidential. The data will not be reported at the individual level. All reports derived from this study will be for the respondents as a group.
Your cooperation and contribution for this study is greatly appreciated.

Sincerely,
Sean Sunghyup Hyun,
PhD Candidate
Virginia Tech

General questions about your restaurant visitation habits

1. How frequently do you eat at a restaurant?
   a. never b. 1-2 times a week c. 3-4 times a week
   d. 5-6 times a week e. 7-8 times a week
   f. 9-10 times a week g. more than 10 times a week

2. On average, how much do you spend each time you go to a restaurant?
   ______$

McDonald's Restaurant Survey

Please refer only to your experiences with **<u>McDonald's</u>**.

3. How familiar are you with McDonald's restaurants?
   a. not at all familiar b. slightly familiar c. familiar
   d. very familiar e. extremely familiar

4. Have you ever eaten at a McDonald's restaurant?
   Yes / no

   If yes, please continue

5. About how many times have you eaten at a McDonald's restaurant in the last year?

   ________ times

6. How much do you spend each time on average when you visit McDonald's? $______

7. Can you recall when you first ate at a McDonald's restaurant?
   a. cannot recall
   b. within the last year
   c. 1 to 2 years ago
   d. 3-4 years ago
   e. 5-6 years ago
   f. 7-8 years ago
   g. 9-10 years ago
   h. more than 10 years ago

8. How likely is it that you will continue to eat at McDonald's restaurants in the future?
(1 = not at all likely 5=neutral 10= extremely likely)

1 2 3 4 5 6 7 8 9 10

9. The next time you dine out, what is the probability that you will go to McDonald's?

a. 0-10%	b. 11-20%	c. 21-30%	d. 31-40%	e. 41-50%
f. 51-60%	g. 61-70%	h. 71-80%	i. 81-90%	j. 91-100%

Based on your experiences with McDonald's, please read each item carefully and circle the appropriate number which best reflects your true opinion or feeling.

(1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree)

I was satisfied with my first visit to McDonald's.	1	2	3	4	5
On first impression, I found the atmosphere at McDonald's friendly.	1	2	3	4	5
On first impression, I found the environment at McDonald's appealing.	1	2	3	4	5
My first interaction with the staff at McDonald's was pleasant.	1	2	3	4	5
I got a good deal on my first purchase from McDonald's.	1	2	3	4	5
When I dine out, McDonald's is my first choice.	1	2	3	4	5
As long as the current level of service continues, I will keep going to McDonald's.	1	2	3	4	5
I visit McDonald's more frequently than I do other restaurants.	1	2	3	4	5
I don't usually visit other restaurants.	1	2	3	4	5
I would suggest McDonald's to my friends/relatives.	1	2	3	4	5
I suggest McDonald's to others quite frequently.	1	2	3	4	5
I suggest McDonald's to people more than other restaurants.	1	2	3	4	5

When I tell others about McDonald's,

I tend to talk about McDonald's in great detail.	1	2	3	4	5
Once I get talking about McDonald's, it is hard for me to stop.	1	2	3	4	5
If somebody says something negative about McDonald's, I defend it.	1	2	3	4	5
If McDonald's opens in a new location, I want to visit it.	1	2	3	4	5
I want to visit McDonald's more frequently.	1	2	3	4	5
When I go to McDonald's, I like to bring my friends/relatives/other people.	1	2	3	4	5
I want to try McDonald's premium product line (e.g. higher price menu).	1	2	3	4	5
I want to try other services/products provided by McDonald's.	1	2	3	4	5
I like McDonald's, but I want to try different restaurants next time.	1	2	3	4	5
Next time I dine out, I will choose another reputable restaurant over McDonald's.	1	2	3	4	5
I will choose another reputable restaurant over McDonald's if the restaurants provide better offers.	1	2	3	4	5
I will visit another reputable restaurant over McDonald's if they provide incentive for first time customers.	1	2	3	4	5
I started to feel bored by the same services provided by McDonald's.	1	2	3	4	5
I will choose another restaurant over McDonald's if McDonald's increases its prices in the future.	1	2	3	4	5
McDonald's reasonable price encourages my visit.	1	2	3	4	5
The food displayed in the advertisements for McDonald's encourages my visit.	1	2	3	4	5
McDonald's food quality encourages my visit.	1	2	3	4	5
McDonald's brand reputation encourages my visit.	1	2	3	4	5
McDonald's convenient location encourages my visit.	1	2	3	4	5
I think the overall food quality of McDonald's is high.	1	2	3	4	5
I think the overall service quality of McDonald's is high.	1	2	3	4	5
I think that the food quality of McDonald's is worth the price paid.	1	2	3	4	5
I think that the service quality of the McDonald's worth the price paid.	1	2	3	4	5
I think the price of the McDonald's is competitive with other restaurants.	1	2	3	4	5
McDonald's restaurants are located in convenient locations.	1	2	3	4	5
The regular price charged by McDonald's is lower than other restaurants.	1	2	3	4	5

The discounted price offered by the McDonald's is lower than other restaurants.	1	2	3	4	5
My attitude toward the McDonald's brand is favorable.	1	2	3	4	5
I often notice and pay attention to McDonald's advertising (e.g. billboards, Internet).	1	2	3	4	5
McDonald's is a good community partner (e.g. giving back, eco-friendly)	1	2	3	4	5
McDonald's is an active sponsor of community events.	1	2	3	4	5
McDonald's has high ethical standards with respect to its customers and employees.	1	2	3	4	5
The brand image of McDonald's fits my personality well.	1	2	3	4	5
I have positive feelings toward McDonald's.	1	2	3	4	5
I often purchase McDonald's gift card.	1	2	3	4	5
I often feel that I receive preferential treatment from McDonald's employees.	1	2	3	4	5
I am familiar with McDonald's accommodations.	1	2	3	4	5
I am familiar with McDonald's customer service.	1	2	3	4	5
I think McDonald's collects information about its customers.	1	2	3	4	5
I often feel that I am treated as being special in McDonald's.	1	2	3	4	5
When I go to McDonald's, I often feel a sense of community with other customers in the restaurant.	1	2	3	4	5
McDonald's has nicely-decorated environment (e.g. decoration, painting).	1	2	3	4	5
McDonald's has visually appealing ambiance.	1	2	3	4	5
McDonald's employees are well dressed and appear neat.	1	2	3	4	5
McDonald's has comfortable seating.	1	2	3	4	5
When McDonald's promises to do something by a certain time, it does so.	1	2	3	4	5
When I have problems with its food, McDonald's managerial staff is sympathetic and reassuring.	1	2	3	4	5
McDonald's is consistent in its food quality.	1	2	3	4	5
McDonald's has dependable service.	1	2	3	4	5
I do not receive prompt service from McDonald's employees.	1	2	3	4	5
Employees of McDonald's are not always willing to help customers.	1	2	3	4	5
Employees of McDonald's are too busy to respond to customer requests promptly.	1	2	3	4	5
I feel safe in my transactions with McDonald's employees.	1	2	3	4	5
Employees of McDonald's are polite.	1	2	3	4	5
Employees of McDonald's do not give me personal attention.	1	2	3	4	5
Employees of McDonald's do not know what my needs are.	1	2	3	4	5

McDonald's does not have my best interests at heart.	1	2	3	4	5
McDonald's does not have operating hours convenient to all their customers.	1	2	3	4	5

Information about Yourself

We will use this information for research purposes only.
Your answer will remain absolutely confidential and anonymous.

1) What is your gender? _____Male ____Female

2) What is your age? _____

3) Which categories describe your total income level before taxes?
____Under $25,000 ____$25,000-$39,999 ____$40,000-$54,999
____$55,000-$69,999 ____$70,000-$84,999 ____$85,000-$99,999
____$100,000-$149,999 ____Over $150,000

4) What is your highest level of education you have completed?
____Less than high school degree ____High school degree ____Some college, but no degree
____Bachelor's degree ____Graduate degree

5) What is your ethnic background?
____African American ____Asian ____Hispanic
____Caucasian/White ____Other, please specify: ______________

Thank you so much for your valuable time and effort.

Customer Equity Consumer Survey Questionnaire (Hotel side)

'Marriott Brand Hotel' Survey

Dear Survey Participant,

Thank you for participating in this study of consumer behavior in hotels. Your help is important for the success of this study and participation is strictly voluntary. Submission of a completed questionnaire indicates your willingness to participate.

It should only take about 20 minutes to complete this questionnaire. All responses will remain confidential. The data will not be reported at the individual level. All reports derived from this study will be for the respondents as a group.
Your cooperation and contribution for this study is greatly appreciated.

Sincerely,
Sean Sunghyup Hyun,
PhD Candidate
Virginia Tech

General questions about your hotel visitation

1. On average, how many nights do you stay in a hotel per year?
   a. never b. 1-5 nights c. 6-10 nights d. 11- 15 nights
   e. 16-20 nights f. 21-25 nights g. 26-30 nights h. 31-35 nights
   i. More than 35 nights per year

2. In average, how much do you spend on lodging per night when you go to a hotel? ______$

'Marriott Brand Hotel' Survey

Marriott is a lodging company that operates and franchises hotels under the following brands: Marriott hotels & resorts, JW Marriott hotels & resorts, Renaissance hotels & resorts, Courtyard by Marriott, Residence Inn by Marriott, Fairfield Inn by Marriott, TownePlace Suites by Marriott, Marriott Vacation Club, The Ritz-Carlton Hotel Company, L.L.C., The Ritz-Carlton Club, Marriott ExecuStay, and Grand Residences by Marriott

Above mentioned hotels are Marriott Brand Hotels.

Please refer only to your experiences with **Marriott Brand Hotels**.

3. How familiar are you with Marriott Brand hotels?
   a. not at all familiar b. slightly familiar c. familiar
   d. very familiar e. extremely familiar

4. Have you ever stayed at a Marriott Brand hotel?
   Yes / no

If yes, please continue

5. About how many nights have you stayed at Marriott Brand hotels in the last year?

________ nights

6. On average, how much do you spend on lodging per night when you stay at a Marriott Brand hotel?
$______

7. Can you recall when you first stayed at a Marriott Brand hotel?
   a. cannot recall
   b. within the last year
   c. 1 to 2 years ago
   d. 3-4 years ago
   e. 5-6 years ago
   f. 7-8 years ago
   g. 9-10 years ago
   h. more than 10 years ago

8. How likely is it that you will continue to visit Marriott Brand hotels in the future?
(1 = not at all likely 5=neutral 10= extremely likely)

1 2 3 4 5 6 7 8 9 10

9. The next time you travel, what is the probability that you will stay at a Marriott Brand hotel?

a. 0-10%	b. 11-20%	c. 21-30%	d. 31-40%	e. 41-50%
f. 51-60%	g. 61-70%	h. 71-80%	i. 81-90%	j. 91-100%

10. How much of discount rate do you usually receive when you go to Marriott Brand hotel (e.g. coupon, internet discount, promotion, etc.)?

a. 0-10%	b. 11-20%	c. 21-30%	d. 31-40%	e. 41-50%
f. 51-60%	g. 61-70%	h. 71-80%	i. 81-90%	j. 91-100%

Based on your experiences with visiting Marriott Brand hotel, please read each item carefully and circle the appropriate number which best reflects your true opinion or feeling.

(1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree)

I was satisfied with my first visit to Marriott Brand hotel.	1	2	3	4	5
My first interaction with an employee of Marriott Brand hotel was pleasant.	1	2	3	4	5
My first impression was that the staff at the Marriott Brand hotel was friendly.	1	2	3	4	5
My first impression was that Marriott Brand hotel was appealing.	1	2	3	4	5
I got a good deal on my first purchase from Marriott Brand hotel.	1	2	3	4	5
I heard about Marriott Brand hotel from other people before my first visit.	1	2	3	4	5
When I travel, Marriott Brand hotel is my first choice.	1	2	3	4	5
I visit Marriott Brand hotel more frequently than other hotels.	1	2	3	4	5
I spend more money in Marriott Brand hotel than in other hotels.	1	2	3	4	5

I don't usually visit other hotels.	1	2	3	4	5
I would suggest Marriott Brand hotel to my friends/relatives.	1	2	3	4	5
I am willing to say good things about Marriott Brand hotel.	1	2	3	4	5
I mention Marriott Brand hotel to others quite frequently.	1	2	3	4	5
I post good things about Marriott Brand hotel on the Internet (e.g. blog).	1	2	3	4	5
Once I get talking about Marriott Brand hotel, it is hard for me to stop.	1	2	3	4	5
If somebody says something negative about Marriott Brand hotel, I defend it.	1	2	3	4	5
If Marriott Brand hotel opens a new hotel, I want to visit it.	1	2	3	4	5
I want to visit Marriott Brand hotel more frequently.	1	2	3	4	5
When I go to Marriott Brand hotel, I like to bring my friends/relatives/other people.	1	2	3	4	5
I would try other services/products (e.g. sports bar) provided by Marriott Brand hotel.	1	2	3	4	5
I want to try Marriott Brand hotel's premium product (e.g. more expensive room, suite room etc).	1	2	3	4	5
I like Marriott Brand hotel, but I want to try different hotels next time.	1	2	3	4	5
I will switch if Marriott Brand hotel increases its prices in the future.	1	2	3	4	5
Next time I travel, I will consider another hotel brand over Marriott Brand hotel.	1	2	3	4	5
I will consider other hotel brands if they provide better offers.	1	2	3	4	5
I will visit other hotel brands over Marriott Brand hotel if they provide incentive for first time customers.	1	2	3	4	5
I will not visit Marriott Brand hotel in the near future.	1	2	3	4	5
Marriott Brand hotel's reasonable price encourages my visit.	1	2	3	4	5
Marriott Brand hotel's billboards and advertisements encourage my visit.	1	2	3	4	5
Marriott Brand hotel's lodging quality encourages my visit.	1	2	3	4	5
Marriott Brand hotel's brand reputation encourages my visit	1	2	3	4	5
Marriott Brand hotel's easy reservation process encourages my visit	1	2	3	4	5
Marriott Brand hotel's customer service encourages my visit.	1	2	3	4	5
Marriott Brand hotel's convenient location encourages my visit.	1	2	3	4	5
I think the overall lodging quality of Marriott Brand hotel is high.	1	2	3	4	5
I think that the lodging quality of Marriott Brand hotel is worth the price I pay.	1	2	3	4	5
I think Marriott Brand hotel's prices are competitive.	1	2	3	4	5
Generally, Marriott Brand hotels are located in convenient locations.	1	2	3	4	5
It is easy to make reservations with Marriott Brand hotel.	1	2	3	4	5

The regular price charged by Marriott Brand hotel is lower than other hotel brands.	1	2	3	4	5
The discounted price offered by the Marriott Brand hotel is lower than other hotel brands.	1	2	3	4	5
My attitude toward Marriott Brand hotel brand is favorable.	1	2	3	4	5
I often notice and pay attention to Marriott Brand hotel's billboards or advertising.	1	2	3	4	5
I often notice and pay attention to information Marriott Brand hotel sends to me.	1	2	3	4	5
I heard that Marriott Brand hotel is a good community partner (e.g. giving back, eco-friendly).	1	2	3	4	5
I heard that Marriott Brand hotel is an active sponsor of community events.	1	2	3	4	5
Marriott Brand hotel has high ethical standards with respect to its customers and employees.	1	2	3	4	5
The image of Marriott Brand hotel brand fits my personality well.	1	2	3	4	5
I have positive feelings toward the Marriott Brand hotel brand.	1	2	3	4	5
I have many Priority Club points with the Marriott Brand hotel.	1	2	3	4	5
The benefit I get from Marriott Brand hotel's loyalty program is important to me.	1	2	3	4	5
I know Marriott Brand hotel's accommodations well.	1	2	3	4	5
Marriott Brand hotel knows a lot about me (e.g. membership).	1	2	3	4	5
Marriott Brand hotel recognizes me as being special.	1	2	3	4	5
When I go to Marriott Brand hotel, I often feel a sense of community with other customers in the Marriott Brand hotel.	1	2	3	4	5
Marriott Brand hotel has up-to-date, renovated rooms.	1	2	3	4	5
Marriott Brand hotel's physical facilities (e.g. room, lobby) are visually appealing.	1	2	3	4	5
Marriott Brand hotel's employees are well-dressed and appear neat	1	2	3	4	5
The appearance of the environment of Marriott Brand hotel is in keeping with the type of service provided.	1	2	3	4	5
The front desk employee is friendly while checking me in.	1	2	3	4	5
Marriott Brand hotel provides dependable service.	1	2	3	4	5
I do not receive prompt service from Marriott Brand hotel's employees.	1	2	3	4	5
Employees of Marriott Brand hotel are not always willing to help customers.	1	2	3	4	5
Employees of Marriott Brand hotel are too busy to respond to customer requests promptly.	1	2	3	4	5
I can trust employees of Marriott Brand hotel.	1	2	3	4	5
Employees of Marriott Brand hotel are polite.	1	2	3	4	5
Employees of Marriott Brand hotel do not know what my needs are.	1	2	3	4	5
Marriott Brand hotel does not have my best interests at heart.	1	2	3	4	5

Information about Yourself

We will use this information for research purposes only.
Your answer will remain absolutely confidential and anonymous.

1) What is your gender? _____Male ____Female

2) What is your age? _____

3) Which categories describe your total income level before taxes?
____Under $25,000 ____$25,000-$39,999 ____$40,000-$54,999
____$55,000-$69,999 ____$70,000-$84,999 ____$85,000-$99,999
____$100,000-$149,999 ____Over $150,000

4) What is your highest level of education you have completed?
____Less than high school degree ____High school degree ____Some college, but no degree
____Bachelor's degree ____Graduate degree

5) What is your ethnic background?
____African American ____Asian ____Hispanic
____Caucasian/White ____Other, please specify: ______________

Thank you so much for your valuable time and effort.

Appendix F

Measurement Scales for Customer Equity (Restaurant)

First Interaction
My first impression with the staff at McDonald's was pleasant.
On first impression, I found the environment at McDonald's appealing.
On first impression, I found the atmosphere at McDonald's friendly.
I was satisfied with my first visit to McDonald's.

Commitment
When I dine out, McDonald's is my first choice.
As long as the current level of service continues, I will keep going to McDonald's
I visit McDonald's more frequently than I do other restaurants.

Cross-Buying
If McDonald's opens in a new location, I want to visit it
I want to visit McDonald's more frequently.
I want to try McDonald's premium product line (e.g. higher price menu).

Word Of Mouth
I suggest McDonald's to others quite frequently.
I When I tell others about McDonald's, I tend to talk about McDonald's in great detail.
Once I get talking about McDonald's, it is hard for me to stop.

Motivation
McDonald's reasonable price encourages my visit.
McDonald's convenient location encourages my visit.

Customer Defection
Next time I dine out, I will choose another reputable restaurant over McDonald's.
I will choose another reputable restaurant over McDonald's if the restaurants provide better offers.

Measurement Scales for Customer Equity (Hotel)

First Interaction
I was satisfied with my first visit to the Marriott brand hotel
My first interaction with an employee of Marriott brand hotel was pleasant.
My first impression was that the staff at the Marriott brand hotel was friendly.
My first impression was that Marriott brand hotel was appealing.

Commitment
When I travel, Marriott brand hotel is my first choice.
I visit Marriott brand hotel more frequently than other hotels.
I spend more money in Marriott brand hotel than in other hotels.

Cross-Buying
If Marriott brand hotel opens a new hotel, I want to visit it.
I want to visit Marriott brand hotel more frequently.
When I go to Marriott brand hotel, I like to bring my friends/relatives/other people.
I would try other services/products (e.g. sports bar) provided by Marriott brand hotel.

Word Of Mouth
I would suggest Marriott brand hotel to my friends/relatives.
I am willing to say good things about Marriott brand hotel.
I mention Marriott brand hotel to others quite frequently.

Motivation
Marriott brand hotel's brand reputation encourages my visit.
Marriott brand hotel's easy reservation process encourages my visit.
Marriott brand hotel's customer service encourages my visit.

Customer Defection
I like Marriott brand hotel, but I want to try different hotels next time.
Next time I travel, I will consider another hotel brand over Marriott brand hotel.

Appendix G

Citations of Copyrighted Works

Figure 4
Conceptual Framework for Modeling customer Lifetime Value
Gupta et al. “Modeling Customer Lifetime Value” *Journal of Service Research*, 2006/ Vol. 9, no. 2., p. 141.
Used with permission per email from Sunil Gupta, July. 6, 2009; letter of permission attached

Figure 5
Three drivers of customer equity
Rust et al. “*Driving Customer Equity*”. New York: Free Press. 2006., p.9.
Used with permission per email from Roland Rust, July. 6, 2009; letter of permission attached