EXAMINATION OF EXECUTIVE COMPENSATION DETERMINANTS IN THE HOSPITALITY INDUSTRY: A QUANTILE REGRESSION APPROACH

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This dissertation is dedicated to my parents , Jong Ho Kim, and Myung Hee Park.

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CHAPTER I

INTRODUCTION

1. Background of study

In the last few decades, the topic of executive compensation has received a great deal of attention from both academic empirical researchers and practitioners of business management, especially those from the finance and accounting fields (Andjelkovic, Boyle, & McNoe, 2002; Grabke-Rundell & Gomez-Mejia, 2002; Gray & Cannella, 1997). The dominant topic of executive compensation studies has focused on examining the relationship between the executive's compensation and the firm's performance (Mishra, McConaughy, & Gobeli, 2000; Perry & Zenner, 2001). That is, executive compensation studies have been conducted on the basis of the pay-for-performance rule in the agency theory (Grabke-Rundell & Gomez-Mejia, 2002). According to the agency theory, proposed by Jensen and Meckling (1976), compensation packages should balance compensation value and the executive's managerial performance by implementing and utilizing an appropriate pay-for-performance rule aligned to motivate the agent (the executive in this study), to attract and retain management talent, and to increase management performance in order to maximize shareholder wealth (Gu & Choi, 2004;

Kim & Gu, 2005; Perlik, 2002). In other words, the agent's compensation contract should lead the executives of the firms to try to increase the firm's performance, thereby achieving the goal of maximization of shareholder's wealth through an increase in the firm's stock price and a stable flow of dividends (Lippert & Porter, 1997; Grabke-Rundell & Gomez-Mejia, 2002). The pay-for-performance rule, then, supports the idea that the level of an executive's compensation should be closely and positively linked to the firm's performance (Hallock, 1998; Jensen & Murphy, 1990; Kato & Kubo, 2006). Because of theoretical confidence in the pay-for-performance rule, it has become an increasingly popular measure in agency theory research (Lippert & Porter, 1997; Perry & Zenner, 2001).

Even so, the pay-for-performance rule has not always been supported by the empirical results of executive compensation studies (Andjelkovic et al., 2002; Gray & Cannella, 1997). As the numbers of studies that have found other affects on executive compensation, such as executive's demographic characteristics and the structure of corporate governance, have increased, the support for the pay-for-performance rule has decreased (Gomez-Mejia, Tosi, & Hinkin, 1987; Hebner & Kato, 1997; Nelson, 2005).

In addition, the increasing attention on pay-for-performance among the public stimulated the development of regulations in the United States (Perry & Zenner, 2001). The United States Securities and Exchange Commission (SEC) announced a new compensation disclosure rule, beginning with the fiscal year of 1992, which required publicly held companies to include top executives' compensation disclosures in annual proxy statements to the SEC (Vafeas & Afxentiou, 1998). Congress also established tax legislation, Section 162(m) of the Internal Revenue Code, to limit executive's

compensation's deduction for non-performance-related executive compensation to US$1 million in the publicly traded companies (Perry & Zenner, 2001). Both the SEC regulation and the tax legislation were expected to help determine clearer and more appropriate levels of executive compensation in U.S. publicly traded companies by encouraging companies to relate compensation to company performance (Perry & Zenner, 2001; Vafeas & Afxentiou, 1998).

Today, the compensation packages of executives in publicly traded companies still have been spent huge amounts of money and have continually increased in value in order to attract and retain executives. For example, in 2006, Goldman Sachs' CEO, Lloyd Blankfein, received compensation totaling $55 million in cash, stock options and restricted stock, a 76% increase in pre-tax compensation from 2005. John Mack, CEO of Morgan Stanley, increased his compensation to $41 million in 2006, a 43% increase from 2005 (Hahn, 2007). In the retail industry, George L. Jones, the president and CEO of book retailer Borders Group, Inc., received $3.37 million in compensation during fiscal year 2006 (Financial Times Information, 2007b). Contrary to above examples of increase in top executive compensation, some top executives have voluntarily reduced their annual salaries, sometimes drastically. For example, Roger Enrico, CEO of PepsiCo, dropped his $900,000 salary to $1 in 1998, 1999 and 2000 and donated his previous salary to scholarships for employees' kids. Steve Miller, CEO of Delphi, dropped his salary from $1.5 million to a $1 after the company filed for bankruptcy protection. Rick Wagoner, GM's CEO, cut his salary almost 50% in 2005 and volunteered for another 50% cut in his $2.2 million salary in 2006 (Kempner, 2007). Although some examples show that top executive's compensation is decreased by several reasons, it is true that most industries

still pay huge amounts of money to acquire and keep talented—and sometimes not-so-talented—executives. While the value of executives' compensation packages can vary in response to such factors as firm performance, the structure of other companies' compensation packages, and voluntary cuts by the executive himself or herself, questions about efficient and appropriate executive compensation packages in publicly traded firms have increased as executive compensation has increased (Grabke-Rundell & Gomez-Mejia, 2002).

Since the agency theory was proposed by Jensen and Meckling (1976), numerous studies have been undertaken to find determinants of executive compensation. At the initial stage of executive compensation research, most studies were concerned with determining how executive compensation relates to financial performance standards (Carr, 1977; Core, Holthausen, & Larcker, 1999; Firth, Tam, & Tang, 1999). As mentioned earlier, the pay-for-performance rule has not always been supported by the empirical results of executive compensation studies. Thus, some researchers made efforts to extend executive compensation study by adding other factors, especially factors from managerial power approach (Yermack, 1995; Core et al., 1999; Hallock, 1997; Bebchuk & Fried, 2003; Grinstein & Hribar, 2004). Grinstein and Hribar (2004) stated the "managerial power approach," which presents that compensation based on the pay-for-performance rule did not work optimally to enforce agents to maximize shareholder wealth if the agent had powers or influence over board decisions, including compensation decisions (Grinstein & Hribar, 2004). Based on the concept of the managerial power approach, researchers who questioned the pay-for-performance rule found that the characteristics of ownership structure and corporate governance also affected executive

compensation. As a result, research that investigates determinants of executive compensation should include variables such as ownership structure, number of board members, and whether the executive is on the company's board of directors, so that both the pay-for-performance rule and the managerial power approach are considered in finding the determinants of executive compensation.

2. Research Motive and Problem Statement

Research Motive

The hospitality industry is not much different from other industries when it comes to compensation for top executives. For example, in 2004, Starwood Hotels & Resorts appointed Maven Steven Heyer, former president and COO of the Coca-Cola Co., as its new CEO, with a $1 million annual base salary for a four-year initial term (Parets, 2004). The total compensation of David Brandon, CEO of Domino's Pizza, Inc., increased from $1.81 million in 2004 to $21.9 million in 2006 (Snavely, 2006). The CEO of McDonalds, Jim Skinner, received $8.8 million in bonuses from 2004 to 2006 (Financial Times Information, 2007a).

As in other industries, not all top executives in the hospitality industry have received huge compensation. The CEO of Planet Hollywood International, Robert Earl, was paid half of his $600,000 annual salary in 2001 because of bankruptcy (Schneider, 2007). Tim Taft was appointed as the new CEO of Pizza Inn with a first-year salary of $1, although he received stock options (Robinson-Jacobs, 2005). These are examples of

the hospitality industry's following the pay-for-performance rule, although there are many exceptions. For example, when Denny's restaurant faced a loss of $88.5 million in company earnings before interest and taxes in 2002, the CEO received a $1.3 million bonus (Perlik, 2002). On the other hand, Joseph P. Martori, CEO of ILX Resorts Incorporated, named the number-two top-performing CEO in HVS International's 2002 Survey and beating out the CEOs of the Four Seasons, Marriott International, Starwood, Hilton and others, was one of the lowest-paid CEOs in the hotel industry, ranking 45th among 51 hospitality industry CEOs (Business Wire, 2003). Sometimes, then, the pay-for-performance rule does not explain the determinants of top executives' compensation in hospitality industry well.

Clear understanding of the determinants of executive compensation is necessary for stockholders or potential investors in the hospitality industry to judge whether the appropriate compensation is awarded. Although the hospitality companies have spent large amounts on executives' compensation packages, little research has been done to investigate how that compensation is determined in the industry. Previous literature related to executive compensation in the hospitality and tourism field has examined the determinants of CEO's compensation only with regard to either financial variables from the firm's performance (Gu & Choi, 2004; Kim & Gu, 2005) or to gender difference (Skalpe, 2007).

Problem Statement

Although previous studies have expanded our knowledge of what determines executive compensation in the hospitality industry, it remains uncertain whether

hospitality companies follow only the pay-for-performance rule or whether other factors have an influence on determining executive compensation in the hospitality industry.

3. Significance of the Study

Most literature related to executive compensation in the hospitality field has focused on financial determinants from the pay-for-performance rule (Gu & Choi, 2004; Kim & Gu, 2005; Skalpe, 2007). While the ownership structure and/or corporate governance variables from the managerial power approach have also been considered to be among the determinants of executive's compensation for academic fields and other industries, to the best of my knowledge, there is no study that has considered whether the managerial power approach is a determinant of executive compensation in the hospitality industry. Therefore, this study combines the pay-for-performance rule and the managerial power approach, using both the financial variables from the pay-for-performance rule and the ownership and corporate governance variables from the managerial power approach, to investigate the determinants of executive compensation in the hospitality industry. In addition, Dyl (1988) found that the different types of industry influence on determining management compensation level. Other researchers also adopted a type of industry as dummy variable in their studies to examine whether the different type of industry influences on the level of the executive compensation (Dyl, 1988; Hallock, 1997; Yermack, 1995). Thus, this study also attempts to examine whether there is a difference

between different sectors (i.e., the hotel & casino vs. restaurant) in the hospitality industry regarding determinants of executive compensation.

In terms of methodology, most research on executive compensation has used traditional multiple regression, such as Ordinary Least Square (OLS) regression and Weighted Least Square (WLS) regression analysis, to investigate the relationship between total cash compensation and financial variables from the pay-for-performance rule. The current study adopted Quantile regression analysis, which was developed by Koenker and Basset (1978), to allow examination of whether different levels of total cash compensation are related differently to each independent variable from the pay-for-performance rule and the managerial power approach. Unlike traditional multiple regression analysis, Quantile regression analysis is operated by a conditional quantile function that estimates the relationship between each independent variable and each segment (quantile) of the dependent variables. For this study, then, Quantile regression will allow us to investigate how each independent variable is related to each different segments of the executive's total cash compensation.

4. Purpose of the Study

The primary objective of this study is to examine whether the financial performance variables from the pay-for-performance rule and a company's ownership and corporate governance structure from the managerial power approach is related to

executive compensation in the hospitality industry. More specifically, the purpose of this study is to:

1) Identify the determinants for executive compensation in the hospitality industry in terms of both the pay-for performance rule and the managerial power approach;
2) Examine whether there is a difference between different sectors (i.e., the hotel & casino and restaurant) in the hospitality industry regarding determinants of executive compensation; and
3) Investigate whether different levels of executive compensation are differently related to selected variables from both the pay-for-performance rule and the managerial power approach in the hospitality industry.

5. Organization of the Study

The composition of this study is as follows. Chapter I, the introduction section, presents the background, research motives, significance, and the purpose of the study. Chapter II, the literature review section, reviews previous literature dealing with agency theory, executive compensation with the pay-for-performance rule and managerial power approach, comparisons between OLS regression and Quantile regression analysis, and development of hypotheses for this study. Chapter III explains the research methodology, including data collection, sampling procedures, and data analysis and models. Chapter IV addresses the empirical results of the study and, finally, Chapter V concludes and discusses the study's implications, contributions, and limitations.

CHAPTER II

REVIEW OF LITERATURE

Numerous studies have tried to verify what factor(s) determine executive compensation. Two main streams of research concerning executive compensation in the finance and accounting fields have emerged over the last 70 years. The fundamental difference between the two streams of research lies in the theoretical foundations of executive compensation: the pay-for-performance rule from agency theory, which focuses on the relationship between executive compensation and firm performance; and the ownership structure and corporate governance from managerial power approach, which emphasizes that, because the pay-for-performance rule does not always work to determine executive's compensation, other factors, such as whether the executive is involved in company ownership, board size, and whether the executive is a board member, also influence the executive's compensation. While neither approach is perfect in explaining what determines executive compensation, they each have their advantages and disadvantages. A current trend in the literature is to combine both approaches.

The goal of this literature review is to address the previous studies regarding the effect of financial determinants and managerial power on executive compensation and to identify relevant variables and methodologies used in previous studies. This chapter has

five main sections. The first section summarizes the agency theory, proposed by Jensen and Meckling (1976). The next two sections present the prior studies of executive compensation determinants from the pay-for-performance and the managerial power approaches, respectively. The fourth section compares OLS regression with Quantile regression for this study. The last section proposes the hypotheses for the study.

1. The Agency Theory

In traditional financial theory, the primary goal of business management is maximization of stockholder wealth in terms of maximization of the firm's market value. Because of this, those who invest money in the company expect executives not only to improve their business processes but to increase the company's value (Brigham, Gapenski, & Ehrhardt, 1999), so spending money for executive compensation is one of the investments shareholders make to maximize their wealth.

In contrast to the traditional financial theory, Jensen and Meckling (1976) proposed "the agency problem" within the agency theory, which is that there is a conflict between the agent's interests and the shareholders' interests because of the separation of management from ownership (Jensen & Meckling, 1976). In other words, the agent (the executives, in this case) is more likely to pursue personal interests or goals than to maximize shareholders' wealth (Dyl, 1988; Jensen & Meckling, 1976; Traichal, Gallinger, & Johnson, 1999). This conflict between agent and shareholder evokes several types of costs for shareholders. This "agent cost" is composed primarily of three types of

costs: monitoring cost, bonding cost, and residual loss. Monitoring cost is the cost for the principal (the shareholder in this case) to limit the discretionary behavior of the agent. Bonding cost refers to the costs for the agent (the executive, in this case) to guarantee his or her discretionary behavior. Residual loss is loss from conflicts between principals and agents (Dyl, 1988; Jensen & Meckling, 1976).

Several remedies have been proposed to solve the agency problem, including monitoring the agent's discretionary behavior and controlling the agent's compensation packages (Dyl, 1988; Jensen & Meckling, 1976; Traichal et al., 1999) by providing sufficient agent compensation to motivate the executive to work toward the best interests of shareholders, i.e., achieving maximization of shareholder wealth (Kim & Gu, 2005).

Jensen and Meckling (1976) also suggested that executive compensation could be determined by means of the pay-for-performance rule, which would establish an optimal compensation contract between agent and principal. According to the pay-for-performance rule in agency theory, the agent's compensation should be determined by practical and reliable measures of firm performance, that is, the level of the agent's compensation would be commensurate with his or her contribution to the firm's value. In this context, compensation should be based on observable measures, such as market returns or profitability ratios, which maximize the value of a firm (Grinstein & Hribar, 2004). The pay-for-performance rule is frequently utilized as a standard by which to determine executive compensation by using firm performance (Gu & Choi, 2004). Thus, many extant studies have investigated the relationship between executive compensation and firm performance using several key financial variables, including firm size and

several types of firm performance measures (Anderson, Becher, & Campbell, 2004; Grinstein & Hribar, 2004; Gu & Choi, 2004, Kato & Kubo, 2006; Kim & Gu, 2005).

2. Financial Determinants of Executive Compensation

Most executive compensation studies have adopted the firm's performance in terms of the firm's financial data, as estimators of each executive's performance because of the difficulty of collecting relevant or sufficient data regarding executives' direct contribution on firm performance. In other words, it is difficult to estimate each executive's direct performance on the firm's performance with financial and mathematical figures. The agency theory also suggests that executives' managerial performance leads to improvement in the firm's performance, which, in turn, links to increasing shareholder wealth (Gu & Choi, 2004).

At the initial stage of executive compensation research, especially after Jensen and Meckling proposed the agency theory in 1976, the financial measures from the pay-for-performance rule were probably the most common measure utilized in research on determinants of executive compensation (Bebchuk & Fried, 2003; Gomez-Mejia &Wiseman, 1997). Even though some critics decry the financial measures from the pay-for-performance rule, numerous studies have utilized the financial measures for firm performance. Thus, following these prior studies provides the theoretical justification for the current study to utilize relevant variables for measuring firm performance.

To measure the firm's performance, researchers have adopted several types of financial figures as relevant variables. The three dominant streams of measurement in prior empirical executive compensation studies in the finance and accounting fields are market-based measurements, accounting-based measurements, and growth-based measurements. First, the company's market return in terms of stock returns is an indirect measure of a firm's market-based performance, because it is an important indicator of its business performance and shareholder wealth (Jensen & Murphy, 1990; Leone, Wu, & Zimmerman, 2006). Financial figures such as return on assets, earnings per share, and return on equity, are accounting-based measures of firm performance. The accounting-based ratio analysis is one of the tools used by financial managers and financial analysts to evaluate the financial position or performance of a firm (Chatfield & Dalbor, 2005). Finally, many studies have utilized the firm's sales growth as a growth-based determinant of executive compensation (Firth et al., 1999; Kato & Kubo, 2006). Many prior studies of executive compensation based on the pay-for-performance rule have also used firm size as a control variable (Andjelkovic et al., 2002). Studies that followed often adopted these four financial measurements of firm performance in executive compensation research.

Jensen and Murphy (1990) examined the association between top management's pay and performance, adopting shareholder wealth in terms of stock returns as an estimator of managerial performance. The study found that top management compensation is highly sensitive to the stock returns of the company. One other example of a study regarding the sensitivity of stock returns on executive compensation was conducted by Leone et al. (2006). The authors examined the sensitivity of CEO cash compensation to stock returns with 9,858 CEOs in the ExecuComp database from 1993 to

2003 and found that CEO cash compensation is twice as sensitive to negative stock returns as it is to positive stock returns. The results supports that company's stock return positively influence on determining CEO cash compensation. In addition, the reducing amount of CEO cash compensation in company with negative stock return is bigger than the increasing amount of CEO cash compensation in company with positive stock return.

Gray and Cannella (1997) examined the role of firm's risk in executive compensation, using several financial figures to identify the relationship between executive compensation and firm risks, return on sales, and firm size. The results of the study provided that firm risks have a significantly negative relationship with executive total compensation and firm size, and Jensen's alpha has a significantly positive association with executive total compensation. The findings from this study supports that the executive compensation is determined by firm's performance. Furthermore, the executive compensation is reduced when firm's risk increases, as well as the executive compensation is increased when firm's size and firm's performance increase.

Duru and Iyengar (1999) conducted a cross-sectional research analysis of 225 firms in the electric utility industry (SIC code 4931) from 1992 to 1995 to examine the association between firm performance and CEO compensation components. The authors adopted the change in CEO compensation as the dependent variable and the changes in the firm's financial figures as multiple independent variables to examine the sensitivity of CEO compensation to changes in firm performance. They used market returns, return on assets, earning per share, operating cash flow per share, and growth in sales to measure financial performance and showed a positive relationship between changes in compensation and changes in firm performance. More specifically, executive bonuses

were sensitive to changes in market return, and executive stock options were sensitive to changes in sales growth.

Several studies have examined the relationship between executive compensation and firm performance during special events, like mergers and acquisitions (M&A). Anderson et al. (2003) investigated bank CEOs' managerial incentives for bank mergers as they related to financial variables such as firm size and stock returns, and found that CEO compensation was in line with an increase in bank size, regardless of whether a merger or acquisition created value. Grinstein and Hribar (2004) also used financial variables, including firm size and ROA, stock return, and sales growth, to examine the determinants of CEOs' bonuses for 327 large ($1 billion or more) M&A deals in publicly traded U.S. companies between 1993 and 1999. They found the firm size, ROA, stock return, and the acquisition dummy to be positively correlated with CEOs' bonuses for the M&A deal.

Some studies of executive compensation determinants have been performed in countries outside the U.S., such as Japan (Kato & Kubo, 2006), England (Eichholtz, Kok, & Otten, 2008), and China (Firth et al., 1999). Kato and Kubo (2006) examined the relationship between executive compensation and firm performance for Japanese firms from 1986 to 1995 using market-based firm performance (stock returns), accounting-based firm performance (return on asset), growth-based firm performance (sales growth), and firm size. The results of this study supported that Japanese CEOs' cash compensation was sensitive to firm performance (especially accounting-based performance) and that the bonus system made CEO compensation more responsive to firm performance. Eichholtz et al. (2008) used samples from 39 companies in the UK property industry from 1998 to

2003 and variables from both firm performance and corporate governance—total stock performance, Jensen alpha, earnings per share, dividend yield, and discount—to investigate the association between executive compensation and firm performance. They found that stock performance, Jensen alpha, earnings per share, and discount were not significantly related to executive cash compensation but that dividend yield was significantly negatively related to executive cash compensation. Thus, the study found a weak association between executive cash compensation and the pay-for-performance rule.

Firth et al. (1999) used a sample of companies in Hong Kong and several variables from both the pay-for-performance rule and the managerial power approach—annual stock return, firm size, return on shareholder equity, and annual compound sales growth—and found that the companies in Hong Kong followed pay-for-performance rule, by showing that company size and accounting profitability are significantly related with executive compensation. Thus, executive compensation studies of three different countries cautiously supported an association between executive compensation and firm performance.

Most research has measured firm performance with market-based, accounting-based (mostly profitability measures), and growth-based measures, as well as a control variable for firm size. However, other types of accounting based financial ratios have been used to represent for firm performance in the accounting literature. The basic accounting-based financial ratios are generally divided into four categories: liquidity, activity, profitability, and coverage. Liquidity ratios are used to measure the company's short-run ability to pay its maturing obligations, activity ratios measure how effectively

and efficiently a company uses its assets, profitability ratios are measures of the degree of success or failure of company for a given period of time, and coverage ratios measure the protection of long-term creditors and investors (Brigham et al., 1999; Chatfield & Dalbor, 2005; Gallagher & Andrew, 1997; Kieso, Weygandt, & Warfield, 2001). Although most studies have adopted profitability ratios for firm performance from among the four classified accounting based ratio analyses, other ratios, like liquidity, activity and coverage ratios, might also be considered as measures of firm performance for the current study.

Ortiz-Molina (2007) stated that executive compensation may not only depend on shareholder opinion, because the bondholders (debtors) but also have the power to influence executive compensation. Thus, Ortiz-Molina found that executive compensation was significantly sensitive to the types of debt in a company. Traichal et al. (1999) affirmed the importance of liquidity ratios and coverage ratios in executive compensation and adopted a modified liquidity ratio (ratio of short-term debt divided by total assets) and coverage ratio (ratio of long-term debt divided by total assets). Since those two liquidity and coverage ratios are measurements that show the ability of a firm to pay back both short-term and long-term debt, those two ratios may also be considered measurements of firm performance. In addition, some studies of executive compensation in the hospitality field have included all four types of accounting-based financial measurements (liquidity, efficiency, profitability, and coverage) as independent variables for their executive compensation studies (Gu & Choi, 2004; Kim & Gu, 2005). In a related study in the hospitality field, Cauvin (1979a) investigated the relationship between executive total compensation and company size, represented by sales, with 33

lodging companies in the U.S. Since the study was conducted before the SEC's regulation requiring disclosure of top executive compensation disclosure was announced, the data for this study were collected from surveys based on the 1978 directory of Hotel/Motel Systems, published by the American Hotel and Motel Association. The author found that the relationship between executive total compensation and company sales was not similar, unlike the results from the studies in other industries. The results indicated that the executive total compensation in small hotel companies was equal to or more than the executive total compensation in large hotel companies. Cauvin investigated the relationship between executive compensation and company sales again in 1979, this time conducting nine simple regressions to examine the relationship between executive compensation in each of nine executive positions. The results showed that there was less relationship between executive compensation and company sales in the lodging industry than in other fields (Cauvin, 1979b).

More recently, Gu and Choi (2004) researched the determinants of CEO compensation in the casino industry, using several types of financial measurements for firm performance: market-based firm performance (annual change of stock price), accounting-based firm performance (return on assets for firm profitability, asset turnover ratio for firm efficiency, long-term debt ratio for firm debt leverage), and firm size (total assets). The results supported that profitability, firm size, debt leverage, and stock options were positively related to CEO cash compensation, while revenue efficiency (i.e., asset turnover) was negatively correlated. Kim and Gu (2005) also studied the determinants of CEO cash compensation in the restaurant industry based on the pay-for-performance rule using firm size, sales growth, ROI, and stock returns. The authors found that CEOs' cash

compensation was positively associated with firm size and operating efficiency, while growth, debt leverage, profitability, and stock performance were not related. In addition, Namasivayam, Miao, and Zhao (2007) investigated the relationship between compensation and firm performance for 1,223 hotel companies in the U.S. using data gathered from the Hospitality Compensation and Benefit Survey of Smith Travel Research in 2001 to 2003. Unlike other studies of executive compensation in the hospitality industry or other industries, the authors adopted RevPar (Revenue per available room) as the hotels' performance measurement. The results showed that both individual salary and benefits were significantly positively related to hotel performance for both management and non-management employees.

For the tourism industry, Skalpe (2007) examined the differences in CEO pay between Norway's tourism and manufacturing industries with regard to the CEOs' gender and age, as well as financial variables that included firm size and firm performance. The study found that there was a difference in CEO pay between genders in both industries, although the smaller companies showed a greater difference. A difference in salary by gender is particularly significant for the tourism industry because more female CEOs work in the tourism industry than in the manufacturing industry.

As a result of extensive literature reviews of studies in the accounting and finance literature on executive compensation based on pay-for-performance rule, four major categories for measuring firm's performance can be identified: market-based firm performance, accounting-based firm performance, growth-based performance, and firm size. Table 2-1 shows a summary of the financial variables used in prior studies of executive compensation determinants. These financial variables can be utilized as the

basis by which select relevant variables of financial determinants for executive compensation in the current study.

Table 2-1. The classification of financial variables from the previous studies

Type	Variable	Studies
Firm size	Total Asset (TA)	Anderson et al. (2003); Firth et al. (1999); Grinstein & Hribar (2004); Gu & Choi (2004); Kim & Gu (2005);Traichal et al. (1999)
	Sales Volume (SV)	Cauvin (1979); Gray & Cannella (1997); Leone et al (2006); Skalpe (2007);
Firm Profitability	Stock Return (SR)	Anderson et al. (2003); Andjelkovic et al (2002); Duru & Iyengar (1999); Eichholtz et al (2008); Firth et al. (1999); Grinstein & Hribar (2004); Gu & Choi (2004); Jensen & Murphy (1990); Kato & Kubo (2006); Leone et al (2006); Traichal et al(1999)
	Return on Asset (ROA)	Andjelkovic et al (2002); Duru & Iyengar (1999); Grinstein & Hribar (2004); Gu & Choi (2004); Kato & Kubo (2006);Leone et al (2006); Skalpe (2007);
	Return on Investment (ROI)	Gomez-Mejia et al (1987); Kim & Gu (2005);
	Return on Sales (ROS)	Gray & Cannella, Jr (1997);
	Return on Equity (ROE)	Andjelkovic et al (2002); Firth et al. (1999); Gomez-Mejia et al (1987); Traichal et al(1999)
	Earnings per Share (EPS)	Duru & Iyengar (1999); Eichholtz et al (2008); Gomez-Mejia et al (1987); Perry & Zenner (2001)
	Sales Growth (GS)	Duru & Iyengar (1999); Firth et al. (1999); Gomez-Mejia et al (1987); Grinstein & Hribar (2004); Kato & Kubo (2006); Kim & Gu (2005)
Firm Liquidity	Fixed Assets Turnover (FAT)	Kim & Gu (2005)
Firm Activity	Asset Turnover (AT)	Gu & Choi (2004); Kim & Gu (2005)
Firm Coverage	Debt ratio (DT)	Kim & Gu (2005)
	Long Term Debt (LTD)	Gu & Choi (2004); Traichal et al(1999)

3. Managerial Power Determinants of Executive Compensation

Recent academic research has found it difficult to explain the determinants of executive compensation using only firm performance because numerous empirical results have supported that the pay-for-performance rule does not always work in determining executive compensation (Conyon, 1997; Gomez-Mejia et al., 1987). Thus, researchers have turned their sights to finding other factors that might influence executive compensation, such as demographic characteristics (e.g., age, gender, and education level), compensation structure (e.g., the composition of compensation with stock options and cash compensation), and the variables from the managerial power approach (e.g., stock ownership, board size, compensation committee size) (Coles, McWilliams, & Sen, 2001; Nelson, 2005). Among those attempts to address other determinants of executive compensation, the dominant theoretical foundation is the managerial power approach proposed by Ouch and Maguire in 1975 (Gomez-Mejia & Wiseman, 1997).

According to traditional financial theory, especially agency theory, the board of a company can control an agent (executive) with compensation packages. However, the managerial power approach suggests that the executive would not consider shareholder wealth if he or she had the power to influence the board's decision-making; that is, if the executive has enough governance power to affect the board's decision process in establishing the executive's compensation contract, the traditional financial view based on the pay-for-performance rule may not be an appropriate approach to finding the determinants of executive compensation (Bebchuk & Fried, 2003; Core et al., 1999; Grinstein & Hribar, 2004; Hallock, 1998; Yermack, 1995). Thus, the managerial power

approach has been combined with the pay-for-performance rule in recent empirical studies on executive compensation.

There are two main components of the managerial power approach: stock ownership structure and board independence. For the stock ownership structure's impact on executive compensation, the CEO who possesses a higher portion of the company's outstanding stocks could have more power in the company and be more likely to use corporate resources for his or her own benefit (Khan, Dharwadkar, & Brandes, 2005). Thus, the executive with high stock ownership would extract greater overall levels of compensation (Ozkan, 2007). In other words, the level of executive compensation would be higher when the executive has higher stock ownership (Toyne, Millar, & Dixon, 2000). In addition, higher executive possession of company's outstanding stocks would influence the composition of board members, because the voting rights to select directors are distributed according to the amount of company stock held. Thus, an executive who owns a great deal of stock may have enough power to affect his or her own compensation level by selecting sympathetic board members (Grabke-Rundell & Gomez-Mejia, 2002).

Since the board of directors decides the level of executive compensation, the independence of the board has been regarded as one of the key factors in determining executive compensation. However, it is not always easy to keep the board independent of top executives in the company. For example, outside members of the board are less likely to conflict with the CEO when the CEO appoints the outside members. Furthermore, the board of directors tends to follow the opinion of compensation consultants who are hired by the CEO (Core et al., 1999). As a result, executive compensation might not be

determined with the company's best interests in mind (Core et al., 1999). Therefore, the independence of the board should be considered in an executive compensation study.

Numerous studies have been conducted to examine the association between executive compensation and selected variables from the managerial power approach. Gomez-Mejia et al. (1987) studied the effect of ownership structure on CEO compensation by classifying sample companies into two categories using the 5 percent ownership convention (referring to whether one individual or organization holds more than five percent of the company's outstanding stock and may, therefore, be able to affect decisions): management-controlled companies and owner-controlled companies. The firm's performance and size measures were also included in the study, which found that ownership structure significantly influenced the level of CEO compensation such that CEO in externally controlled firms receive more compensation on the basis of firm performance than do CEOs in internally controlled firms. Thus, executive compensation would be more likely to follow the pay-for-performance rule in externally controlled firms, and executive stock ownership is a key factor in determining executive compensation.

Core et al. (1999) also researched the effect of corporate governance on executive compensation with 495 CEOs in 205 publicly traded U.S. firms. The authors utilized several relevant variables from both financial performance and the managerial power approach to identify determinants of executive compensation. Among the managerial power variables were board size, composition of board membership, whether the CEO served as chairperson of the board, and the CEO's percentage of stock ownership. The authors found that there is a significantly negative relationship between CEO

compensation and board and ownership structure and concluded that CEOs received greater compensation when governance structures were less effective. Likewise, Yermack (1996) found that companies with small boards provided stronger CEO performance incentives from compensation. Other studies that investigated the relationship between CEO compensation and corporate governance from managerial power approach included that of Bebchuk and Fried (2003), which found that the CEO could influence board decisions by controlling the information about the company to board members and controlling the meeting time and agenda.

Several studies have examined the relationship between executive compensation and relevant variables from the managerial power approach in different countries, such as China (Firth, Fung, & Rui, 2007), the United Kingdom (Ozkan, 2007), and Israel (Cohen & Lauterbach, 2008). Firth et al. (2007) examined how ownership structure and corporate governance influenced CEOs' compensation in Chinese companies. They adopted variables based on the theoretical concepts from both the pay-for-performance and managerial power approaches. Board size, proportion of non-executive directors on the board, and a dummy variable (whether the CEO and the chairman of the board are the same person) were used to examine the effect of managerial power on CEO compensation. The study revealed that type of ownership and board size affected CEO compensation, as independent boards or non-executive directors of boards were more likely to implement performance-related pay.

Using board size, the composition of non-executive directors on board, and CEO stock ownership, Ozkan (2007) investigated how corporate governance influenced CEO compensation in 414 U.K. companies and found that larger board size and a higher

proportion of non-executive directors on the boards resulted in higher CEO compensation; thus, less corporate governance of executives led to higher executive compensation. Finally, Cohen and Lauterbach (2008) researched CEO compensation, as it related to company ownership, with 124 publicly traded firms in Israel from 1994 to 2001. The authors included independent variables of firm performance, firm size, board composition, demographics (education level and age), and company ownership and found that CEOs in CEO-owned companies received significantly higher compensation than did CEOs who did not own part of the company. In addition, the pay-for-performance sensitivity was lower in CEO-owned companies than in non-CEO owned companies, even though the difference was not statistically significant. These results also indicated that the CEOs who owned more company stock received higher compensation than did CEOs who owned less company stock, regardless of firm performance. Thus, executive compensation was related to corporate governance in a variety of different countries.

The extant literature demonstrates that the importance of the managerial power approach has increased and that combinations of variables from the pay-for-performance and the managerial power approaches have come to the fore in executive compensation studies. Thus, the managerial power approach should be considered for the current study in order to derive more concise and meaningful information, so both the pay-for-performance and the managerial power approaches shall be included in this study. Table 2-2 summarizes selected variables from the managerial power approach used in prior studies which will form the basis of variables of managerial power determinants in this study.

Table 2-2. The variables of managerial power approach used in previous studies

Type	Variables	Studies
Ownership	Executive shares	Cohen & Lauterbach (2008); Core et al. (1999); Coles et al. (2001); Gomez-Mejia et al. (1987); Khan et al. (2005); Ozkan (2007)
	Ownership Composition	Core et al. (1999); Coles et al. (2001); Firth et al. (2007); Khan et al. (2005); Ozkan (2006); Toyne et al. (2000)
Board Independence	Board size (Number of Board Director)	Core et al. (1999); Firth et al. (2007); Grinstein & Hribar (2004); Hallock(1997); Ozkan (2007); Yermack (1995)
	Board Structure	Cohen & Lauterbach (2008); Core et al. (1999); Coles et al. (2001); Firth et al. (2007); Grinstein & Hribar (2004);
	Executive as Director (CEO as Board of chair)	Conyon (1997); Core et al. (1999); Firth et al. (2007); Grinstein & Hribar (2004);

4. OLS regression and Quantile regression

Several types of multiple regression analyses have been utilized in prior empirical studies to examine the relationship between executive compensation and selected variables based on pay-for-performance, managerial power, and demographic characteristics. These have included multivariate logistic regression (Gray & Cannella, 1997; Jensen & Murphy, 1990; Nelson, 2005), weighted least-squares (WLS) regression

(Gu & Choi, 2004; Kim & Gu, 2005), and ordinary least squares (OLS) regression (Anderson et al., 2004; Core et al., 1999; Dyl, 1988; Firth et al., 2007; Firth et al., 1999; Grinstein & Hribar, 2004; Gomez-Mejia et al., 1987; Hebner & Kato, 1997; Kato & Kubo, 2006; Traichal et al., 1999). Clearly, most researchers have used OLS regression analysis in these efforts. OLS regression achieves the parameter estimates of the model (model fit) and illuminates the relationship between the dependent variable and independent variables through the conditional mean function (Kutner, Nachtsheim, Neter, & Li, 2005; Pedhazur, 1997). The conditional mean function uses the conditional mean response to examine the relationship between the dependent variable and independent variable(s) (Hao & Naiman, 2007). One of the crucial factors in conducting OLS regression is reducing a heteroscedasticity problem by minimizing the sums of squared residuals in the regression equation. However, OLS regression analysis has been criticized for failing to minimize the sums of squared residuals in the regression equation (Koenker, 2005) because it is difficult to follow the equal variance of variables for social phenomena in the real world (Hao & Naiman, 2007).

Because of this criticism, Koenker and Basset (1978) developed a new mechanism of regression analysis, called quantile regression analysis, which uses a conditional quantile function instead of a conditional mean. Quantile regression analysis can be used to examine the relationship between the dependent variable and independent variable(s) by estimating each quantile of response variables based on the conditional quantile function (Koenker & Hallock, 2001); thus, it can achieve flexibility by estimating a change in the entire range of the dependent variable through a change in each independent variable (Hao & Naiman, 2007). As a result, quantile regression

analysis has gradually emerged as the way to estimate the responses of various levels of a population from each independent variable (Koenker & Machado, 1999).

More specifically, the conditional mean function in the OLS regression enables to estimate the coefficient of each independent variable by taking the value of parameters that minimize the sum of squared residuals. In other words, OLS regression minimizes the sum of squared vertical distances between data points (X*i*, Y*i*) and the fitted line $\hat{\mathbf{Y}} = \hat{\boldsymbol{\beta}}_0 + \hat{\boldsymbol{\beta}}_1$ (Hao & Naiman, 2007; Koenker, 2005; Koenker & Basset, 1978). The model for estimating the coefficient of OLS regression is shown as follows:

$$\text{Min} \sum_i (\mathbf{Y}_i - (\boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 x_i))^2$$

However, the conditional quantile function enables to estimate the coefficients of independent variables that minimize the sum of absolute residuals. In other words, quantile regression minimizes the sum of absolute vertical distances between observed value to its fitted value. The model for estimating the coefficient of median-regression line is follows:

$$\text{Min} \sum_i \left| \mathbf{Y}_i - (\boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 x_i) \right|$$

The median regression line should pass through a pair of sample, by half of data should be in the above median regression line, as well as the last half of data should be in the below median regression line (Hao & Naiman, 2007). By modifying above median regression function, the estimation of coefficients for *p*th quantile regression is derived as shown below:

$$\text{Min} \; P \sum_{Yi \geq \beta_0^{(p)} + \beta_1^{(p)} x_i} \left| Y_i - (\beta_0^{(p)} + \beta_1^{(p)} x_i) \right| + (1-P) \sum_{Yi < \beta_0^{(p)} + \beta_1^{(p)} x_i} \left| \mathbf{Y}_i - (\beta_0^{(P)} + \beta_1^{(P)} x_i) \right|$$

As shown above *p*th quantile regression model, *p*th quantile regression enables to estimate the coefficients $\hat{\beta}_0^{(p)}$ and $\hat{\beta}_1^{(p)}$ by using the weighted sum of distances between fitted values from $\hat{Y}_i = \hat{\beta}_0^{(p)} + \hat{\beta}_1^{(p)}$ and the observed value of Y*i*, where 0 < P < 1 (Hao & Naiman, 2007; Koenker, 2005; Koenker & Bassett, 1978).

In addition, Koenker and Hallock (2001) used one example of a CEO compensation topic to illustrate the need for quantile regression analysis for executive compensation study. They derived 1999 data from the EXECUCOMP database for CEO annual compensation in 1,660 firms and showed that executive compensation tends to increase with firm size. However, the low and high levels of CEO annual compensation were more highly related to firm size than were the middle range of CEO annual compensation, indicating that different levels of CEO compensation were differently related to firm size. The authors insisted that those kinds of results would be more frequent and would create more difficulty in explaining the relationship between executive compensation and covariates with OLS regression analysis when the sample size is larger and more covariates are included in the study. Thus, they suggested that quantile regression analysis would be a more effective method than the OLS method for executive compensation studies.

In the current study, quantile regression analysis also enables examination of whether different levels of executive total cash compensation are related differently to each independent variable. More specific and concise results are expected from quantile regression analysis than would be expected from OLS regression analysis.

5. Development of Hypotheses

Two main hypotheses for this study are proposed for examining the determinants of executive cash compensation in the hospitality industry using OLS regression and quantile regression with selected variables from both the pay-for-performance and the managerial power approach. The two main hypotheses were tested for three classes of samples: for Ha, all hospitality industry (H1), hotel and casino industry (H2), and restaurant industry (H3); and for Hb, and all hospitality industry (H4), hotel and casino industry (H5), and restaurant industry (H6).

Hypotheses A

Ha: The selected variables from both the pay-for-performance rule and the managerial power approach are significantly correlated with executive cash compensation in the hospitality industry.

Ha-1: The firm's current ratio (CR) is significantly correlated with executive cash compensation in the hospitality industry.

Ha-2: The firm's asset turnover (AT) is significantly correlated with executive cash compensation in the hospitality industry.

Ha-3: The firm's debt-to-asset ratio (DT) is significantly correlated with executive cash compensation in the hospitality industry.

Ha-4: Firm size (FS) is significantly correlated with executive cash compensation in the hospitality industry.

Ha-5: The firm's Earnings per Share (EPS) is significantly correlated with executive cash compensation in the hospitality industry.

Ha-6: The firm's sales growth (GS) is significantly correlated with executive cash compensation in the hospitality industry.

Ha-7: The type of executive (whether the executive is a director or not: PDIR) is significantly correlated with executive cash compensation in the hospitality industry.

Ha-8: The board size (the number of directors on the board: NDIR) is significantly correlated with executive cash compensation in the hospitality industry.

Ha-9: The compensation committee size (the number of directors on the compensation committee: NCCMT) is significantly correlated with executive cash compensation in the hospitality industry.

Ha-10: The number of the executive's equity shares (Dummy variable: whether the executive has more than 5% of outstanding common stocks of company: SO) is significantly correlated with the executive cash compensation in the hospitality industry.

One additional set of hypotheses was proposed for the quantile regression method. Each selected variable from both the pay-for-performance rule and the managerial power approach was tested by different levels of executive total cash compensation, leading to the following hypothesis:

Hypotheses B

Hb: The selected variables from both the pay-for-performance rule and the managerial power approach are differently correlated with different levels of executive cash compensation in the hospitality industry.

Hb-1: The firm's current ratio (CR) is differently correlated with different levels of executive cash compensation in the hospitality industry.

Hb-2: The firm's asset turnover (AT) is differently correlated with different levels of executive cash compensation in the hospitality industry.

Hb-3: The firm's debt-to-asset ratio (DT) is differently correlated with different levels of executive cash compensation in the hospitality industry.

Hb-4: Firm size (FS) is differently correlated with different levels of executive cash compensation in the hospitality industry.

Hb-5: The firm's Earnings per Share (EPS) is differently correlated with different levels of executive cash compensation in the hospitality industry.

Hb-6: The firm's sales (GS) is differently correlated with different levels of executive cash compensation in the hospitality industry.

Hb-7: The type of executive (whether the executive is a director: PDIR) is differently correlated with different levels of executive cash compensation in the hospitality industry.

Hb-8: Board size (the number of directors on the board: NDIR) is differently correlated with different levels of executive cash compensation in the hospitality industry.

Hb-9: Compensation committee size (the number of directors on the compensation committee: NCCMT) is differently correlated with different levels of executive cash compensation in the hospitality industry.

Hb-10: The number of the executive's equity shares (Dummy variable: whether the executive has more than 5% of outstanding company common stocks: SO) is differently correlated with different levels of executive cash compensation in the hospitality industry.

CHAPTER III

METHODOLOGY

1. Data Collection and Sampling Procedures

The main objective of this study is to examine which elements from the two approaches, financial performance and managerial power, are linked to executive cash compensation in the hospitality industry. Sample data were gathered from secondary databases, Standard & Poor's COMPUSTAT database and proxy statements (DEF 14A) from SEC filings. The data collection procedure for this study was divided into two main processes: gathering firms' financial data from the COMPUSTAT database to calculate financial measurements and collecting executive compensation data and data related to the managerial power approach from the proxy statements from SEC filings.

If a company's data was not available for one of following procedures, the observation was eliminated from the sample. The sample companies were limited to the companies that were on the list of COMPUSTAT database. Among the several subsidiaries of the hospitality industry were three major sectors: hotels, casinos, and restaurants.

1. Financial data for the sample companies were retrieved for each of the three main sectors of the hospitality industry from the COMPUSTAT database using Standard Industrial Classification (SIC) codes. A total of 150 hospitality company samples were collected.
    1) Hotel Industry

       The initial sample consisted of all hotel companies (SIC code 7011). After excluding companies that did not have financial data for either 2005 or 2006, 15 hotel companies remained in the sample.
    2) Casino Industry

       The initial sample consisted of all casino companies (SIC code 7990). After excluding companies that did not have financial data for either 2005 or 2006, 49 casino companies remained in the sample.
    3) Restaurant Industry

       The initial sample consisted of all restaurant companies (SIC code 5812). After excluding companies that did not have financial data for either 2005 or 2006, 86 restaurant companies remained in the sample.
2. The 150 hospitality companies in the sample were matched to the SEC filing list to find executive compensation data and data related to the managerial power approach. After the matching process, 83 hospitality companies remained in the sample.
    1) Hotel Industry

       Seven hotel companies were eliminated from the sample either because they were not listed in the SEC filings or because they didn't have proxy

statements (DEF 14A) for 2005 and 2006. After excluding the 7 companies, 8 hotel companies remained in the sample.

2) Casino Industry

Twenty-eight casino companies were eliminated from the sample either because they were not listed in the SEC filing lists or because they didn't have proxy statements (DEF 14A) for 2005 and 2006. After excluding the 28 companies, 21 casino companies remained in the sample

3) Restaurant Industry

Thirty-two restaurant companies were eliminated from the sample either because they were not listed in the SEC filing lists or because they didn't have proxy statements (DEF 14A) for 2005 and 2006. After excluding the 32 companies, 54 casino companies remained in the sample.

3. Executive compensation and data related to the managerial power approach were retained from the proxy statements of the 83 hospitality companies for 2005 and 2006. Initially, data for 388 executives were gathered; after filtering, 331 executives' data remained.

1) Filtering Executives' data from the Hotel Industry

The initial executive sample included 44 executives in 8 hotel companies. Nine executives were missing compensation data for either 2005 or 2006 and were eliminated, leaving 35 executives in the sample.

2) Filtering Executives' data from the Casino Industry

The initial executive sample included 104 executives in 21 hotel companies. Seventeen executives were missing compensation data for either 2005 or 2006 and were eliminated, leaving 87 executives in the sample.

3) Filtering Executives' data from the Restaurant Industry

The initial executive sample included 240 executives in 54 hotel companies. Thirty-one executives were missing compensation data from either 2005 or 2006, leaving 209 executives in the sample.

4. With a total of 331 executives' data remaining, the data was filtered again to remove executives who had a greater than 100% change in total cash compensation from 2005 to 2006 because such an unusual change in executive total cash compensation could skew results.

1) In the Hotel Industry

One executive was removed because the executive had a greater than 100% change in total cash compensation from 2005 to 2006, leaving 34 executives in the sample.

2) In the Casino Industry

One executive was removed because the executive had a greater than 100% change in total cash compensation from 2005 to 2006, leaving 86 executives in the sample.

3) In the Restaurant Industry

Fourteen executives were removed because they had a greater than 100% change in total cash compensation from 2005 to 2006, leaving 195 executives in the sample.

5. After transforming the actual cash compensation of executives to their natural logarithms, two outliers were detected in the restaurant sample as having a very low log value. The real dollar amounts of two executives' annual total cash compensations (outliers) were same as $25,000. The $25,000 for each executive's total cash compensation was too small, compared with other executives in the sample. Thus, the two outliers were deleted from the restaurant sample to achieve more efficient results. As a result of removing the two outliers from the restaurant sample, the number of executives in the restaurant sample decreased from 195 to 193, and the number of executives in the full sample decreased from 315 to 313.
6. Finally, the sample was divided into two sub-samples: the hotel and casino industry made up one sub-sample and the restaurant industry made up the other. The hotel and casino companies were combined as one sub-sample because the number of executives in those industries was too small to conduct statistical analysis, especially regression analysis. Combining them made sense since hotel and casino companies are not always easily distinguished because some hotel companies also have casino facilities, and vice versa.

As shown in Table 3-1, these procedures led to a total of 313 executives from 83 hospitality companies: 120 executives from the 29 hotel and casino companies and 193 executives from the 50 restaurant companies.

Table 3-1. Classification of study sample

Category	Type of Industry	Number of companies	Number of executives
Sub-Sample	Hotel & Casino Industry	29	120
Sub-Sample	Restaurant Industry	50	193
Full Sample	Hospitality Industry	79	313

2. Variable selection

Based on the extensive literature review, eleven variables were selected for the study—one dependent variable, six variables from the pay-for-performance rule, and four variables from the managerial power approach. The dependent variable (executive total cash compensation) and the six financial variables were transformed by natural logarithm or calculated by formula to conduct the multiple regression analyses for this study. This section explains why the dependent and independent variables were selected for the purposes of this study, how the dependent variable and one independent variable (firm size) were transformed, and how the other financial measures to be utilized for this study were calculated.

Selection of dependent variable

Executive compensation consists of three main types of executive compensation: cash-based compensation (e.g., salary and bonus), deferred compensation (e.g., stock options), and benefit-based compensation (e.g. insurance and pensions) (Brigham & Houston, 2001). As has been the case with many prior studies, the current study used only the cash-based compensation (in this case, salary and bonus for 2006) as the

dependent variable (Gray & Cannelaa, Jr., 1997; Gu & Choi, 2004; Jensen & Murphy, 1990; Kim & Gu, 2005; Lippert & Porter, 1997). Other types of compensation were not included because they are difficult to translate into comparable (cash) amounts. In addition, total cash compensation was transformed by natural logarithm in order to avoid the statistical problem of heteroscedasticity that can result from the not equal variances of variables from raw data when conducting the regression analyses (Dyl, 1988; Ott & Longnecker, 2001). By adopting the base of natural logarithms for each executive's total cash compensation, the dependent variable was transformed from the original values of executive total cash compensation to the log of executive total cash compensation.

Selection of independent variables

Firm performance variables

Several types of financial measures for firm performance have been utilized in prior empirical executive compensation studies, primarily market-based performance measures, accounting-based performance measures, and growth-based performance measures. The current study adopted both accounting-based and growth-based performance measures. Market-based performance measures (e.g., stock returns) were not chosen for this study because they can be easily biased by "noise" that is not controlled by management (Gomez-Mejia & Wiseman, 1997). Firm size was also utilized as a financial variable. The financial measures for firm performance were adopted and modified from Gu and Choi's study (2004) and Kim and Gu's study (2005) in the hospitality field.

As was mentioned in the literature review, accounting-based financial performance measures are generally divided into four categories: liquidity, activity, profitability, and coverage. Current ratio and quick ratio are common examples of liquidity ratios, which estimate a firm's ability to pay back its short-term debts. Current ratio (CR) was selected for this study, rather than quick ratio, because CR is most commonly used as a basic ratio for liquidity and because quick ratio excludes more liquid assets, like inventory, even though inventory is one of the most important assets in the hospitality industry (Chatfield & Dalbor, 2005). Activity ratios measure management's effectiveness in employing its resources to the firm's business and include mainly receivable turnover, inventory turnover, and asset turnover (Kieso et al., 2001). As in Gu and Choi (2004) and Kim and Gu (2005), asset turnover was selected for this study. Profitability ratios include return on assets, profit margin on sales, and earnings per share (EPS). Return on assets and EPS have often been used in executive compensation studies as an estimator of firm's profitability (Duru & Iyengar, 1999; Eichholtz et al., 2008; Gomez-Mejia et al., 1987; Perry & Zenner, 2001). EPS was selected as an estimator of firm's profitability ratios for the current study, rather than return on assets, because EPS facilitates checking the firm's profitability based on the amount of outstanding common stock, so EPS is an indicator of shareholder profits from the firm's business activities in the fiscal year (Gallagher & Andrew, 1997). Finally, as has been the case in prior studies in the field, debt ratio (DT) (Kim & Gu, 2005; Ortiz-Molina, 2007) was selected as an estimator of the firm's coverage ratios, which measure the firm's ability to protect itself from its total debt (Brigham & Houston, 2001).

Most previous executive compensation studies have also added firm size and sales growth as financial determinants of executive compensation. Firm size has been used as a control variable in prior executive compensation studies because it is highly correlated with the level of executive compensation (Gomez-Mejia et al., 1987). Thus, as in other studies, total assets (TA) was selected to estimate firm size for this study (Gu & Choi, 2004; Kim & Gu, 2005). Sales growth has also been viewed as an indicator of growth-based performance and was adopted from Kim and Gu's study as a estimator of growth-based performance for the current study. Thus, a total of six financial variables from the pay-for-performance rule were utilized for this study.

Accounting-based financial ratios were used to transform and calculate six financial variables from the pay-for-performance rule into independent variables. Firm size and sales growth rate were also calculated using formulas; firm size transformed the dollar amount of the firm's total assets by natural logarithms to avoid the bias of heteroscedasticity. The following formulas were used to calculate the financial variables for this study:

1) $$\text{Current Ratio (CR)} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

2) $$\text{Asset Turnover (AT)} = \frac{\text{Net Sales}}{\text{Total Assets}}$$

3) $$\text{Earinings per Share (EPS)} = \frac{\text{Net Income - Preferred Stock Dividends Paid}}{\text{Common stock outstanding}}$$

4) $$\text{Debt Ratio (DT)} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

5) $$\text{Sales Growth (SG)} = \frac{\text{Sales}_{2006} - \text{Sales}_{2005}}{\text{Sales}_{2005}}$$

6) $$\text{Firm size (FS)} = \text{Log(TotalAsset)}$$

Managerial power variables

Several types of variables have been utilized in prior studies to investigate the effects of the stock ownership structure and board independence on executive compensation. For this study, four variables from the managerial power approach were selected: Number of board directors (NDIR), Number of compensation committee members (NCCMT), Executive as current director (PDIR), and the executive's stock ownership (SO). Several studies have adopted NDIR and NCCMT to estimate the board's independence (Core et al., 1999; Firth et al., 2007; Grinstein & Hribar, 2004; Hallock, 1997; Ozkan, 2007; Yermack, 1995). Real numbers for both variables were collected from the companies' proxy statements (DEF 14A) in the SEC filing lists and recorded in the dataset. PDIR represents whether the executive is a current member of the board of directors and was a dummy variable, coded 0 if the executive was not a current board director or 1 otherwise. Finally, the executive's stock ownership was included to examine the effect of ownership structure on executive compensation and was also a dummy variable, coded 0 if the executive has less than 5% of company's common stocks or 1 otherwise. The classification rule for this variable was based on whether the executive held more than 5% of the company's outstanding common stocks. Since 1960s, numerous researchers have used the cut-off point of 5% stock ownership convention in many empirical research, because 5% of stock ownership for publicly traded company has been considered as enough amounts of stocks to influence on the firm's decision making

(Grabke-Rundell & Gomez-Mejia, 2002; Gomez-Mejia et al., 1987). Thus, four variables from the managerial power approach were adopted and modified to examine the effects of corporate governance and stock ownership on executive compensation in the hospitality industry.

3. Data Analysis and Model

This research is designed as a cross-sectional data analysis to examine how each financial performance and managerial power variable is linked to executive cash compensation in the hospitality industry. The data analysis of this study consisted of a descriptive analysis, a reliability test, an Ordinary Least Squares (OLS) regression analysis, and a quantile regression analysis. A descriptive analysis summarized the sample's financial characteristics (e.g., firm size, EPS, and sales) and corporate governance characteristics (e.g., number of board members, executive's stock ownership, board characteristics). Several types of reliability tests were conducted to check the data before doing the OLS regression and quantile regression analyses. Scatter plots allowed outliers to be removed from the sample, and a histogram and normal probability plot tested the normality and linearity in order to check the assumptions of the multiple regression analysis.

The OLS regression analysis and the quantile regression analysis were used to investigate the determinants of executive cash compensation, with total cash compensation as the dependent variable (Y) and all variables from both the pay-for-

performance rule and the managerial power approach as the independent variables (X). Quantile regression analysis allowed examination of whether different levels of total cash compensation are related differently to each independent variable from the pay-for-performance rule and the managerial power approach.

To test the hypotheses proposed in literature review chapter, the multiple regression models for each industry were proposed as follows:

Predicted Executive total cash compensation = $\beta 0 + \beta 1$ Current ratio$(CR)_{it} + \beta 2$ Asset turnover$(AT)_{it} + \beta 3$ Debt ratio$(DT)_{it} + \beta 4$ Firm size$(FS)_{it} + \beta 5$ Earnings per Share $(EPS)_{it} + \beta 6$ Sales growth$(SG)_{it} + \beta 7$ Executive as board directors$(PDIR)_{it} + \beta 8$ Number of board directors$(NDIR)_{it} + \beta 9$ Number of compensation committee members$(NCCMT)_{it} + \beta 10$ Executive's stock shares $(SO)_{it} + \varepsilon_{it}$,

Where,

$\beta 0$ = the intercept; $\beta_{1,2...,10}$ = the beta coefficient or slope; and ε_{it} = the random error term or the residual portion; Total cash compensation$_{it}$ = the sum of executive's annual cash salary and cash bonus for firm *i* in year *t*; Current ratio$_{it}$ = Current asset/Current liabilities for firm *i* in year *t*; Asset turnover$_{it}$ = Total sale (revenue)/ Average of asset for firm *i* in year *t*; Debt ratio$_{it}$ =Total liabilities / Total assets for firm *i* in year *t*; Firm size$_{it}$ = Log of the book value of total assets of firm *i* in year *t* ; Earnings per Share$_{it}$ = (Net income – preferred common stock dividend paid) / common stock outstanding for firm *i* in year *t*; Sales growth$_{it}$ = the percentage growth in sales for firm *i* from year *t-1* to year *t*; Executive as board director$_{it}$ = Whether the executive is also a member of the board for

firm *i* in year *t* (not current member of board = 0, current member of board = 1); Number of board directors $_{it}$ = Total number of board directors for firm *i* in year *t*; Number of compensation committee members $_{it}$ = Number of compensation committee members for firm *i* in year *t*; and Executive's stock shares $_{it}$ = whether the portion of executive's equity shares for firm *i* in year *t* is more than 5% of the firm's outstanding common stock (less than 5% = 0, more than 5% = 1).

CHAPTER IV

FINDINGS

1. Description of Sample

Table 4-1 shows a frequency analysis for the characteristics of this study's sample. Executive total cash compensation in the hospitality industry averages $559,484, range from $109,490 to $3,035,000. The average executive total cash compensation in hotel and casino companies is higher than that in restaurant companies, at $711,395 and $465,031, respectively; the median in hotel and casino companies is also larger than the median in restaurant companies. Furthermore, the mean of the percent change of executive compensation from 2005 to 2006 was negative at -8.95%, but the average percent change and the median percent change of executive total cash compensation in hotel and casino companies was more negative than was that for restaurants (-14.98% and -5.20% average change, respectively; and -12.44% and -2.6% median change, respectively).

Table 4-1. Descriptive Statistics of Executive Total Cash Compensation (N=313)

Sample	Category	Mean	Std. Dev.	Median	Minimum	Maximum
All Hospitality Companies (N=313)	Total Cash Compensation (2006)	$559,484	$483,339	$388,600	$109,490	$3,035,000
	% Change of Total Cash Compensation (2005 - 2006)	-8.95	32.08	-5.74	-85.08	96.04
Hotel & Casino Companies (N=120)	Total Cash Compensation (2006)	$711,395	$587,548	$564,879	$109,490	$2,825,000
	% Change of Total Cash Compensation (2005 - 2006)	-14.98	35.09	-12.44	-85.08	50.95
Restaurant Companies (N=193)	Total Cash Compensation (2006)	$465,031	$398,081	$339,984	$112,452	$3,035,000
	% Change of Total Cash Compensation (2005 - 2006)	-5.20	29.53	-2.60	-71.27	96.04

In terms of corporate governance characteristics, the average number of board members is 8 for both the full sample (all hospitality industry) and the sub-samples (Hotel & Casino industry and Restaurant industry), and the number of board members

ranges from 3 to 14. More than 30% of executives in the samples are board members and more than 30% of the executives in the samples also hold more than 5% of outstanding stock, which indicates that many have enough power to influence board decisions.

Prior to performing OLS regression and quantile regression analysis, several tests for outliers, normality, and linearity were performed to check assumptions of the multiple regression method. The outliers were checked by developing scatter plots of samples; there were no outliers among dependent variables (Log TCC) in the full sample or the sub-samples (Figures 4-1, 4-2 and 4-3).

Figure 4-1. Scatter plot for full sample (All hospitality industry)

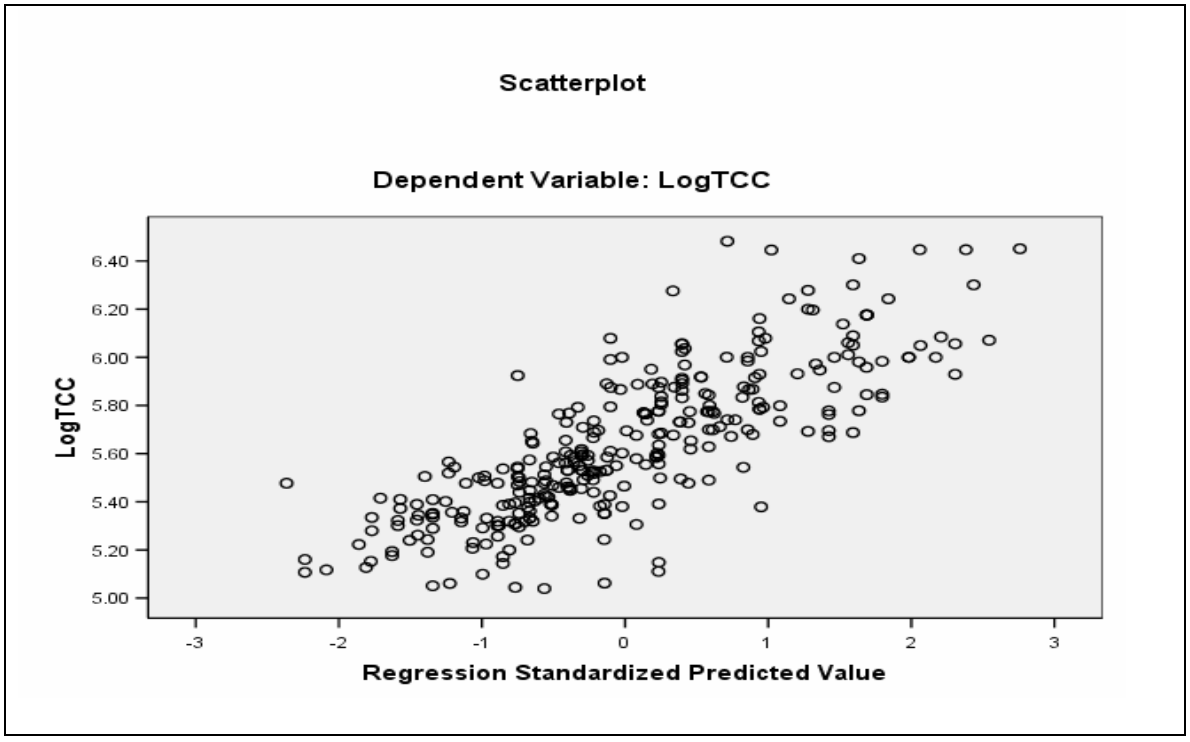


Figure 4-2. Scatter plot for sub-sample (Hotel & Casino industry)

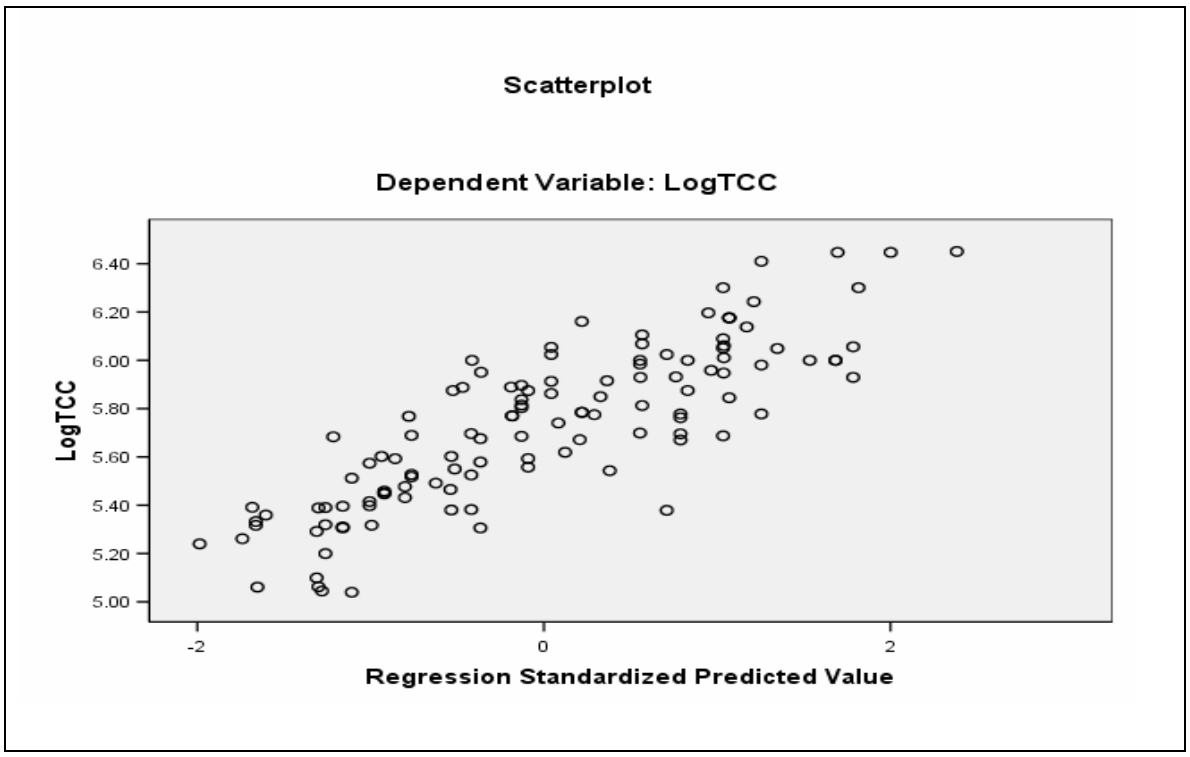
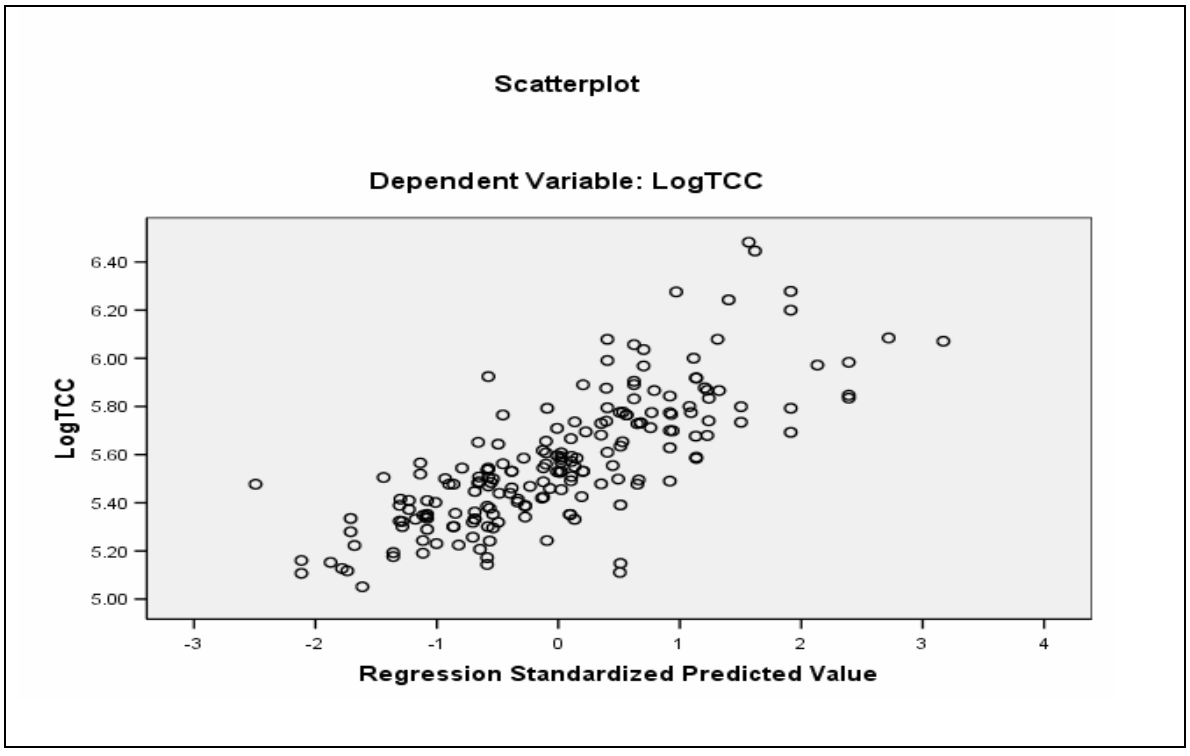


Figure 4-3. Scatter plot for sub-sample (Restaurant industry)



The normality and linearity of samples were also tested using histograms and normal probability plots of standardized residuals for dependent variables (Log of total cash compensation). As shown in Figure 4-4, standardized residuals of dependent variables in the full sample were normally distributed and had linearity. Figures 4-5 and 4-6 also show that non-normality and nonlinearity were not detected in the sub-samples of either the Hotel & Casino sub-sample or the Restaurant sub-sample. Thus, it was confirmed that data sets of both the full sample and the sub-samples were appropriate to conduct multiple regression methods to examine the relationship between executive total cash compensation and independent variables selected for this study.

Figure 4-4. Histogram and Normal P-P Plot for full sample (All hospitality industry)

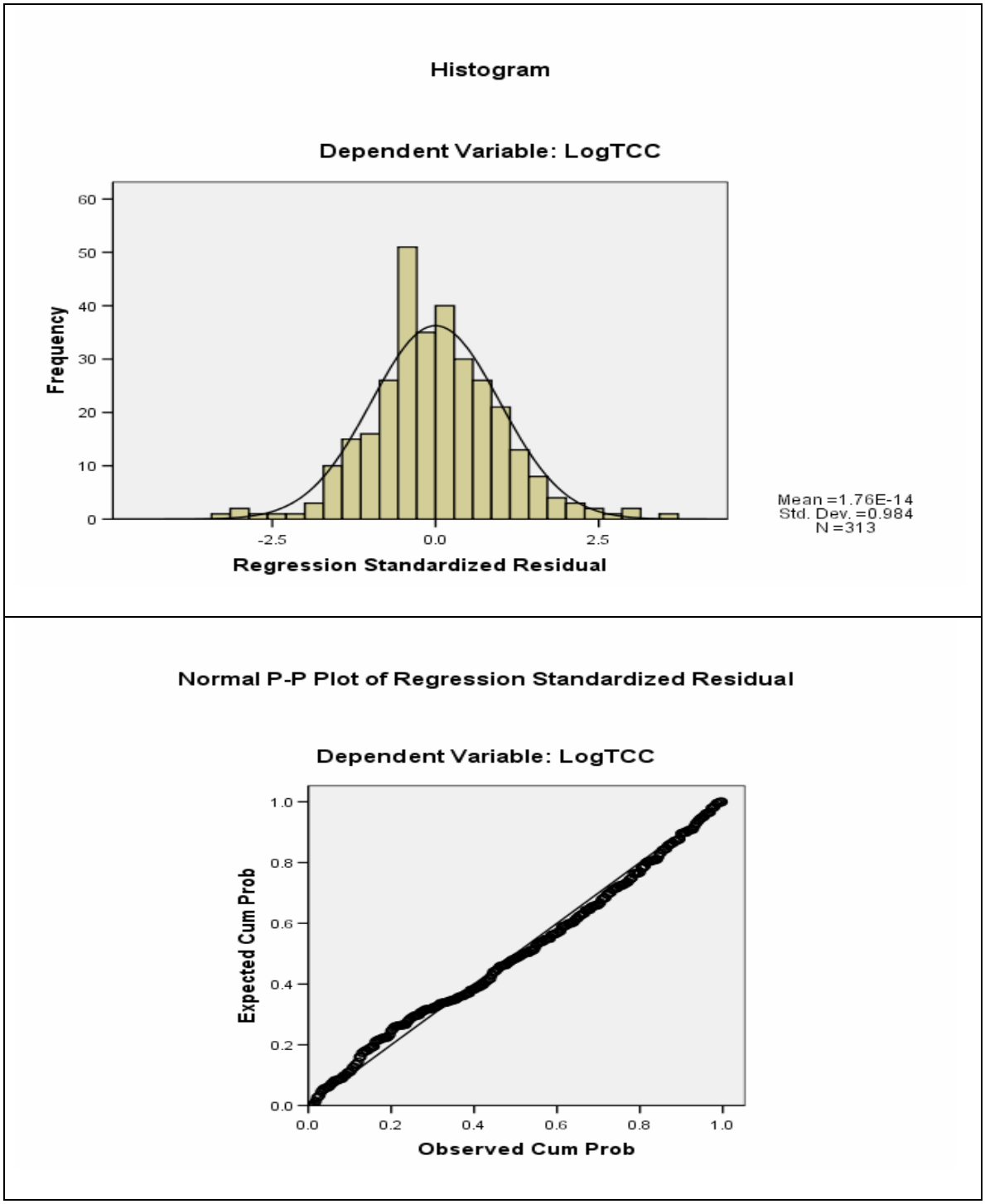


Figure 4-5. Histogram and Normal P-P Plot for sub-sample (Hotel & Casino industry)

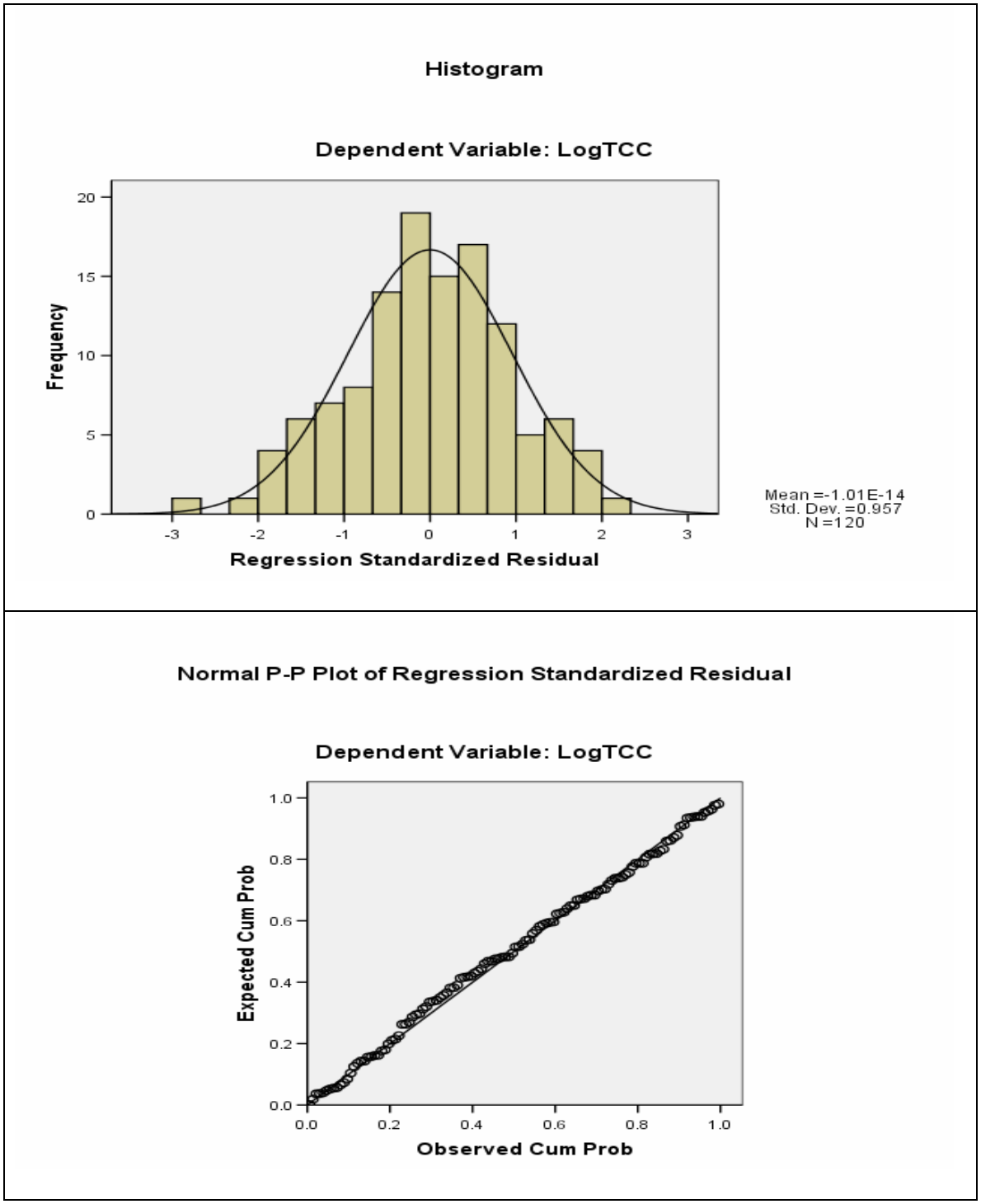
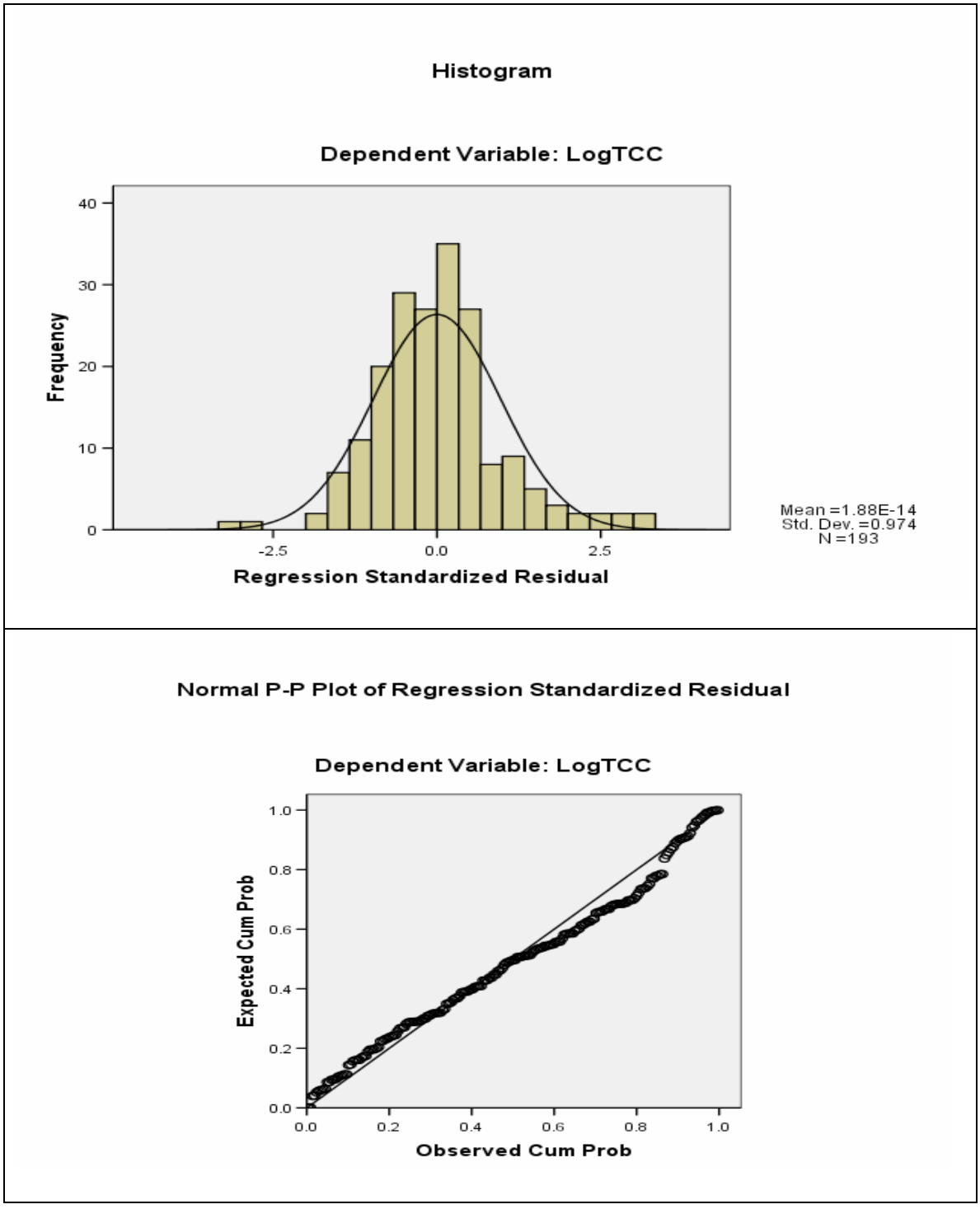


Figure 4-6. Histogram and Normal P-P Plot for sub-sample (Restaurant industry)



2. Findings of Ordinary Least Square (OLS) Regression

Tables 4-2, 4-3, and 4-4 report the results of the OLS regression with the full sample and the two sub-samples. Multicollinearity for the three multiple regression models had to be checked since high correlations among the variables would cause deviation or and/or misleading results in the multiple regression statistics by changing input variable in the regression model as variables were added in or deleted from the model (Pedhazur, 1997). The variance inflation factor (VIF) was used to check the impact of multicollinearity between each independent variable in the regression models. The higher the VIF number, the greater the impact of collinearity on the accuracy of the model (Ott & Longneker, 2001).

The VIF values shown in Table 4-2, for the full sample, lie in the range between 1.091 and 3.361. This does not indicate a serious multicollinearity problem because the VIF is well below the problematic level of 10 (Ott & Longneker, 2001). The range of VIF values for the Hotel & Casino sub-sample are between 1.088 and 5.141 (Table 4-3), and Table 4-4 shows that the VIF values of the Restaurant sub-sample are between 1.275 and 2.906. Thus, there are no serious multicollinearity problems for the sub-samples either.

After testing multicollinearity using VIF values, OLS regression analyses were conducted to investigate the relationship between the dependent variable and 10 independent variables to examine the three main hypotheses (H1, H2, and H3). The dependent variable for the OLS regression models is the log of executive total cash compensation and the ten independent variables consisted of six financial variables and

four managerial power variables. The results of the OLS regression analyses are presented in Tables 4-2, 4-3, and 4-4.

Results of OLS regression method for the Full sample

Table 4-2 summarizes the results of the OLS regression for the full sample with six financial variables and four managerial power variables. Both the R-square (=0.646) and the adjusted R-square (=0.634) for this model were the appropriate level of goodness of fit for empirical study in social science fields.

The p-values of three of the financial variables (DT, FS, EPS) were less than 0.01 with positive coefficients, and the p-values of the other three financial variables (CR, AT, GS) were larger than 0.05, so only DT, FS, and EPS were positively related to the dependent variable at a statistically significant level of 0.01. The p-values of both PDIR and SO were less than 0.01, and PDIR and SO were positively associated with executive total cash compensation at a p-value of 0.01.

Table 4-2. OLS regression summary for the Full sample (all hospitality companies)

Variable	Regression Coefficients	T Value	Significance	Collinearity Statistics	
				Tolerance	VIF
Intercept	4.672	56.480	0.000		
CR	0.021	1.239	0.216	0.713	1.403
AT	0.022	1.125	0.262	0.505	1.982
DT	0.115	3.419	0.001***	0.788	1.269
FS	0.245	10.186	0.000***	0.298	3.361
EPS	0.038	4.170	0.000***	0.615	1.626
GS	0.079	1.739	0.083*	0.917	1.091
PDIR	0.182	6.749	0.000***	0.658	1.520
NDIR	0.010	1.583	0.114	0.514	1.946
NCCMT	-0.004	-0.494	0.622	0.844	1.185
SO	0.092	3.196	0.002***	0.578	1.730
N	313				
R-Square	0.646				
Adjusted R	0.634				

Note: * P< 0.10, ** P< 0.05, ***P<0.01

After the OLS regression analysis, the following model was accepted with statistical significance:

Predicted Executive total cash compensation = 4.672 + 0.115 Debt to asset ratio(DT) + 0.245 Firm size(FS) + 0.038 Earnings per share(EPS) + 0.182 Type of board directors(PDIR) + 0.092 Executive's stock shares(SO).

Thus, hypotheses H1-3, H1-4, H1-5, H1-7, and H1-10 were accepted at the 0.01 level, but hypotheses H1-1, H1-2, H1-6, H1-8, and H1-9 were not.

Results of OLS regression method for the Hotel & Casino sub-sample

Table 4-3 summarizes the results of the OLS regression method for the Hotel & Casino sub-sample with six financial variables and four managerial power variables. Both the R-square (=0.708) and the adjusted R-square (=0.682) for this model were the appropriate level of goodness of fit.

Like the OLS regression for the full sample, six financial variables were used for the OLS regression for this sub-sample with the result that the p-values for four variables (DT, FS, EPS, and GS) were less than 0.01, and the p-values of CR and AT were larger than 0.05. Thus, DT, FS, EPS, and GS were positively associated with the dependent variable with statistical significance at the 0.01 level. The p-values of only two managerial power variables, PDIR and SO, were less than 0.05, so PDIR and SO were positively related with the executive total cash compensation at a p-value of 0.05.

Table 4-3. OLS regression summary for the Hotel & Casino sub-sample

Variable	Regression Coefficients	T Value	Significance	Collinearity Statistics	
				Tolerance	VIF
Intercept	4.507	28.246	0.000		
CR	0.051	1.373	0.173	0.532	1.881
AT	-0.034	-0.954	0.342	0.819	1.222
DT	0.176	2.797	0.006***	0.646	1.547
FS	0.307	5.780	0.000***	0.195	5.141
EPS	0.041	3.250	0.002***	0.479	2.088
GS	0.141	2.662	0.009***	0.919	1.088
PDIR	0.207	4.813	0.000***	0.731	1.369
NDIR	-0.002	-0.153	0.878	0.388	2.576
NCCMT	-0.008	-0.413	0.680	0.630	1.587
SO	0.106	2.264	0.026**	0.638	1.568
N	120				
R-Square	0.708				
Adjusted R	0.682				

Note: * P< 0.10, ** P< 0.05, *** P<0.01

After the OLS regression analysis, the following model was accepted with statistical significance:

Predicted Executive total cash compensation = 4.507 + 0.176 Debt to asset ratio(DT) + 0.307 Firm size(FS) + 0.041 Earnings per share(EPS) + 0.141 Sales growth(GS) + 0.207 Type of board directors(PDIR) + 0.106 Executive's stock shares(SO).

Thus, hypotheses H2-3, H2-4, H2-5, H2-6, H2-7, and H2-10 were accepted at 0.05 level, while hypotheses H2-1, H2-2, H2-8, and H2-9 were not.

Results of OLS regression for the Restaurant sub-sample

Table 4-4 summarizes the results of the OLS regression for the Restaurant sub-sample. Both the R-square (=0.591) and the adjusted R-square (=0.598) for this model had the appropriate level of goodness of fit, even though both were less than those for the full sample or the other sub-sample.

Contrary to the results of the OLS regression analyses for the full sample and the Hotel & Casino sub-sample, the results of the OLS regression for the Restaurant sub-sample had only two variables (DT and FS) in the financial variables with p-values less than 0.05 and positive coefficients, indicating that DT and FS were positively related to the dependent variable at a statistically significant level of 0.05 and 0.01, respectively. The results of the Restaurant sub-sample were similar to those of the full sample and the Hotel & Casino sub-sample in terms of the managerial power variables, as the p-values of

both PDIR and SO were less than 0.05. Thus, PDIR and SO were positively associated with executive total cash compensation at a p-value at the 0.05 level.

Table 4-4. OLS regression summary for the Restaurant sub-sample

Variable	Regression Coefficients	T Value	Significance.	Collinearity Statistics	
				Tolerance	VIF
Intercept	4.715	42.041	0.000		
CR	0.028	1.433	0.154	0.715	1.398
AT	0.023	0.850	0.396	0.649	1.542
DT	0.093	2.058	0.041**	0.784	1.275
FS	0.255	8.279	0.000***	0.344	2.906
EPS	0.011	0.594	0.553	0.536	1.865
GS	-0.127	-1.183	0.238	0.781	1.280
PDIR	0.161	4.676	0.000***	0.594	1.683
NDIR	0.012	1.421	0.157	0.471	2.124
NCCMT	-0.010	-0.927	0.355	0.764	1.310
SO	0.090	2.490	0.014**	0.526	1.900
N	193				
R-Square	0.591				
Adjusted R	0.568				

Note: * P< .10, ** P< .05, P<0.01

After the OLS regression analysis, the following model was accepted with statistical significance:

Predicted Executive total cash compensation = 4.715 + 0.093 Debt ratio(DT) + 0.255 Firm size (FS) + 0.161 Type of board directors(PDIR) + 0.090 Executive's stock shares(SO).

Thus, only hypotheses H3-3, H3-4, H3-7, and H3-10 were accepted at 0.05 level, but hypotheses H3-1, H3-2, H3-5, H3-6, H3-8, and H3-9 were not accepted.

3. Findings of the Quantile Regression

After conducting the OLS regression analyses, the quantile regression analyses were conducted to test the three proposed hypotheses under the second main hypotheses (H3, H4, and H5) to determine whether the selected independent variables are differently related to different levels of executive compensation. The variables for the quantile regression were the same as the variables in the OLS regression analyses. There are two usual ways of interpreting the results of quantile regression: checking the statistical significance of the coefficients of each independent variable toward dependent variable, and checking the pattern of coefficients of each independent variable toward each quantile of the dependent variables. Tables 4-5, 4-6, and 4-7 show the results of the quantile regression analysis for the coefficient estimates of the model for the full sample and the two sub-samples, and Figures 4-7, 4-8, and 4-9 show the pattern of the coefficients of each independent variable from the pay-for-performance rule and the managerial power approaches toward each quantile of dependent variable (the level of executive total cash compensation) for the three samples. The X-axis for each graph shows the quantile of executive total cash compensation, and the Y-axis shows the coefficients of the independent variables from both the pay-for-performance rule and the managerial power approach. Red lines show the coefficients for the independent variables from the OLS regression analysis, and the black line represents the coefficients of the independent variable from the quantile regression analysis. The black shadow areas show the 95% confidence interval of coefficients for the independent variables from the results of the quantile regression analysis.

Results of the quantile regression method for the Full sample

Table 4-5 shows the results of the quantile regression analysis for the coefficient estimates of the model with the full sample of the hospitality industry. Generally speaking, it looks similar to the OLS regression results for the full sample, even though the quantile regression provides more specific results than the OLS regression does.

For example, for the financial variables, neither CR nor AT were correlated with executive total cash compensation at an alpha level of 0.05 in the OLS regression, but the quantile regression showed that both CR and AT were significantly related to executive total cash compensation at the 0.05 level for the low quantiles of compensation, the 0.1-0.2 and the 0.1-0.3 quantiles, respectively. Thus, executives who received lower cash compensation were influenced by CR and AT, while others were not. In addition, the coefficient graphs for both CR and AT (Figure 4-7) show that the coefficient values for CR and AT decreased as the level of executive compensation increased, indicating that executives at a lower level of compensation were more sensitive to both CR and AT than were the executives in the middle and upper level of compensation. For the DT and FS variables, the quantile regression analysis provided results similar to those of the OLS regression analysis (i.e., both DT and FS were significantly related to executive compensation in the full sample with statistical significance at an alpha level of 0.05). However, the coefficient graphs for DT show moderate volatility of coefficients from the lower quantile to the upper quantile of executive compensation. This indicates that DT was not differently related to the level of executive compensation with statistical significance. In contrast to the DT graph, the pattern of coefficients of the FS variable decreased from the lower quantile of executive compensation to the middle quantile, then

increased as it approached the upper quantile. Thus, the low and high levels of executive compensation were more related to firm size than was the middle range of executive compensation.

The results of the quantile regression also show that EPS was not significantly correlated with executive total cash compensation for executives in the lower level of compensation, the 0.1-0.3 quantile, at an alpha level of 0.05, even though EPS was significantly correlated with total cash compensation in the OLS regression results. This suggests that EPS affects only the executives in the mid- and upper levels of total cash compensation. The coefficient graph for the EPS variable in Figures 4-7 shows an increasing pattern for the coefficient value of EPS from the lower to the upper quantiles of executive compensation, so executives with lower compensation were less sensitive to EPS than were executives in the middle and upper levels of compensation.

The result from the quantile regression also shows that GS was significantly correlated with executive total cash compensation for executives in the mid- and upper levels of total cash compensation (0.5-0.8 quantile) at an alpha level of 0.05, even though GS was not significantly related with executive's total cash compensation in the OLS regression results. The coefficient graph for the GS variable (Figures 4-7) shows the coefficient value for GS increasing as the level of executive compensation increases, so executives with lower compensation were less sensitive to GS than were executives in the middle and upper levels of compensation.

The result of the quantile regression analysis of the four managerial power variables was not much different from that of the OLS regression. Both PDIR and SO were significantly correlated with executive total cash compensation at the 0.05 level, and

NDIR and NCCMT were not. Figure 4-7shows that the only pattern of the SO coefficient of SO was an increasing pattern from the low quantile to the high quantile of executive total cash compensation. By contrast, the pattern of PDIR coefficient had moderate variation. Thus, the effect of SO on executive compensation increased as executive compensation increased.

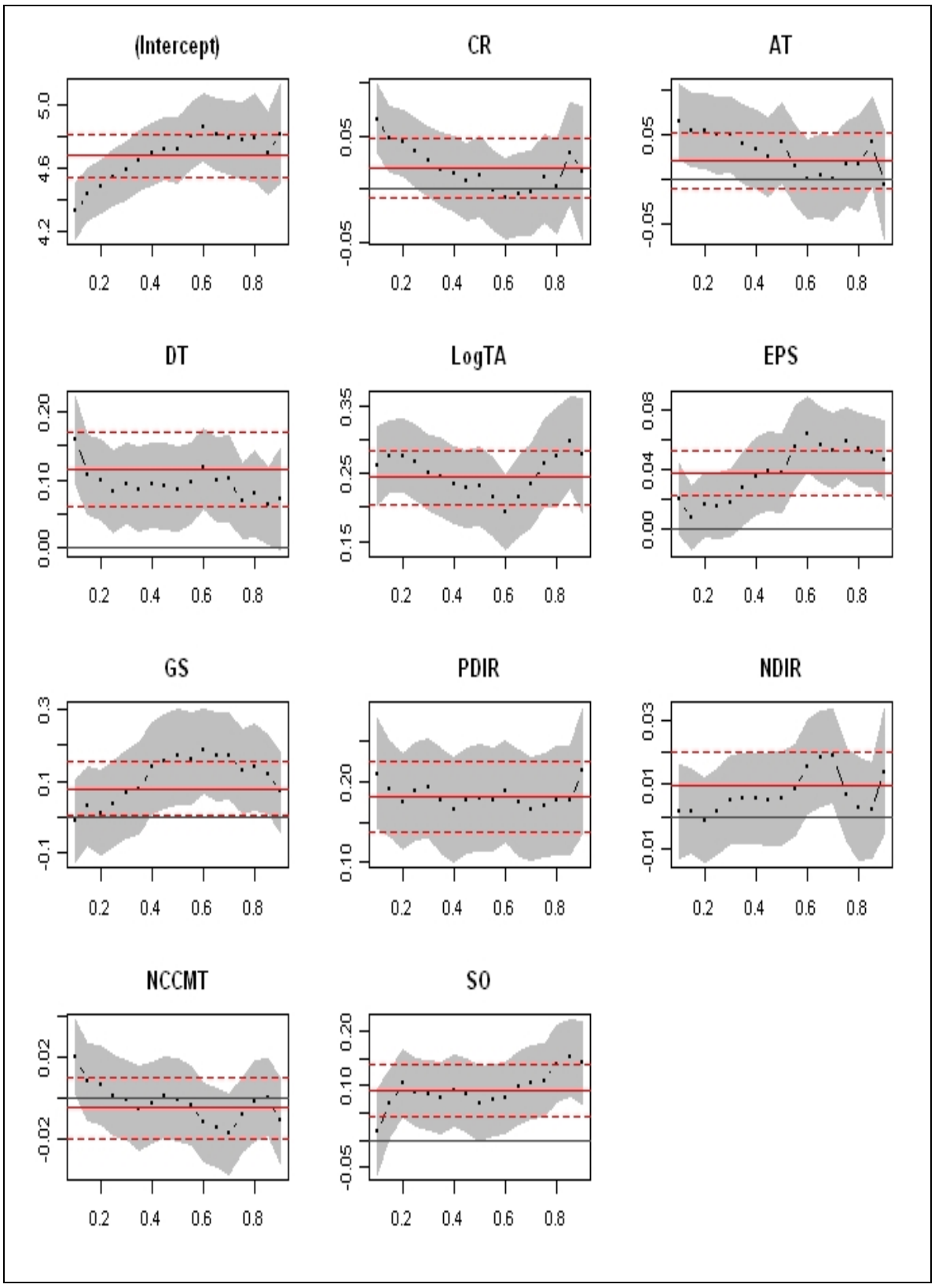
From the results of the quantile regression analysis, hypotheses: H4-1, H4-2, H4-4, H4-5, H4-6 and H4-10 were accepted at 0.05 level, while hypotheses: H4-3, H4-7, H4-8, and H4-9 were not accepted.

Table 4-5. Quantile regression summary for the Full sample (all hospitality industry)

Variables		Quantile Regression(%)								
		10	20	30	40	50	60	70	80	90
(Intercept)	Coefficient	4.328	4.481	4.580	4.687	4.711	4.858	4.789	4.787	4.813
	T value	40.872***	44.184***	42.525***	40.364***	38.154***	38.339***	33.963***	28.451***	25.382***
CR	Coefficient	0.066	0.044	0.026	0.015	0.012	-0.009	-0.004	0.002	0.016
	T value	3.316***	2.317**	1.333	0.686	0.529	-0.396	-0.169	0.071	0.417
AT	Coefficient	0.063	0.053	0.050	0.033	0.040	0.000	0.001	0.017	-0.006
	T value	2.495**	2.121**	1.964**	1.248	1.449	-0.014	0.020	0.520	-0.159
DT	Coefficient	0.159	0.099	0.094	0.092	0.085	0.117	0.100	0.080	0.070
	T value	4.039***	2.776***	2.607***	2.426**	2.249**	3.238***	2.583***	2.085**	1.538
FS	Coefficient	0.260	0.276	0.251	0.232	0.231	0.192	0.233	0.274	0.277
	T value	7.527***	8.569***	7.489***	6.759***	6.518***	5.696***	6.164***	6.197***	5.491***
EPS	Coefficient	0.021	0.017	0.018	0.036	0.038	0.065	0.053	0.054	0.047
	T value	1.409	1.297	1.311	2.324**	2.349**	4.268***	3.571***	3.667***	2.937***
GS	Coefficient	-0.010	0.012	0.065	0.137	0.168	0.183	0.170	0.140	0.071
	T value	-0.137	0.169	0.876	1.755*	2.119**	2.561**	2.356**	1.943**	1.059
PDIR	Coefficient	0.210	0.175	0.192	0.165	0.180	0.188	0.166	0.177	0.213
	T value	5.090***	4.901***	5.139***	4.207***	4.497***	4.922***	4.298***	4.348***	4.490***
NDIR	Coefficient	0.002	-0.001	0.005	0.006	0.006	0.016	0.019	0.002	0.014
	T value	0.172	-0.163	0.615	0.659	0.635	1.758*	2.111**	0.246	1.185
NCCMT	Coefficient	0.019	0.006	-0.001	-0.002	-0.001	-0.012	-0.018	-0.001	-0.011
	T value	1.770*	0.522	-0.082	-0.195	-0.075	-1.038	-1.494	-0.120	-0.864
SO	Coefficient	0.017	0.105	0.083	0.090	0.066	0.078	0.106	0.140	0.142
	T value	0.351	2.870***	2.182**	2.276**	1.631	1.981**	2.610***	3.309***	3.085***
Sample Size		N=313	N=313	N=313	N=313	N=313	N=313	N=313	N=313	N=313

Note: * P< .10, ** P< .05, P<0.01

Figure 4-7. The coefficient graphs of all hospitality industry by Quantile regression



Results of quantile regression method for Hotel & Casino sub-sample

Table 4-6 shows the result of the quantile regression analysis for the coefficient estimates of the model with the Hotel & Casino sub-sample. Generally speaking, the results of the quantile regression analysis were similar to those of the OLS regression results for the sub-sample, but the quantile regression provides more specific results than the OLS regression.

For example, neither CR nor AT in the quantile regression results were correlated with executive total cash compensation in the hotel and restaurant industry at an alpha level of 0.05, which is the same as the results from the OLS regression. However, the patterns of the coefficients of both the CR and AT variables (Figure 4-8) provided meaningful results, even though the CR and AT were not significantly related with the level of executive compensation. The patterns of the coefficient value for both CR and AT decreased as the level of executive compensation increased, indicating that the executives at lower levels of compensation were more sensitive toward both CR and AT than were the executives at middle and upper levels of compensation.

In addition, DT was not significantly related to all quantile of executive compensation in the result from the quantile regression, while the OLS regression showed that DT is significantly related to executive compensation. The quantile regression provided, however, that DT was significantly related to compensation for the low quantile, 0.1-0.2 quantile, so only those executives at the low level of total cash compensation were influenced by DT. In addition, the coefficient graphs for the DT variable (Figure 4-8) show that the pattern of the coefficient value for DT decreased slightly as the level of executive compensation increased, suggesting that executives at

lower levels of compensation were slightly more sensitive to DT than were the executives in the middle and upper levels of compensation.

The quantile regression analysis provided similar results for the FS variable as the OLS regression results for this sub-sample that FS was statistically significantly related to executive compensation at an alpha level of 0.05. However, the pattern of coefficients of the FS variable decreased from the lower quantile of executive compensation to the middle quantile, then increased to the upper quantile. This suggests that the low and high levels of executive compensation were more related to firm size than was the middle range of executive compensation.

The results of the quantile regression show that EPS was not significantly correlated with executive total cash compensation for the low quantile (0.1 – 03 quantile) of executive compensation, even though EPS was significantly correlated with executive total cash compensation in the OLS regression results. It implies that EPS significantly affects only the executive in mid- and upper level of total cash compensation. Furthermore, the coefficient graphs for the EPS variable (Figure 4-8) show that the coefficient value for EPS increased from the lower quantile of executive compensation to the upper quantile, so executives at the lower level of compensation were less sensitive to EPS than were executives in middle and upper levels of compensation. The quantile regression also shows that GS was significantly correlated with executive total cash compensation, but only for the upper level of compensation (0.8 -0.9 quantile), even though GS was significantly related to compensation in the OLS regression results. Thus, GS affected only the executives at the upper level of total cash compensation. In addition, the coefficient graphs for the GS variable (Figure 4-8) show that the coefficient value for

GS increased as the level of executive compensation increased, which also supports the conclusion that those at the lower level of compensation were less sensitive toward GS than were those at the middle and upper levels.

The result of the quantile regression analysis was not much different for the four managerial power variables than the results of the OLS regression. PDIR was significantly correlated with executive total cash compensation at the 0.05 level, whereas NDIR and NCCMT were not. Most notable were the results from the quantile regression for the SO variable, which showed that SO was significantly correlated with executive total cash compensation for executives only at the upper level of total cash compensation (0.7-0.8 quantile) at an alpha level of 0.05, even though SO was significantly related to executive total cash compensation in the OLS regression results. Of the two statistically significant variables (PDIR and SO) shown in Figure 4-8, only SO had a pattern of coefficients that increased from the low quantile to the high quantile of executive total cash compensation; the pattern of coefficients for PDIR had moderate volatility. It indicates that executives at the lower level of compensation were less sensitive to SO than were executives in middle and upper levels of compensation.

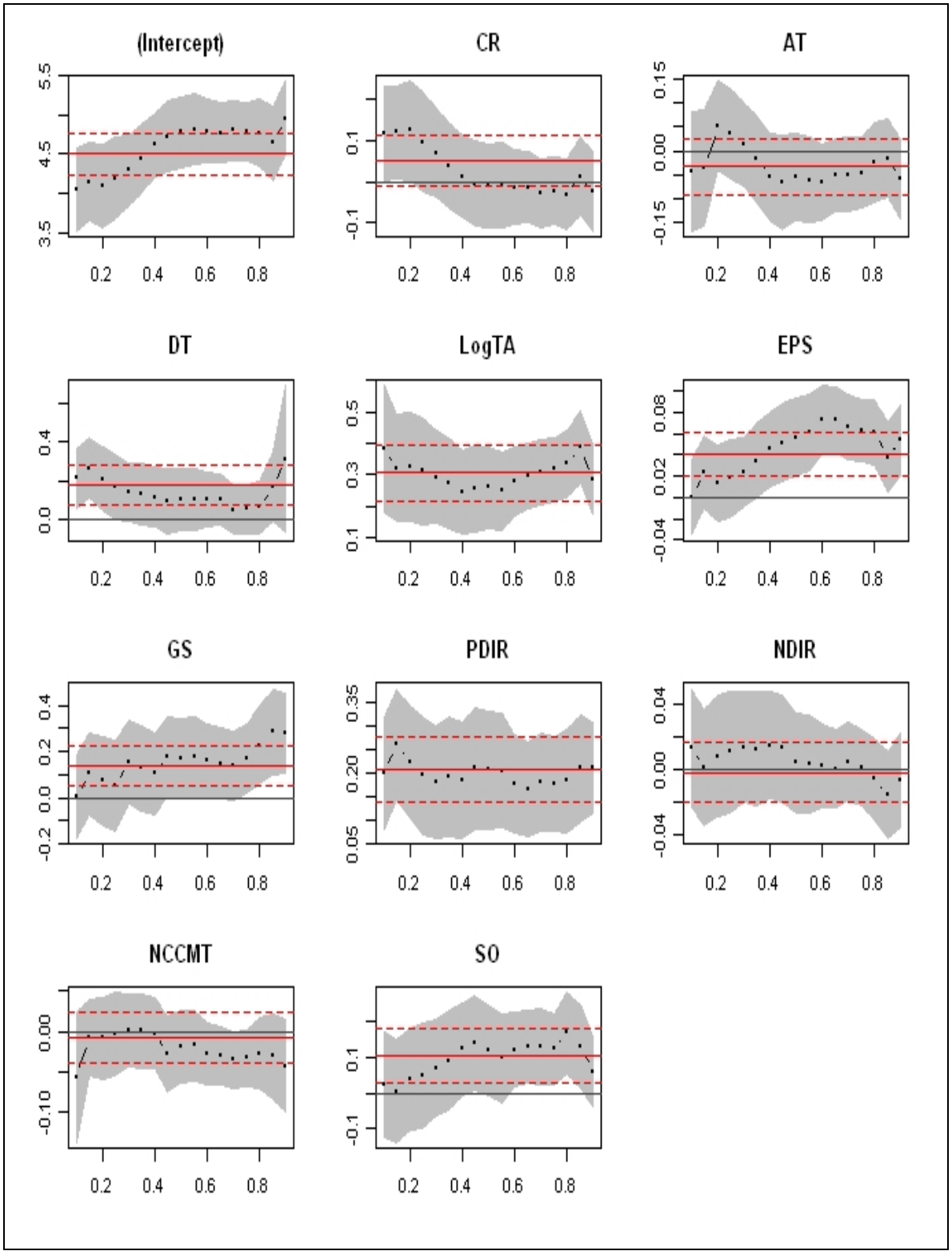
After the quantile regression analysis, only hypotheses H5-3, H5-4, H5-5, H5-6, and H5-10 were accepted at 0.05 level, while hypotheses H5-1, H5-2, H5-7, H5-8, and H5-9 were not.

Table 4-6. Quantile regression summary for the Hotel & Casino sub-sample

Variables		Quantile Regression(%)								
		10	20	30	40	50	60	70	80	90
(Intercept)	Coefficient	4.060	4.100	4.296	4.616	4.776	4.794	4.803	4.772	4.957
	T value	12.676***	12.883***	15.616***	18.646***	17.778***	19.584***	20.668***	18.487***	17.351***
CR	Coefficient	0.117	0.125	0.070	0.013	-0.012	-0.014	-0.029	-0.031	-0.024
	T value	1.651	1.692*	1.077	0.208	-0.188	-0.254	-0.571	-0.588	-0.417
AT	Coefficient	-0.043	0.053	0.014	-0.055	-0.055	-0.067	-0.051	-0.025	-0.059
	T value	-0.560	0.924	0.258	-0.988	-0.985	-1.382	-1.069	-0.488	-1.137
DT	Coefficient	0.211	0.210	0.140	0.115	0.101	0.105	0.048	0.061	0.315
	T value	2.264**	2.119**	1.538	1.219	1.030	1.236	0.618	0.726	1.351
FS	Coefficient	0.384	0.326	0.294	0.242	0.259	0.280	0.306	0.335	0.288
	T value	3.148***	3.092***	3.308***	3.027***	3.337***	4.240***	4.845***	5.164***	4.280***
EPS	Coefficient	0.000	0.013	0.023	0.045	0.057	0.073	0.066	0.061	0.054
	T value	0.016	0.598	1.173	2.154**	2.569***	3.728***	3.575***	3.221***	2.679***
GS	Coefficient	0.004	0.074	0.154	0.105	0.169	0.162	0.138	0.227	0.279
	T value	0.038	0.627	1.378	0.986	1.617	1.666*	1.524	2.236**	2.651***
PDIR	Coefficient	0.200	0.223	0.180	0.184	0.206	0.177	0.179	0.182	0.210
	T value	2.782***	3.085***	2.522**	2.454***	2.733***	2.773***	2.827***	2.766***	3.599***
NDIR	Coefficient	0.013	0.008	0.014	0.015	0.004	0.002	0.005	-0.006	-0.007
	T value	0.596	0.359	0.662	0.746	0.218	0.143	0.329	-0.385	-0.376
NCCMT	Coefficient	-0.057	-0.009	0.002	-0.002	-0.020	-0.028	-0.036	-0.027	-0.043
	T value	-1.159	-0.276	0.058	-0.092	-0.721	-1.219	-1.716*	-1.022	-1.251
SO	Coefficient	0.023	0.038	0.070	0.123	0.120	0.120	0.130	0.168	0.061
	T value	0.254	0.444	0.852	1.544	1.566	1.900*	2.045**	2.461**	1.001
Sample Size		N=120	N=120	N=120	N=120	N=120	N=120	N=120	N=120	N=120

Note: * P< .10, ** P< .05, P<0.01

Figure 4-8. The coefficient graphs of the Hotel & Casino sub-sample by quantile regression



Results of quantile regression for the Restaurant sub-sample

Table 4-7 shows the results of the quantile regression analysis for the coefficient estimates of the model with the Restaurant sub-sample. The quantile regression provided more specific results than the OLS regression for restaurant sub-sample, even though the result of the quantile regression analysis for the restaurant sub-sample was similar to that of the OLS regression results in this sub-sample.

In the quantile regression, unlike the results from the OLS regression, both CR and AT were correlated with executive total cash compensation at the lower quantile (0.1 - 0.3 quantile) of executive compensation at the alpha level of 0.05. In addition, the coefficient graphs for both CR and AT (Figure 4-9) show that their coefficient values decreased as the level of executive compensation increased. This suggests that executives at lower levels of compensation were more sensitive to both CR and AT than were executives at the middle and upper levels of compensation.

The result of the quantile regression also showed that DT was not significantly related to executive compensation, while the result from the OLS regression showed the opposite. In addition, the coefficient graphs for the DT variable (Figure 4-9) show that the pattern of the coefficient value for DT was one of moderate volatility from the lower quantile to the upper quantile of executive compensation. It indicates that there is no different impact of DT on different level of executive compensation in Restaurant industry.

The quantile regression analysis provided similar results for the FS variable as that of the OLS regression that FS was statistically significantly related to executive compensation at an alpha level of 0.05. However, the pattern of coefficients of the FS

variable decreased from the lower quantile of executive compensation to the middle quantile, then increased in the upper quantile. Thus, the low and high levels of executive compensation were more related with firm size than was the middle range.

The results of the quantile regression also showed that EPS was not significantly correlated with executive total cash compensation for any quantile of executive compensation at an alpha level of 0.05, which was the same as the result from the OLS regression. However, the coefficient graphs for the EPS variable in Figure 4-9 show that the coefficient value for EPS increased from the lower quantile of executive compensation to the upper quantile, indicating that the executives at the lower level of compensation were less sensitive to EPS than were the executives at the middle and upper levels.

Like the OLS regression result, the quantile regression also shows that the GS variable was not significantly correlated with executive total cash compensation for any level of executive total cash compensation at an alpha level of 0.05. In addition, the coefficient graphs for the GS variable (Figure 4-9) show moderate volatility of the coefficient from the lower quantile to the upper quantile of executive compensation. Thus, GS was not related to the level of executive compensation.

The results of the quantile regression analysis for the four managerial power variables were not much different from those of the OLS regression. PDIR was significantly correlated with executive total cash compensation at the 0.05 level, while NDIR and NCCMT were not. However, the quantile regression for SO shows that SO was significantly correlated with executive total cash compensation only for executives at the upper level of compensation (0.7-0.9 quantile) at an 0.05 alpha level, while the OLS

regression shows that it was significantly related to executive total cash compensation in general.

The coefficient pattern of SO (Figure 4-9) increased from the low quantile to the high quantile of compensation, suggesting that the effect of SO on executive compensation increase when the level of compensation increases. However, the pattern of coefficients for PDIR had moderate volatility, suggesting that there is no different effect of PDIR on different level of executive compensation.

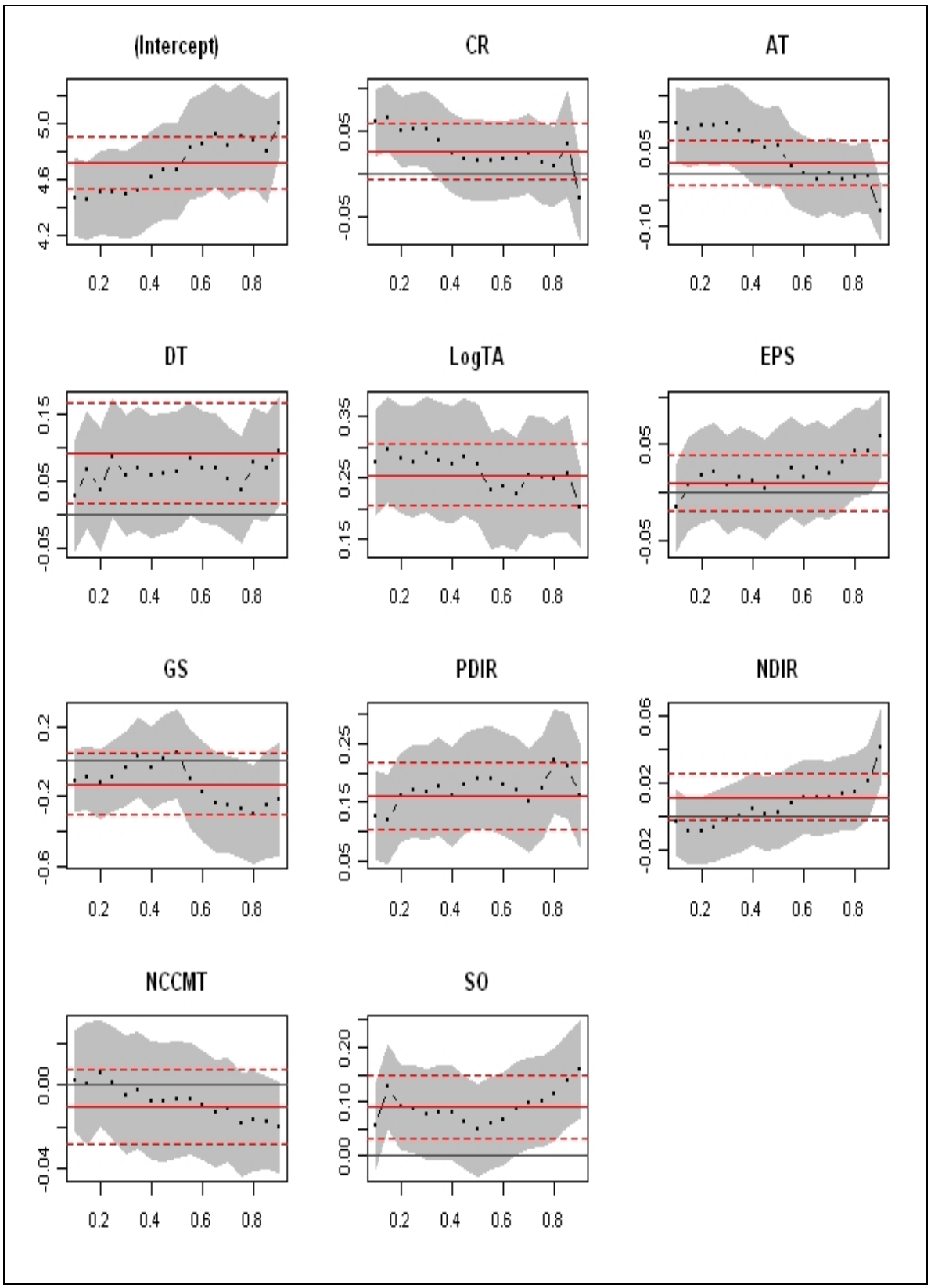
Furthermore, the pattern of the NDIR coefficient increased from the lower quantile to the upper quantile, which indicates that the executives at a lower level of compensation were less sensitive toward NDIR than were the executives at the middle and upper levels of compensation. However, the pattern of the NCCMT coefficient decreased from the lower quantile to the upper quantile, indicating that the executives at a lower level of compensation were more sensitive to NCCMT than were the executives at the middle and upper levels of compensation. After the quantile regression analysis, hypotheses H6-1, H6-2, H6-4, and H6-7 were accepted at 0.05 level, but H6-3, H6-5, H6-6, H6-8, H6-9, and H6-10 were not accepted at the 0.05 level.

Table 4-7. Quantile regression summary for the Restaurant sub-sample

Variables		Quantile Regression(%)								
		10	20	30	40	50	60	70	80	90
(Intercept)	Coefficient	4.465	4.504	4.488	4.614	4.662	4.846	4.841	4.884	4.999
	T value	26.656***	25.263***	23.571***	22.672***	22.499***	21.782***	21.022***	23.965***	36.805***
CR	Coefficient	0.061	0.050	0.053	0.025	0.017	0.017	0.024	0.009	-0.029
	T value	2.662***	2.012**	2.004**	0.901	0.585	0.611	0.874	0.307	-1.017
AT	Coefficient	0.097	0.093	0.097	0.060	0.053	0.001	-0.001	-0.008	-0.072
	T value	2.262**	2.109**	2.106**	1.299	1.155	0.015	-0.033	-0.199	-2.282***
DT	Coefficient	0.030	0.037	0.059	0.058	0.066	0.070	0.053	0.077	0.094
	T value	0.594	0.678	1.084	1.069	1.230	1.410	1.116	1.548	1.921
FS	Coefficient	0.275	0.280	0.289	0.272	0.273	0.234	0.255	0.248	0.203
	T value	5.345***	5.336***	5.107***	4.744***	4.744***	4.080***	4.364***	4.720***	5.258**
EPS	Coefficient	-0.016	0.017	0.007	0.011	0.016	0.016	0.019	0.043	0.058
	T value	-0.605	0.578	0.242	0.368	0.522	0.527	0.676	1.536	2.295**
GS	Coefficient	-0.108	-0.124	-0.040	-0.037	0.046	-0.172	-0.248	-0.306	-0.220
	T value	-1.023	-1.032	-0.315	-0.262	0.301	-1.000	-1.508	-1.819*	-1.133
PDIR	Coefficient	0.127	0.160	0.167	0.159	0.190	0.181	0.153	0.220	0.162
	T value	2.827***	3.510***	3.441***	3.080***	3.731***	3.371***	2.888***	4.101***	3.052***
NDIR	Coefficient	-0.004	-0.008	-0.002	0.005	0.003	0.012	0.012	0.015	0.042
	T value	-0.292	-0.689	-0.170	0.356	0.232	0.882	0.905	1.087	3.033***
NCCMT	Coefficient	0.002	0.006	-0.005	-0.007	-0.007	-0.009	-0.012	-0.017	-0.020
	T value	0.144	0.383	-0.265	-0.420	-0.402	-0.586	-0.766	-1.197	-1.556
SO	Coefficient	0.055	0.089	0.077	0.080	0.048	0.067	0.098	0.113	0.158
	T value	1.169	1.916*	1.568	1.541	0.941	1.335	1.983**	2.221**	2.922**
Sample Size		N=193	N=193	N=193	N=193	N=193	N=193	N=193	N=193	N=193

Note: * P< .10, ** P< .05, P<0.01

Figure 4-9. The coefficient graphs of the Restaurant sub-sample by Quantile regression



CHAPTER V

CONCLUSION

1. Summary of the study

This study has investigated the determinants of executive compensation in the hospitality industry with selected variables from both the pay-for-performance rule and the managerial power approach, using two multiple regression analysis methods: OLS regression and quantile regression. The study provides an empirical illustration of determinants of executive compensation in the hospitality industry as a whole, and in two sub-categories, the Hotel & Casino category and the Restaurant category. OLS regression analysis was performed first to identify the determinants of executive compensation in the hospitality industry on the basis of both the pay-for-performance rule and the managerial power approach. At the second stage of analysis, quantile regression analysis was adopted to examine whether the independent variables were differently related to different levels of executive compensation in the hospitality industry. A summary and discussion of the empirical findings of this study are presented in the following sections.

Summary of the Full Sample: The Hospitality Industry

OLS regression analysis

The results of OLS regression analysis for the hospitality industry revealed that three financial variables, DT, FS, and EPS, and two managerial power variables, PDIR and SO, were positively related to executive compensation with statistical significance. Thus, pay-for-performance rules and managerial power variables both influenced executive compensation in the hospitality industry.

While the financial variables suggested that firm size (FS) and firm profitability (EPS) positively affected executive compensation, the study found a different result from prior studies of executive compensation in the hospitality industry by showing that coverage ratio was positively related to executive compensation and that CR, AT, and GS were not. The results of the coverage ratio analysis revealed that executives in the hospitality industry were paid highly despite increasing risk to the firm. In general, a company with a higher debt ratio has a riskier financial status because high debt means a heavy interest burden and the need to repay principal (Chatfield & Dalbor, 2005) However, Jensen and Meckling (1976) suggested that agents (executives) in companies with high debt capital structures receive more compensation because of the incentive effects associated with debt: The agent is paid more for being willing to take on the challenge of activities which offer the possibility of very high payoffs, even when they have a very low probability of success. Such activities invoke an agency problem because the shareholders prefer that the company does not remain in a risky environment, but executives may prefer to invest in more risky projects in order to receive higher

compensation from big successes with risky projects. This result implies that there may be an agency problem in the hospitality industry. Three other financial variables—CR, AT, and GS—were not significantly related to executive compensation, so the hospitality industry only partially follows the pay-for-performance rule in determining executive compensation.

Regarding the managerial power approach, the PDIR and SO variables were identified as determinants of executive compensation in the hospitality industry, while NDIR and NCCMT were not. These results support the idea that executives who serve on the board of directors receive more compensation than those who do not, regardless of the number of board members or the number of compensation committee members. Stock ownership by the executive also positively influenced executive compensation, so, in addition to pay-for-performance rules, how the executive was related to corporate governance influenced executive compensation.

Quantile regression analysis

The results of the quantile regression analysis provided more specific and concise results for the hospitality industry by examining the effects of each independent variable on different levels of executive compensation. The quantile regression analysis showed that the level of executive compensation was differently related to each independent pay-for-performance and managerial power variable. The variables were related to three different group of compensation—the lower level (0.1-0.3 quantile), the middle level (0.4-0.6 quantile), and the upper level (0.7-0.9 quantile).

Among the financial variables, the lower level of executive compensation was significantly related to CR and AT, while the middle and upper levels were significantly related to EPS and GS. That is, firm liquidity and efficiency were determinants of lower level compensation, while profitability in terms of EPS and GS determined middle and upper levels of executive compensation. In addition, the FS variable was significantly related to all levels of executive compensation, although the sensitivity of the lower and upper levels was greater than that of the middle level. Meanwhile, the coverage ratio (DT) was significantly related to the full range of executive compensation, although it was moderate. Thus, firm coverage was not differently related depending on the level of compensation.

Among the four managerial power variables, only the stock ownership variable was differently related to levels of executive compensation in that the upper level of executive compensation was more sensitive than either the lower or middle levels. PDIR was significantly but moderately related to all levels of compensation, so it was not differently related to different levels of compensation.

The results of the quantile regression analysis of the financial and managerial power variables also suggested that executive stock ownership and board independence (from the managerial power approach) influenced executive compensation in the hospitality industry, and that the hospitality industry also partially follows the pay-for-performance rule to determine executive compensation. It concluded that the hospitality industry weakly follows pay-for-performance rule to determine executive compensation and higher executive's stock ownership and board non-board independent from top executive may also influence on determining the level of executive compensation in

hospitality industry. In addition, it supports that the determinants of executive compensation differ between different groups of executive compensation level in the hospitality industry.

Summary of Hotel & Casino Sub-sample

OLS regression analysis

The results of the OLS regression analysis provided a result similar to that of the full sample (the positive correlation of FS, EPS, DT, PDIR, and SO) for both financial variables and managerial power variables, except that GS was significantly related to compensation in the hotel and casino industry. Four financial variables (FS, EPS, GS and DT) were positively related to executive compensation, and the positive relationship between coverage ratio and executive compensation suggested that there may be a serious agency problem in the hotel and casino industry. In short, the results showed that the hotel and casino industry partially follows the pay-for-performance rule in determining executive compensation.

The results of the managerial power approach were the same as that for the full sample in that the PDIR and SO variables were identified as determinants of executive compensation. Thus, the involvement of the executive in corporate governance influences

Quantile regression analysis

The results of the quantile regression analysis were similar to those for the hospitality industry as a whole, supporting the idea that different levels of executive compensation are differently related to the independent variables.

Among the financial variables for the pay-for-performance rule, the lower level of executive compensation was significantly related to only FS and DT. The FS variable was significantly related to all levels of executive compensation, although the sensitivity of FS on the lower and upper levels of compensation was more than it was for the middle level. However, coverage ratio (DT) was significantly related only to the lower level of executive compensation with a positive coefficient, but the sensitivity of DT on the level of executive compensation was moderate. Thus, firm coverage was not differently related to different levels of executive compensation. In addition, the coefficient graph of CR and AT showed that the lower level of compensation was more sensitive than were the middle and upper levels, which had no statistical significance. A cautious interpretation of this finding is that the firm's liquidity and efficiency could have more influence on the lower level of executive compensation than on the middle and upper levels.

In contrast to the lower level of compensation, the middle and upper levels were significantly related to EPS, and firm profitability was a determinant of the middle and upper levels of compensation. In addition, sales growth had different affects on the different levels of executive compensation, based on the coefficient graph of GS, which showed that the lower level of executive compensation was less sensitive to GS than were the middle and upper levels.

Among the four managerial power variables, the result for the Hotel & Casino sub-sample was the same as that of the hospitality industry as a whole, except that the stock ownership variable was differently related with levels of executive compensation, while the other three variables—PDIR, NDIR, and NCCMT—were not.

The results of the quantile regression analysis of the financial and managerial power variables also suggested that executive stock ownership and board independence influenced executive compensation in the Hotel & Casino industry, and that the industry also partially follows the pay-for-performance rule to determine executive compensation. While the influence of the pay-for-performance rule is weak, higher executive's stock ownership and board independence from the top executive may also influence the level of compensation. The findings also support the concept that the determinants of executive compensation differ based on the level of compensation.

Summary of the Restaurant Sub-sample

OLS regression analysis

The results of the OLS regression analysis for the Restaurant industry sub-sample provided results similar to those of the full sample in the positive correlation of DT, FS, PDIR, and SO with executive compensation. However, EPS was not significantly related to compensation in the Restaurant sub-sample. More specifically, firm size was positively related with executive compensation, although the positive relationship between coverage ratio and executive compensation suggests that there may be a serious agency problem in the Restaurant industry. As for the managerial power variables, PDIR and SO variables

were identified as determinants of compensation in the Restaurant industry sub-sample. Thus, this result also shows that the level of the Restaurant executive's involvement in corporate governance, along with pay-for-performance, influences executive compensation.

Quantile regression analysis

The results of the quantile regression analysis for the Restaurant industry sub-sample provided similar results as those for the hospitality industry as a whole. The results also supported the concept that different levels of executive compensation were differently related to the pay-for-performance and managerial power variables.

Among the financial variables related to the pay-for-performance rule, the lower level of executive compensation was significantly related to CR and AT, but not to EPS and GS, so firm liquidity and efficiency were determinants of lower levels of executive compensation. Unlike the result from the full hospitality industry sample, firm profitability in terms of EPS and GS was not significantly differently related to compensation in the restaurant industry. However, the coefficient graphs of EPS and GS showed that the lower level of executive compensation was less sensitive to EPS and GS than were the middle and upper levels of executive compensation. As was the case with the full hospitality industry and the Hotel & Casino sub-sample, the firm debt ratio was not differently related to different levels of executive compensation. The FS variable also provided the same results as that of the hospitality industry and the Hotel & Casino industry in that it was significantly related to all levels of executive compensation, and

the sensitivity of FS to the lower and upper levels of compensation was greater than for the middle level.

The result for the four managerial power variables was a little different from that for the full hospitality industry and the Hotel & Casino industry sub-sample in that all three variables were differently related with the level of executive compensation, even though SO had statistical significance, while the other two did not. Contrast to other variables from managerial power approach, PDIR was not differently related with the level of executive compensation, even though the PDIR had statistical significance for full ranges of executive compensation.

The results of the quantile regression analysis of restaurant industry also provide same conclusion that executive's corporate governance influenced executive compensation, and that the restaurant industry partially follows the pay-for-performance rule to determine executive compensation. It condensed the previous two conclusion of all hospitality industry and hotel and casino industry that the restaurant industry weakly follows pay-for-performance rule to determine executive compensation and higher executive's stock ownership and board non-board independent from top executive may also influence on determining the level of executive compensation in restaurant industry. In addition, it also supports that the determinants of executive compensation differ between different groups of executive compensation level in restaurant industry.

2. Implications of study

The findings of this study have both theoretical and practical implications that are useful for practitioners and researchers. Both the OLS regression analysis and the quantile regression analysis supported that the pay-for-performance rule and the managerial power approach influence executive compensation in the hospitality industry. The most important theoretical contribution of this study is extending the theoretical evidence of extant executive compensation studies in the hospitality industry by adding the managerial power approach. Based on the results of this study, stock ownership and board independence have positive effects on executive compensation, with strong explanatory power of regression results in terms of high figures of R-square and Adjusted R-square. In addition, the positive association between coverage ratio and executive compensation provided theoretical evidence that supported Jensen and Meckling's contention regarding the incentive effects associated with debt (Jensen & Mekling, 1976).

The other important theoretical implication is that this study is, to the best of our knowledge, the first attempt that utilizes quantile regression analysis to examine the different effect of each independent variable (from both the pay-for-performance rule and the managerial power approach) on executive compensation. Most other studies have adopted traditional regression analysis as a statistical analysis method. Unlike traditional multiple regression analysis that mostly use conditional mean function, the quantile regression provide more specific and concise information by utilizing conditional quantile function. The results from this study's quantile regression analysis also provide more specific and comprehensive theoretical evidence that the level of executive compensation is differently related to the variables from both the pay-for-performance

rule and the managerial power approach. Besides, the quanitle regression analysis also provides the coefficient patterns of each independent variable on the basis of each quantile of executive compensation. The coefficient patterns of each independent variables help estimate the sensitivity of each independent variable for the different groups of executive compensation level regardless of statistical significance. For example, compensation for an executive in the lower level of compensation group may be determined by the company's liquidity and efficiency, while compensation for the executive in the middle or upper level may be determined by company's profitability. The firm size may have a more influence on determining lower and upper level of executive compensation than middle level of executive compensation. With regards to stock ownership, the lower level of executive compensation was less sensitive than middle and upper level of executive compensation in hospitality industry. The practical contributions of this study include identifying what factors determine executive compensation and how these factors impact different levels of executive compensation in order to help illuminate executive compensation schemes in the hospitality industry, particularly in the hotel, casino, and restaurant segments, and thereby provide a method by which to judge whether an executive's compensation has been appropriately set to achieve the company's business goals. The board of directors or members of the compensation committee can utilize the regression formula as a guideline for determining executive compensation for a certain year; for example, HVS International has a formula of pay-for-performance to evaluate whether executive's compensation in hospitality industry are well distributed (Mehegan, 1998).

The pay-for-performance model of HVS International is composited with only three major factors; firm size (market capitalization of firm), stock returns (average stock appreciation), and firm's growth (EBIIDA growth) (Mehegan, 1998). The accounting based performance that utilized in this study is not included in the pay-for-performance model of HVS International, even though the accounting based firm performance should be considered frequently and importantly as one of firm performance estimators in the accounting and finance researches. Thus, the findings from this study suggests that new pay-for-performance model, which included accounting based performance measures, will provide more comprehensive information to determine level of executive compensation in hospitality industry.

In addition, the results from the quantile regression analysis also suggest that different measures could be utilized to determine different levels of executive compensation. By utilizing different measures of firm performance to determine executive compensation, the compensation committee in the company can more clearly and correctly decide the level of executive compensation. For example, the executives, who received lower level of compensation in the hospitality industry, may find their performance evaluation fair by using firm's liquidity, efficiency, and firm size as a decision criteria to determine their level of compensation. Contrast to lower level of executives, upper level of executives can be better off by being evaluated by utilizing more accurate criteria such as firm's profitability and firm size to determine their level of compensation.

The findings from OLS regression analysis proposed that there were a difference of determinant of executive compensation between Hotel and Casino industry and

Restaurant industry. After excluding positive effect of DT, only firm size influenced on determining executive compensation in the restaurant industry, whereas three financial variables; firm size, EPS, and firm sales growth, were identified as determinants of executive compensation in the hotel and casino industry. The hotel and casino industry appears to prefer to follow pay-for-performance rule than restaurant industry, being identified two additional determinants (EPS and firm's sale growth) of executive compensation in Hotel and Casino industry. Thus, our findings imply that board of directors in the restaurant industry should make more efforts to follow pay-for-performance rule for deciding appropriate level of executive compensation in their companies. In addition, the board of directors in both hotel and casino industry and restaurant industry also should strive to consider firm's efficiency and liquidity as measures to determine level of executive compensation, because those two measures are also critical estimators for evaluating firm's performance.

In regards to the effect of the executive's level of involvement in corporate governance on his or her compensation level, this study suggests that the executive who has enough power to influence board decision receives higher compensation. Thus, hospitality companies should put more effort into preventing the intervention of the executive's opinion on board decisions, especially in decision-making about compensation. Furthermore, not only the board of directors but also all shareholders in hospitality companies should require the compensation committee to follow more pay-for-performance rules, rather than submitting too much to executive involvement in corporate governance, to achieve clear and correct determination of executive compensation.

3. Limitations and Suggestions for Future Research

Although this study contributes to the extension of executive compensation theoretical research in the hospitality industry by combining the pay-for-performance rule and the managerial power approach with recent data and by utilizing OLS regression analysis and quantile regression analysis, the study has several limitations.

First, the number of executives used for this study (313) was a small sample size for cross-sectional data analysis. One way to increase sample size would be to include either other hospitality industries—such as airlines, recreation services, and theme parks—or other countries, such as the United Kingdom, France, Japan, Hong Kong, and China. By increasing the sample size, the study may produce more comprehensive results and have more power to generalize. A comparison study regarding either industry difference or regional difference may also be conducted by comparing the determinants of executive compensation in different industries or countries.

Second, this study focused only on corporation-level executives—such as CEO, vice president, and chief financial executive—in publicly held companies in the hospitality industry. However, the findings for this study might differ if the sample is focused on executives in lower, non-corporate levels. For example, general managers (GM) and directors in each department (e.g., marketing, sales, and housekeeping) would be considered as executives at the property level. In addition, this study incorporates both accounting-based and growth-based measures to assess firm performance, while other types of performance measures such as market-based performance measures (e.g., annual stock returns), typical performance measures in the hospitality industry, and market

share, were not included. Future research integrating those performance measures may enhance the findings. Typical financial performance measures in the hotel industry, such as Revenue per available rooms (REVPAR), Occupancy rate, and Average Daily Rate, could be adopted to examine determinants of property-level executives in the hotel industry on the basis of the pay-for-performance rule.

Third, the other factors that may affect executive compensation in this study were derived only from the theoretical base of the managerial power approach. However, several studies have also considered the executive's demographic characteristics—such as age, gender, and education level—as factors that influence executive compensation. Future hospitality researchers could seek the effect of executive demographic characteristics on executive compensation in the hospitality industry.

Finally, this study utilized only executive cash compensation (salary and bonus) as a dependent variable to identify determinants of executive compensation. Several other types of executive compensations are also included in the executive compensation package, such as stock options, pensions, and other benefits (e.g., insurance). Thus, future study could include other types of compensation to provide more comprehensive and concise findings for the determinants of executive compensation in the hospitality industry. Future hospitality researchers could also study the determinants of different types of executive compensation (e.g., stock options).

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APPENDICES

APPENDIX A

EXECUTIVES IN HOTEL INDUSTRY (2006)

Company Name	Name of Executive	Total Cash Compensation ($)	Current Director
GAYLORD ENTERTAINMENT CO	Colin V. Reed	823,385	O
	David C. Kloeppel	488,885	X
	John P. Caparella	336,923	X
	Mark Fioravanti	329,500	X
GREAT WOLF RESORTS INC	John Emery	416,000	O
	James A. Calder	260,000	X
	Hernan R. Martinez	375,000	X
	Kimberly K. Schaefer	310,000	X
	J. Michael Schroeder	250,000	X
HILTON HOTELS CORP	Stephen F. Bollenbach	1,137,830	O
	Robert M. La Forgia	1,150,000	X
	Matthew J. Hart	850,000	O
	Madeleine A. Kleiner	1,025,000	X
INTERSTATE HOTELS & RESORTS	Thomas F. Hewitt	400,000	O
	J. William Richardson	115,385	X
	H. Lee Curtis	244,732	X
	Christopher L. Bennett	246,277	X
LODGIAN INC	Edward J. Rohling	892,692	O
	Daniel E. Ellis	325,000	X
	Samuel J. Davis	109,490	X
MARRIOTT INTL INC	J.W. Marriott, Jr	1,119,506	O
	Arne M. Sorenson	609,000	X
	William J. Shaw	908,800	O
	James M. Sullivan	609,000	X
	Joseph Ryan	1,449,000	X
RED LION HOTELS CORP	Arthur M. Coffey	354,791	O
	Anupam Narayan	245,625	X
	John M. Taffin	208,524	X
	Thomas L. McKeirnan	158,291	X
STARWOOD HOTELS&RESORTS WRLD	Steven J. Heyer	1,000,000	O
	Vasant M. Prabhu	578,667	X
	Kenneth S. Siegel	496,000	X
	Raymond L. Gellein, Jr.	599,541	X
	Theodore W. Darnall	467,846	X

APPENDIX B

EXECUTIVES IN CASINO INDUSTRY (2006)

Company Name	Name of Executive	Total Cash Compensation ($)	Current Director
AMERICAN SKIING CO	William J. Fair	469,230	O
	Christopher S. Diamond	279,803	X
	Stan Hansen	282,367	X
	Foster A. Stewart, Jr.	287,293	X
	Helen E. Wallace	291,793	X
AMERISTAR CASINOS INC	Gordon R. Kanofsky	473,942	X
	Peter C. Walsh	379,154	X
	Thomas M. Steinbauer	349,154	O
	Craig H. Neilsen	854,231	O
	Angela R. Frost	202,212	X
ARCHON CORP	Paul W. Lowden	750,000	O
	John M. Garner	115,000	X
BOYD GAMING CORP	William S. Boyd	1,750,000	O
	Robert L. Boughner	1,000,000	O
	Keith E. Smith	750,000	O
	Ellis Landau	550,000	X
CENTURY CASINOS INC	Erwin Haitzmann	588,831	O
	Peter Hoetzinger	588,831	O
	Larry Hannappel	195,650	X
	Ray Sienko	125,609	X
FULL HOUSE RESORTS INC	Andre M. Hilliou	207,500	O
	Greg Violette	182,500	X
HARRAHS ENTERTAINMENT INC	Gary W. Loveman	2,000,000	X
	Charles L. Atwood	1,122,885	X
	Stephen H. Brammell	486,923	X
	Timothy J. Wilmott	1,228,615	X
ISLE OF CAPRI CASINOS INC	Bernard Goldstein	885,866	O
	Timothy M. Hinkley	748,959	X
	Allan B. Solomon	595,626	X
	Robert G. Griffin	391,932	X
	Lester J. McMackin	360,912	X
LAKES ENTERTAINMENT INC	Lyle Berman	707,200	O
	Timothy J. Cope	497,200	X
	Robert Wyre	300,000	X
	Richard Bienapfl	270,000	X
LAS VEGAS SANDS CORP	Sheldon G. Adelson	1,000,000	O
	William P. Weidner	1,000,000	O
	Bradley H. Stone	1,000,000	X
	Robert G. Goldstein	965,000	X
	Scott D. Henry	500,000	X
MGM MIRAGE	J. Terrence Lanni	2,000,000	O
	James J. Murren	1,500,000	X
	Robert H. Baldwin	1,500,000	X
	John T. Redmond	1,500,000	X
	Gary N. Jacobs	700,000	X
	Scott D. Henry	469,230	O
	Gary N. Jacobs	279,803	X

Company Name	Name of Executive	Total Cash Compensation ($)	Current Director
MONARCH CASINO & RESORT INC	John Farahi	400,000	O
	Bob Farahi	240,000	O
	Ben Farahi	110,770	X
	Darlyne Sullivan	207,242	X
	Richard Cooley	214,954	X
MTR GAMING GROUP INC	Edson R. Arneault	1,057,206	O
	Robert A. Blatt	239,203	O
	John W. Bittner, Jr	241,000	X
	David R. Hughes	335,225	X
NEVADA GOLD & CASINOS INC	H. Thomas Winn	391,347	O
	Donald A. Brennan	173,740	X
	Cathryn L. Porter	228,669	X
PENN NATIONAL GAMING INC	Peter M. Carlino	2,800,000	O
	William J. Clifford	1,170,000	X
	Leonard M. DeAngelo	1,275,000	X
	Jordan B. Savitch	650,000	X
	Kevin DeSanctis	1,572,604	X
PINNACLE ENTERTAINMENT INC	Daniel R. Lee	1,375,000	O
	Stephen H. Capp	1,132,154	X
	Wade W. Hundley	1,057,308	X
	John A. Godfrey	818,500	X
	Alain Uboldi	728,654	X
RIVERA HOLDINGS CORP	William L. Westerman	1,000,000	O
	Robert A. Vannucci	586,265	X
	Tullio J.Marchionne	248,744	X
	Duane R. Krohn	202,330	X
	Ronald P. Johnson	204,253	X
TRUMP ENTERTAINMENT RESORTS	James B. Perry	850,000	O
	Mark Juliano	775,000	X
VAIL RESORTS INC	Jeffrey W. Jones	787,788	X
	William A. Jensen	687,596	X
	Roger D. McCarthy	652,884	X
	Martha D. Rehm	636,538	X
	Adam M. Aron	484,417	X
WYNN RESORTS LTD	Stephen A. Wynn	2,825,000	O
	John Strzemp	600,000	X
	Ronald J. Kramer	2,800,000	O
	Marc D. Schorr	2,572,115	X
	Linda Chen	956,144	X
YOUBET.COM INC	Charles F. Champion	772,493	O
	Gary W. Sproule	482,300	X

APPENDIX C

EXECUTIVES IN RESTAURANT INDUSTRY (2006)

Company Name	Name of Executive	Total Cash Compensation ($)	Current Director
AFC ENTERPRISES INC	Kenneth L. Keymer	840,000	X
	H. Melville Hope, III	350,370	X
	Harold M. Cohen	294,800	X
	Robert Calderin	345,395	X
	James W. Lyons	319,831	X
ARK RESTAURANTS CORP	Michael Weinstein	776,652	O
	Vincent Pascal	339,984	O
	Robert Towers	339,342	O
	Paul Gordon	293,817	O
	Robert Stewart	251,952	X
BENIHANA INC	Joel A. Schwartz	431,863	O
	Taka Yoshimoto	246,039	O
	Michael R. Burris	208,279	X
	Kevin Y. Aoki	140,644	O
	Juan C. Garcia	180,673	X
BJ'S RESTAURANTS INC	Paul A. Motenko	312,600	O
	Gerald W. Deitchle	495,000	O
	Gregory S. Lynds	304,704	X
BRAZIL FAST FOOD CORP	Ricardo Figueiredo Bomeny	129,027	O
	Roger F. Thomson	929,697	X
	Todd E. Diener	1,087,754	X
BUCA INC	Wallace B. Doolin	544,673	O
	Kaye R. O'Leary	216,475	X
	Modesto Alcala	256,471	X
	Stephen B. Hickey	225,000	X
	Cynthia C. Rodahl	194,721	X
BUFFALO WILD WINGS INC	Sally J. Smith	450,000	O
	Mary J. Twinem	280,000	X
	James M. Schmidt	215,000	X
	Judith A. Shoulak	230,000	X
	E. Lee Sanders	215,000	X
	James F. Hyatt	1,887,764	X
CALA CORP	Joseph Cala	300,000	O
CALIFORNIA PIZZA KITCHEN INC	Larry S. Flax	539,231	O
	Richard L. Rosenfield	539,231	O
	Susan M. Collyns	315,769	X
	Thomas Beck	225,000	X
	Sarah Goldsmith Grover	197,454	X
CBRL GROUP INC	Michael A. Woodhouse	937,500	O
	Lawrence E. White	425,000	X
	N.B. Forrest Shoaf	309,000	X
	Cyril J. Taylor	697,015	X
	G. Thomas Vogel	594,804	X
	David L. Gilbert	500,945	X
CEC ENTERTAINMENT INC	Richard M. Frank	1,200,000	O
	Michael H. Magusiak	598,077	X
	Richard T. Huston	224,616	X
CENTERPLATE INC	Janet L. Steinmayer	630,769	O
	Kenneth R. Frick	262,500	X

Company Name	Name of Executive	Total Cash Compensation ($)	Current Director
CHEESECAKE FACTORY INC	David Overton	682,000	O
	Michael J. Dixon	285,000	X
	Peter J. D'Amelio	390,000	X
	Max S. Byfuglin	404,849	X
	Debby R. Zurzolo	340,000	X
CKE RESTAURANTS INC	Andrew F. Puzder	2,792,802	O
	E. Michael Murphy	1,199,008	X
	John J. Dunion	406,923	X
	Theodore Abajian	979,804	X
	Brad R. Haley	623,130	X
COSI INC	Kevin Armstrong	350,000	X
	William Koziel	256,923	X
	Gilbert Melott	235,644	X
DARDEN RESTAURANTS INC	Clarence Otis, Jr	1,898,313	O
	Andrew H. Madsen	1,584,856	O
	Blaine Sweatt, III	492,552	O
	Kim A. Lopdrup	826,756	X
	David T. Pickens	830,256	X
DENNYS CORP	Nelson J. Marchioli	734,616	O
	Rhonda J. Parish	391,507	X
	Margaret L. Jenkins	372,628	X
	Janis S. Emplit Senior	323,031	X
EINSTEIN NOAH RESTAURANT GRP	Paul J.B. Murphy, III	594,990	O
	Daniel J. Dominguez	350,941	X
	Richard P. Dutkiewicz	306,926	X
	Jill B.W. Sisson	265,097	X
FAMOUS DAVES OF AMERICA INC	David Goronkin	620,274	O
	Diana G. Purcel	245,028	X
	Christopher O'Donnell	210,724	X
FLANIGANS ENTERPRISES INC	James G. Flanigan	448,000	O
	Jeffrey D. Kastner	303,000	O
	August Bucci	320,000	X
	Jean Picard	142,000	X
FRISCH'S RESTAURANTS INC	Craig F. Maier	548,212	O
	Donald H. Walker	167,632	X
GOOD TIMES RESTAURANTS INC	Boyd E. Hoback	170,000	O
	Scott G. LeFever	134,000	X
GRANITE CITY FOOD & BREWERY	Steven J. Wagenheim	275,000	O
	Timothy R. Cary	214,623	X
	Monica A. Underwood	112,452	X
GRILL CONCEPTS INC	Philip Gay	316,274	O
	Robert Spivak	440,000	O
	John Sola	216,193	X
	Michael Weinstock	208,415	O
	Louie Feinstein	190,386	X
JACK IN THE BOX INC	Linda A. Lang	1,750,000	O
	Paul L. Schultz	1,139,750	X
	Jerry P. Rebel	803,000	X
	David M. Theno	679,100	X

Company Name	Name of Executive	Total Cash Compensation ($)	Current Director
KONA GRILL INC	Jason J. Merritt	367,500	X
	Mark S. Robinow	330,750	X
LANDRYS RESTAURANTS INC	Tilman J. Fertitta	3,035,000	O
	Richard H. Liem	475,000	O
	Steven L. Scheinthal	735,000	X
	Jeffrey L. Cantwell,	300,962	X
	Richard E. Ervin	536,846	X
LUBYS INC	Christopher J. Pappas	581,951	O
	Harris J. Pappas	581,951	O
	Ernest Pekmezaris	307,341	X
	Peter Tropoli	321,398	X
MAX & ERMAS RESTAURANTS	Todd B. Barnum	355,000	O
	William C. Niegsch, Jr	214,405	O
	Robert A. Lindeman	220,933	X
	James Howenstein	161,024	X
MCCORMICK & SCHMICKS SEAFOOD	Saed Mohseni	344,231	X
	Douglas L. Schmick	266,346	O
	Emanuel N. Hilario	242,692	X
	David E. Jenkins	148,655	X
	Jeffrey H. Skeele	139,231	X
MCDONALD'S CORP	James A. Skinner	1,177,692	O
	Matthew H. Paull	683,333	X
	Ralph Alvarez	703,077	X
	Michael J. Roberts	962,500	X
MEXICAN RESTAURANTS INC	Curt Glowacki	253,085	O
	Andrew J. Dennard	155,000	X
	Dennis D. Vegas	175,000	X
	James J. Liguori	175,000	O
NATHAN'S FAMOUS INC	Eric Gatoff	260,000	O
	Ronald G. DeVos	222,750	X
	Wayne Norbitz	463,750	O
	Donald L. Perlyn	310,000	O
O'CHARLEY'S INC	Gregory L. Burns	550,000	O
	Lawrence E. Hyatt	370,000	X
	John R. Grady	381,200	X
P F CHANGS CHINA BISTRO INC	Richard L. Federico	585,000	O
	Robert T. Vivian	385,000	X
	Russell G. Owens	385,000	X
	R. Michael Welborn	315,000	O
PANERA BREAD CO	Ronald M. Shaich	515,000	O
	Neal J. Yanofsky	581,625	X
	Mark A. Borland	364,795	X
PAPA JOHNS INTERNATIONAL INC	Nigel Travis	754,231	O
	J. David Flanery	394,231	X
	John H. Schnatter	595,231	O
	William M. Van Epps	512,116	X
	Michael R. Cortino	337,996	X
RARE HOSPITALITY INTL INC	Philip J. Hickey, Jr.	737,019	O
	Eugene I. Lee, Jr	478,173	O
	W. Douglas Benn	358,578	X

Company Name	Name of Executive	Total Cash Compensation ($)	Current Director
RED ROBIN GOURMET BURGER	Dennis B. Mullen	751,437	O
	Michael E. Woods	339,102	X
	Todd Brighton	289,336	X
	Robert J. Merullo	339,613	X
RUBIO'S RESTAURANTS INC	Ralph Rubio	287,991	O
	John Fuller	227,115	X
	Carl Arena	200,000	X
	Gerald Leneweaver	210,000	X
RUTHS CHRIS STEAK HOUSE	Craig S. Miller	480,000	O
	Thomas J. Pennison, Jr	200,000	X
	Geoffrey D.K. Stiles	300,000	X
	David L. Cattell	200,000	X
SHELLS SEAFOOD RESTRNTS INC	Leslie J. Christon	300,000	O
	Warren R. Nelson	166,904	X
	Guy C. Kathman	144,634	X
	Christopher R. Ward, Sr.	127,927	X
SONIC CORP	J. Clifford Hudson	1,001,372	O
	W. Scott McLain	452,390	X
	Michael A. Perry	404,975	X
	Ronald L. Matlock	363,583	X
STAR BUFFET INC	Robert E. Wheaton	275,000	O
STEAK N SHAKE CO	Alan B. Gilman	500,000	O
	Peter Dunn	596,154	O
	Jeffrey Blade	219,231	X
	Gary Reinwald	245,000	X
	Gary Walker	242,827	X
STEAKHOUSE PARTNERS INC	A. Stone Douglass	200,012	O
	Joseph L. Wulkowicz	156,000	X
	Susan Schulze-Claasen	150,014	X
TEXAS ROADHOUSE INC	G.J. Hart	535,200	O
	Scott M. Colosi	238,174	X
	W. Kent Taylor	300,000	O
	Steven L. Ortiz	414,200	X
	Sheila C. Brown	174,200	X
WENDY'S INTERNATIONAL INC	Kerrii B. Anderson	620,058	O
	Jeffrey M. Cava	388,600	X
	Jonathan F. Catherwood	383,692	X
WESTERN SIZZLIN CORP	James C. Verney	260,000	X
	Robyn B. Mabe	131,000	X
YUM BRANDS INC	David C. Novak	1,215,000	O
	Emil J. Brolick	629,577	X
	Graham D. Allan	542,308	X

VITA

Sang Hyuck Kim

Candidate for the Degree of

Doctor of Philosophy or Other

Thesis: EXAMINATION OF EXECUTIVE COMPENSATION DETERMINANTS IN THE HOSPITALITY INDUSTRY: A QUANTILE REGRESSION APPROACH

Major Field: Hospitality Administration in Human Environmental Sciences

Biographical:

Personal Data: Born in Seoul, Korea, On November 4, 1975 as the son of Jong Ho Kim and Myung Hee Park. Married to Soo Lyun Cho, July 17, 2002. Have two sons; Patrick Junhee Kim, born in Knoxville, Tennessee on April 30, 2005 and Andrew Gunhee Kim, born in Stillwater, Oklahoma on November 21, 2006.

Education: Graduated from Dukwon High School, Daegu, Korea, in February 1994; received Bachelor of Science degree in Business Administration from Dong-Guk University, Seoul, Korea, in February, 2000; received the Master of Business Administration degree, concentrated on Finance at Western Illinois University, Macomb, Illinois in May 2002; received the Master of Science degree with a major in Accountancy at University of Illinois, Urbana-Champaign, Illinois in May 2003; completed the requirements for the Doctor of Philosophy degree with a major in Hospitality Administration at Oklahoma State University, Stillwater, Oklahoma in July 2008.

Experience: Research Assistant for Tourism Institute, University of Tennessee at Knoxville, 2005-2006; Internship, Samsung Everland Foodservice, 2007; Research Assistant, Oklahoma State University, 2006-Present.

Professional Memberships: Member of International Council on Hotel, Restaurant and Institutional Education.

Name: Sang Hyuck Kim Date of Degree: July, 2008

Institution: Oklahoma State University Location: Stillwater, Oklahoma

Title of Study: EXAMINATION OF EXECUTIVE COMPENSATION DETERMINANTS IN THE HOSPITALITY INDUSTRY: A QUANTILE REGRESSION APPROACH

Pages in Study: 110 Candidate for the Degree of Doctor of Philosophy

Major Field: Hospitality Administration in Human Environmental Sciences

Scope and Method of Study: This study has investigated the determinants of executive compensation in the hospitality industry with selected variables from both the pay-for-performance rule and the managerial power approach, using two multiple regression analysis methods: OLS regression and quantile regression. OLS regression analysis was performed first to identify the determinants of executive compensation in the hospitality industry on the basis of both the pay-for-performance rule and the managerial power approach. At the second stage of analysis, quantile regression analysis was adopted to examine whether the independent variables were differently related to different levels of executive compensation in the hospitality industry.

Findings and Conclusions: Both the OLS regression analysis and the quantile regression analysis supported that the pay-for-performance rule and the managerial power approach influence executive compensation in the hospitality industry. The results of OLS regression analysis for the hospitality industry revealed that three financial variables, firm debt ratio, firm size, and EPS, and two managerial power variables, PDIR (current director or not) and executive stock ownership, were positively related to executive compensation with statistical significance. In addition, the quantile regression analysis showed that the level of executive compensation was differently related to each independent pay-for-performance and managerial power variable. In other words, the different measures could be utilized to determine different levels of executive compensation.

ADVISER'S APPROVAL: Dr. Jerrold K. Leong