CUSTOMER SATISFACTION, PROFITABILITY, AND FIRM VALUE IN THE HOSPITALITY AND TOURISM INDUSTRY: AN APPLICATION OF AMERICAN CUSTOMER SATISFACTION INDEX (ACSI)

A Thesis presented to the Faculty of the Graduate School

University of Missouri

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

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by

KYUNG-A SUN

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MAY 2011

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CUSTOMER SATISFACTION, PROFITABILITY, AND FIRM VALUE
IN THE HOSPITALITY AND TOURISM INDUSTRY: AN APPLICATION OF
AMERICAN CUSTOMER SATISFACTION INDEX (ACSI)

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ACKNOWLEDGEMENTS

This thesis would not have been possible without the guidance and help of several individuals who in one way or another contributed and extended their valuable assistance in the preparation and completion of this study.

First and foremost, I would like to thank my advisor, Dr. Dae-Young Kim for all of his continuous advice, guidance, support, and encouragement. His passion for academia and his valuable research will always inspire me to think about the faithful attitude of a scholar. I would also like to thank Dr. James Groves for his warm support, guidance, and care that always motivated me to continue. Dr. Mark Ellersieck deserves a special recognition for providing me with a statistical background. His helpful comments are greatly appreciated. I also owe a gracious thank-you to my colleagues Kwang Ho Lee, Gumkwang Bae, Amanda Alexander, and Sung-bum Kim who provided me with never-ending assistance and guidance.

My husband, Sangmin Ahn, has provided me with this incredible opportunity to take another step forward in realizing my dream. Because of his support, encouragement, love and patience, I am the happiest woman in the world. I would also like to thank my parents who have shown me how to be a responsible individual, my younger brother who gives me endless emotional support, and my mother in law who always cheers me up and prays for me. Lastly, I would like to thank Dr. Kyu-wan Choi for his generous and thoughtful mentoring.

I dedicate this thesis to all, these precious people.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

In the current business world, where competition among companies has become increasingly fierce, it is considered important for companies to differentiate themselves from other companies in order to keep their relationships with their customers. This emphasis on customer relations has created a paradigm shift from transactional marketing to relationship marketing (Grönroos, 1994; Sheth & Parvatiyar, 1994). Relationship marketing refers to "all marketing activities directed toward establishing, developing, and maintaining successful relational exchanges" (Morgan & Hunt, 1994, p. 22). Numerous studies have treated satisfaction as the essential principle for the retention of customers, and, therefore, customer satisfaction has moved to the head of relationship marketing approaches (Rust & Zahorik, 1993).

Not surprisingly, firms have invested substantial resources for increasing customer satisfaction, and as a result, the costs related to customer satisfaction account for the largest portion of their annual marketing budget (Wilson, 2002). According to Sheth and Sisodia (1995a, 1995b), over the past 50 years marketing-related business costs increased from approximately 20% to 50% of the total costs. The more money companies spend for customer satisfaction, the more interested they become in the effect of customer satisfaction on their financial performance.

On the one hand, based on increasing evidence linking a firm's financial performance to the level of customer satisfaction (Anderson, Fornell, & Lehmann, 1994; Anderson, Fornell, & Rust, 1997; Bolton, 1998), marketing managers have begun to focus on how to improve customer satisfaction and thus, their business performance (Piercy & Morgan, 1995; Westbrook, 2000). They are beginning to regard customer satisfaction as a criterion for analyzing product or service performance (Business Week, 1990).

On the other hand, the majority of financial experts (Madden, Fehle, & Fournier, 2006; Moorman & Lemann, 2004) insist that "if marketing wants 'a seat at the table' in important business decisions, it must be linked to financial performance" (p. 74). That is, marketing can be appreciated from a financial viewpoint only if it shows the financial contribution to the firms' annual performance. Experts also believe that the performance of customer satisfaction must be represented from a financial viewpoint.

These occurrences have given rise to research interests in assessing the extent to which customer satisfaction functions in terms of a financial purpose as one of the goals of marketing activities (Aaker & Jacobson, 2001; Jacobson & Mizik, 2008; Rust, Ambler, Carpenter, Kumar, & Srivastava, 2004; Srivastava & Reibstein, 2005; Wiesel, Skiera, & Villanueva, 2008). As a result of this research, the main practical argument for whether to use marketing investments to increase customer satisfaction within the context of their financial performance has become a heated discussion in the real business world (Agrawal & Kamakura, 1995; Day & Fahey, 1988; Mathur & Mathur, 1995; Narayanan, Desiraju, & Chintagunta, 2004; Pauwels, Silva-Rosso, Srinivasan, & Hanssens, 2004; Srivastava, Shervani, & Fahey, 1998, 1999). Although a number of studies examined the

advantages of customer satisfaction on firms' financial performance (Anderson, Fornell, & Rust, 1997; Grewal, Chandrashekaran, & Citrin, 2010; Gruca & Rego, 2005; O'Sullivan & McCallig, 2009; Tuli & Bharadwaj, 2009), several other studies found mixed and inconclusive results concerning the relationship between customer satisfaction and a firm's financial performance may not be positive or mixed and inconclusive (Itter & Larcker, 1996; Tornow & Wiley, 1991; Wiley, 1991).

Kotler (1991) posits that high customer satisfaction ratings are widely regarded as the best indicator of a company's future profits. A study by Anderson, Fornell, & Mazvancheryl, (2004) suggests that a firm that generates superior satisfaction could obtain greater value from the networks of suppliers, partners, and channels that operate a market in the form of lower costs, higher volumes and prices, and faster market penetration. In addition, a recent study found that customer satisfaction improves the ability to predict future cash flows, stock performance, long-term financial measure, and shareholders' value (Aksoy, Cooil, Groening, Keiningham, & Yalçın, 2008). In yet another study conducted by Anderson, Fornell, and Mazvancheryl (2004), the researchers found a positive association between a firm's current level of customer satisfaction and simultaneous financial market indicies, such as Tobin's q, stock, and market-to-book ratio. One recent relevant study conducted by Denizci and Li (2009) is attempting to improve the understanding of the marketing-finance interface in order to better comprehend the relationship between marketing activities and financial concepts such as Tobin's q and return on asset.

However, other schools of thought argue that customer service perceptions and their satisfaction are sometimes, but not always, reflected in a firm's financial

performance (Schneider, 1991). For example, Gursoy and Swanger (2007) claim that while customer satisfaction is at the very core of the marketing operation, it may not result in higher financial performance, because some consumers consider it a ‘‘given’’ factor, and as such, is an expected and natural part of day-to-day operations.

In addition to the controversial questions on the financial effects of customer satisfaction, another complicated debate is how to solve the issue of measuring financial performance appropriately (Pandian, Thomas, Furrer, & Bogner, 2006). In other words, what is the appropriate measurement of financial performance? Measures for the financial performance have been previously examined in the financial literature. Traditionally, the most general financial productivity measures were return on investment (ROI), return on assets (ROA), return on equity (ROE), stock market performance, internal rate of return, net present value, Tobin’s q, sales, profit, and shareholder value (Denizci & Li, 2009). These ratios can be divided into two groups: short-term performance and long-term performance. Generally in the financial literature, the short-term performance refers to profitability, and the long-term performance indicates a firm’s value in the stock market (Ittner, Larcker, & Rajan, 1997; Lambert, 1998). Thus, this study categorizes the financial performance using two measures: a firm’s profitability and value to represent the financial performance of customer satisfaction.

In the hospitality and tourism industry, customer satisfaction and its financial performance also have been given a great deal of attention, and various studies support the importance of customer satisfaction in terms of a firm’s performance (Denizci & Li, 2009; Morgan, Anderson, & Mittal, 2005). In order to investigate the importance of customer satisfaction to the hospitality and tourism industry, numerous researchers have

explored customer satisfaction theories developed by consumer behaviorists in the areas of lodging (Barsky, 1992; Barsky & Labagh, 1992; Ekinci & Riley, 1998; Saleh & Ryan, 1991), restaurants (Bojanic & Rosen, 1994; Dube, Renaghan, & Miller, 1994; Lee & Hing, 1995; Oh & Jeong, 1996), foodservice (Almanza, Jaffe, & Lin, 1994), and tourism (Danaher & Arweiler, 1996; Hudson & Shepard, 1998; Pizam & Milman, 1993; Ryan & Cliff, 1997).

Studies show that the concept of customer satisfaction in the hospitality and tourism industry is different from other industries such as the manufacturing industry. According to Pizam and Ellis (1999), unlike material products or pure services, most hospitality experiences are a combination of products and services. Thus, it can be assumed that satisfaction with a hospitality experience such as a hotel stay or a restaurant meal is a total summation of customer satisfaction with the individual elements and attributes of all the products and services. For example, Czepiel, Solomon, Suprenant, and Gutman (1985) suggest that satisfaction in the hospitality industry is a function of satisfaction with two independent elements: the functional element (i.e. the food and beverage in a restaurant), and the performance-delivery element (i.e. the service). Therefore, in order to increase customer satisfaction, hospitality and tourism companies need to concentrate on not only their product, but also their services simultaneously. Customer satisfaction from their services as a performance-delivery element is regarded as an additional significant factor in hospitality and tourism companies.

In this sense, it is more difficult for the hospitality and tourism companies to attain higher customer satisfaction. Increasing customer satisfaction entails an increase in costs, requiring managers to try more vigorously to understand the relationship between

customer satisfaction and its financial performance (Anderson, et al., 1997). An empirical work conducted by Anderson, Fornell, and Rust (1997) supports the idea that tradeoffs between customer satisfaction and a firm's profitability are more likely to be found in the service industry.

1.2 Need for this Study

As more studies examine the marketing performance of customer satisfaction (Anderson, Fornell, & Lehmann, 1994; Anderson & Sullivan, 1993; Bloemer & Kasper, 1994; Bolton & Drew, 1994; Rust & Zahorik, 1993), the efforts to measure the financial performance of customer satisfaction have focused attention on an individual customer rather than from the view of corporate level (Anderson et al., 1994; Anderson et al., 1997; Bolton 1998). Although various empirical studies have conducted to analyze the practical effect of customer satisfaction on a firm's financial performance (Aaker & Jacobson, 2001; Jacobson and Mizik, 2008; Rust et al., 2004; Srivastava & Reibstein, 2005; Wiesel et al., 2008), there still exist strong arguments concerning the association between customer satisfaction and a firm's financial performance (Anderson et al., 1997; Jacobson, 1990; Phillips, Chang, & Buzzell, 1983).

Regardless of the passionate discussion in the general marketing and finance literature, the performance of customer satisfaction has failed to draw adequate attention in the field of hospitality and tourism industry (Denizci & Li, 2009). Although most hospitality and tourism researchers have long assumed that marketing efforts, such as efforts to increase customer satisfaction, contribute to a company's financial

performance, it is alarming that there is such a lack of empirical research concerning that relationship (Denizci & Li, 2009).

Even though, according to Czepiel et al. (1985), the service industry has more difficulty in obtaining customer satisfaction due to its attributes of the performance-delivery elements, few studies have been conducted empirically to examine the effect of customer satisfaction in the hospitality and tourism industry. Therefore, practical investigation of the financial performance of customer satisfaction is an increasing demand in the hospitality and tourism companies because the findings of these studies can provide companies with the motivation and justification for considering their customers' satisfaction.

By understanding the different impacts of customer satisfaction among industries, it is possible to assume that there exist the differences in customer satisfaction level and in its financial impact on sub industries (i.e., hotels, restaurants, and airlines) within the hospitality and tourism industry. By surveying customers, Danaher and Mattson (1994) found that there is a significantly lower satisfaction level for the restaurant service process when compared with the hotel process. Additionally, another study conducted by Davila and Venkatachalam (2004) also asserts a specific characteristic of airline companies in terms of the factors that influence performance measures. The differences could give more specific implications to the each sub industry.

1.3 Research Purpose of the Study

The purpose of this study is three fold: (1) to compare the level of customer satisfaction between the hospitality and tourism industry and other industries, (2) to empirically examine the financial performance of customer satisfaction in the hospitality and tourism contexts, (3) to compare the extent to which customer satisfaction performs financially between hospitality and tourism industry and other industry.

To put it more specifically, the research objectives of this study are:

1) To compare the level of customer satisfaction between the hospitality and tourism industry and the manufacturing industry.
2) To empirically examine in the hospitality and tourism contexts, the effect of customer satisfaction on a firm's profitability.
3) To empirically examine in the hospitality and tourism contexts, the effect of customer satisfaction on a firm's value
4) To compare the extent to which customer satisfaction influences the profitability of hospitality and tourism firms with manufacturing firms.
5) To compare the extent to which customer satisfaction influences the values of hospitality and tourism firms with manufacturing firms.

1.4 Hypotheses and Conceptual Framework

The hypotheses and conceptual framework for this study were developed after reviewing previous studies regarding customer satisfaction, the performance of marketing

activities, and measuring financial performance. Other studies observing the difference between the hospitality and tourism industry and other industries in terms of customer satisfaction were also reviewed. In order to investigate the impact of customer satisfaction on a firm's financial performance, this study employs customer satisfaction as the independent variable, and the financial ratios that represent a firm's profitability and value are use as the dependent variables. The following hypotheses were tested:

H1. There will be a mean difference of customer satisfaction between in the hospitality and tourism industry and the manufacturing industry.

H2. Customer satisfaction will have a positive influence on hospitality and tourism companies' financial performance.

H2-a. Customer satisfaction will have a positive influence on hospitality and tourism companies' profit margin.

H2-b. Customer satisfaction will have a positive influence on hospitality and tourism companies' return on assets.

H2-c. Customer satisfaction will have a positive influence on hospitality and tourism companies' return on equity.

H2-d. Customer satisfaction will have a positive influence on hospitality and tourism companies' Tobin's q.

H2-e. Customer satisfaction will have a positive influence on hospitality and tourism companies' market value added.

H3. The financial impact of customer satisfaction in the hospitality and tourism

Industry will be more substantial than in the manufacturing industry.

H3-a. The financial impact of customer satisfaction on profit margin in the hospitality and tourism industry will be more substantial than in the manufacturing industry.

H3-b. The financial impact of customer satisfaction on return on assets in the hospitality and tourism industry will be more substantial than in the manufacturing industry.

H3-c. The financial impact of customer satisfaction on return on equity in the hospitality and tourism industry will be more substantial than in the manufacturing industry.

H3-d. The financial impact of customer satisfaction on Tobin's q in the hospitality and tourism industry will be more substantial than in the manufacturing industry.

H3-e. The financial impact of customer satisfaction on market value added in the hospitality and tourism industry will be more substantial than in the manufacturing industry.

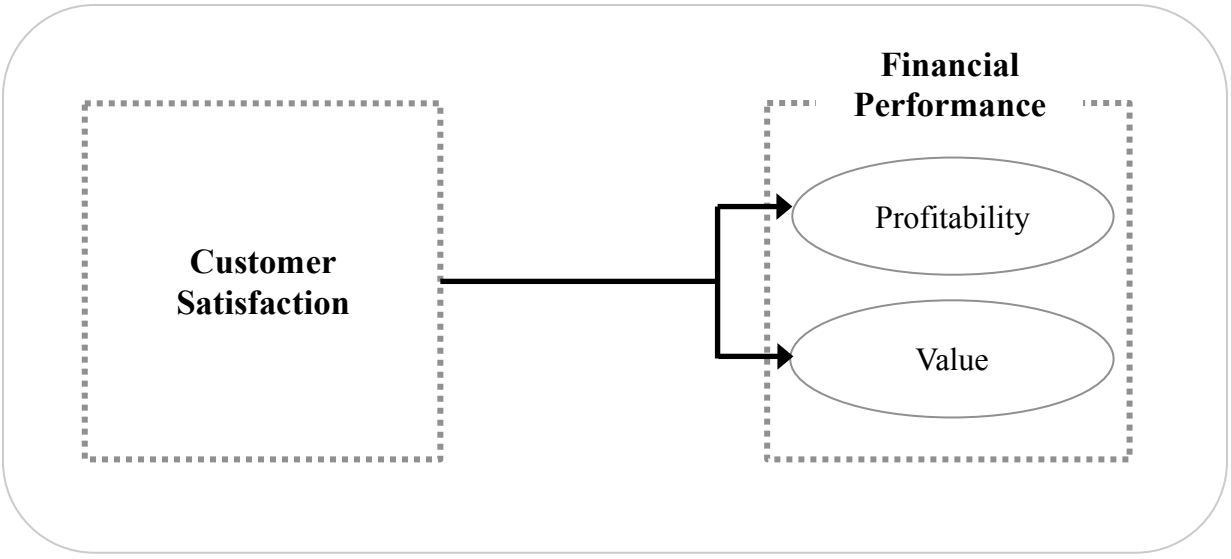

Figure 1. The Conceptual Framework of this study

1.5 Definition of the Terms in the Conceptual Framework

Customer satisfaction: a psychological concept that includes the feeling of well-being and pleasure that consequences from obtaining what one hopes for and expects from an appealing product and/or service (World Tourism Organization (WTO), 1985). Although there are various approaches to explain customer satisfaction/dissatisfaction, the most widely used is proposed by Oliver (1980) who has developed the expectancy disconfirmation theory. According to this theory, which has been tested and proven in several studies (Oliver & DeSarbo, 1988; Tse & Wilton, 1988), when customers purchase goods and services, they expect a certain level of performance from the products and services. After experiencing the products and services, their expectations are compared against the real performances. If there are differences between expectations and performances, disconfirmation appears. Negative disconfirmation leads dissatisfaction, and positive disconfirmation leads satisfaction (Pizam & Ellis, 1999).

Firms' profitability: an ability to earn a profit. That is, how efficiently a company or industry generates earnings. It is mainly expressed in terms of several popular numbers that measure one of two common types of performance: "how much they make with what they've got" and "how much they make from what they take in"(Ross, Westerfield, & Jordan, 2003). It is directly related to a firm's profit and traditional accounting based measures of economic returns (Pandian et al., 2006). Profit Margin (PM), Return on Assets (ROA), and Return on Equity (ROE) are the best known and the most widely used ratios that measure the profitability (Ross et al., 2003).

Firms' Value: an economic measure that reflects the market value of a whole business or a company (Ross et al., 2003). It is an evaluation by customers in the stock market (Lubatkin & Shrieves, 1986), and it is a sum of claims of all the security-holders: debt holders, preferred shareholders, minority shareholders, common equity holders, and others (Ross et al., 2003). Firm Value is one of the fundamental measures used in business valuation, financial modeling, accounting, and portfolio analysis. According to Gapenski (1996), Market Value Added (MVA) is the measure of financial performance that is being applied more often.

1.6 Outline of Subsequent Chapters

The following chapters include the Literature Review, Methodology, Results, and Conclusions and Discussion. In the Literature Review, Chapter 2, previous studies and literature on the basic concept of customer satisfaction, and the characteristic of customer satisfaction and its effect in the hospitality and tourism industry are reviewed. The

research methodology utilized to conduct the study is addressed in detail in Chapter 3. The results of the statistical tests are presented and explained in Chapter 4. Chapter 5 includes a brief summary of the study and conclusion, along with implications and suggestions for further research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The purpose of this study is to examine the influence of customer satisfaction on the financial performance of hospitality and tourism companies. To present theoretical backgrounds and strong arguments, this chapter reviews the literature on customer satisfaction, and examines the national indicator of customer satisfaction such as American Customer Satisfaction Index (ACSI). Finally, this study discusses the relationship between customer satisfaction and a firm's financial performance in the hospitality and tourism industry, and makes comparisons with the manufacturing industry.

This chapter is divided into five main sections:

1) customer satisfaction
2) measurement of customer satisfaction: American Customer Satisfaction Index (ACSI)
3) consequences of customer satisfaction
4) strong argument for financial performance of customer satisfaction
5) customer satisfaction and financial performance in the hospitality and tourism industry

2.2 Customer Satisfaction

2.2.1 Growing Interests in Customer Satisfaction

Most companies try to attract and satisfy their customers and work hard to make sure their products and services increase customer retention. Simply speaking, customer satisfaction is vital for companies to survive in the fierce competition. Many studies indicate that it costs about five times as much in time, money and resources to draw a new customer as it does to keep an existing one (Naumann, 1995). Therefore, it is possible to assume that increasing customer satisfaction and retaining the customers can be an effective survival strategy for companies.

Furthermore, because customer satisfaction is such an important criterion for determining quality that is actually carried to customers through the products and services (Vavra, 1997), there is a growing interest in customer satisfaction as a means of evaluating quality according to Anderson and Sullivan (1993). Thus, customer satisfaction is regarded as a most universally accepted measurement (Morgan et al., 2005), as well as an influential performance metric (Kaplan & Norton, 1996) in measuring a firm's competitiveness and marketing performance.

2.2.2 What is Customer Satisfaction?

The concept of customer satisfaction has been extensively studied by social psychologists, marketing researchers, and students of consumer behavior. The increasing importance of customer satisfaction in both service and manufacturing industries creates

several definitions (Peterson & Wilson, 1992). According to WTO (1985), customer satisfaction is a psychological concept that involves the feeling of well-being and pleasure resulting from gaining what a person hopes for and expects from a product and/or service.

Another definition of customer satisfaction was proposed by Vavra (1997). He suggested that customer satisfaction is defined as satisfaction based on an outcome or a process (Vavra, 1997, p. 4). In other words, it is characterized by satisfaction as the end-state resulting from the experience of the consumption process. This end-state can be a cognitive state of reward, an emotional response to an experience, or a comparison of rewards and costs to the expected consequences.

In addition, one of the definitions most widely used is a proposition of Oliver (1980) who has developed the expectancy disconfirmation theory. According to this theory, which has been verified and confirmed in various studies (Oliver & DeSarbo, 1988; Tse & Wilton, 1988), customers purchase a good or service with pre-purchase anticipations about expected performance. Once the product or service has been purchased and used, outcomes are compared against anticipation. When the outcome matches the anticipation, confirmation arises. Disconfirmation arises when anticipation is different from outcomes they experience through the product or service. Negative disconfirmation occurs when product/service outcome is less than expected. Positive disconfirmation occurs when product/service outcome is better than expected. Satisfaction is caused by confirmation or positive disconfirmation of consumer expectations (Pizam & Ellis, 1999).

2.3 Measurement of Customer Satisfaction: American Customer Satisfaction Index (ACSI)

Many firms attempt to measure customer satisfaction in order to evaluate whether they meet their customers' needs (Fornell, Mithas, Morgeson, & Krishnan, 2006) as well as analyze their managers' performance (Ittner, Larcker, & Rajan, 1997). According to HR Focus (1993), 37% of companies employ nonfinancial measures such as customer satisfaction measures in their executive bonus contracts. William M. Mercer, Inc. reported that 35% of firms use customer satisfaction measures in determining compensation (Ittner & Larker, 1998). In other words, companies are beginning to use customer satisfaction as a criterion for diagnosing product and service performance, and often link customer satisfaction measures to both executive and employee compensation (Business week, 1990).

The need for firms to facilitate customer satisfaction more fully has given rise to research interests in how to measure customer satisfaction in the real world. At the beginning of the 1990s, as a result of an attempt to measure customer satisfaction directly and objectively, the Swedish Customer Satisfaction Barometer (SCSB) was developed based on the data from Swedish industries. Meanwhile in the U.S., Anderson and Fornell and their colleagues at the National Quality Research Center at the University of Michigan Business School developed the American Customer Satisfaction Index (ACSI). This index has been recognized as a new type of market-based performance measure for firms, industries, economic sectors, and national economies (Fornell, Johnson, Anderson, Cha, & Bryant, 1996).

2.3.1 Model and Methodology of the ACSI

As a measure of overall customer satisfaction, ACSI has to be uniform and comparable in order to objectively represent the level of customer satisfaction among companies and industries (Fornell et al., 1996). ACSI contains two fundamental properties: First of all, it recognizes the different types of customer evaluations that cannot be measured directly among the industries. Consequently, ACSI employs a several indicator approach to measure general customer satisfaction as a latent variable that must be comparable across firms, industries, and sectors. Second, as an overall measure of customer satisfaction, ACSI is measured in a way that not only accounts for consumption experience but also that is forward-looking. The conceptual model of ACSI is shown in Figure 2, which represents a chain of relationships between the antecedents of overall customer satisfaction and the consequences of it.

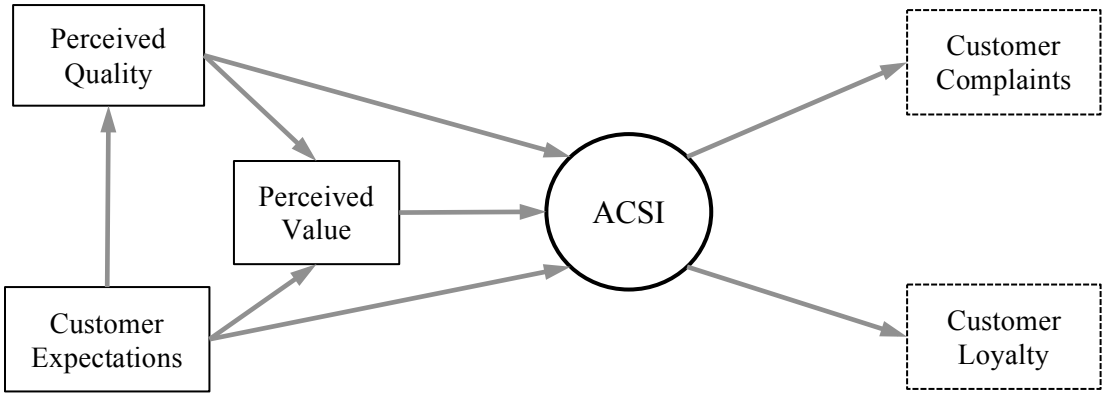

Figure 2. The American Customer Satisfaction Index (ACSI) Model

A system of cause and effect relationships is shown in Figure 2, making ACSI the core in the relationship, consisting of the antecedents such as perceived quality, customer

expectations, a perceived value, consequences such as costumer complaints and loyalty (Anderson & Fornell, 2000). In terms of the three antecedents of customer satisfaction, the first one, perceived quality, is influenced by customer expectations that have a direct and positive effect on customer satisfaction. The second determinants, customer expectations, represents both prior consumption-experience including non-experiential information such as advertising and word-of-mouth and a forecast of the supplier's ability to deliver quality in the future. The third antecedent, perceived value, combines price information into the model and increases the comparability of the results across firms, industries, and sectors (Anderson & Fornell, 2000). As noted previously, there are various consequences of customer satisfaction. In the ACSI model, following Hirschman's (1970) exit-voice theory, researchers contended there will be a decrease in customer complaints and an increase in customer loyalty (Fornell & Wernerfelt, 1988) as the consequences of customer satisfaction.

ACSI is designed to be representative of each of the seven major sectors (one-digit standard industrial classification (SIC) code level). Accessible end-users included in this design are: (1) Manufacturing/Non-durables, (2) Manufacturing/Durables, (3) Transportation/Communications/Utilities, (4) Retail, (5) Finance/Insurance, (6) Services, and (7) Public Administration/Government. Hospitality and tourism industry falls into the (6) service sector as an accommodation and food service, including the largest companies on the basis of total sales.

For each company, approximately 250 interviews were conducted with the firms' current customers from samples of households in the continental United States with telephones. Once a respondent was identified as a customer, the interviewer started with

the customer satisfaction questionnaire. The measurement variables and latent variables of the questionnaire are described in Table 1. A 10-point scale is used to enable customers to make better discriminations (Andrew, 1984). The results are calculated statistically and released as an ACSI from 0 to 100 scales.

Table 1

Measurement Variables Used in the ACSI Model

Measurement Variable	**Latent Variable**
1. Overall expectation of quality (prepurchase)	Customer expectations
2. Expectation regarding customization, or how well the product fits the customer's personal requirements (prepurchase)	Customer expectations
3. Expectation regarding reliability, or how often things would go wrong (prepurchase)	Customer expectations
4. Overall evaluation of quality experience (postpurchase)	Perceived quality
5. Evaluation of customization experience, or how well the product fit the customer's	Perceived quality
6. Evaluation of reliability experience, or how often have gone wrong	Perceived quality
7. Rating of quality given price	Perceived value
8. Rating of price given quality	Perceived value
9. Overall satisfaction	ACSI
10. Expectancy disconfirmation (performance that falls short of exceeds expectation)	ACSI
11. Performance versus the customer's ideal product or service in the category	ACSI
12. Has the customer complained either formally or informally about the product or service?	Customer complaints
13. Repurchase likelihood rating	Customer loyalty
14. Price tolerance (increase) given repurchase	Customer loyalty
15. Price tolerance (decrease) to induce repurchase	Customer loyalty

2.3.2 Power of the ACSI

As a valid national indicator of customer satisfaction, ACSI is supported by the statistical results, which confirm its ability to represent the underlying customer satisfaction and to relate effects and consequences in an expected manner (Anderson & Fornell, 2000).

A critical part of ACSI is its ability to predict economic returns. The empirical evidence for predictive power is available from ACSI data (Anderson & Fornell, 2000). The basic principle in the ACSI is that satisfied customers can be economic assets to a company. According to the definition, an economic asset generates future income to the owner of that asset (Ross et al., 2003). Thus, if customer satisfaction is an economic asset, it should be possible to use the ACSI for prediction of a company's financial results. Furthermore, if the ACSI is related to financial performance, then the index determines external validity. The University of Michigan Business School faculty has done substantial research to reveal that ACSI is linked to financial performance, analyzing both accounting and stock market returns. They found that ACSI scores show a statistically positive relationship with the traditional performance measures used by companies and security analysts (i.e., ROA, ROE, price-earing ratio, and the market-to-book ratio). This evidence suggests that the ACSI has become a reliable and valid measure for customer satisfaction that is appropriate to a company's financial performance.

2.4 Consequences of Customer Satisfaction

2.4.1 General Consequences of Customer Satisfaction

Customer satisfaction has attracted significant research interest for more than two decades (Luo & Homburg, 2007). According to Keiningham, Munn, and Evans (2003, p. 37), "both practitioners and academics have accepted the premise that customer satisfaction results in customer behavior patterns that positively affect business results."

In particular, researchers have scrutinized the theoretical and conceptual foundations of customer satisfaction (Fornell et al., 1996; Luo & Bhattacharya, 2006; Oliver, 1997; Rust et al., 2004). A number of prominent articles were conducted to address potential antecedents of customer satisfaction (Anderson & Sullivan, 1993; Bolton & Lemon, 1999; Oliver, 1980; Szymanski & Henard, 2001). In addition, many studies also have investigated various consequences of customer satisfaction.

Previous studies divide the consequences of customer satisfaction into four categories: customer-related, employee-related, efficiency-related, and overall performance-related outcomes. The first three categories of satisfaction consequences provide specific explanations for the positive impact of customer satisfaction on firm profitability. The majority of studies examine customer-related consequences (including customers' behavioral intentions and behaviors). The most dominant finding in this context is that satisfaction increases customer loyalty and customer retention, and influences their future repurchase intentions (Fornell et al., 1996; Mittal & Kamakura, 2001; Mittal, Ross, & Baldasare, 1994; Olsen, 2002).

Specifically, customer satisfaction is linked obviously to retention. As Naumann's

(1995) study revealed, it is more costly to add new customers than to continue relationships with current customers. Therefore, customer satisfaction that is directly related to customer retention gives the firm the opportunity to enjoy greater profitability in the long run. In addition, customer satisfaction was also found to have a positive impact on repurchase intention. According to a study conducted by Anderson and Sullivan (1993), high satisfaction results in higher repurchase intention, that is the number of times a customer will repurchase should increase consequently. Furthermore, other schools of thought also revealed that customer satisfaction can improve profitability in terms of pricing, showing that highly satisfied customers are willing to pay premium prices (Homburg, Koschate, & Hoyer, 2005) and tend to be less price sensitive (Stock, 2005). As a result, it is possible for such firms to be more efficient in generating revenue.

Other important outcomes in the efficiency-related category are that customer satisfaction enhances the effectiveness of future advertising and promotion investments (Luo & Homburg, 2007). On the basis of longitudinal analyses, the scholars explain that customer satisfaction produces free word-of-mouth advertising and saves subsequent marketing costs. In addition, they contend that customer satisfaction has a positive effect on a firm's human resource. This finding indicates that human resource managers should have a strong interest in customer satisfaction as well. These results have significant implications for marketers in their meeting with financial executives and human resource managers.

2.4.2 Economic Consequences of Customer Satisfaction

Besides examining customer-related, employee-related, and efficiency-related consequences, this study empirically investigates the other main consequences, performance-related outcomes. As one of the nonfinancial indicators of investments in "intangible" assets, customer satisfaction is considered a better predictor of future financial performance than historical accounting measures (Deloitte Touche Tohmatsu International, 1994; Kaplan & Norton, 1996). The same issue has generated a need to reveal the economic value of customer satisfaction as a marketing activity (Edvinsson & Malone, 1997; Stewart, 1997; Wallman, 1995). The Marketing Science Institute selected the measurement of the financial effect of marketing activities as the main concern for the 2004-2006 period (Denizci & Li, 2009). Some researchers have even suggested that "the new epoch of accountable marketing" might be coming soon (Uncles, 2005).

Traditionally, in order to measure the financial performance of nonfinancial activities such as customer satisfaction, many studies have employed a survey of the managers or the employees in the organizations (Bisbe & Otley, 2004; Chenhall, 2005; Grafton, Lillis, & Widener, 2010; Ittner, Larcker, & Randall, 2003; Sprinkle, 2003). However, some schools of thought suggest that the results of surveys of managers and employees are limited when it comes to reflecting the firm's objective performance because their responses sometimes reflect a conflict of interest. Additionally, Sheth and Sisodia (2002) insist that marketing performance should focus on carrying value to customers and corporations in a quantifiable value relative to its costs.

As a result, many recent studies have begun to investigate presumably more

objective information such as ROA (Return on Assets), ROE (Return on Equity), and stock market performance in order to overcome the bias nature of survey data.

2.5 Strong Argument for Research of Financial Performance of Customer Satisfaction

In the studies empirically examining the financial performance of customer satisfaction, there are numerous examples of research that validates the positive impact of customer satisfaction on a firm's financial performance (Anderson et al., 1997; Grewal, Chandrashekaran, & Citrin, 2010; Gruca & Rego, 2005; O'Sullivan & McCallig, 2009; Tuli & Bharadwaj, 2009). According to Anderson, Fornell, and Lehmann (1994), the performance of customer satisfaction in 77 Swedish companies indicates that customer satisfaction is positively associated with simultaneous accounting return on investments.

On the other hand, several other studies contend that the relationship between customer satisfaction and a firm's financial performance may not be positive or mixed and inconclusive (Itter & Larcker, 1996; Tornow and Wiley, 1991; Wiley, 1991). Foster and Gupta (1997) found that, depending on the questions included in the satisfaction measures, there was either positive, negative, or insignificant relations between satisfaction measures for individual customers of a wholesale beverage distributor and future customer profitability. Even though Anderson, Fornell, and Lehmann (1994) found positive associations between customer satisfaction and return on investment in Swedish manufacturing firms, they also revealed weaker or negative associations in service firms.

In summary, theoretically and conceptually, the assumption is that customer

satisfaction has a positive influence on a firm's financial performance. However, previous empirical studies provide mixed results on the relationship between customer satisfaction and financial performance. Hence, there is a need to investigate the assumptions that have been generally accepted in the academic and the real business world.

2.5.1 Customer Satisfaction and Profitability

Traditionally, there was an assumption that increasing customer satisfaction is more likely to bring positive outcomes such as increasing sales volume and market share. Over time, these marketplace outcomes became a traditional method of evaluating a firm's marketing activities (Lehmann, 2004). Today, however, there is significant evidence in the marketing literature that customer satisfaction is an important driver of a firm's profitability. In fact, much current research suggests that high customer satisfaction ratings can be the best indicator of a company's future profits (Kotler, 1991, p.19).

Studies by Anderson, Fornell, and Lehmann (1994) and Rust, Moorman, and Dickson (2002) report a positive impact of customer satisfaction on the financial performance measures, such as return on investment and return on assets. According to Nelson et al. (1992), the higher the customer satisfaction, the higher the earnings, net value, and return on assets (ROA) a firm will have. Other studies conducted by Rust and Zahorik (1993), and Ittner and Larcker (1998) also link customer satisfaction to operating margin, and return on investment (ROI), both regarded as accounting performances.

Nevertheless, a negative relationship between customer satisfaction and profitability has been documented as well. For example, Tornow and Wiley (1991) posit

that most components consisting of customer satisfaction have a negative relationship with a firm's profitability.

In spite of the fact that there exist some negative results in the relationship between customer satisfaction and profitability, this present study explores the positive effects of customer satisfaction on profitability based on the theoretical backgrounds and various studies that empirically investigated the relationship between an objective satisfaction index such as SCSB (Swedish Customer Satisfaction Barometer) and ACSI (American Customer Satisfaction Index).

2.5.2 Customer Satisfaction and Firm Value

Traditionally, a firm's value in the stock market has been regarded as an indicator of performance. Top managers persist with the idea that every functional activity should have as its ultimate goal the creation of shareholders value (Day & Fahey, 1988; Hunt & Morgan, 1995). Considered an example of financial performance, firm evaluation also has been a prominent area of interest for corporate officials. Even CEOs have embraced this interest because firm evaluations, which can be significantly influenced by customer satisfaction, are directly linked to their compensation (Ittner et al., 1997).

On the other hand, it is important to know how customer satisfaction influences a firm's value in academic fields as well. Some scholarly research now suggests that satisfaction improves shareholder value by increasing cash flow growth and reducing its unpredictability (Fornell et al. 2006; Gruca & Rego, 2005). A study by Aksoy et al. (2008) found that customer satisfaction improves the ability to predict future cash flows,

stock performance, long-term financial measure, and shareholders' value. Another study by Anderson et al. (2004) found a positive association between a firm's current level of customer satisfaction and simultaneous financial market indices, such as Tobin's q, stock, and market-to-book ratio.

The result of some previous studies in marketing would suggest that the stock market is sensitive to changes in customer satisfaction and that this affects the market's current reaction. Mittal, Anderson, Sayrak, and Tadikamalla (2005) reported that the stock market is more responsive to firms that achieve customer satisfaction while concurrently pursing goals of revenue improvement and cost reduction (Rust et al. 2002). Mittal's et al. (2005) study provides evidence that supports investor sensitivity to the relationship between satisfaction and profitability when determining firm value. Therefore, customer satisfaction may also be value relevant when influencing the impact on firm valuation.

Viewed as a whole, this research indicated there is a need for examining the relationship between customer satisfaction and market value. Some scholars think this research is necessary in order to conclude that customer satisfaction is a key component in influencing shareholder value (Ittner & Larker, 1996; Mittal et al., 2005; Rust, Moorman, & Dickson, 2002).

2.6 Customer Satisfaction and Financial Performance in the Hospitality and Tourism Industry

2.6.1 Customer Satisfaction in the Hospitality and Tourism Industry

One of the main stream service research groups has tried to find the behavioral and situational difference that impacts on the evaluation of the customer satisfaction (Bitner, 1990; Bitner, Booms, & Tetreault, 1990). They insist that different service attributes are important for customers to evaluate their service experience (Ostrom & Iacobucci, 1995). According to Brown and Swartz (1989), the difference in the service process may play an important role in determining overall customer satisfaction. Danaher and Mattson (1994) conducted a study to compare the different patterns of evaluation in the different types of service delivery process among hotels, restaurants, and conferences. By surveying customers, they found that there is a significantly lower satisfaction for the restaurant service process compared with the hotel process.

In a related study, Lovelock (1985) explored the differences in airline businesses, dividing the service attributes into two groups: core and secondary. To put it another way, airline companies perform their services with customers in the following order: first making inquiries and reservations, then checking their baggage, assigning a seat, checking them at the gate, providing on-board service during the flight, and retrieving their baggage at the destination airport. Although each of these services is a supporting task, which is secondary to the core experience of physically transporting passengers and their bags, these secondary services were regarded as more important aspects of a customer's overall experience, and therefore, they have a greater potential to generate

customer dissatisfaction if performed poorly.

2.6.2 Financial Performance of Customer Satisfaction in the Hospitality and Tourism Industry

As a main domain of service industries, most hospitality and tourism companies are producing intangible products and are trying to satisfy their customers with their services in accordance with their operating goals. Customer satisfaction is considered as the first target of hospitality companies' main operations, and is the direct outcome of their operation. In the hospitality industry, a motivation for the increase of customer satisfaction is more likely to be the indicator of a reliable signal of customer satisfaction with links to long-term performance (Fornell et al., 1996). Along with a substantial amount of research that focused on the impact of customer satisfaction on a company's performance evaluation, there has been research attention given to the hospitality and travel industry as well.

Some schools of thought in the hospitality and tourism industry argue that customer service perceptions and their satisfaction are sometimes, but not always, returned in companies' financial performance (Schneider, 1991). For example, Gursoy and Swanger (2007) suggest that although customer satisfaction is at the very core of hospitality operations, it may not be reflected in higher financial performance because it is regarded as a ''given'' factor, which is an expected and ordinary part of everyday operations. In other words, consumers expect to be satisfied when they experience any services, and hospitality and tourism businesses cannot survive without satisfied

customers. In addition, when hospitality and tourism businesses have a plan to increase their customer satisfaction, they may spend more money to implement it compared to manufacturing businesses. Because of the cost of such things as training staff, and upgrades of facilities, a hospitality business may be able to increase customer satisfaction, but this may result in lower profits. On the other hand, internal cost-cutting strategies such as lowering training expenses or delaying facility upgrades may make a company more profitable for a time, but customers may not be satisfied.

However, other researchers conducting empirical studies have insisted there is a positive relationship between customer satisfaction and financial performance in the hospitality and tourism industry. For example, Banker, Potter, and Srinivasan (2000) found that customer satisfaction was positively associated with future accounting performance in 18 hotels managed by a hospitality firm. In a related issue, a most recently relevant study conducted by Denizci and Li (2009) enhances the understanding of the marketing-finance interface, confirming the relationship between customer satisfaction and financial concepts in the hospitality and tourism industry. They found that customer satisfaction is significantly related to financial productivity such as Tobin's q and return on asset. With the understanding of the previous studies, this study supports the idea of the positive relationship between customer satisfaction and the financial performance of the hospitality and tourism companies. Despite the fact that several studies found the negative influence of customer satisfaction on firms' financial performance in the hospitality and tourism industry, this study values customer satisfaction as an economic asset on the basis of the importance of customer satisfaction in this industry.

2.6.3 Comparison of the Impact of Customer Satisfaction with Manufacturing Industry

Referring to various previous studies conducted to discover the characteristics of customer satisfaction in the hospitality and tourism industry such as lodging (Barsky, 1992; Barsky & Labagh, 1992; Ekinci & Riley, 1998; Saleh & Ryan, 1991), restaurant (Bojanic & Rosen, 1994; Dube et al., 1994; Lee & Hing, 1995; Oh & Jeong, 1996), foodservice (Almanza et al., 1994), and tourism (Danaher & Arweiler, 1996; Hudson & Shepard, 1998; Pizam & Milman, 1993; Ryan & Cliff, 1997). This study expects to find a different magnitude of influence of customer satisfaction on the financial performance compared to other industries. More specifically, in terms of the characteristics, different from the material products, a study by (Reuland, Coudrey, & Fagel, 1985) suggests that hospitality experiences consist of a mixture of three parts: the material product, the behavior and attitude of the employees, and environment. Material product refers to the food and beverages in the case of restaurants, and the behavior and attitude of the employees refers to the situational elements resulting from the employees who are responsible for hosting the customer, serving the meal and beverages and who directly interact with the guests, and the environment refers to the building, the layout, the furnishings, and the lighting in the restaurant.

On the other hand, a study conducted by Czepiel et al. (1985) proposes that satisfaction in the hospitality industry is a function of satisfaction with two independent elements: the functional element such as the food and beverage in a restaurant, and the performance-delivery element such as the service. For instance, customers in a restaurant can respond to the experience in the restaurant by pointing out that "The service was

great, the food poor" or conversely. That is, they can evaluate each element separately or conversely.

According to these characteristics of hospitality experiences, hospitality companies need to spend more money and efforts to make their customers satisfied. To put it differently, in order to increase customer satisfaction, hospitality and tourism companies need to concentrate on not only their product, but also their services. Customer satisfaction from their services is regarded as an additional, but significant factor in hospitality and tourism companies. In their empirical study that compares the impact of customer satisfaction between goods and services, Anderson et al. (1997) suggested that services are more likely than goods to have tradeoffs between customer satisfaction and profitability. With this understanding, it is assumed that the impact of customer satisfaction on a firm's financial performance, such as profitability and value, will be more substantial than in the manufacturing industry.

2.7 Summary

This chapter reviewed the literature on the customer satisfaction and its measurement, and consequences of the customer satisfaction. The argument for financial performance of customer satisfaction was addressed. Lastly, the chapter focused on the customer satisfaction and its financial performance in the hospitality and tourism industry, comparing the manufacturing industry.

This chapter was divided into five main sections:

1) customer satisfaction
2) measurement of customer satisfaction: American Customer Satisfaction Index (ACSI)
3) consequences of customer satisfaction
4) strong argument for financial performance of customer satisfaction
5) customer satisfaction and financial performance in the hospitality and tourism industry

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter discusses the methodology that was employed to examine the hypotheses developed in the study. The conceptual research model is presented in the first section, addressing the purpose of this study. The following section covers the explanation of the constructs (i.e., independent variable and dependent variables) in the model and how to measure the constructs and utilize them in this study. In the third section, the data collection part, the methods this study used to obtain the data and the firms the data are specifically introduced. Lastly, the fourth section presents the data analysis procedure. In addition, statistical methods to test each hypothesis are also explained.

3.2 Research Model

The main purpose of this study is to investigate the impact of customer satisfaction on the hospitality and tourism companies' financial performance. In order to examine the influence of customer satisfaction, the American Customer Satisfaction Index is employed as a proxy of customer satisfaction in this study. On the other hand, this study uses two separate measures that show the financial short-term and long-term performance of firms. One measure looks at profitability and the other looks at value.

More specifically, to measure profitability, profit margin (PM), return on assets (ROA), and return on equity (ROE), which are the representative financial ratios to evaluate the performance, are used. To measure firm value, Tobin's q and market value added (MVA) are used. With the understanding of the variables, the conceptual framework of this study is as follows:

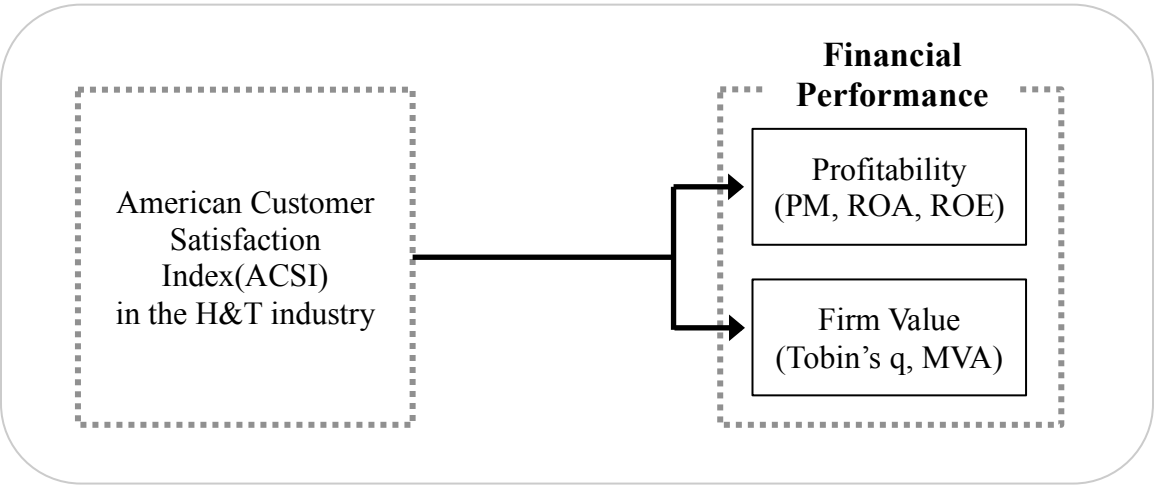

Figure 3. The Conceptual Framework of this Study with Variables

Notes: PM: profit margin, ROA: return on assets, ROE: return on equity, MVA: market value added

3.3 Constructs and their Measurements

3.3.1 Independent Variable

American Customer Satisfaction Index (ACSI): To conduct the empirical study, this study measures customer satisfaction using the ACSI (American Customer Satisfaction Index), which was developed by the National Quality Research Center of the Stephen M. Ross Business School at the University of Michigan. The index represents the quality of goods and services purchased in the United States. It is a national indicator

of customer satisfaction on a 0-100 scale (Fornell et al., 1996). The national average ACSI score shows a correlation between the gross domestic product, the personal consumption expenditure, and the stock market. Thus, it can be shown that ACSI is a significant barometer of economic performance for the macro economy (Aksoy et al., 2008). Hotel, restaurant, and airline companies are divided into separate businesses, and their ACSIs are released in June every year. Among the total hotel, restaurant, and airline companies in the U.S., only nine restaurants, six hotels, and six airlines made both their ACSI and their financial statements 1998-2010 available in this study.

3.3.2 Dependent Variable

Profitability: As a proxy of profitability, profit margin (PM), return on assets (ROA), and return on equity (ROE) are used to examine the research question empirically. The three measures (PM, ROA, and ROE) are the best known and most widely used of all financial ratios representing profitability in the financial literature (Ross et al., 2003). They are intended to measure how efficiently the firm uses its assets and how efficiently the firm manages its operations. The focus of these ratios is the bottom line, net income (Ross et al., 2003). All other things being equal, a relatively high profit margin is apparently desirable. High profit margin appears with low expense ratios relative to sales. Return on assets (ROA) is a measure of profit per dollar of assets. The other variable, return on equity (ROE) refers to a measure of how the stockholders fared during the year. Because most publically traded firms' goal is benefiting shareholders, ROE is the true bottom line measure of performance. Each formula to calculate the

variables is as follows:

Profit margin: Net income / Sales

Return on assets (ROA): Net income / Total assets

Return on Equity (ROE): Net income / Total equity

Firm Value: To measure the firm's value efficiently, this study has two separate measures of market value at the firm level across years: Tobin's q and market value added. Tobin's q is defined as the ratio of the market value of a firm with the replacement cost of its assets. There are several methods to measure Tobin's q (Hall, Cummins, Laderman, & Mundy, 1988; Lindenberg & Ross, 1981), and this study uses the approximate Tobin's q, which is generally accepted in economics and finance literature Chung and Pruitt's (1994) method (Berger, Ofek, & Swary, 1996). The approximate Tobin's q is as followed:

$$\textit{Approximate Tobin's } q = \frac{\mathrm{MVE+PS+DEBT}}{\mathrm{TA}},$$

Where MVE is the product of a firm's share price and the number of common stock shares outstanding; PS stands for the liquidating value of the firm's outstanding preferred stock; DEBT represents the value of short-term liabilities net of its short-term assets plus the book value of the firm's long-term debt; and TA is the book value of the firm's total assets (Chung & Pruitt, 1994).

As another proxy to assess the firm's value, market value added (MVA) is used. According to Milunovich and Tsuie (1996), derived from the EVA concept, MVA is a

present value of all estimated EVAs of a firm in the future and presents the extent to which a firm has added value to its capital, funded from shareholders and lenders.

$$Market\ Value\ Added_t\ (MVA_t) = V_t - C_t$$

It is a market-generated number that is calculated by subtracting the capital invested in a firm *C* from the sum *V* of the total market value of the firm's equity and the book value of its debt. MVA is a cumulative measure of the value generated by management in excess of the capital invested by shareholders (Stewart, 1991).

3.3.3 Control Variable

In order to investigate the impact of customer satisfaction on a firms' financial performance more exactly, this study employs five control variables; the leverage, the increase rate of sales (IRS), firm size, capital intensity, and liquidity respectively in the multiple linear regression models. Adding these control variables in the research model results in increasing the power in explaining the degree to which independent variable influence dependent variable. The increase rate of sales (IRS) is used to control any systematic effect caused by different scales of sales in relationship to their financial performances. The leverage (debt to equity ratio) controls the effect caused by the different capital structure among the firms. According to McConnell and Servaes (1990), a firm can use increased debt because interest expense is tax deductible whereas dividends are not. Additionally, this study follows other studies in finance and accounting, using firm size, capital intensity, and liquidity as control variables. It is expected that

these variables control the relationship between financial performance and ACSI in the model. The formulations to compute the control variables are explained in the Appendix.

3.4 Data Collection

To conduct the research model, this study used the secondary data from the firms' financial statements, downloaded from an economic database. ACSI data were collected from the official website for The American Customer Satisfaction Index (www. theacsi.org). The ACSIs of the hospitality and tourism companies are released in June every year, categorized as full service restaurants (i.e., Olive Garden, Red Lobster), limited service restaurants (i.e., Papa John's, McDonald's), Hotels (i.e., Marriott, Hyatt Hotels), and airlines (i.e., Southwest Airlines, American Airlines). Because the ACSIs are measured based on a brand level, and the financial data are released to the public on a firm level, the brand level ACSI needs to be converted into the firm level. For example, the ACSI are measured for Olive Garden and Red Lobster, which are the brands of Darden Restaurants, separately. The financial data, however, are released on a firm level such as Darden Restaurants. Thus, this study converted the brand level ACSI into the firm level ACSI weighted on the number of brand's properties in order to measure the financial performance with the firm-level financial data. On the other hand, to collect the annual accounting and financial data, this study used the COMPUSAT database. Then, the ratios such as PM, ROA, ROE, Tobin's q, and MVA were calculated by hand.

3.5 Data Analysis

The data are analyzed following statistical procedures, and SPSS 15.0 is utilized to examine the tests. The descriptive statistics such as frequencies, means, and standard deviations are computed to describe the overall level of customer satisfaction and the financial performance ratios. In order to test the first hypothesis, a one-way analysis of variance (ANOVA) test is utilized to determine the mean difference of ACSI between in the hospitality and tourism industry and the manufacturing industry.

To test the second and third hypotheses, this study employs a linear regression model where profit margin (PM), return on assets (ROA), and return on equity (ROE) are used for measuring profitability, and Tobin's q and MVA (Market Value Added) is used for measuring a firm's value. The independent variable is the American customer satisfaction index (ACSI). Debt to equity ratio, the increase rate of sales, firm size, capital intensity, and liquidity were adopted as control variables. With the collected data from ACSI official web sties and COMPUSTAT database, this study takes the log transformation on the data in order to make them normal with respect to mean and constant variance. As a result, the study interprets the results based on the percentage instead of their level.

One significant point of this study is that since a majority of previous studies revealed relationships between ACSI and profitability and value, this study focuses on investigating the relationships of rate of annual change, instead of the original score level and ratios. Among the hospitality and tourism companies, hotels, restaurants, and airlines are employed in this study. To examine the relationship more accurately, it was

considered reasonable to use the rate of annual change rather than the level of scores and ratios, because the level of ACSI scores is quite different from each other among the companies. The model formulations are suggested as follows:

$$\Delta\%PM_t = \alpha_0 + \alpha_1 \Delta\%ACSI_t + \alpha_2 \Delta\%leverage_t + \alpha_3 \Delta\%IRS_t + \alpha_4 \Delta\%FS_t + \alpha_5 \Delta\%CI_t + \alpha_6 \Delta\%LIQ_t + \varepsilon_t$$

$$\Delta\%ROA_t = \alpha_0 + \alpha_1 \Delta\%ACSI_t + \alpha_2 \Delta\%leverage_t + \alpha_3 \Delta\%IRS_t + \alpha_4 \Delta\%FS_t + \alpha_5 \Delta\%CI_t + \alpha_6 \Delta\%LIQ_t + \varepsilon_t$$

$$\Delta\%ROE_t = \alpha_0 + \alpha_1 \Delta\%ACSI_t + \alpha_2 \Delta\%leverage_t + \alpha_3 \Delta\%IRS_t + \alpha_4 \Delta\%FS_t + \alpha_5 \Delta\%CI_t + \alpha_6 \Delta\%LIQ_t + \varepsilon_t$$

$$\Delta\%Tobin's\ q_t = \alpha_0 + \alpha_1 \Delta\%ACSI_t + \alpha_2 \Delta\%leverage_t + \alpha_3 \Delta\%IRS_t + \alpha_4 \Delta\%FS_t + \alpha_5 \Delta\%CI_t + \alpha_6 \Delta\%LIQ_t + \varepsilon_t$$

$$\Delta\%MVA_t = \alpha_0 + \alpha_1 \Delta\%ACSI_t + \alpha_2 \Delta\%leverage_t + \alpha_3 \Delta\%IRS_t + \alpha_4 \Delta\%FS_t + \alpha_5 \Delta\%CI_t + \alpha_6 \Delta\%LIQ_t + \varepsilon_t$$

*Δ% ACSI: rate of change of American Customer Satisfaction Index
*Δ% PM: rate of change of profit margin
*Δ% leverage: rate of change of debt to equity ratio
*Δ% IRS: rate of change of increase sales
*Δ% FS: rate of change of firm size
*Δ% CI: rate of change of capital intensity
*Δ% LIQ: rate of change of liquidity
*Δ% ROA: rate of change of return on assets
*Δ% ROE: rate of change of return on equity
*Δ% MVA: rate of change of market value added

3.6 Summary

This chapter discussed the methodology that was employed to conduct this study. The second section of the chapter introduces the research model. The third section presents the constructs and their measurement, explaining the independent and dependent variables and control variables. Section four discusses the data collection procedure. Lastly, the fifth section presents statistical procedures adopted for data analysis.

CHAPTER 4

RESULTS

4.1 Introduction

This chapter addresses the statistical analysis of the data. The introduction of the subjects employed in this study and the descriptive summary of variables, including mean and standard deviations are presented in the second section of this chapter. The third section tests the hypotheses and includes results from a one-way analysis of variance, Duncan's Post hoc and a multiple regression analysis.

4.2 Subjects and Descriptive Summary

The research objective of this study is to analyze the effect of customer satisfaction on the firms' performance in the hospitality and tourism industry. Specifically, this study approaches the influence of customer satisfaction in the view of a firm's profitability and value.

Although in 1995, ACSI for the hospitality and tourism industry started to be released, a limited number of hospitality and tourism firms were included. Therefore, in order to make the data persistent, this study adopted the data from 1998 when the number of firms started to expand. In addition, among the firms that have the ACSI, a few firms are private companies that are not traded publically in the stock market, and their financial data are not available in the official economic database system. Thus, this study

adopted twenty one-hospitality and tourism companies (i.e., 6 hotels, 9 restaurants, and 6 airlines) whose financial data has been available publicly since 1997. The list of the firms included as the subject is reported in the Appendix.

To compare the mean difference of ACSI and the impact of ACSI on the financial performance between the hospitality and tourism industry and manufacturing industry, this study also includes twenty-one manufacturing companies (i.e., 4 durable goods and 17 nondurable goods). Among the available 35 manufacturing companies, twenty-one firms were chosen by persistency of the ACSI data from 1998 to 2010. The list of the firms included as the subject is also reported in the Appendix.

4.2.1 Description of the ACSI in the Hospitality and Tourism Industry

Flow of ACSI in the Hospitality and Tourism Industry: Figure 1 represents the flow of ACSI on hotels, restaurants, and airlines, respectively. Although, the scores of customer satisfaction are in different ranges among the industries, both ACSIs of hotels and restaurants are a growing trend, while ACSI of airlines shows repeated increase and decrease within relatively low levels until 2008. However, ACSI of airlines also started increasing in 2008. Until 2010, all of the ACSIs in the hospitality and tourism industry were increasing, restaurants' overtook hotels' slightly in 2010.

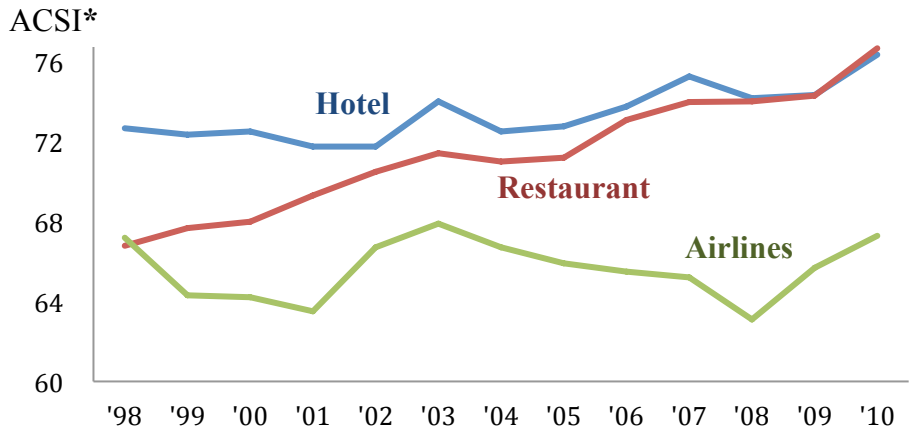

Figure 4. Flow of ACSI in the Hospitality and Tourism Industry

Notes: ACSI*: American Customer Satisfaction Index

The Mean Difference of ACSI among Hotels, Restaurants, and Airlines: In order to investigate the mean difference of ACSI among hotels, restaurants, and airlines within the hospitality and tourism industry, analysis of variance is employed. Table 2 displays that the ACSI is significantly different among hotels, restaurants, and airlines from 1998 to 2010 at the significance level of .01 (F-Value = 34.57). According to the results of the Duncan post hoc test, mean value of hotels' ACSI is found to be higher than restaurants', and mean value of restaurants' is found to be higher than airlines'.

Table 2

Difference of ACSI within the Hospitality and Tourism Industry

	N	**Mean**	**S.D**	***F*-value/*p*-value**
Hotels	26	74.50 (H)	2.73	
Restaurants	56	71.59 (M)	5.62	34.57/.000**
Airlines	60	65.49 (L)	5.54	

Duncan Post hoc test High (H) > Medium (M) > Low (L)
**Significance level of 0.01

4.2.2 Descriptive Statistics of Variables

Table 3 summarizes descriptive statistics of the data for the hospitality and tourism industry. The maximum value of ACSI is 81, the minimum value is 54, and the mean value is 69.544. The mean values of profitability ratios (i.e., PM, ROA, ROE) are 0.061, 0.037, and 0.014, respectively and the mean values of firm value (i.e., Tobin's q, MVA) are 1.429 and 1796.90, respectively. The mean values of control variables (i.e., DER, IRS, FS, CI, and LIQ) are 1.91, 0.081, 8.741, 1.373, and 0.978, respectively. Except ACSI, MVA, and FS, all of the variables are ratios that represent the financial position or situation of the firms. ACSI is measured with a 100-scale score, MVA is calculated with a dollar value, and FS is the result of log transformation.

Table 3

Descriptive Statistics of Original Values of the Variables in the Hospitality and Tourism Industry

Variable	N	Mean	S.D.	Minimum	Maximum
ACSI	142	69.544	6.297	54.00	81.00
PM	142	0.061	0.436	-0.39	5.06
ROA	142	0.037	0.096	-0.32	0.41
ROE	142	0.014	0.531	-4.12	2.31
Tobin's q	142	1.429	1.085	0.22	6.52
MVA	142	1796.90	11500.92	-19518.74	50105.31
DER	142	1.91	3.643	-12.99	32.82
IRS	142	0.081	0.293	-0.9	2.00
FS	142	8.741	1.295	5.83	10.71
CI	142	1.373	1.502	0.26	12.24
LIQ	142	0.978	0.649	0.30	5.18

NOTE: ACSI: American Customer Satisfaction Index, PM: Profit Margin, ROA: Return on Assets, ROE: Return on Equity, MVA: Market Value Added, DER: Debt to Equity ratio, IRS: Increase Rate of Sales, FS: Firm Size, CI: Capital Intensity, LIQ: Liquidity

Due to the fact that this study used the rate of changes between year t and year t-1 instead of the original values in the multiple regression analysis, Table 4 indicates the descriptive statistics of the rate of changes of variables as well. The number of firms were reduced to 121, from 142, in calculating the rate of change between year t and year t-1. The average rate of change in the ACSI is 0.2%. In addition, the maximum rate of change in the ACSI is 12%, and the minimum rate of change in the ACSI is -11%. The average rates of change in PM, ROA, ROE, Tobin's q, and MVA are 266%, -36%, -79%, 1.6%, and 94%, respectively. The average rates of change in the control variables are 11.4%, -620%, 0.7%, 7.6%, and 7.2%, respectively.

Table 4

Descriptive Statistics of Rate of Change of Variables in the Hospitality and Tourism Industry

Variable	N	Mean	S.D.	Minimum	Maximum
ACSI	121	0.0021	0.0382	-0.11	0.12
PM	121	2.663	38.588	-22.85	425.63
ROA	121	-0.364	4.976	-20.23	44.88
ROE	121	-0.795	4.135	-24.73	18.13
Tobin's q	121	0.016	0.279	-0.76	1.52
MVA	121	0.948	8.976	-14.63	94.26
DER	121	0.114	0.716	-2.04	4.49
IRS	121	-6.293	77.446	-850.63	85.97
FS	121	0.007	0.03	-0.07	0.21
CI	121	0.076	0.78	-0.68	8.30
LIQ	121	0.072	0.318	-0.74	1.44

NOTE: ACSI: American Customer Satisfaction Index, PM: Profit Margin, ROA: Return on Assets, ROE: Return on Equity, MVA: Market Value Added, DER: Debt to Equity ratio, IRS: Increase Rate of Sales, FS: Firm Size, CI: Capital Intensity, LIQ: Liquidity

To test the third hypothesis, this study includes the manufacturing industry, comparing the hospitality and tourism industry. Table 5 shows the descriptive statistics of the variables in the manufacturing industry, and Table 6 indicates the descriptive statistics of the rates of change of variables in the manufacturing industry. The total number of data is 261, and mean of ACSI is 81.76 with 4.22 standard deviation. In the Table 7, the number of data reduced to 240, in calculating the rate of change between year t and year t-1. The mean rate of change in ACSI is 0.12% between year t and year t-1.

Table 5

Descriptive Statistics of Original Values of Variables in the Manufacturing Industry

Variable	N	Mean	S.D.	Minimum	Maximum
ACSI	261	81.757	4.22	69.00	91.00
PM	261	0.07	0.07	-0.65	0.31
ROA	261	0.07	0.07	-0.50	0.30
ROE	261	0.23	0.52	-1.48	7.46
Tobin's q	261	1.76	1.08	0.24	5.43
MVA	261	9232.33	31378.06	-149290	105942.23
DER	261	1.67	2.15	0.35	23.61
IRS	261	0.05	0.14	-0.58	1.17
FS	261	9.58	1.32	6.72	12.69
CI	261	1.03	0.43	0.38	3.39
LIQ	261	1.25	0.56	0.39	3.89

NOTE: ACSI: American Customer Satisfaction Index, PM: Profit Margin, ROA: Return on Assets, ROE: Return on Equity, MVA: Market Value Added, DER: Debt to Equity ratio, IRS: Increase Rate of Sales, FS: Firm Size, CI: Capital Intensity, LIQ: Liquidity

Table 6

Descriptive Statistics of Rate of Change of Variables in the Manufacturing Industry

Variable	N	Mean	S.D.	Minimum	Maximum
ACSI	240	0.0012	0.026	-0.09	0.07
PM	240	0.27	6.10	-18.62	91.36
ROA	240	0.36	7.79	-20.71	117.57
ROE	240	0.57	9.65	-24.89	143.25
Tobin's q	240	-0.007	0.22	-0.65	1.13
MVA	240	-0.071	2.55	-16.28	25.56
DER	240	0.15	1.80	-0.75	27.32
IRS	240	-12.33	142.83	-2066.9	90.19
FS	240	0.006	0.019	-0.07	0.14
CI	240	0.029	0.193	-0.55	1.89
LIQ	240	0.028	0.220	-0.79	1.00

NOTE: ACSI: American Customer Satisfaction Index, PM: Profit Margin, ROA: Return on Assets, ROE: Return on Equity, MVA: Market Value Added, DER: Debt to Equity ratio, IRS: Increase Rate of Sales, FS: Firm Size, CI: Capital Intensity, LIQ: Liquidity

This study performed a Pearson correlation test in order to report general bivariate correlations between the original values of variables in the hospitality and tourism industry. Table 7 provides the results of the test. The correlation between the profitability ratios (i.e., PM, ROA, and ROE) is positive at the 1% significance level. Similarly, a correlation between firm value indices (i.e., Tobin's q and MVA) is also positive at the 1% significance level. ACSI has a significant and positive correlation with ROA and ROE, and positive correlates with PM. On the other hand, ACSI significantly and positively correlates with Tobin's q, and positively correlates with MVA.

Table 7

Pearson's correlation of Original Values of the Variables in the Hospitality and Tourism Industry

	ACSI	PM	ROA	ROE	TQ	MVA	DER	IRS	FS	CI	LIQ
ACSI	1	.073	.396**	.263**	.347**	.095	-.199*	-.004	-.474**	-.004	.193*
PM		1	.506**	.269**	.001	.105	-.058	-.302**	-.154	.623**	.276**
ROA			1	.618**	.609**	.438**	-.274**	-.195*	-.364**	.070	.047
ROE				1	.109	.209*	-.003	-.053	-.064	.085	.020
TQ					1	.523**	-.279**	-.110	-.389**	-.310**	-.129
MVA						1	-.108	-.017	.021	-.070	-.014
DER							1	.027	-.020	-.027	.070
IRS								1	-.027	-.029	.289**
FS									1	.000	-.296**
CI										1	.656**
LIQ											1

TQ: Tobin's q
* Significance level of 0.05
** Significance level of 0.01

As the study provides the descriptive statistics of the rate of change that is used in the multiple regression analysis, the study also performed a Pearson correlation test between the rates of change of variables in the hospitality and tourism industry. Table 8 shows that among the profitability variables, significant and positive correlation between PM and ROA, and between ROA and ROE are reported from the results. As an independent variable, ACSI has a significant and positive correlation with a dependent variable (i.e., ROE) at the significance level of .01.

Table 8

Pearson's correlation of the Rate of Change of the Variables in the Hospitality and Tourism Industry

	ACSI	PM	ROA	ROE	TQ	MVA	DER	IRS	FS	CI	LIQ
ACSI	1	-.019	.085	.262**	-.034	-.038	-.104	-.007	-.213*	-.103	.253**
PM		1	.868**	.132	-.248**	.097	-.139	-.031	-.061	.949**	.100
ROA			1	.553**	-.201*	.082	-.154	-.167	-.104	.774**	.148
ROE				1	-.058	.005	-.139	-.431**	-.028	.054	.168
TQ[a]					1	.136	.123	-.099	-.096	-.3.3**	-.072
MVA						1	-.059	.038	-.106	.077	-.028
DER							1	-.228*	-.024	-.165	-.069
IRS								1	.112	.022	.075
FS									1	.172	-.126
CI										1	.050
LIQ											1

[a]TQ: Tobin's q
* Significance level of 0.05
** Significance level of 0.01

Table 9 and 10 show results of the Pearson correlation test between variables in the manufacturing industry in terms of original values and the rate of change in variables between year t and year t-1, respectively.

Table 9

Pearson's Correlation of Original Values of the Variables in the Manufacturing Industry

	ACSI	PM	ROA	ROE	TQ	MVA	DER	IRS	FS	CI	LIQ
ACSI	1	.060	.071	.155*	.189*	-.040	.220**	-.041	-.134*	-.015	-.334**
PM		1	.836**	.388**	.405**	.365**	.094	.006	.163**	.148*	-.199
ROA			1	.528**	.604**	.361**	.180**	.049	-.007	-.123*	-.067
ROE				1	.333**	.091	.830**	-.003	-.125*	-.101	-.187**
TQ					1	.540**	.209**	-.056	-.222**	-.232**	-.215**
MVA						1	-.038	-.035	-.016	-.009	-.112
DER							1	-.037	-.271**	-.148*	-.313**
IRS								1	.075	-.029	-.005
FS									1	.460**	-.175**
CI										1	-.207**
LIQ											1

TQ: Tobin's q
* Significance level of 0.05
** Significance level of 0.01

Table 10

Pearson's Correlation of the Rate of Change of the Variables in the Manufacturing Industry

	ACSI	PM	ROA	ROE	TQ	MVA	DER	IRS	FS	CI	LIQ
ACSI	1	-.029	-.031	-.033	-.028	-.019	-0.12	.045	-.071	-.015	.062
PM		1	.999*	.982**	.275**	-.030	.024	.004	-.161*	-.078	.024
ROA			1	.984**	.277**	-.028	.024	.004	-.168**	-.089	.024
ROE				1	.268**	-.025	.199**	.004	-.172**	-.091	.009
TQ					1	-.018	-.027	.048	-.177**	-.213**	-.039
MVA						1	-.002	.011	.122	.113	-.032
DER							1	-.007	-.044	-.030	-.065
IRS								1	-.006	-.046	-.039
FS									1	.752**	-.041
CI										1	-.027
LIQ											1

TQ: Tobin's q
* Significance level of 0.05
** Significance level of 0.01

4.3 Testing the Hypotheses

Chapter 1 presented three research objectives of the study. First of all, this study examined the mean difference of ACSI between the hospitality and tourism industry and manufacturing industry. Second, the positive impact of ACSI on the hospitality and tourism companies' financial performance was investigated. Lastly, the study sought to compare the impact of ACSI on the firms' financial performance between the hospitality and tourism industry and manufacturing industry. In this section, a one-way analysis of variance, Duncan's Post hoc test, and a multiple regression analysis were used to address the research objectives and test the hypotheses.

4.3.1 Mean Difference of the ACSI between the Hospitality and Tourism Industry and the Manufacturing Industry

The first hypothesis addresses whether there will be a mean difference of the ACSI between the hospitality and tourism industry and the manufacturing industry. The ACSI of the manufacturing industry is divided into two sub industries: the nondurable goods manufacturing and the durable goods manufacturing. In order to examine the difference of the ACSI more specifically, this study compared the mean difference of the ACSI among the three groups: the nondurable goods manufacturing, the durable goods manufacturing, and the hospitality and tourism industry. The results of analysis of variance are presented in Table 11. Table 11 results indicate there is a significant difference of ACSI among the nondurable goods manufacturing, the durable goods manufacturing, and the hospitality and tourism industry (F-Value = 271.93). Duncan Post hoc analysis indicates that the ACSI of the hospitality and tourism industry is lower than the nondurable goods manufacturing and the durable manufacturing. However, between the nondurable goods industry and the durable good industry, there is no significant difference of the ACSI.

Table 11

Difference of ACSI between the Hospitality and Tourism Industry and the Manufacturing Industry

	N	Mean	S.D	*F*-value/ *p*-value	Duncan[d]
NDM[a]	211	81.99	3.79		
DM[b]	50	80.75	5.59	271.493/ .000**	H&T < NDM, DM
H&T[c]	142	69.54	6.29		

[a]NDM: Nondurable goods Manufacturing, [b]DM: Durable goods Manufacturing, [c]H&T: Hospitality and Tourism industry, [d]Duncan: Duncan Post hoc Test
**Significance level of 0.01

4.3.2 Impact of the ACSI on the Financial Performance in the Hospitality and Tourism Industry

The second hypothesis contends there will be a positive impact of the ACSI on the hospitality and tourism companies' financial performance. In order to test the hypothesis, this study employed a multiple regression analysis with the independent variable (i.e., the rate of change between year t and year t-1 in the ACSI), dependent variables (i.e., the rates of change in PM, ROA, ROE, Tobin's q, and MVA), and control variables (i.e., the rates of change in DER, IRS, FS, CI, and LIQ). Table 12 outlines the results of the models. Goodness of fit of each model, except the MVA model, implies that each model explains a significant portion of total variance; *F*-value confirms overall significance of models at the 1% α level (PM, ROA, and ROE) and 5% α level (Tobin's q). From the Pearson correlation results in the table 7 and 8, this study indicates that the correlation between the independent variable and dependent variables was not much higher (.90 and higher). In addition, every tolerance is greater than 0.1 and every VIF value is smaller

than 2 (Belsley, Kuh, & Welsch, 1980). With these results, it is possible to assume that there are no substantial multicollinearity problems in these models (Tabachnik & Fidell, 2007). In terms of auto correlation problems, the results of Durbin-Watson statistics (1.653 in the PM model, 2.054 in the ROA model, 2.245 in the ROE model, 2.182 in the Tobin's q model, and 2.034 in the MVA model) are near 2.00 in the all models. Thus, these results confirm the independence of errors in the models (Tabachnik & Fidell, 2007).

Among the models, ACSI shows a significant and positive influence on ROE at the 5% α level (*t*-value = 2.73). A negative influence of DER on ROE (*t*-value = -2.649) is resulted at the significance level of 5%. IRS has negative effects on ROA (*t*-value = -3.42) and ROE (*t*-value = -6.296) at the significance level of 5%, and 1%. Significant and negative impacts of FS on PM (*t*-value = -10.57) and ROA (*t*-value = -3.66) are reported. CI affects significantly PM (t-value = 48.36), ROA (t-value = 15.45), and Tobin's q (t-value = -3.718) respectively. Lastly, LIQ has no significant relationship in the models. Based on the results of ROE model, as expected above, it is concluded that ACSI would be one of the primary indicators in predicting profitability in terms of the context of hospitality and tourism companies (i.e., hotels, restaurants, and airlines), while the results show that there are not significant relationships between ACSI, and PM, ROA, Tobin's q and MVA.

Table 12

Results of the Multiple Regression Analyses in the Hospitality and Tourism Industry

	ACSI	DER	IRS	FS	CI	LIQ
PM						
Coefficient	34.27	1.016	-.013	-281.51	49.13	2.13
t-value	1.612	.907	-1.29	-10.57**	48.36**	.851
R^2	.955					
Adjusted R^2	.952					
F-value	406.55**					
ROA						
Coefficient	13.55	-.355	-.012	-32.12	5.17	1.042
t-value	1.94	-.962	-3.42*	-3.66**	15.45**	1.262
R^2	.704					
Adjusted R^2	.688					
F-value	45.93**					
ROE						
Coefficient	23.91	-1.226	-.027	11.355	.169	1.865
t-value	2.73*	-2.649*	-6.296**	1.032	.403	1.802
R^2	.36					
Adjusted R^2	.291					
F-value	9.326**					
Tobin's q						
Coefficient	-.45	.019	.000	-.516	-.104	-.035
t-value	-.66	.526	-.802	-.605	-3.718*	-.434
R^2	.111					
Adjusted R^2	.065					
F-value	2.416*					
MVA						
Coefficient	-12.366	-.573	.005	-43.068	1.031	-1.227
t-value	-.541	-.475	.466	-1.503	.943	-.455
R^2	.030					
Adjusted R^2	-.21					
F-value	.591					

NOTE: ACSI: American Customer Satisfaction Index, DER: Debt to Equity ratio,
IRS: Increase Rate of Sales, FS: Firm Size, CI: Capital Intensity, LQ: Liquidity, PM: Profit Margin,
ROA: Return on Assets, ROE: Return on Equity, MVA: Market Value Added
*Significance level of 0.05
**Significance level of 0.01

4.3.3 Comparing the Impact of the ACSI on the Financial Performance between in the Hospitality and Tourism Industry and in the Manufacturing Industry

Considering the characteristics of the hospitality and tourism industry, this study assumes that the financial impact of customer satisfaction in the hospitality and tourism industry will be more substantial than in the manufacturing industry (Hypothesis 3). To examine this hypothesis, this study used multiple regression analysis with data of the manufacturing industry, and intended to compare the coefficient of ACSI between the hospitality and tourism industry and the manufacturing industry. The coefficient of ACSI in the hospitality and tourism industry is calculated for the second hypothesis. From the result of the Pearson correlation test, the correlation between CI and FS (0.752) is significant at the 0.01 level. Thus, CI is removed in the multiple regression model of the manufacturing industry. As a result, the model formulation consists of ACSI as an independent variable, PM, ROA, ROE, Tobin's q, and MVA as dependent variables, and DER, IRS, FS, and LIQ as control variables. Table 13 indicates the results of the multiple regression analysis with the manufacturing data. Goodness of fit of each model implies that each model explains a significant portion of total variance; *F*-value confirms overall significance of models at the 1% α level (ROE) and 5% α level (Tobin's q). Because CI is removed after checking the Pearson correlation, this study confirms that the correlation between the independent variable and dependent variables is not much higher. Moreover, every tolerance is greater than 0.1 and every VIF value is smaller than 2 (Belsley, Kuh, & Welsch, 1980). Therefore, this study suggests that it is possible to conclude that there are no substantial multicollinearity problems in these models (Tabachnik & Fidell, 2007). With the results of the Durbin-Watson statistics (1.987 in the PM model, 1.979 in the

ROA model, 1.979 in the ROE model, 2.401 in the Tobin's q model, and 2.010 in the MVA model) are near 2.00 in the all models. Thus, these results confirm the independence of errors in the models (Tabachnik & Fidell, 2007).

Among the models, ACSI shows no significant influence on the dependent variables (PM, ROA, ROE, Tobin's q, MVA), comparing its influence on ROE in the hospitality and tourism industry model. From the results of control variables, DER has a positive influence on ROE (t-value = 3.012), and IRS and LIQ have no significant influence in the models. Significant and negative impacts of FS on PM (t-value = -2.526), ROA (t-value = -2.615), ROE (t-value = -2.605), and Tobin's q (t-value = -2.823) are presented. Based on the results of the models, it can be concluded that ACSI does not have a significant influence on the financial performance in the manufacturing industry (i.e., nondurable goods and durable goods).

Table 13

Results of the Multiple Regression Analyses In the Manufacturing industry

	ACSI	DER	IRS	FS	LIQ
PM					
Coefficient	-9.588	.058	.000	-52.00	.613
t-value	-6.33	.261	.085	-2.526*	.338
R^2	.029				
Adjusted R^2	.008				
F-value	1.380				
ROA					
Coefficient	-13.121	.071	.000	-68.634	.766
t-value	-.679	.252	.100	-2.615*	.331
R^2	.031				
Adjusted R^2	.010				
F-value	1.478				
ROE					
Coefficient	-16.053	1.029	.000	-82.766	.821
t-value	-.686	3.012**	.112	-2.605*	.293
R^2	.069				
Adjusted R^2	.049				
F-value	3.412**				
Tobin's q					
Coefficient	-.298	-.005	.000	-2.132	-.046
t-value	-.543	.618	.841	-2.823**	-.687
R^2	.039				
Adjusted R^2	.018				
F-value	1.838*				
MVA					
Coefficient	-1.166	.005	.000	15.970	-.285
t-value	-.182	.049	.051	1.807	-.360
R^2	.016				
Adjusted R^2	-.006				
F-value	.716				

NOTE: ACSI: American Customer Satisfaction Index, DER: Debt to Equity ratio,
IRS: Increase Rate of Sales, FS: Firm Size, CI: Capital Intensity, LQ: Liquidity, PM: Profit Margin,
ROA: Return on Assets, ROE: Return on Equity, MVA: Market Value Added
*Significance level of 0.05
**Significance level of 0.01

4.4 Summary

This chapter presents the statistical analysis of the data. The descriptive statistics including the flow of ACSI in the hospitality and tourism industry and mean and standard deviations of variables, and correlations between variables are presented in the second section of this chapter. The third section tests the hypotheses and includes the results from a one-way analysis of variance, Duncan's Post hoc test, and a multiple regression analysis.

CHAPTER 5

CONCLUSIONS AND DISCUSSION

5.1 Introduction

This chapter includes the conclusion, discussion, implications, and limitations of the study. The second section of this chapter summarizes the study. The findings of the study and discussion are presented in the third section. The fourth section addresses the academic and practical implications of the study. Finally, the limitations of the study and recommendations for future study are revealed in the last section.

5.2 Summary of the Study

First of all, this study examined the difference of customer satisfaction between the hospitality and tourism industry and the manufacturing industry. Second, the financial impact of customer satisfaction on hospitality and tourism companies was investigated and compared with the manufacturing industry.

More specifically, there were three main objectives in this study. The first objective was to examine the mean difference of ACSI between the hospitality and tourism industry and the manufacturing industry. As a proxy of customer satisfaction, American Customer Satisfaction Index (ACSI) was obtained from the official web site released by the National Quality Research Center at the University of Michigan Business School. With these data, this study conducted a one-way analysis of variance

among the hospitality and tourism industry, the nondurable goods manufacturing industry, and the durable goods manufacturing industry. The results indicate that there is a significant mean difference of ACSI among the industries at the significance level of 1%. Moreover, the results from the Duncan Post hoc test revealed that the ACSI of the hospitality and tourism industry is significantly lower than the manufacturing industry, and there is no difference between the nondurable goods manufacturing and durable goods manufacturing industries. Thus, it appears that as a main domain of service industries, the hospitality and tourism industry has a hard time acquiring higher customer satisfaction than the manufacturing industry, although they consider customer satisfaction the first target of their operations.

The second objective of the study is to investigate the impact of ACSI on the hospitality and tourism companies' financial performance. To test the hypothesis, a multiple regression analysis was employed with the ACSI as an independent variable, financial ratios such as profit margin (PM), return on assets (ROA), return on equity (ROE), Tobin's q, and market value added (MVA) as dependent variables, and control variables such as debt to equity ratio (DER), increase rate of sales (IRS), firm size (FS), capital intensity (CI), and liquidity (LIQ). The positive impact of ACSI on the return on equity (t-value = 2.73) was revealed at the significant level of 5%, while the other model formulations were not significant. The result proved the second hypothesis that the ACSI has a positive influence on a firm's financial performance in the hospitality and tourism industry. In other words, in the hospitality and tourism industry, increasing customer satisfaction can be a motivation for improving a firm's financial performance.

The third objective is to compare the magnitude of ACSI's impact on the financial

performance between the hospitality and tourism industry and the manufacturing industry. Considering the performance-delivery element as an additional characteristic of the hospitality experience compared to the material product (Czepiel et al., 1985), hospitality and tourism companies have to concentrate on the product as well as the services simultaneously. Thus, it can be assumed that the magnitude of ACSI's impact on hospitality and tourism companies will be more substantial than on the manufacturing companies. The data of manufacturing companies were used to examine the influence of ACSI on the financial performance, and a multiple regression analysis was also employed with an independent variable (i.e., ACSI), dependent variables (i.e., PM, ROA, ROE, Tobin's q, and MVA), and control variables (i.e., DER, IRS, FS, CI, and LIQ). As a result, the study failed to reveal the ACSI's significant impact on the manufacturing companies' financial performance, and did not compare the magnitude of the impact of ACSI between the industries.

To summarize, the study found the significant mean difference of ACSI between the hospitality and tourism industry and the manufacturing industry. In addition, this study verified the positive influence of ACSI on the financial performance of the hospitality and tourism industry. However, there exists no statistically significant impact of ACSI on the manufacturing companies' financial performance. An examination of the results confirms the importance of customer satisfaction in the hospitality and tourism industry, based upon the motivation of increasing a firm's financial performance. The following section provides a more detailed discussion.

5.3 Findings of the Study and Discussion

Hypothesis 1. There will be a mean difference of customer satisfaction between the hospitality and tourism industry and the manufacturing industry.

The first hypothesis of the study seeks to examine the mean difference of ACSI between in the hospitality and tourism industry and in the manufacturing industry. In order to investigate the difference in more detail, the manufacturing industry is divided into two sections: one is the nondurable goods manufacturing industry and the other is the durable goods manufacturing industry. Through the analysis of variance and the Duncan Post hoc Test, the results indicate that the mean value of ACSI is found to be lower in the hospitality and tourism industry than in the manufacturing industry. Different from the material products, the hospitality and tourism industry has an additional element, a service-delivery factor as one of the elements of customer satisfaction (Czepiel et al., 1985; Reuland et al., 1985). Regarding this additional element of customer satisfaction in the hospitality and tourism industry, the lower ACSI of the hospitality and tourism companies can be easily understood, because they need to focus on the additional element in order to make their customer satisfied. Furthermore, this result offers the hospitality and tourism companies the opportunity to realize that there exists a gap in ACSI when comparing hospitality and tourism with the manufacturing level of customer satisfaction. It can be a motivation for them to make an effort to improve their customer satisfaction.

Hypothesis 2. Customer satisfaction will have a positive influence on hospitality and tourism companies' financial performance.

H2-a. Customer satisfaction will have a positive influence on hospitality and tourism companies' profit margin.

H2-b. Customer satisfaction will have a positive influence on hospitality and tourism companies' return on assets.

H2-c. Customer satisfaction will have a positive influence on hospitality and tourism companies' return on equity.

H2-d. Customer satisfaction will have a positive influence on hospitality and tourism companies' Tobin's q.

H2-e. Customer satisfaction will have a positive influence on hospitality and tourism companies' market value added.

In order to prove the second hypothesis, this study investigated the financial performance of ACSI with five dependent variables. Financial performance can be categorized by two concepts: one is profitability and the other is firm value. Profit margin, return on assets, and return on equity are used to reveal the profitability (Ross et al., 2003), and Tobin's q and market value added are employed to investigate the firm value (Gapenski, 1996). This hypothesis is partially supported by the current data. Results of multiple regression analysis only supported the idea that there is a significant and positive impact of ACSI on ROE at the significance level of 5%, while the results indicated that there is no significant influence of ACSI on PM, ROA, Tobin's q, and MVA. The result of the ROE model is consistent with the results of previous research, which insists that customer satisfaction has a positive impact on a firm's profitability, according to Anderson et al., (1997), Grewal et al, (2010), Gruca and Rego (2005),

O'Sullivan and McCallig (2009), and Tuli and Bharadwaj (2009). ROE (return on equity) is regarded as a well-known profitability ratio used in analysis of financial statements. This result can motivate the marketers to try harder to increase customer satisfaction or continue implementing the strategies to improve customer satisfaction with the confidence of profitability. However, the insignificant results of the firm value model (i.e., Tobin's q and MVA) could confuse them in the viewpoint of maximizing a shareholder's value.

Hypothesis 3. The financial impact of customer satisfaction in the hospitality and tourism industry will be more substantial than in the manufacturing industry.

H3-a. The financial impact of customer satisfaction on profit margin in the hospitality and tourism industry will be more substantial than in the manufacturing industry.

H3-b. The financial impact of customer satisfaction on return on assets in the hospitality and tourism industry will be more substantial than in the manufacturing industry.

H3-c. The financial impact of customer satisfaction on return on equity in the hospitality and tourism industry will be more substantial than in the manufacturing industry.

H3-d. The financial impact of customer satisfaction on Tobin's q in the hospitality and tourism industry will be more substantial than in the

manufacturing industry.

H3-e. The financial impact of customer satisfaction on market value added in the hospitality and tourism industry will be more substantial than in the manufacturing industry.

All of the hypotheses in the third hypothesis section are not supported by current data. No significant influence of ACSI on the firms' profitability (i.e., PM, ROA, and ROE) and value (i.e., Tobin's q and MVA) in the manufacturing industry were found in this study. Therefore, the study fails to confirm a more substantial effect of ACSI on the financial performance in the hospitality and tourism industry than in the manufacturing industry. In spite of the fact that it was impossible to compare the extent to which ACSI affects the financial performance between the hospitality and tourism industry and the manufacturing industry, this study concludes that ACSI does not significantly contribute to a manufacturing firm's profitability and value.

Table 14

Summary of Hypotheses Test

Hypothesis	Contents	Supported
H1	There will be mean difference of customer satisfaction between in the hospitality and tourism industry and the manufacturing industry.	Yes
H2	Customer satisfaction will have a positive influence on hospitality and tourism companies' financial performance.	Yes[a]
H2-a	Customer satisfaction will have a positive influence on hospitality and tourism companies' profit margin.	No
H2-b	Customer satisfaction will have a positive influence on hospitality and tourism companies' return on assets.	No
H2-c	Customer satisfaction will have a positive influence on hospitality and tourism companies' return on equity.	Yes
H2-d	Customer satisfaction will have a positive influence on hospitality and tourism companies' Tobin's q.	No
H2-e	Customer satisfaction will have a positive influence on hospitality and tourism companies' market value added.	No
H3	The financial impact of customer satisfaction in the hospitality and tourism industry will be more substantial than in the manufacturing industry.	No
H3-a	The financial impact of customer satisfaction on profit margin in the hospitality and tourism industry will be more substantial than in the manufacturing industry.	No
H3-b	The financial impact of customer satisfaction on return on assets in the hospitality and tourism industry will be more substantial than in the manufacturing industry.	No
H3-c	The financial impact of customer satisfaction on return on equity in the hospitality and tourism industry will be more substantial than in the manufacturing industry.	No
H3-d	The financial impact of customer satisfaction on Tobin's q in the hospitality and tourism industry will be more substantial than in the manufacturing industry.	No
H3-e	The financial impact of customer satisfaction on market value added in the hospitality and tourism industry will be more substantial than in the manufacturing industry.	No

Yes[a:]: Partially supported

5.4 Academic and Practical Implications

The main purpose of this study was to investigate the impact of customer satisfaction on the financial performance in the hospitality and tourism industry. Its second purpose was to compare how differently customers are satisfied with a hospitality and tourism experience and a manufacturing product, and to compare the extent to which customer satisfaction influences the financial performance between the hospitality and tourism industry and the manufacturing industry.

In regards to the flow of the ACSI in the hospitality and tourism industry, the period from 1998 to 2009 was employed in this study. The ACSI in both hotels and restaurants show similar increasing index patterns. In fact, since 2008 the indices have become almost the same. ACSI of airlines is similar to the restaurant's scores in 1998, but their ASCIs decreased significantly afterward (Fornell & Cook, 2010). This difference of ACSI within the hospitality and tourism industry supports the findings suggested by Brown and Swartz (1989), and Danaher and Mattson (1994), Ostrom and Jacobucci (1995). They insist that different service attributes are important for customers to evaluate their service experience, and, moreover, the difference of the service process may play an important role in determining overall customer satisfaction. The understanding of different customer satisfaction levels within the industry can give the practical implications that managers in each sub industry (i.e., hotels, restaurants, and airlines) need in order to recognize their own service process characteristics. Then, when they want to improve the customer satisfaction, they can try to find ways to increase customer satisfaction based on the structure of each process rather than strictly comparing the index with the other sub industries.

Second, the results of a series of regression analyses revealed that ACSI is significant in predicting the firm's profitability for ROE. The findings have academic implications. Return on Equity, which is calculated by a fiscal year's net income divided by total equity, measures the rate of return on the shareholders' equity of the common stock owners. To put it another way, ROE illustrates how well a company uses investment funds to generate earning growth (Ross et al., 2008). Although there exist many ratios (i.e., PM, ROA, and ROI) and each ratio has its own meaning and implication in terms of representing profitability, ROE is considered one of the best indices for comparing companies in terms of their financial performance in business academia (Ross et al., 2008). ROE's reputation as an excellent index is demonstrated by the DuPont formula-- known as a strategic profit model: DuPont formula breaks down ROE into three components and reveals the effect of each component on the firm's profitability (Ross et al., 2008). This study theoretically implies that ROE also can be regarded as an important indicator to represent a firm's profitability especially when measuring the financial performance of customer satisfaction in the hospitality and tourism industry. Furthermore, this finding also has practical implications. The significant result of ROE in this study indicates that the effect of ACSI on ROE can be utilized in understanding the relationship between customer satisfaction and a firm's profitability. The fact that customer satisfaction has a positive impact on financial outcome indicators (ROE), demonstrates the economic value of customer satisfaction (Fornell et al., 2006). It implies that the increase of customer satisfaction significantly improves a firm's operating performance, and allows the marketers to be confident that the strategies for customer satisfaction contribute to a firm's financial performance.

Finally, the findings of the study suggesting that ACSI has no significant influence on the financial performance in the manufacturing industry proves the difference of the impact of customer satisfaction on the financial performance between in the hospitality and tourism industry and in the manufacturing industry. Combining the mean difference of ACSI between in the hospitality and tourism industry and the manufacturing industry, the difference of impact of customer satisfaction between the industries can offer practical implications. The finding that lower ACSI of the hospitality and tourism industry can influence the profitability positively can be evidence enough to motivate managers to improve their customer satisfaction. However, considering the tradeoff effect between customer satisfaction and profitability, the finding that higher ACSI of the manufacturing industry does not influence the financial performance can offer the opportunity to think about the optimal level of the customer satisfaction in terms of the financial performance, (Anderson et al., 1997). An interesting result of this study that has important management implications is the issue of increasing customer satisfaction versus increasing the financial performance. This study shows that although increasing customer satisfaction is hard in the hospitality and tourism industry, their customer satisfaction falls behind the manufacturing companies', and they have a sufficient motivation to improve it in order to increase their financial performance.

5.5 Limitations and Recommendations

Although this study made significant contributions to academia and the real business world, it suffers from a few limitations. First of all, the data used in this study

have limitations, because the available data from ACSI and COMPUSTAT were limited to only 21 hospitality and tourism firms in the U.S. (i.e., hotels: 6, restaurants: 9, and airlines: 6). Future studies should encompass more firms in the hospitality and tourism industry to generalize the findings. Additionally, because this study employed secondary data obtained from the official database, it was impossible to close off perfectly the other possibilities that might affect the performance of the firms. Thus, future studies can include economic conditions such as the economic recession in 2009 in the U.S. This could improve the internal validity of the study.

In regard to another limitation of the study, this study fails to reveal the impact of ACSI on a firm's value. The insignificant impacts of ACSI in the Tobin's q and MVA indicate that changes of customer satisfaction do not have a straight and immediate impact on a firm's value. This study could not consider revealing the time lagging effect on the Tobin's q and MVA that are regarded as the long-term performance index. Future studies could enhance the long-term effect of the ACSI on a firm's value more precisely.

The results of this study indicate that manufacturing companies' ACSI, which is higher than the hospitality and tourism companies', does not significantly influence the financial performance. This poses an interesting issue for future studies and offers the opportunity to investigate the optimal level of customer satisfaction regarding the financial performance.

APPENDIX

1. How to Calculate the Control Variables

Increase Rate of Sales = ($Sales_t$ / $Sales_{t-1}$) -1

Debt to Equity Ratio = Total Liability / Total Equity

Firm size = ln (Total Asset)

Capital Intensity = Total Asset / Sales

Firm size = Current Asset / Current Liability

2. The list of the firms included as the subject

Hospitality and Tourism Firms

Category	**Firms**
Restaurant	Darden
	Chili's Grill & Bar (Brinker)
	Papa John's
	Starbucks
	YUM
	Wendy's
	Domino's Pizza
	Burger King
	McDonald's
Hotel	Marriott

	Hyatt Hotels
	InterContinental Hoels
	Starwood Hotels & Resorts Worldwide
	Choice Hotels
	WYN
Airline	Southwest Airlines
	Continental Airlines
	American Airlines
	DAL
	US Airways
	United Airlines

Manufacturing Firms

Category	**Firms**
Durable Goods	Toyota
	Honda
	Whirlpool
	HP
Nondurable Goods	Philip Morris
	Reynolds American
	Clorox
	Colgate-Palmolive
	Procter & Gamble
	Coca- Cola
	PepsiCo
	Liz Claiborne
	Nike
	H J. Heinz
	Hershey
	ConAgra Foods
	General Mills

	Campbell Soup
	Kraft Foods
	Kellogg
	Tyson Foods

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