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The relationship between managerial holdings and performance: An empirical study on the restaurant industry

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THE RELATIONSHIP BETWEEN MANAGERIAL HOLDINGS AND PERFORMANCE : AN EMPIRICAL STUDY ON THE RESTAURANT INDUSTRY

by

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Bachelor of Arts
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1989

Master of Business Administration
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A thesis submitted in partial fulfillment
of the requirements for the degree of

Master of Science

in

Hotel Administration

William F. Harrah College of Hotel Administration
University of Nevada, Las Vegas
May, 1998

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Examination Committee Chair

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ABSTRACT

The Relationship between Managerial Holdings and Performance: An Empirical Study on the Restaurant Industry

by

Young Kwi Kim

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The relationship between managerial stock holdings and performance, measured by profitability, operating efficiency, and stock return, was examined for the publicly traded restaurant companies during the period of 1995-1996. Additionally, the study investigated whether the degree of association between managerial ownership and performance, as measured by the same variables, differs across three groups identified by the range of managerial ownership.

The empirical results support that managerial ownership has a positive impact on most of the performance variables (i.e. operating efficiency and profitability). Firm size, a control variable, was also found to be significantly associated with profitability, operating efficiency, and stock return. The impact of managerial ownership on performance variables was most evident in the

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group with 0%-15% managerial ownership. The results suggest that large restaurant firms with relatively low managerial ownership may utilize equity ownership most effectively as a managerial incentive to improve performance.

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CHAPTER I

INTRODUCTION

The goal of corporations is to maximize the return to owners or shareholders. Most corporations, however, due to separation of ownership and management, may not maximize the return to shareholders. As stressed by Berle and Means (1932), when managers hold little equity in the firm, corporate assets may be deployed to benefit managers rather than shareholders. This is why the owner (a principal) establishes incentives for the manager (an agent) so that the manager can make optimal decisions from the owner's viewpoint. Jensen and Meckling (1976), who systematically developed the agency concept, proposed managerial stock ownership as one way of reducing the agency problems that arise from the ownership-management separated structure. They suggested that increasing managerial stock ownership would help managers maximize security returns and financial performance from the shareholder's point of view rather than concentrate on the short-term managerial tasks.

Most publicly traded restaurant firms provide managerial ownership in the hope that equity ownership derives various benefits for the firm as explained below. First, equity ownership may increase the convergence of interests between managers and shareholders as Jensen and Meckling (1976) suggested.

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Restaurant firms offering managerial ownership, therefore, may anticipate increased returns to shareholders. Second, ownership may strengthen attachment and bonding of executives to the firm. It is likely that a sense of ownership reduces unnecessary costs that might have been incurred without it and increases the efficiency of operating/managing activities. This will result in improved firm performance. Equity ownership can be also utilized as a recruiting strategy for qualified restaurant executives. Today, restaurant executives' search for equity ownership is noticeable whether it is through stock options, partnership, or by other means of acquiring more equity. By identifying the prospective executives' "need" for equity, a restaurant firm can utilize equity ownership as a pro-active recruiting strategy.

Many restaurant firms, acknowledging these benefits and the industry trend, have adopted or are willing to adopt managerial ownership as a strategy to motivate their executives. A survey by *Restaurant Business* in 1993 indicates the weight of stock options in the restaurant executives' compensation (Romeo, 1994). The survey shows that the average stock option and long-term incentive for all 90 restaurant CEOs constitute 70% of their total compensation. Executives and top management are the most important parts of the restaurant firm's human resources. Their leadership and ability are critical to a restaurant firm's growth and survival in this highly competitive industry. Accordingly, the subject of executives' equity ownership, as a motivational factor, has gained wide attention throughout the industry and academia.

However, the compensation for restaurant CEOs lagged far behind in

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1994, compared with the pay of other industries. According to a study by Pearl Meyer and Partner (as cited in Romeo and Coeyman, 1995), the average CEO's compensation in the U.S. was $3.5 million in 1994, up from $2.5 million in 1989. Comparatively, for the 100 highest paid CEOs of public restaurant companies, the mean was a mere $611,315 (Romeo and Coeyman, 1995). The relatively low compensation packages for restaurant CEOs may incite the restaurant industry to increase incentives for CEOs. Yet, this suggestion must be considered carefully and based on a proven track of association between incentives and firm performance of the restaurant companies.

Numerous studies to determine the relationship between managerial stock ownership and firm performance have been conducted; yet these studies that focused on multiple industries or single non-hospitality industry have yielded inconclusive results. Some studies (Hudson, Jahera, and Lloyd, 1992; Kim, Lee, and Francis, 1988; Morck, Shleifer, and Vishny, 1988) found that there was a significant relationship between managerial ownership and firm performance. On the other hand, some other studies (Demsetz, 1983; Gomez-Mejia and Balkin, 1992; Lloyd, Jahera, and Goldstein, 1986; Tsetsekos and DeFusco, 1990) failed to discover a significant relationship between them. None of these studies focused on the restaurant industry. Kesner's (1987) study that found that the impact of managerial holdings on firm performance varies among different industries, suggests that focusing on one industry or similar industries is necessary to eliminate possible industry effect.

This thesis, based on the agency theory, examines the relationship

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between managerial ownership and firm performance of the publicly traded restaurant firms, inclusive of all types of operation. The findings of the study will provide empirical evidence and suggestions as to whether establishing and increasing managerial ownership is a valid strategy in the restaurant industry to improve firm performance and increase the return to shareholders.

Organization of the Study

This study is designed to investigate the relationship between managerial ownership and firm performance based on the agency theory. Chapter I addresses purpose, contribution of the study, limitations, delimitations, and definition of terms. Chapter II reviews background theories and empirical studies related to the study on the relationship between managerial ownership and firm performance. Chapter III discusses data, variables, and research hypotheses testing, and provides a preliminary test. Chapter IV reports findings of the empirical investigation and analyzes the results. Finally, Chapter V presents a summary, discusses implications of the results, and provides suggestions for further research.

Purpose of the Study

The primary purpose of the study is to investigate the impact of managerial ownership on firm performance in terms of asset utilization, profitability, operating efficiency, and stock return. The findings will help the restaurant industry by setting a guideline for adopting and increasing managerial ownership as a competitive strategy to improve firm performance

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and increase the return to shareholders. To accomplish this purpose, the study will first examine the current status of managerial ownership within the restaurant industry. This examination will provide a perspective of managerial ownership within the overall restaurant industry. This perspective can then be utilized in this study as an industry standard to which individual restaurant firms can be compared. In addition, the study will investigate whether the degree of association between managerial ownership and performance, as measured by the same variables, varies across firms with the different levels of managerial ownership. The result will help to determine whether the effect of increasing managerial ownership is different among firms with different levels of managerial ownership.

Contribution of the Study

Despite the volume of the studies conducted so far, there has not been a conclusive result on the relationship between managerial ownership and firm performance. Some studies (Hudson, Jahera, and Lloyd, 1992; Kim, Lee, and Francis, 1988; Morck, Shleifer, and Vishny, 1988) found a significant relationship between managerial ownership and performance, while some others (Demsetz, 1983; Gomez-Mejia and Balkin, 1992; Lloyd, Jahera, and Goldstein, 1986; Tsetsekos and DeFusco, 1990) failed to discover the significant relationship. This study will add additional evidence and contribute to narrowing the gap among the previous studies on the relationship between managerial ownership and firm performance.

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Most previous studies that investigated the impact of managerial ownership on firm performance have used diverse industries as samples. While some studies focused on single non-hospitality industry such as manufacturing and utility, the others collected samples by a random selection procedure from multiple industries or right off the Fortune 500 companies. According to Kesner (1987), the impact of managerial ownership on firm performance differed across different industries. He found that, for low-growth industries, managerial ownership did not seem to influence either current or future performance. Alternatively, high-growth industries were found to have a positive and significant relationship between managerial ownership and firm performance. His study suggests that focusing on one industry or similar industries may provide better insights and eliminate a possible industry effect. Industry effect, caused by using mixed industries as a sample, may distort the overall result because of the diverse, or sometimes conflicting, characteristics of different industries. This thesis, by focusing on one industry, will provide industry-effect-free results.

While some studies (Demsetz and Lehn, 1985; Salancik and Pfeffer, 1980) included accounting ratios as performance measures in their studies on the relationship between managerial ownership and firm performance, numerous researchers (Kim, Lee, and Francis, 1988; Lloyd, Jahera, and Goldstein, 1986; Tsetsekos and DeFusco, 1990) have used stock return as the only performance measure. Stock return has been the common performance measure among the previous studies examining the relationship between managerial stock holdings

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and firm performance. The reason for focusing on stock performance may be because of the strong dependence of executives' wealth on the stock market value. This study, by employing various performance measures from asset utilization (total asset turnover), operating efficiency (operating efficiency ratio), and profitability (operating return, net profit margin, return on assets, return on investment, and return on equity) to stock return, examines the impact of managerial ownership on various performance measures of the restaurant firms.

None of the previous studies on the relationship between managerial ownership and firm performance have focused on the service industry, except one thesis by Qian (1996). Qian examined the lodging and casino industry, but used only a limited number of observations. In comparison, this study collected data from 224 observations covering a two-year period and focused only on the restaurant industry. The result will help to find and add a performance variable in the restaurant industry.

The findings of the study will reveal if managerial holdings can be used as an incentive for restaurant executives to improve firm performance in terms of profitability, operating efficiency, and stock return. Also, the findings will disclose whether increasing the extent of managerial ownership is a valid strategy for the restaurant industry to use in order to better align managers' interest with shareholders'.

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Limitations of the Study

The study will have the limitations as noted below:

1. The sample is limited to the publicly traded restaurant firms. Privately held restaurant firms were excluded due to the inaccessibility of data.
2. Some small public restaurant firms were not included because the data required for this study was incomplete or unavailable.

Delimitations

The scope of the study is delimited by:

1. Defining the restaurant firm as a firm whose primary business is food and beverage sales, and is classified as an eating place by primary SIC code 5812 in the *Compact Disclosure* database. Companies with 5812 as secondary SIC code were not included because their primary business is not restaurant operation.
2. Using key accounting ratios which have been commonly used by previous researchers in the financial literature and stock return as measures of financial performance and market performance.
3. Defining managerial ownership as shares held by officers and directors at the corporate level. Ownership held by managers at lower levels was not included in this study due to lack of information.
4. Using market value of equity as a measure of firm size.

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Definition of Terms

1) Agency relationship: a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent.
2) Agency cost: the inefficiencies that result from the conflicts of interest between managers and shareholders in the firms with low managerial ownership.
3) Managerial ownership: the outstanding shares held by the firm's corporate officers, directors, or individuals actively involved in the corporate decisions.
4) Market value of equity: total market value of the outstanding common equity. It was used as a measure of firm size.
5) Restaurant industry: a group of firms whose primary business is food & beverage sales, and which provide an eating place. All types of publicly traded restaurant firms were included as a sample in this study.
6) Accounting performance: a firm's financial ability in profitability and efficiency. Seven accounting ratios (i.e. total asset turnover, operating efficiency ratio, net profit margin, operating return, return on assets, return on equity, and return on investment) were used to evaluate the restaurant firm's accounting performance.
7) Total asset turnover (ATT): a measure of firm's efficiency in asset utilization. This ratio can be computed by dividing net sales by average

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total assets.

8) Net profit margin (NPM): a measure of firm's profitability. Net profit margin can be obtained by dividing net income by net sales.

9) Operating efficiency ratio (OE): a measure of firm's operating efficiency. This can be obtained by dividing income before fixed charges by total revenue.

10) Operating return (OR): a ratio of operating cash flow to total operating assets. Operating assets are defined as total assets minus investment & advance to subsidiaries. This is a fine measure of profitability that is left most to the discretion of managers.

11) Return on assets (ROA): a measure of a firm's profitability. ROA can be computed by dividing net income by average total assets.

12) Return on equity (ROE): a measure of return to the common shareholders. ROE can be obtained by dividing net income by average common equity.

13) Return on investment (ROI): a measure of the return on the invested capital. It is obtained by dividing net income by the sum of long-term liability and equity.

14) Price-earnings ratio (P/E): a ratio of stock price per share to fully diluted earnings per share. This ratio expresses the price that the market places on the earning ability of a firm. P/E ratio was used as a control variable in measuring stock performance.

15) Stock return (SR): stock price change in percentage during a certain period. It can be calculated as: $R = (P_1 + D - P_0)/P_0$ where,

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R = stock return

P_1 = closing price on the ending date

P_0 = closing price on the beginning date

D = dividend during the period.

16) Small firm size effect: abnormal risk-adjusted returns that appeared in the stock performance of small firms as opposed to large firms.

17) P/E effect: an effect appearing in stock return due to information on price-earnings ratio that indicates the future earning power of a firm. P/E effect has been found to be inversely related with future stock performance.

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CHAPTER II

REVIEW OF LITERATURE

Introduction

In an attempt to provide adequate background information and enhance an understanding of the relationship between managerial ownership and performance of the restaurant firms, this chapter covers two major domains; theoretical background and empirical studies. Reviewed in the first part of the chapter are agency theory, suggestions about agency problems, managerial ownership, employee stock ownership plan, and motivation theory. The second part discusses empirical studies on the relationship between managerial ownership and firm performance, and other relevant issues on control variables.

Agency Relationship and Costs

It may not be overstated that firms exist to pursue maximization of returns to owners or shareholders. Most corporations today, however, because of the separation of ownership and management, may have difficulty meeting the best interest of owners. Because owners or shareholders are not the ones who operate or manage the firm, they have to delegate some decision making authority to someone whose interest may not be aligned with theirs.

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Jensen and Meckling (1976) systematically developed the agency model that is embedded on this owner (principal)-manager (agent) relationship. According to them, an agency relationship is created when there is a separation of ownership and control. Jensen and Meckling defined agency relationship as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent. Because of the conflict of interests between shareholders and managers, shareholders can not expect any matters in conflict with managers to be resolved in their favor. The conflict of interests is usually resolved in favor of managers who have the power of control. Jensen and Meckling (1976) noted that maximizing sales rather than profits is a typical example of managers' interest. On the other hand, shareholders are more interested in long-term profits than short-term sales increase. Because the agents will usually pursue their interests instead of the principals' interest, the agency problems and associated costs arise from this context.

Jensen and Meckling (1976) described agency costs as the various inefficiencies that result from the conflicts of interests between managers and shareholders. They defined agency costs as the sum of:

(1) the monitoring expenditures by the principal: The principal can limit the divergences from his interests by establishing proper incentives for agents and incurring monitoring costs.

(2) the bonding expenditures by the agent: The principal will pay the agent to

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expend resources (bonding costs) to make sure that he will not take actions which would harm the principal.

(3) the residual loss: There will be some divergences between the agent's decisions and those decisions that would maximize the wealth of the principal. The residual loss is the dollar equivalent of the reduction in wealth experienced by the principal due to this divergence.

There are several ways of reducing agency problems. One of the simple remedies would be to strengthen monitoring and bonding activities. The methods may include auditing, formal control systems, budget restrictions, and incentive compensation system.

Managerial ownership- -as one way of achieving the solution discussed above- -can be utilized to increase executives' bonding with the firm and increase firm performance. Managers who hold equity in the firm would represent the interest of shareholders better because their own wealth is more directly affected by the firm's share value. In addition to the wealth-bonding factor, executives' enhanced sense of ownership would likely help to reduce the inefficiencies or agency costs resulting from the conflicting interests between shareholders and managers. Aware of the benefits driven by managerial ownership, some companies require executives to buy a certain amount of stock in the firm. A survey by a management consulting firm, *Towers Perrin* (as cited in Reese, 1993), reports that 16% of the observed U.S. companies have adopted or are preparing guidelines that specify the amount of stock that executives must own. Mandatory stock-buying schemes, however, may not be costless because

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executives, who would have to resort to large personal borrowings to meet the requirement, may require increasing amounts of compensation.

Another way of reducing agency costs would be to use more debt financing as Jensen and Meckling (1976) suggested. Theoretically, the manager can become the sole equity holder by repurchasing all of the outside equity claims, thus eliminating the agency problem. He can acquire the equity with funds obtained through the issuance of limited liability debt claims and the use of his own personal wealth. This method, however, is hypothetical and unrealistic as explained below. First, there is a lack of incentives for creditors to loan to highly leveraged firms. Potential creditors would not loan $100 million to a firm in which the entrepreneur has an investment of $10,000 because with this financial structure the creditors bear most of the costs, if the company does not perform well. Second, there are monitoring costs that are associated with debt financing. Bondholders, by including various covenants in the provisions, may limit the managerial behavior that results in reductions in the value of the bonds. The costs involved in writing provisions, the costs of enforcing them, and the reduced profitability due to limiting management's ability to take optimal actions on certain issues would likely be non-trivial. Third, there are bankruptcy costs when the firm has difficulty meeting its financial obligations and is forced into bankruptcy. The probability of bankruptcy will affect not only the market price of the firm but also incurs the costs related with bankruptcy. Due to the various costs that are related with debt financing, it is rare to find firms financed by debt claims solely without a mix of debt and equity.

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Managerial Stock Ownership and Employee Stock Ownership Plan

Both managerial stock ownership and employee stock ownership were devised as a form of compensation systems with the same purpose of better aligning the non-owners' interests with the owners'. While managerial ownership is for the corporate level executives, employee stock ownership is open to employees and lower level managers. An Employee Stock Ownership Plan (ESOP) is a compensation and retirement plan that operates through a trust mechanism called Employee Stock Ownership Trust (Conte and Kruse, 1991). The outcomes and benefits of managerial stock ownership and employee stock ownership are similar but not homogeneous. Table 1 summarizes an analysis and comparison of characteristics and benefits of using managerial ownership and ESOP.

The major apparent advantages of providing managerial ownership (MO) are improved firm performance and increased returns to shareholders. Additionally, managerial ownership can be utilized as a recruiting strategy for qualified executives. In 1993, Tom Russo, who turned down a chance for the president of Chevys because of a non-satisfactory equity offer, joined Miami Subs for the stock options of 2.1 million shares (Bernstein, 1994). This case well indicates that equity ownership is a prime factor in the restaurant executives' job searches and that equity ownership can be utilized as a motivator.

However, managerial stock ownership is sometimes criticized because of the nature of the stock market. Critics argue that some executives become overcompensated despite their poor management. For example, Flagstar

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companies posted a loss of $255 million in revenues in 1992 while the compensation of CEO Jerry Richardson rose by more than 200%, to $3.5 million because of stock options issued below the prevailing share price (Romeo, 1993). Critics point out that one of the reasons that executives of poor performing company make a fortune is that a company's shares do not grow in value solely because of its own efforts or those of its top executives.

Table 1.
Analysis and Comparison of MO and ESOP

Criteria	MO	ESOP
Definition & Beneficiary	• Compensation for corporate level executives and top management through grants or buying schemes	• Compensation and retirement plan for employees and lower level managers through a trust mechanism
Purpose	• To better align the managers' interests with shareholders'	• To better align employees' interests with shareholders'
Benefits	• Improved firm performance • Increased returns to shareholders • Recruiting strategy for qualified executives • Strong bonding with the firm	• Tax advantage for the firm • Increased productivity • Strategy to defend from hostile take-over • Strong bonding with the firm
Cost or Disadvantage	• Possibility of overcompensating executives of poor performing firms	• Employees' input needs to be accomplished to reach the maximum degree of increased productivity

Note: The information was gathered from different sources: Chang, 1990; Conte and Kruse, 1991; Demsetz, 1983; Jensen and Meckling, 1976; Romeo, 1993; Rosen, 1990; Scholes and Wolfson, 1990; Tsetsekos and DeFusco; 1990

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Meanwhile, the likely advantages of adopting ESOP are (a) increased employee productivity, (b) tax benefits, and (c) possible defense from hostile take-over attempts. Tax benefits accrue because firms can take advantage of the tax deductibility of interest and principal payments resulting from servicing an ESOP debt. A firm paying cash or dividends to the ESOP could also take a tax deduction on dividends paid to the ESOP Trust.

Another advantage of ESOP is increased productivity as ESOPs are required to invest primarily in employer securities and the return on an ESOP portfolio is likely to be highly related to company performance. However, Rosen (1990) asserts that there is no automatic linkage between employee attitudes and corporate performance and that the performance difference came from employees' participation in job-level decision making. He found out that, overall, the ESOP firms grew 3-4% faster per year than they would have without an ESOP. Most of the difference, however, came from the most participative one-third of the companies. These companies allowed for relatively high degrees of employee input into job-level decision making and demonstrated 8-11% faster growth per year after they set up an ESOP than they would have without one. This result may suggest that participation, not ownership, makes the difference. However, Rosen (1990) found that executives at participative companies consistently felt that participation alone would not be sufficient. Ownership motivates employees, and participation gives them an opportunity to contribute their ideas, knowledge, and experiences to the growth of the company.

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Another popular reason for adopting ESOPs is that they can be used effectively to thwart hostile takeover attempts. Polaroid's case in 1989 shows how the ESOP helped the company defeat the bidder. The employees voted their company shares with management when the company was faced with a hostile tender offer by Shamrock Holdings (Bruner, and Brownlee II, 1990).

Managerial Ownership as a Motivator in the Restaurant Industry

This section presents further discussion on managerial ownership in association with and application of motivation theory. Many restaurant firms are turning their interest into equity ownership not only to reward, but also to motivate their executives to improve firm performance and increase the return to shareholders. However, motivation leading to better performance is not as easily done as said. Green (1992) notes the difficulty of motivating employees as follows:

> Fundamental to all the popular theories of motivation is the notion that employees are motivated to perform better when offered something that they want. Yet many employees are not so motivated when faced with such opportunities. How often have you seen employees offered something they wanted, only to discover they were not motivated to work harder and perform better? (p.4)

Green (1992) explains that difficulty of associating motivation with performance is incurred by failing to link the three stages that Vroom (1964) addressed. According to the expectancy theory of motivation popularized by Vroom (1964),

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motivation and performance strategies should address three beliefs. That theory is reconceptualized below for clarity.

$$\text{Effort} \overset{B1}{\Rightarrow} \text{Performance} \overset{B2}{\Rightarrow} \text{Outcomes} \overset{B3}{\Rightarrow} \text{Satisfaction}$$

According to Vroom, the complete connection of B1 stage (belief that effort will lead to performance), B2 stage (belief that performance will lead to outcomes), and B3 stage (belief that outcomes will lead to satisfaction) will lead to successful motivation.

To reflect and emphasize the role of equity ownership as a motivator leading to consequential benefits and outcomes, Vroom's conceptualization was modified as shown below. Considered that equity ownership is usually offered as a reward for the executives' performance, the B2 stage in Vroom's conceptualization was brought in as a starting connector in this circular pattern.

$$\text{Performance} \overset{S1}{\Rightarrow} \text{Outcomes} \overset{S2}{\Rightarrow} \text{Satisfaction} \overset{S3}{\Rightarrow} \text{Efforts}$$

S4

Note: Author's flow chart is based on the Vroom's conceptualization

This modified conceptualization of motivation serves to better explain the role of equity ownership in a continuous and on-going process. In this context of the model, equity ownership appears to be an efficient motivational tool for executives. First, the direct linkage between the firm's stock value and executives' wealth (S1) is more likely to motivate executives to improve stock performance. The S1 stage (belief that performance will lead to outcome) is

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clearly manifested to the executives. Second, "a sense of ownership" derived from holding the firm's equity seems to work through all motivational stages. The enhanced executives' bonding and attachment to the firm will drive them to make more efforts (S3). Their efforts with a sense of ownership will affect a spectrum of activities ranging from daily operating and decision-making to pursuing the long-term goal better aligned with shareholders'. This will lead to increased efficiency of operation and improved overall firm performance (S4) and ,as a result, generating increased wealth for the executives (S1). The S2 stage is important in completing and continuing motivational effect. A sense of ownership will play a big role at this stage when the executives are not satisfied with their outcomes. It will help to neutralize and replace their dissatisfaction with a sense of ownership and move to the next stage.

The longitudinal motivation effect of managerial ownership is advantageous compared to other forms of financial compensation such as bonuses and salary raises. While cash bonuses and salary raises may motivate executives at the time of receipt, the motivational effect of equity ownership lasts longer because their wealth depends on the firm's stock value that reflects overall firm performance.

Empirical Studies

Managerial Ownership and Firm Performance

Many researchers (Hudson, Jahera, and Lloyd, 1992; Kim, Lee, and Francis, 1988; Morck, Shleifer, and Vishny, 1988; Salancik and Pfeffer, 1980)

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viewed managerial holdings as a proxy for the degree of convergence of interests between managers and shareholders. They believed that managers with a large equity position in the firm would more likely improve firm performance and maximize firm value as their own wealth depended on increases in security prices. However, previous studies (Demsetz and Lehn, 1985; Gomez-Mejia and Balkin, 1992; Hudson, et al., 1992; Lloyd, Jahera, and Goldstein, 1986; Morck, et al., 1988; Tsetsekos and DeFusco, 1990) investigating the relationship between managerial ownership and firm performance have not yielded conclusive results.

Managerial Ownership and Accounting Performance

Demsetz and Lehn (1985) tested the hypothesis using accounting ratios as performance measures. Their results were not supportive of the Jensen/Meckling model. Kesner (1987), who examined the impact of board ownership on firm performance, found the financial dependence perspective supported in part by his research findings. He identified the type of board ownership (inside vs. outside) and examined its impact on various performance measures including PM, ROA, ROE, ROI, SR, and EPS (earnings per share). He found that only two of the performance measures - PM and ROA - were significantly related to the percentage of insiders on the board at the .05 level.

The study by Salancik and Pfeffer (1980) focused on the effects of ownership and performance on the executive tenure in 84 U.S. corporations. They employed profit margin as a measure of operating performance and stock return as a measure of performance in the capital market. The empirical study

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shows that performance measures are related to the tenure of the chief executives depending on the concentration of their stock ownership.

Managerial Ownership and Stock Performance

Lloyd, Jahera, and Goldstein (1986) and Tsetsekos and DeFusco (1990) found no relationship between managerial ownership and stock performance, even after controlling for small firm effect. Tsetsekos and DeFusco (1990) concluded that managerial ownership did not have an effect on portfolio returns and that the size effect was independent of ownership.

On the other hand, Kim, Lee, and Francis (1988) discovered a positive relationship between managerial ownership and stock return while controlling size effect and E/P effect (or P/E effect). The reason for controlling the size effect and E/P effect in the measurement of stock performance is that they are possible causes of abnormal returns that appear in certain groups of securities. The conclusions of Kim, Lee, and Francis (1988) support the hypothesis that managerial ownership has an impact on market performance. In other words, firms with high managerial ownership outperform those with low managerial ownership in stock return. A further study by Hudson, Jahera, and Lloyd (1992) provides additional empirical evidence that ownership is a significant factor in explaining firm performance even after controlling for other market anomalies.

Managerial Ownership and Market Valuation of firms

Morck, Shleifer, and Vishny (1988) examined the relationship between managerial ownership and market valuation of large firms. They found that

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there was a significant nonmonotonic relationship between the managerial stock holdings and market valuation of the firm, as measured by Tobin's Q. Tobin's Q was computed by dividing a firm's market value by the replacement cost of its physical assets. Their study found a positive relation between managerial ownership and Tobin's Q in the 0% to 5% board ownership range, a negative and less pronounced relation in the 5% to 25% range, and a positive relation again in the range beyond 25%. As they explained, the initial rise in Q may reflect managers' greater incentives to maximize value as their stakes rise. In the 5% to 25% ownership range, the negative and less significant correlation may be related with conditions conducive to the entrenchment of incumbent management such as a founder, increased voting power, increased tenure with and attachment to the firm, and lower employment of professional managers. Throughout this range, the incentive effect of managerial ownership could still be operative; it might just be dominated by the entrenchment effect. Beyond 25% of managerial ownership, the positive correlation may reflect a pure convergence-of-interest effect after the entrenchment stage.

Impact of Managerial Ownership among Different Industries

Kesner's (1987) study focused on the stock ownership of the board of directors for 250 of the Fortune 500 companies. He suspected that the relationship between stock ownership and firm performance differs among different industries. He used industry growth rate based on changes in profits during the observed year to classify the 27 industries as either low-growth or high-growth industry. His study showed that the association between

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managerial ownership and performance differed among different industries. The empirical results indicate that stock ownership does not appear to influence either current or future performance in low-growth industries. Alternatively, high-growth industries do reveal a positive and significant relationship between managerial ownership and performance. Kesner's study suggests that using multiple industries as a sample, when investigating the relationship between managerial ownership and firm performance, may distort the overall result. His study further implies that focusing on one industry or similar industries can help control for the industry effect.

Executive Compensation and Firm Size

Previous studies (Baker, Jensen, and Murphy, 1988; Gomez-Mejia and Balkin, 1992; Magnan, St. Onge, and Thorne, 1995) have found a strong positive association between firm size and executive compensation. Child (1973) explained the association with *internal organization of a firm* and *external labor market*. The association between executive compensation and internal organization is based on the finding that large firms tend to have more hierarchical levels of compensation than small firms. External labor market implies that executives who manage larger and more complex firms usually show more knowledge and ability than do executives of smaller and less complex firms. Accordingly, the executive compensation of large firms is more extensive than that of small firms. Many previous studies investigating the relationship between managerial ownership and firm performance controlled firm size because of the implicit association between firm size and compensation

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(see Geddes, 1997; Gomez-Mejia and Balkin, 1992; Magnan, et al., 1995).

Small Firm Effect and Stock Return

Small firm effect refers to the prevailing effect appeared in the small firms that experience abnormally high risk-adjusted stock returns opposed to large firms. The documentation on the superior market performance of small firms can be found in the empirical studies of Banz (1981) and Peterson (1974). Banz (1981) revealed that stocks with lower market values outperformed stocks with larger market values by a significant margin. Similarly, Peterson (1974) showed that stocks with lower total book values of assets provided higher risk-adjusted rates of return than stocks with higher total invested capital. Numerous empirical studies have documented the small firm effect. But the reason or reasons for the effect remain unclear. Some possible explanations such as beta biases, tax effects, transaction costs, trading activity, and return measurement techniques have been investigated extensively.

Roll (1981) suggested that trading activity affected returns because less frequent trading activity by small firms caused estimates of systematic risk to be biased downward and excess returns were overstated. On the contrary, James and Edmister (1983) contended that a liquidity premium for infrequent trading in smaller firms added little to the explanation.

Several studies (Keim, 1983; Reinganum, 1983; Roll, 1983) showed that the small firm size effect was most evident in the month of January, and this might be related to tax loss selling in the smaller firms. However, James and Edmister (1983) found that the small firm effect existed nevertheless, even after controlling

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for trading frequency.

Stoll and Whaley (1983) discovered that transaction costs for small firms were higher, partially because of wider dealer spreads, and the higher transaction costs were related with higher stock returns. Schultz (1983) asserted that return differences between large and small firms could not be explained solely by differences in transaction costs.

Recently, extensive studies have been conducted on the principal-agent relationship as a potential factor to explain the so-called stock return anomalies. The hypothesis of the agency theory is that the abnormal returns appearing in small firms, where relatively high managerial ownership is found, may be related to managerial stock holdings. Because of the relationship between firm size and stock performance, several studies (Cook and Rozeff, 1984; Lloyd, Jahera, and Goldstein, 1986; Tsetsekos and DeFusco, 1990) investigating the impact of managerial ownership on stock performance controlled small firm size effect by forming portfolios by the intersection of size and ownership. On the other hand, the study by Kim, Lee, and Francis (1988) included firm size with other variables in the multiple regression.

P/E effect and Stock Performance

Investors view price-earnings (P/E) ratio as a good gauge of future earning power of the firm (Gibson, 1995). Basu (1977) observed that firms whose common stock traded at low price-earnings ratios tend to outperform firms with high price-earnings ratios. Banz (1981) further supported the argument that price-earnings ratio has an impact on stock performance. Kim, Lee, and Francis

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(1988) also found that security returns were significantly associated with earnings yield. Earnings yield (E/P) ratio is reverse to P/E ratio. They showed that firms whose common stock traded at high earnings yield outperform those with low earnings yield. On the other hand, Reinganum (1981) asserted that E/P effect was present in rates of return only when considered separately from small firm size effect. He found that when small firm size effect and E/P effect were considered together, one effect subsumed the other. However, the study by Cook and Rozeff (1984) demonstrated that equity returns are related to both firm size and E/P ratio. Cook and Rozeff (1984) argued that Reinganum's finding (1981) that size subsumed E/P ratio was caused by a fortuitous choice of methods.

Many previous studies (Banz, 1981; Basu, 1977; Kim, Lee, and Francis, 1988) based on price-earnings ratio hypothesis support that P/E ratios, due to exaggerated investor expectations, may be indicators of future investment performance. Basu (1977) argued that price-earnings ratio could be viewed as a proxy variable for the firm's expected rate of return. He concluded in his study (1977) that

> Contrary to the growing belief that publicly available information is instantaneously impounded in security prices, there seem to be lags and frictions in the adjustment process. As a result, publicly available P/E ratios seem to possess "information content" and may warrant an investor's attention at the time of portfolio formation or revision. (p.681)

Because of the relationship between P/E ratio and stock performance,

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previous studies investigating the relationship between managerial ownership and stock performance included P/E ratio as a control variable. Some studies (Hudson, Jahera, and Lloyd, 1992; Cook and Rozeff, 1984), to control P/E effect, used a cross-classification method by forming portfolios by the intersection of managerial ownership and P/E ratio. Kim, Lee, and Francis (1988) used a somewhat different procedure from these studies. They included E/P (or P/E) ratio in the multiple regression with other variables.

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CHAPTER III

METHODOLOGY AND DATA

Introduction

Following the procedures and methods used in the previous studies (Hudson, Jahera, and Lloyd, 1992; Kim, Lee, and Francis, 1988) on the relationship between managerial ownership and firm performance, this study uses a multiple regression analysis with firm size and P/E ratio included as control variables. The Chapter III is organized in the following order:

1. Data Collection and the Sample
2. Variables
3. Hypotheses Testing
4. Preliminary Test

Data Collection and the Sample

The financial data of the restaurant firms classified by primary SIC code 5812 (eating place) were drawn mostly from the *Compact Disclosure* CD-ROM database. The sample includes two-year observations (1995-1996). The sample selection followed the procedures employed by previous studies that used multiple-year observations (see Kim, Lee, and Francis, 1988; Lloyd, Jahera, and

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Goldstein, 1986; Miller, 1995). The *Compact Disclosure* contained financial data of 190 restaurant firms for 1995 and 181 for 1996 respectively. Due to unavailability of managerial ownership information, a total of 147 observations were omitted from the sample, leaving 111 observations for 1995 and 113 for 1996 available for the final sample of 224 observations. Due to potential bias that may arise from using selective firms' successive two-year data, additional data set was created to include only one-year data from the 146 restaurant firms.

Information on the managerial ownership percentage and size, measured by market value of a firm's equity, were collected from the same database. Equity market value was derived by multiplying the total number of outstanding shares by market price. Stock prices were collected from Historical Stock Quotes in *America On Line*. Stock return was calculated as the percentage change in the price during a year. Price-earnings ratio was calculated by dividing the stock price of the ending date (December 31) by earnings per share for the past 12 months. Information on the earnings per share was obtained from *Internet* WWW. Dailystocks. Net. Accounting ratios of asset turnover, net profit margin, return on assets, return on equity, and return on investment were gathered from the *Compact Disclosure* database. Operating efficiency ratio and operating return were calculated based on the financial statements in the *Compact Disclosure*. Table 2 provides a list of restaurant firms included in this study. Because not all firms were available for two-year observations, some restaurant firms were used for only one-year observation. A total of 146 restaurant firms were selected for a final sample of 224 observations.

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Table 2.
The Sample Firms

	Company
1.	All American Food Group Inc.
2.	Apple South Inc.
3.	Applebee's International Inc.
4.	Au Bon Pain Co. Inc.
5.	Austin's Steaks & Salon Inc.
6.	Back Bay Restaurant Group Inc.
7.	Back Yard Burgers Inc.
8.	Bayport Restaurant Group Inc.
9.	Bertuccis Inc.
10.	Bob Evans Farms Inc.
11.	Boston Chicken Inc.
12.	Brazil Fast Food Corp.
13.	Brinker International Inc.
14.	Buffets Inc.
15.	Casa Ole Restaurants Inc.
16.	Central Coal & Coke Corp.
17.	Champions Sports Inc.
18.	Chart House Enterprises Inc.
19.	Checker Drive In Restaurants Inc.
20.	Cheesecake Factory Inc.
21.	Chefs International Inc.
22.	Chicago Pizza & Brewery Inc.
23.	Ciao Limited.
24.	Ciatti's Inc.
25.	CKE Restaurants Inc.
26.	Cluckcorp International Inc.
27.	Consolidated Products Inc.
28.	Cooker Restaurant Corp.
29.	Country Star Restaurants Inc.
30.	Cracker Barrel Old Country Store Inc.
31.	Creative Host Services Inc.
32.	Daka International Inc.
33.	Darden Restaurants Inc.
34.	Dave & Busters Inc.
35.	DenAmerica Corp.
36.	Eateries Inc.
37.	Einstein Noah Bagel Corp.
38.	El Chico Restaurants Inc.
39.	Elephant & Castle Group Inc.
40.	Elmers Restaurants Inc.

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41.	ELXSI Corp.
42.	Family Steak House of Florida Inc.
43.	Fine Host Corp.
44.	Flagstar Cos. Inc.
45.	Foodmaker Inc.
46.	Foodquest Inc.
47.	Fresh Choice Inc.
48.	Frisch's Restaurants Inc.
49.	Furr's Bishops Inc.
50.	Garden Fresh Restaurant Corp.
51.	GB Foods Corp.
52.	Good Times Restaurants Inc.
53.	Grand Havana Enterprises Inc.
54.	Grill Concepts Inc.
55.	Ground Round Restaurants Inc.
56.	Hometown Buffet Inc.
57.	Host Marriott Services Corp.
58.	Houlihans Restaurant Group Inc.
59.	IHOP Corp.
60.	Integrated Brands Inc.
61.	International Dairy Queen Inc.
62.	International Fast Food Corp.
63.	International Franchise Systems Inc.
64.	Italian Oven Inc.
65.	J. Alexander's Corp.
66.	Jake's Pizza International Inc.
67.	Java Centrale Inc.
68.	Jerry's Famous Deli Inc.
69.	Koo Koo Roo Inc.
70.	Krystal Co.
71.	Landry's Seafood Restaurants Inc.
72.	Linda's Diversified Holdings Inc.
73.	Logan's Roadhouse Inc.
74.	Lone Star Steakhouse & Saloon Inc.
75.	Longhorn Steaks Inc.
76.	Luby's Cafeterias Inc.
77.	Macheezmo Mouse Restaurants Inc.
78.	Magnolia Foods Inc.
79.	Main St & Main Inc.
80.	Manhattan Bagel Co. Inc.
81.	Maverick Restaurants Inc.
82.	Max & Erma's Restaurants Inc.
83.	McDonald's Corp.
84.	Michigan Brewery Inc.

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85.	Morgan's Foods Inc.
86.	Morrison Fresh Cooking Inc.
87.	Morrison Health Care Inc.
88.	Morton's Restaurant Group Inc.
89.	Nashville Country Club Inc.
90.	New York Bagel Enterprises Inc.
91.	Newriders Inc.
92.	Noble Roman's Inc.
93.	NPC International Inc.
94.	Nutrition Management Services Co.
95.	O Charley's Inc.
96.	Outback Steakhouse Inc.
97.	Papa John's International Inc.
98.	Pepsi Co. Inc.
99.	Piccadilly Cafeterias Inc.
100.	Pizza Inn Inc.
101.	PJ America Inc.
102.	Planet Hollywood International Inc.
103.	Pollo Tropical Inc.
104.	Pudgie's Chicken Inc.
105.	QPQ Corp.
106.	Quality Dining Inc.
107.	Quantum Restaurants Inc.
108.	Rainforest Café Inc.
109.	Rally's Hamburgers Inc.
110.	Rare Hospitality International Inc.
111.	Rattlesnake Holding Co. Inc.
112.	Red Hot Concepts Inc.
113.	Roadhouse Grill Inc.
114.	Rock Bottom Restaurants Inc.
115.	Royal Canadian Foods Corp.
116.	Ruby Tuesday Inc.
117.	Ryan's Family Steak Houses Inc.
118.	Sagebrush Inc.
119.	Sbarro Inc.
120.	Scholotzsky's Inc.
121.	Shells Seafood Restaurants Inc.
122.	Shoney's Inc.
123.	Showbiz Pizza Time Inc.
124.	Silver Diner Inc.
125.	Sixx Holdings Inc.
126.	Sizzler International Inc.
127.	Skyline Chili Inc.
128.	Sonic Corp.

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129.	Spaghetti Warehouse Inc.
130.	Stacey's Buffet Inc.
131.	Summit Family Restaurants Inc.
132.	Taco Cabana Inc.
133.	Terrace Holdings Inc.
134.	Timber Lodge Steakhouse Inc.
135.	TPI Enterprises Inc.
136.	Tubby's Inc.
137.	Unique Casual Restaurants Inc.
138.	United Restaurants Inc.
139.	Universal Franchise Opportunities Corp.
140.	Value Holdings Inc.
141.	Vicorp Restaurants Inc.
142.	Vie De France Corp.
143.	Volunteer Capital Corp.
144.	Wall Street Deli Inc.
145.	Watermarc Food Management Co.
146.	Wendy's International Inc.

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Variables

Managerial ownership percentage (MOP) was used as an independent variable. MOP was defined as the percentage of outstanding shares held by a firm's corporate officers, directors, or individuals actively involved in the corporate decisions. Eight performance ratios were selected as dependent variables to measure various firm performance. In consideration of Hofer's (1983) notion that it is common to see several different indices used because organizations legitimately seek to accomplish a variety of different objectives, ranging from profitability to effective asset utilization and high stockholder returns, the study adopted a host of performance measures to evaluate both accounting ratios and stock return. While return on assets (ROA), return on equity (ROE), return on investment (ROI), operating return (OR), operating efficiency ratio (OE), net profit margin (NPM), and total asset turnover (ATT) were adopted to measure accounting performance, stock return (SR) was used to measure market performance.

ROA, a ratio of net income to total assets, measures the return to the total financing provided by shareholders, and long-term and short-term creditors. ROE, defined as net income divided by common equity, is an indicator of the return to the owners or the shareholders. ROI, a ratio of net income to the invested capital, measures the return to capital or long-term and permanent financing. NPM is computed by dividing net income by net revenue. OE, income before fixed charges divided by total revenue, is a fine measure of management's performance because this ratio considers only those expenses that

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management can generally control. OR is a ratio of operating cash flow to the operating assets, excluding the effect of depreciation and interest expenses. Thus, this ratio represents a better measurement of managerial performance because operating activity is left most at discretion of managers. ATT, a ratio of net sales divided by average total assets, measures the ability to generate sales through the use of assets. SR was defined as the percentage change in stock price during a year.

Firm size was used as a control variable. Market value of outstanding common equity was used as a measure of firm size, following some previous studies (Demsetz and Lehn, 1985; Hudson, Jahera, and Lloyd, 1992; Kim, Lee, and Francis, 1988; Lloyd, Jahera, and Goldstein, 1986; Tsetsekos and DeFusco, 1990). While some other studies (Geddes, 1997; Magnon, St. Onge, and Thorne, 1995; Miller, 1995) used sales of a firm as a measure of firm size, Demsetz and Lehn (1985) included a firm's book value of assets as a firm size variable. Exploring the impact of managerial holdings on performance needs to consider the impact of firm size. First, firm size has been found to have an impact on stock returns (Banz, 1981; Reinganum, 1981) and previous studies investigating the relationship between managerial ownership and stock performance used size as a control variable (Hudson et al., 1992; Kim et al., 1988; Lloyd, et al., 1986; Tsetsekos and DeFusco, 1990). Second, it is indispensable to investigate the role of firm size because of the implicit association between firm size and incentives offered to executives. Many studies (Baker, Jensen, and Murphy, 1988; Gomez-Mejia and Balkin, 1992 ; Magnan, et al., 1995) documented a strong positive

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association between firm size and executive compensation. It is apparent that the incentives offered to executives of large firms are greater than those of small firms, with the level of managerial ownership concentration being held constant, because it is easier for executives of small firms to obtain a large percentage of holdings.

Because actual market value of equity could not serve as a size measure due to the immense gap in firm size among the sample firms, firm size or market value of equity was log-transformed. For example, company A, the size of which is 100 times larger than company B, would not have 100 times greater incentives for managers to achieve 100 times better financial performance than company B. According to the theory of data transformation (Norusis, 1996), the logarithmic transformation has the effect of stretching extremely small values and condensing extremely large values of variables, thus, making the relationship more linear.

Price-earnings ratio, defined as the market price of a share of common stock divided by the earnings per share, was employed as an additional control variable in examining the impact of managerial ownership on stock performance. Previous studies (Banz, 1981; Basu, 1977; Kim, Lee, and Francis, 1988) found a significantly negative impact of P/E ratio on stock performance.

Hypotheses Testing

A multiple regression analysis was used to examine the impact of managerial ownership on various performance measures. Like most other studies on the relationship between managerial ownership and firm

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performance, this study included firm size and P/E ratio as control variables. The following multiple regression formula was created based on the previous discussion of the variables.

$$Y = A_0 + A_1X_1 + A_2X_2 + A_3X_3$$

where:

Y = financial performance variable measured by different accounting ratios and stock return

X_1 = percentage of managerial ownership

X_2 = firm size measured by market value of equity

X_3 = P/E ratio, when Y is stock return

Ai = constant or coefficients of independent variables (i = 0, 1, 2, and 3)

If A_1, A_2, and A_3 are 0, the null hypotheses can not be rejected. This means that independent variables do not have any significant impact on the dependent variable.

The following null hypotheses were tested to examine if managerial ownership, firm size, and P/E ratio (when Y is stock return) have significant impact on each performance variable.

Null Hypotheses:

(a) There is no significant impact of managerial ownership and firm size on asset turnover (A_1=0; A_2=0).

(b) There is no significant impact of managerial ownership and firm size on operating efficiency (A_1=0; A_2=0).

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(c) There is no significant impact of managerial ownership and firm size on net profit margin ($A_1=0$; $A_2=0$).

(d) There is no significant impact of managerial ownership and firm size on operating return ($A_1=0$; $A_2=0$).

(e) There is no significant impact of managerial ownership and firm size on return on assets ($A_1=0$; $A_2=0$).

(f) There is no significant impact of managerial ownership and firm size on return on equity ($A_1=0$; $A_2=0$).

(g) There is no significant impact of managerial ownership and firm size on return on investment ($A_1=0$; $A_2=0$).

(h) There is no significant impact of managerial ownership, firm size, and price-earnings ratio on stock return ($A_1=0$; $A_2=0$; $A_3=0$).

To examine whether the degree of association between independent variables and a dependent variable differs across the firms with different levels of managerial ownership, the following procedures were completed. The 224 observations were ranked according to the managerial ownership percentage to form three evenly divided groups. The first group contained 75 observations in the lowest managerial ownership range, from 0% to 15%. The second group had 75 observations in the medium managerial ownership range, from 15% to 33%. The third group consisted of 74 observations with managerial ownership ranging from 33% to 82%. The same null hypotheses and multiple regression model as those used for the entire group were formulated for hypothesis testing of each group.

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Because of the multiple independent variables employed in the regression, a multicollinearity diagnosis test was conducted to measure the tolerance level. The tolerance, the strength of the linear relationships among the independent variables, is to identify the proportion of variability of the variable that is not explained by its linear relationship with the other independent variables in the model (Norusis, 1996). A value close to 1 indicates that an independent variable has little of its variability explained by the other independent variables. A value close to 0 suggests multicollinearity. For the correlation test between firm size and managerial ownership concentration, a bivariate correlation test was conducted. The t-test for equality of means used for the preliminary test served to confirm the necessity of including firm size as a control variable.

Because of the potential bias that may result from using selective firms' successive two-year data, another multiple regression was performed to cross-check the validity of data used for the study. For this test, only one-year data were included from the 146 restaurant firms. To maintain consistency, 1996 data were selected if the firm had two-year information.

Preliminary Test

The preliminary test was designed to examine the effect of firm size on performance while holding managerial ownership constant. The test result confirmed the necessity of including firm size as a control variable in examining the relationship between managerial ownership and firm performance.

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The Effect of Firm Size on Firm Performance after Holding MOP Constant

To hold the managerial ownership percentage (MOP) constant, all samples were cross-classified by both managerial ownership level and firm size. First, all firms were divided into three groups according to their managerial ownership level. Second, each group consisting of firms with fairly homogenous managerial ownership was subclassified into two subgroups arrayed from the smallest firms to largest firms. The t-test for equality of means was conducted to examine whether the average performance differs across firm size within each group of similar managerial ownership concentration.

Table 3.
The Size Effect After Holding MOP Constant

	Group1 Low MOP Firms			Group2 Med MOP Firms			Group3 High MOP Firms		
Size	*S*	*L*	*Sig.*	*S*	*L*	*Sig.*	*S*	*L*	*Sig.*
ATT	1.74	1.30	**	1.25	1.25		1.70	1.55	
OE	-0.06	0.13	****	-0.38	0.13	****	-0.09	0.07	**
NPM	-0.20	0.05	****	-0.57	0.04	***	-0.17	-0.01	**
OR	0.05	0.17	***	-0.10	0.14	****	0.05	0.15	**
ROA	-0.34	0.06	*	-0.29	0.03	****	-0.16	0.02	****
ROE	-0.50	0.16	****	-0.64	-0.02	**	-0.33	0.08	***
ROI	-0.23	0.08	**	-0.80	-0.01	**	-0.22	0.03	**
SR	0.07	0.41		-0.30	0.23	****	-0.26	0.03	**

Note. The values represent mean percentages of performance. The t-test for equality of means was used. Group 1 consists of firms with 0% - 15% MOP. Group 2 consists of firms with 15% - 33% MOP. Group 3 consists of firms with 33% - 82% MOP. S stands for small size firms. L stands for large size firms. *p < .1. **p < .05. ***p < .01. ****p < .005.

Table 3 presents mean values of performance and the significance level for the equality of means. The result reveals that the average performance of large firms, by most of the performance measures, is superior to that of small

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firms at the significance level of 0.1 or better when managerial ownership was held constant. In other words, large firms outperform small firms when they have similar managerial ownership concentration. Therefore, it is suggested that controlling firm size is necessary in exploring the relationship between managerial ownership and firm performance.

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CHAPTER IV

RESULTS AND FINDINGS

Introduction

This chapter discusses performance of the sample restaurant firms and empirical findings regarding the relationship among managerial ownership, firm size, and various performance measures. The group-wise analysis is also presented. This analysis enables us to examine whether the degree of association among managerial ownership, firm size, and firm performance is different across the firms with different levels of managerial ownership.

Overview of Financial Performance

Table 4 summarizes eight performance ratios, firm size, and managerial ownership percentage of the sample restaurant firms evaluated between 1995 and 1996. The figures in the table are based on the descriptive statistics of 224 observations. The sample shows an average 27% of managerial ownership while the range varies from zero, which means negligible managerial holdings, to 82%. The firm size ranges are widely spread from the smallest, $0.11 million to the largest, $57.2 billion. The latter is 520,000 times as large as the former. While the mean size is $987 million, the median is only $45 million. This implies that the

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majority of the sample are small firms.

Table 4.
Summary of Descriptive Statistics for Restaurant Firms

Variable	Mean	SD	Median	Minimum	Maximum
ATT	1.47	0.78	1.37	0.08	6.04
OE	-0.03	0.46	0.07	-5.22	0.42
NPM	-0.14	0.63	0.01	-7.62	0.63
OR	0.08	0.21	0.12	-1.01	0.90
ROA	-0.11	0.58	0.02	-7.13	1.68
ROE	-0.12	1.65	0.04	-7.03	17.03
ROI	-0.14	1.06	0.03	-9.84	7.33
SR	0.06	0.72	-0.03	-0.92	4.90
Size ($ million)	986.56	6,071.80	45.48	0.11	57,200.00
MOP	0.27	0.20	0.24	0.00	0.82

Note. The statistics are based on the 1995-1996 data from *Compact Disclosure* CD-ROM. SD means standard deviations. MOP refers to managerial ownership percentage.

The relatively high values of the standard deviation in the restaurant firms' performance indicate large performance variability among the restaurant firms. Qian (1996) showed that the standard deviation for the hotel/casino industry ranged from 0.04 to 0.32 when the performance was measured by OR, NPM, ROA, ROE, ROI, and stock return. The restaurant industry shows a much wider range of variability from 0.21 to 1.65 when the same variables were compared. This suggests that overall performance of the restaurant industry is not well balanced among the well-performing and poor-performing restaurant firms. However, considered that restaurant firms are more diversified in the type of operations ranging from quick-service (McDonald's), limited service, and upscale restaurants (Morton's) to food-contractors (Fine Host), the greater performance variability shown in the restaurant industry, compared to

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hotel/casino industry, seems natural.

The higher mean values of all profitability variables, compared to their counterpart medians, suggest that the majority of the restaurant firms tend to perform below standards.

Test Results

MOP, Firm size, and Performance

The evidence as to whether managerial ownership affects performance in the presence of a possible size effect was obtained by conducting a multiple regression. Table 5 presents the regression results on the relationship among managerial ownership, firm size, P/E ratio (when performance is stock return), and firm performance. Presented in the table are model F test significance level, model R square, coefficients of independent variables, the t-test significance level associated with each independent variable, and tolerance level. A significance level less than 0.1 is usually considered to be a valid value to reject the null hypothesis and indicates a significant association among the variables. Tolerance level is a test statistic for multicollinearity diagnosis. Multicollinearity refers to the linear relationship between independent variables, which makes a multiple regression model unreliable. A tolerance level less than 0.1 indicates strong multicollinearity. In the table, the tolerance values are all around 0.9, suggesting that multicollinearity is not a problem in the regression.

Managerial ownership variable (MOP) is positive and statistically significant at the 0.05 level in its correlation with OE, NPM, OR, ROA, and ROE,

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and at the 0.1 level with ROI. These data indicate that restaurant firms with higher managerial holdings experience higher accounting performance. This result is supportive of the agency model and motivation theory that suggest that managerial ownership will motivate executives to increase firm performance.

Table 5.
Results of Multiple Regression

Measures	Model R Square & Sig. F	MOP Coefficients & Sig. T	Size Coefficients & Sig. T	P/E Coefficient & Sig. T	TL
ATT	0.023*	0.313	-0.089		0.918
OE	0.175***	0.305**	0.214***		0.918
NPM	0.263***	0.360**	0.218***		0.916
OR	0.242***	0.187**	0.111***		0.919
ROA	0.153***	0.491**	0.246***		0.918
ROE	0.112***	0.742**	0.405***		0.905
ROI	0.106***	0.583*	0.340***		0.912
SR	0.581***	-0.020	0.731***	0.088	0.883

Note. Simultaneous multiple regression was conducted. TL stands for tolerance level.
*p < .1. **p < .05. ***p < .001.

In reviewing the results in Table 5, it is noteworthy that at the 0.001 significance level firm size is positively correlated with all the performance measures except asset turnover. This suggests that large restaurant firms outperform small ones in terms of profitability, operating efficiency, and stock return. This is probably due to their economy of scale, competitive advantages such as easier access to management know-how and technologies, and more attractive incentive packages offered to executives. The regression results show that the restaurant firms' performance is positively associated with both firm size and the degree of managerial holdings in all the performance measures

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except stock return and asset turnover.

On the other hand, neither of the two independent variables has any significant impact on asset turnover (ATT). Asset turnover is a ratio of net sales to average total assets. The enormous total assets of a large restaurant firm makes it hard to have a high turnover ratio. Unlike other accounting ratios that measure profits from different perspectives, asset turnover measures sales activities. The fact that managerial ownership has a positive impact on all the profitability ratios but lacks a significant impact on asset turnover suggests that restaurant executives with large equity holdings may be more profit-oriented, rather than sales-oriented.

Stock return shows a significant correlation with size but no significant association with managerial ownership. An interesting finding is that the small firm size effect that appeared in the previous studies is not present in this sample. According to many previous studies, small firms experience higher rates of return. However, our sample does not show any small firm size effect in market performance. Rather, the result shows a positive relation between firm size and stock return at the significance level of 0.001. This result, contradictory from the previous studies, may be related to industry-specific factors (i.e. different characteristics) and relatively short-term observation.

In order to test validity of the data collection method used in this study, another data set containing only one-year observations was created. The result of the multiple regression using new data set was same as the result above, indicating validity of the data.

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MOP, Firm Size, and Performance within Ownership Ranked Classes

To see whether the impact of managerial ownership on firm performance is more significant in one group than the others, the 224 observations were ranked according to the managerial ownership percentage and then evenly divided into three groups. The first group contained 75 observations in the lowest managerial ownership range, from 0% to 15%, with an average of 7% managerial holdings and an average firm size of $2,618 million. The second group had 75 observations of medium managerial ownership, ranging between 15% and 33%, with a mean of 24% and an average firm size of $251 million. The third group consisted of 74 observations with the highest managerial ownership percentage ranging from 33% to 82% with a mean of 51% managerial ownership and a mean size of $81 million.

The grouping of the sample confirms Demsetz and Lehn's (1985) finding of an inverse relationship between managerial ownership concentration and firm size. The correlation between managerial ownership and firm size, measured as market value of equity, is -0.2859 at the 0.0005 significance level. This means that large restaurant firms usually have low managerial ownership concentration due to dispersed ownership structure. Alternatively, small firms show high managerial ownership percentage due to concentrated ownership structure. The same multiple regression analysis was performed for each group. Table 6 summarizes the results of multiple regression conducted within each group.

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Table 6.
Variable Coefficients in Multiple Regression Analysis for Each Group

	Group1			Group2			Group3		
	MOP	Size	P/E	MOP	Size	P/E	MOP	Size	P/E
ATT	-0.16	-0.22		1.40	-0.10		0.32	-0.66	
OE	0.80**	0.10***		0.81	0.23***		0.15	0.21***	
NPM	1.23***	0.12***		1.40**	0.20***		0.09	0.11***	
OR	0.79**	0.08***		0.73	0.14***		0.05	0.12**	
ROA	2.09**	0.17***		1.37**	0.21***		0.05	0.14***	
ROE	5.87***	0.33***		2.64**	0.33***		0.11	0.26***	
ROI	2.77**	0.23***		2.23**	0.41***		0.61*	0.20***	
SR	2.40*	0.19**	-0.12	0.13	0.26***	0.37**	0.42	0.28**	-0.17

Note. Simultaneous multiple regression was conducted. The tolerance level is higher than .9 in all performance measures.
*p < .1. **p < .05. ***p < .001.

Across all three groups, size is statistically significant and shows a positive relationship with all the performance measures except asset turnover. This result is consistent with the one using the entire sample. Managerial ownership, on the other hand, shows inconsistent relationship with performance measures across the groups. The significance level declines as the managerial ownership level increases. Managerial ownership in Group 1 shows a significant and positive relationship with OE, NPM, OR, ROA, ROE, ROI, and even with stock return (at the 0.1 level) which was not significant in the regression with the entire sample. This shows that increasing managerial ownership has a significant impact on performance in the group with the lowest managerial ownership range. Managerial ownership in Group 2 was found significantly and positively correlated with only four performance measures, NPM, ROA, ROE, and ROI. In Group 3, which contains firms with the highest managerial ownership range, only ROI is associated with managerial ownership

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at the 0.1 level. P/E is statistically significant and positive in its correlation with stock return in Group 2. P/E was not found to have any significant impact on stock return in the test using the entire sample.

The results of the group-wise analysis show that the impact of increasing managerial ownership on performance is more evident in large restaurant firms where ownership concentration is hard to achieve and managerial ownership percentage remains relatively low. In small restaurant firms where ownership concentration is easy to achieve and executives have already amassed a large percentage of shares, increasing managerial ownership is less likely to further improve performance.

The results of the group-wise analysis are similar to the results of Morck, Shleifer, and Vishny (1988) that found the most significant association between managerial ownership and performance in the group with 0%-5% of managerial ownership range. The less strong association between managerial ownership and performance in Group 2 might be due to the "entrenchment effect" as discussed by Morck et al.(1988). However, the lack of association between managerial ownership and performance in Group 3, which has the largest managerial ownership concentration, contradicts the convergence-of-interest theory. A plausible cause of this lack of association is the underperformance of the small- size firms in this group. Small restaurant firms may be less competitive and hence underperform the large ones. The overall underperformance may have decreased or disallowed for observing the significant association between managerial ownership and *performance* in this

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group. In addition to the size-performance factor, size-incentive factor may complement the explanation for this lack of association. While increasing the *percentage* of managerial ownership in Group 1, where firm size is relatively large, may render substantial incentives to executives, the same percentage increase in Group 3 with small market value may not be significant enough for executives to generate increased firm performance. The small-firm effect in Group 2 and Group 3 may have affected or dominated the convergence-of-interest effect and made the correlation between managerial ownership and performance less significant or insignificant.

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CHAPTER V.

SUMMARY AND CONCLUSIONS

Summary

The agency theory views the separation of ownership and management as the cause of inefficiencies that arise from delegating authority to someone (an agent) who is not the owner. Managerial ownership was proposed by Jensen and Meckling (1976) as one of the solutions for reducing agency problems and increasing the convergence of interests between managers and shareholders. Despite the volume of the studies on the relationship between managerial ownership and firm performance, there has not been a conclusive result. Most previous studies used multiple industries as a sample without controlling for possible industry effect or focused on single non-hospitality industry.

The primary purpose of the study, based on the agency theory, was to extend previous research on the relationship between managerial ownership and firm performance to the restaurant industry by using a multiple regression analysis. 224 observations from the 146 restaurant firms were gathered for the period of 1995 and 1996. Based on the previous studies on the firm size effect and implicit association between firm size and executive compensation, the study added firm size as a control variable in investigating the relationship

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between managerial ownership and firm performance. Additionally, P/E ratio was included as another control variable in examining stock performance because of its impact on stock return. Using various performance measures from asset utilization, operating efficiency, and profitability to stock return, the study found a significant and positive association between managerial ownership and all of the profitability and operating efficiency measures. The findings based on the entire sample of the study support the hypothesis that managerial ownership is a proxy for convergence of interests between managers and shareholders. Firm size was found to be significantly associated with all of the performance measures except asset turnover. Neither firm size nor managerial ownership has been found to be significantly related with asset turnover. The lack of association between managerial ownership and asset turnover- - a ratio of net sales divided by average total assets- -, and the significant association between all profitability ratios and managerial ownership imply that restaurant executives with high equity holdings in the firm are more profit-oriented rather than sales-oriented as Jensen and Meckling (1976) suggested.

The secondary purpose of the study was to examine whether the degree of association between managerial ownership and performance varies across the firms with different levels of managerial ownership. The result revealed that such association is particularly strong in the group with 0%-15% managerial ownership. The result of the group-wise analysis is somewhat consistent with the one by Morck, Shleifer, and Vishny (1988). The degree of significant association between managerial ownership and performance declines as the

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level of managerial ownership increases. The less significant association between managerial ownership and performance in the firms with high managerial holdings may have been affected by the underperformance of the small-size restaurant firms. In other words, the convergence-of-interest effect of managerial ownership in the firms with high managerial ownership may be lost in the shadow of a strong size effect.

Implications of the Study

Based on the findings, the study offers three important implications for the restaurant industry. Motivation of executives is of vital importance in the restaurant industry as their ability, performance, and leadership are critical to the firm's survival, growth, and success in the highly competitive environment. The significant and positive association between managerial ownership and firm performance found over the entire sample implies that restaurant firms may utilize managerial ownership as an incentive for executives to improve firm performance. With an offer of equity ownership, restaurant executives are more likely to be motivated to improve firm performance as their own wealth depends on the firm's stock performance. Additionally, a sense of ownership and attachment to the firm derived from the offered equity ownership may help refrain executives from shirking, reduce unnecessary costs, and increase operating efficiency, thus, leading to improved profitability and operating efficiency.

Second, increasing managerial ownership may be used most effectively in the large restaurant firms, where relatively low managerial holdings were

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found, to improve performance and expand firm value. Small restaurant executives who already amassed a large percentage of managerial holdings may not be as motivated as those of large restaurant firms by increasing managerial ownership. However, this does not necessarily mean that increasing managerial ownership is not effective in the small firms. It rather suggests that, because of the size difference, the effect of increasing the *percentage* of managerial ownership in the small restaurant firms may not be as visible as that in the large firms. The size effect may, in part, have reduced the degree of significant association between managerial ownership and firm performance in the small firms with high managerial holdings.

Third, the strong and positive association between firm size and performance shows that large restaurant firms outperform small ones. The economy of scale, size privileges, and extensive compensations offered to the executives of large restaurant firms may have contributed to the positive association between firm size and performance. Many small restaurant firms in the sample were money-long companies. Small restaurant firms' underperformance and instability as reflected in the large performance gap between small and large restaurant firms suggest that the restaurant industry may enhance its overall performance by restructuring through merger and acquisition. Restaurant firms, through merger and acquisition, may take advantage of favorable outcomes such as obtaining lower costs of capital, achieving economies of scale particularly in such areas as advertising, marketing, and purchasing, and enhancing and improving management teams.

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Recommendations for Future Research

For future studies, it is suggested that a longer time frame be used so as to collect more data observations. A large number of observations would allow for a division into more sub-groups of managerial ownership in a group-wise analysis and, therefore, provide better insights of managerial holdings' impact on performance at different ownership ranges.

The two-variable (three-variable in the case of stock return as a dependent variable) regression model for the study was intended for examining the relationship between managerial ownership and performance rather than for predicting performance. The relatively low R square values of the regression models in Table 5 suggest that they cannot be used as predicative models. Future studies can extend this model into a performance predicting model by adding more variables. In such a model, the type of operation and employee stock ownership may be added as predicting variables. Restaurant industry shows a wide performance variability possibly due to diversified types of operation. This suggests that subcategorizing restaurant firms according to their type of operation may be necessary in investigating the impact of managerial ownership on firm performance. Considered that most quick-service restaurant firms run multi-unit operations and upscale restaurant firms run a limited number of units, categorization according to the type of operations may be used in place of firm size as a control variable. The additional variables can be also considered new control variables in examining the relationship between managerial ownership and performance. It would be interesting to see how

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additional variables would interact with managerial ownership to affect restaurant firms' performance.

Future studies on the relationship between managerial ownership and performance may extend the scope of study to the unit ownership. A recent industry trend shows that an increasing number of restaurant firms including Outback Steakhouse and Sonic Drive-Ins are offering the restaurant unit's top management an opportunity of equity ownership. At last, the research methodology used in this study may be applied for investigating other service industry sectors.

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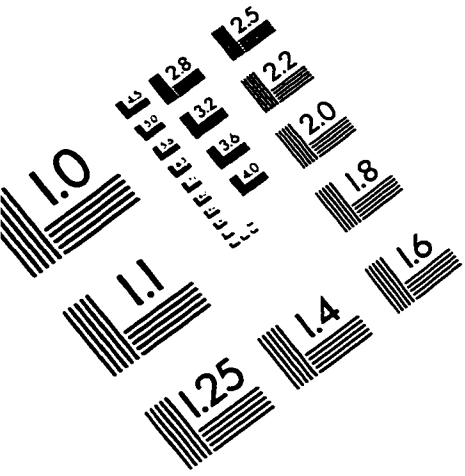
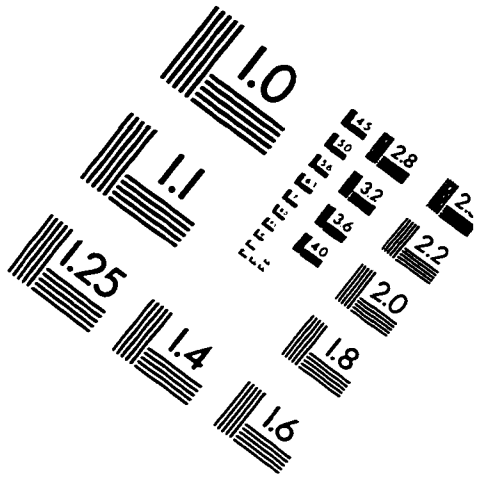
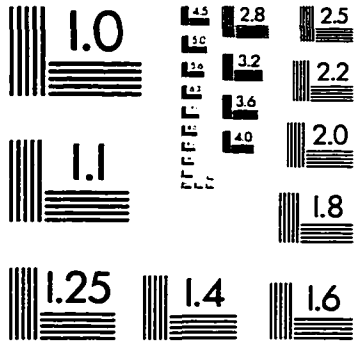
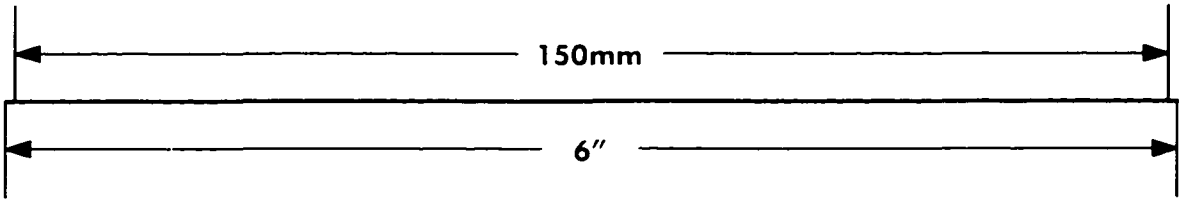
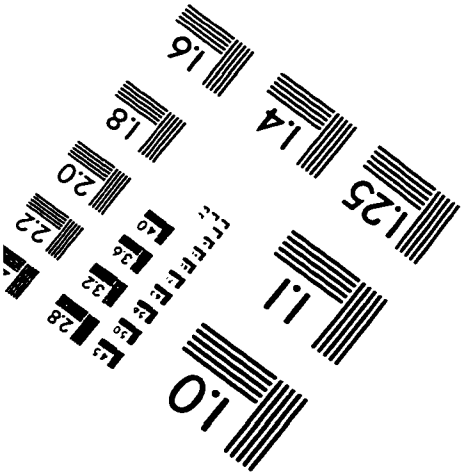
IMAGE EVALUATION TEST TARGET (QA-3)

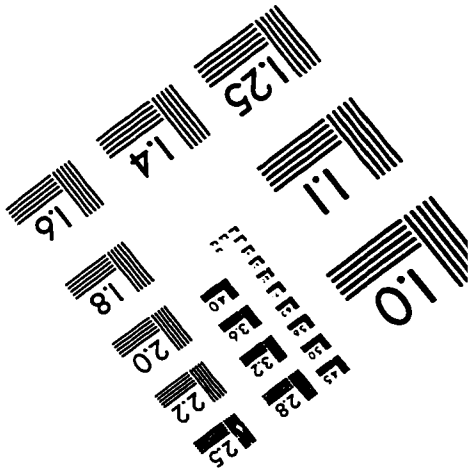












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