

**The Effect of Ownership Structure on Firm Performance in Nonfinancial Sector of
Pakistan**

By

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requirements for the degree of Master of Philosophy



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Declaration of Authentication

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Dedication

I would like to dedicate thesis to my **Grand Parents, Abbu** and **Ammi** who always prayed for my “success”, supported me, encouraged and made me realized about my capabilities. This would not be possible without the most honest support of my group mates **Mehwish & Sahar** and finally, I would like to dedicate it to my sweetheart niece **Aima** for cheering me up with her naughty comments, love and most caring attitude whenever I felt down.

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ABSTRACT

Ownership structure is one of the important components of corporate governance system that significantly affects firm performance. This study analyzes ownership structure on the basis of ownership concentration as well as composition and examines its effect on financial (ROA & EBIT) and market performance (EPS & Tobin's Q) of nonfinancial sector of Pakistan while incorporating industrial dummies, firm size and regime change. The data of the study comprises of 100 nonfinancial firms listed at Karachi Stock Exchange (KSE) Pakistan over the period of 2005-2012. Findings of the study support the concept of managerial entrenchment and controlling power of concentrated shareholders by concluding that managerial ownership has negative but concentrated ownership has positive effect on the firm performance. The large sized firms perform better than small and medium sized firms. The performance of nonfinancial sector of Pakistan seems better during the period before financial crisis than the one after financial crisis. This two period comparison serves as contribution towards existing literature. Moreover, the study finds varying management style and firm performance across industries. In this connection ownership structure does not play a significant role in the determination of performance of different industries.

Key Words: ownership structure, firm performance, regime change, rent protection theory, agency theory, control-ownership disparity, agency problems.

CHAPTER 1: INTRODUCTION

This chapter introduces the entire thesis in order to understand as to the organization of the study. In addition to the background and purpose of the study, problem statement, research objectives and research questions have also been described in this chapter. Theoretical framework and significance of the present study have been discussed.

1.1. BACKGROUND OF THE STUDY

Businesses are the life blood of an economy and if they perform well then both shareholders and economies benefit. Corporate governance provides a mechanism in order to maximize shareholder's wealth and it also ensures the protection of collective interest of all the stakeholders. Therefore, strong and effective corporate governance systems lead toward better financial and market performance of firms (Jensen & Meckling, 1976; Morck, Shleifer, & Vishny, 1988; Stulz, 1988).

Smith (1776) was the pioneer in introducing the concept of ownership structure and delineated that companies organized in a way that allowed employees to exploit different situations. In addition, the structure of organizations increases delinquency of employees and these unprofessional behaviors are difficult to prohibit and control companies. The significance of ownership structure is eminent since Berle & Means (1932) worked on it and the foundation of their study is ownership and control disparity. While focusing on one of the important perspectives of ownership structure in terms of ownership concentration, they argue that if firms have dispersed ownership then the effectiveness of real power of shareholders decreases that leads towards decreasing performance of firms.

The existing literature provides an evidence regarding the role of ownership structure in the determination of value, profitability and efficiency of an equity market (Demsetz & Villalonga, 2001; Shahab-u-Din & Javid, 2011; Srivastava, 2011). Main focus of many researchers is to study conflicts between shareholders and managers along with its implications on the performance of a firm. Hence, most of the researches explore the effects of agency conflict on firm's overall performance and its market value. The concept of ownership and control disparity is presented in agency theory (Jensen & Meckling, 1976), which states that the misalignments of interests between managers and the principal owners (shareholders) result in the deviation of manager's focus from value maximization of firms.

Significant amount of research has been extended in exploring this theory. This literature has developed the effect of ownership structure on firm performance in the context of numerous corporate issues. Previous studies have produced mixed results (positive, negative and neutral statistically significant relationship), for the relationship between ownership structure and firm performance. Furthermore, Jensen & Meckling (1976) argues that the effects of managerial ownership on firm performance are highly influential as the managers (agents) have the liberty of looking forward the activities which can be damaging for shareholders (principals) while serving their own interests.

This study is an attempt to work out the relationship between ownership structure and performance of nonfinancial companies listed at Karachi Stock Exchange (KSE) for the period of 2005-2012. Most of the studies either focus on ownership concentration or composition but this study covers both of these important perspectives by considering concentrated and managerial ownership in order to operationalize ownership structure. In this study, concentrated ownership is measured through percentage of shares held by top five shareholders while

managerial ownership is operationalized through the percentage of shares held by the managers, CEOs and directors (Chen, Hou, & Lee, 2012; Gao & Song, 2008; Kirchmaier & Grant, 2005; Monsen, Chiu, & Cooley, 1968; Wahla, Shah, & Hussain, 2012).

In literature, different dimensions; Return on Equity (ROE), Return on Assets (ROA), Net Profit Margin, Book Value of Firm to Total Assets, Net Profit after Tax, Earnings per Share, Price to Earnings ratio and Tobin's Q, are incorporated to measure firm performance (Berle & Means, 1932; Cole & Mehran, 1998; Demsetz & Villalonga, 2001; Li, Moshirian, Nguyen, & Tan, 2007; Shahab-u-Din & Javid, 2011; Yen & Andre, 2010). Some of these measures indicate firm's value in terms of profitability and few points out the performance in terms of productivity and market efficiency. These dimensions are categorized into financial and market perspectives which have their own importance in determining firm performance with inimitable pros and cons. Most of the leading studies (Chen, Hou, & Lee, 2012; Craswell, Taylor, & Saywell, 1997; Demsetz & Villalonga, 2001; Kang & Kim, 2012) used Tobin's Q as an indicator of performance which is an appropriate performance measuring tool for companies who declare their book value. The study not only employed Tobin's Q but also used EPS (Earnings per Share) for examining the market performance of nonfinancial sector of Pakistan. In addition to market measures, this study incorporates financial measures (Returns on Assets and Earnings before Interest and Taxes) in order to increase reliability and validity of the findings.

Government plays a vital role in determining the relationship of ownership structure and industrial performance. Keeping this significance of the government the present study is one of the pioneering studies to incorporate the effect of regime change while analyzing the effect of ownership structure on firm performance. Literature provides evidence that large businesses have high proportion of leverage in their capital structure due to which they tend to have direct

ownership and comparatively experience higher growth than small business units. So, this study considers firm size as an important element in determining the performance of nonfinancial sector of Pakistan and also analyzes its effect on the relationship of ownership structure and firm performance. Additionally, measuring the role of nature of various industries in the relationship between ownership structure and firm performance is another contribution of the present study.

1.2. PURPOSE OF THE STUDY

Strong and effective corporate governance system not only helps in strengthening and developing the capital market but also facilitates in protecting shareholder's interests which in turn affects firm performance positively. So, this study explores the effect of ownership structure on performance of nonfinancial sector of Pakistan by employing both important perspectives of ownership concentration and composition. It also explains the role of controlling mechanisms adopted by concentrated shareholders, managerial entrenchment and wealth effect in determining firm performance. In addition, the current study examines and compares performance of nonfinancial firms during different regimes before and after financial crisis. Furthermore, across industrial differences, firm size and regime change are incorporated while analyzing the relationship between ownership structure and firm performance.

1.3. PROBLEM STATEMENT

Ownership structure is one of the important components of corporate governance and optimal pattern of ownership lead towards better firm performance but due to ineffective corporate governance system firms would suffer financial crisis. In literature, concentrated and managerial ownership are considered as corporate governance mechanisms because they facilitate in the alignment of manager's interests with shareholders. While highlighting the significance of corporate governance system in general and ownership structure in particular, the

focus of the present study is on examining the effect of ownership structure over firm performance.

“To understand the role of types of industries, firm size and regime change playing their role in the relationship of ownership structure and firm performance in Pakistan”.

1.4. RESEARCH OBJECTIVES

1. To examine the relationship between ownership structure and firm performance across industries.
2. To investigate the effect of firm size on the relationship between ownership structure and firm performance.
3. To find out regime change effect on the relationship of ownership structure with firm performance.

1.5. RESEARCH QUESTIONS

1. What is the nature of firm's Ownership Structure in relation with financial and market performance and its interactive effect with the type of industry?
2. Does the performance of nonfinancial sector of Pakistan vary across firms having different sizes and whether firm size affects the relationship of ownership structure and firm performance?
3. What are the effects of regime change on the relationship of ownership structure and firm performance?

1.6. THEORETICAL FRAMEWORK OF THE STUDY

Theoretical framework of the study is based on the effect of ownership structure on performance of nonfinancial firms listed at Karachi Stock Exchange Pakistan. Ownership

structure is taken as an independent variable and after analyzing the literature it is operationalized with the help of two dimensions. First, concentrated ownership that is percentage of shares held by top five shareholders (Kirchmaier & Grant, 2005; Monsen et al., 1968; Wahla et al., 2012). Second dimension is managerial ownership which represents ownership composition and measured by percentage of shares held by the managers, CEOs and directors (Chen et al., 2012; Gao & Song, 2008).

Firm performance is taken as dependent variable which is operationalized by using both financial and market indicators of performance. EPS (Earning per share) and Tobin's Q are used under the dimension of market measures whereas ROA (Returns on Assets) and EBIT (Earnings before Interest and Taxes) are employed to calculate financial performance (Berle & Means, 1932; Cole & Mehran, 1998; Collins, Dutta, & Wansley, 2009; Demsetz & Villalonga, 2001; Iannotta, Nocera, & Sironi, 2007; King & Santor, 2008; Li, Moshirian, Nguyen, & Tan, 2007; Mak & Li, 2001; Minguez-Vera & Martin-Ugedo, 2007; Shahab-u-Din & Javid, 2011; Srivastava, 2011; Yen & Andre, 2010; Warrad, Abed, Khriasat, & Al-Sheikh, 2012). Moreover, firm size, regime change and type of industry are incorporated in the model as control variables. Firm size (Chen, Cheuang, Stouraitis, & Wong, 2005) is calculated on the basis of total assets acquired by firms and regime change is analyzed by considering regime before and after the financial crisis of 2008. Dummy variables are constructed to represent firm size and different regimes as well as industries because the econometricians follow the pattern of qualitative variables in order to handle regime change and various sizes of firms and types of industries (Gujarati & Sangeetha, 2007).

1.7. SIGNIFICANCE

The influence of shareholders on corporate decisions and the trading of shares in the capital market are derived from ownership structure that is an important element of corporate governance system. The present study would assist investors for making an optimal decisions regarding investment in companies because it discusses the importance of controlling mechanisms adopted by concentrated shareholders, extraction of private benefits by concentrated shareholders, managerial entrenchment and wealth effect in determining financial and market performance of firms.

The findings of the study would reflect the ways of more effective control of the organizations because it incorporates both of the two important viewpoints; ownership concentration and composition, of ownership structure. It defines that if managers become owners then they try to formulate investment and financing strategies in the favor of shareholders which results in shareholder's wealth maximization. In addition, managerial ownership puts constraints on the managerial discretion of using firm's resources in an inefficient way. So, the study would help policy makers for maximizing the shareholder's interest by reducing ownership and control disparity.

The study also inquires the interactive effect of ownership structure with type of industry which would facilitate managers in formulating organizational strategies by keeping in mind different industry dynamics. Moreover, the consideration of the study covers one of the novel areas in research regarding ownership structure through examining the role of government in the performance of nonfinancial sector of Pakistan and regime change effect over the relationship of ownership structure with firm performance.

The current study would contribute in the body of empirical knowledge related to ownership structure and firm performance by incorporating regime change, type of industry and firm size as control variables. Extensive time series panel data of nonfinancial sector of Pakistan is used for the analysis and estimation of the concepts in order to increase the reliability of results. So, this study would not only be helpful for business analysts and decision making authorities but also worthy for academicians and researchers.

1.8. SCHEME OF THE STUDY

The thesis is organized into six chapters

Chapter 1 - introduces the study; Empirically Investigating the Effect of Ownership Structure on Firm Performance in Nonfinancial Companies Listed at KSE Pakistan, and also discusses the basis and background, problem statement, research objectives and questions of the study. Moreover, it provides the significance of the study and briefly presents theoretical framework.

Chapter 2 -based on foundation theories of ownership structure and explains different concepts related to ownership concentration and composition. The review of literature also explains the justification of the study by identifying the gap within the existing body of knowledge.

Chapter 3 -provides details regarding the model of the study which is developed on the strong theoretical underpinnings after critically analyzing literature. While discussing the relationship between independent, control and dependent variables of the study it presents hypotheses.

Chapter 4 -discusses the operational definitions of the variables undertaken in the study. The type of data, techniques for collecting data and sampling are also explained in this chapter.

In addition, appropriate methodologies with alternative techniques for the estimation and analysis of data are explained in detail. Moreover, it presents justification of the analytical tools incorporated in the study.

Chapter 5 -shows the results of the study and describes the findings of research in comparison with previous studies. While discussing results, both supporting and contradictory studies are mentioned.

Chapter 6 -presents conclusion of the study based on empirical findings. The theoretical and practical implications are also discussed. In addition, limitations, recommendations and future research directions are provided and in the end conceptual definitions of the study are presented.

CHAPTER 2: REVIEW OF LITERATURE

This chapter focuses on reviewing the work of other researchers related to the importance of ownership structure in determining firm performance. The first part discusses agency and rent protection theories which serve as foundation for ownership structure and corporate governance. After discussing ownership concentration, second part gives overview of ownership composition in which both managerial entrenchment and wealth effect are described. The third and fourth parts explain contradictory studies towards ownership-control disparity and other dimensions of ownership structure respectively. Second last part describes the intervention of control variables in determining firm performance. Finally, in the light of important theories of corporate governance and finance literature, basis for theoretical framework of the study is presented.

The goals and objectives of companies are determined by ownership structure. Firms proceed and progress according to their defined objectives and attainment of these objectives basically reflects the performance of firms. The strategies, decisions and objectives of firms are affected by the type of ownership structure adopted by firms. Previous studies (Anderson & Reeb, 2003; Berle & Means, 1932; Kim E. , 2006; Kirchmaier & Grant, 2005) found a statistical significant relation between ownership structure and firm performance. It is also explained in literature that diversification strategies of firms depend upon the pattern of ownership formation (Delios, Zhou, & Xu, 2008). In addition, literature also reveals an insignificant relationship of concentrated ownership with firm performance (Wahla et al., 2012).

Ownership structure is basically corporate governance mechanism to which costs and benefits are associated and it is defined as issuing of shares out of the authorized capital and this

distribution of shares gives voting rights to shareholders, so that they can participate in the decision making of firms. In addition, the identity of shareholders also has great significance in ownership structure. Basically, concentration of ownership and ownership composition are the two important perspectives through which ownership structure can be examined (Jiang, 2004). Furthermore, ownership concentration is divided in to two forms; concentrated and dispersed ownership, on the basis of number of shares as a percentage of total shares held by institutions and individuals (Gursoy & Aydogan, 1998).

2.1. FOUNDATION THEORIES OF OWNERSHIP STRUCTURE

The concept of ownership structure and control is basically presented by Smith (1776) who argued that the structure of companies itself allow their employees to misconduct and these unprofessional behaviors are difficult to prohibit and control by companies. The importance of the effect of ownership structure on firm performance is well-known since Berle & Means (1932). They highlighted the significance of the separation between ownership and control in the modern corporations and argued that ownership structure plays a significant role in the economic theory of firm. While focusing on the forms of ownership concentration; concentrated and dispersed ownership, they identify conflict of interests between shareholders and management, and found that shareholders cannot exercise their real power in directing the performance of managers because of dispersed ownership.

2.1.1. Agency Theory

The arguments of Berle & Means (1932) are further supported by agency theory presented by Jensen & Meckling (1976). They define firms as contracting relationships between shareholders and managers in which shareholders delegate responsibilities of business management to managers but due to non-rational behavior of agents, all the decisions regarding

business are not in the interests of shareholders. This theory refers to existence of agency relationships between shareholders and managers. The main objective of firms is shareholders' value maximization which is negatively affected by the structure of ownership as explained by Berle & Means (1932) and Jensen & Meckling (1976) because of agency problems. Basically, agency problems incur because shareholder's focus is on maximizing wealth but manager's focus is on personal wealth.

In consistent with the argument presented by Jensen & Meckling (1976), it is further demonstrated that ownership structure plays a significant role in strategic investment decisions of companies that ultimately affects firm's value (Namazi & Kermani, 2013). Moreover, it is found that with the increase in capital expenditures and spending on research and development, the value of the share increases which ultimately enhance the overall value of firm (Cho, 1998). The findings presented by McConnell & Servaes (1990) and Morck et al., (1988) are consistent with the hypotheses given by Cho (1998) and also similar to Jensen & Meckling (1976) and Stulz (1988) who considered ownership structure as an exogenous variable and found that market value of the firm is affected by the structure of ownership.

On the basis of the concept of ownership structure presented by Berle & Means (1932) and Jensen & Meckling (1976), Thomsen & Pedersen (2000) argued that managers would go for the formulation of diversification strategy or any other strategy in the favor of their own interests due to opportunistic behavior which ultimately reduces the shareholder's wealth but influence of large shareholders as a result of concentration in shares enhances the economic performance of firms by forcing managers to work and formulate strategies in the interest of shareholders.

2.1.1.1. Ownership and Control Disparity

Shleifer & Vishny (1994,1997) investigated that the strategies regarding goals and objectives of firms are influenced by the level of concentration in the ownership structure. They further argued that the underlying problems behind agency issues are basically the separation of ownership and control. The importance of separation and control which is known as disparity is also highlighted by Kim, Lim, & Sung (2007) who examined that firms having greater direct shareholdings by families would have greater contribution to group control and have high profitability.

Disparity between ownership and control results in conflict of interests between shareholders and managers due to which the performance of firm affected in a negative manner. Normally it is not possible for dispersed shareholders to control managers and align their objectives with shareholders but concentrated ownership is positively related with firm performance because major shareholders have more resources and opportunities to control managers. Moreover, concentrated ownership results in motivating investors for controlling the management (Kirchmaier & Grant, 2005). These findings are in line with Mosen et al.,(1968) who argued that agency problems can be reduced and firm performance in terms of Return on Equity can be enhanced due to concentrated ownership. The concept about the reduction of agency cost is also supported by Kapopoulos & Lazaretou (2007) who argued that firm's market value can be improved with the percentage of shareholdings.

Like various studies, with the help of Two Stages Least Square analysis Minguez-Vera & Martin-Ugedo (2007) indicate that there is a positive significant relation between degree of control related with concentrated ownership and firm value. It is also found that if the major shareholders are individuals then there exists a positive relation between ownership structure and

firm value. Another study, conducted on companies of Czech Republic, states that the firm can gain higher returns if agency cost is reduced which can be done through concentrated shareholders because they have more incentives to efficiently monitor the management (Claessens, Djankov, Fan, & Lang, 2002).

Similarly, a comparison of performance and risk of 181 banks from 15 European countries over the period of 1999 to 2004 delineates the effect of ownership models, along with the degree of ownership concentration, on banks profitability, cost efficiency and risk. By employing multivariate regression analysis, the study examines that ownership concentration has not statistical significant relation with bank profitability but higher ownership concentration lead towards better loan quality and lower insolvency risk. So, it concludes that higher ownership concentration has a positive significant relationship with the performance of the banking sector (Iannotta et al., 2007).

Morck et al. (1988) and McConnell & Servaes (1990) found differences in the relationship of ownership concentration and firm performance at different levels of concentration. At 0% to 5% level of concentration both researchers found positive but McConnell & Servaes (1990) found significant and Morck et al. (1988) found insignificant relationship between equity ownership and firm's value. McConnell & Servaes (1990) also argued that at 5% to 25% concentration level, equity ownership has positive and statistically insignificant relationship with firm performance. In addition, at 25% to 100% shareholdings concentration they examined that there exists no relationship between equity ownership and firm value. On the other hand, Morck et al. (1988) examined that equity ownership is statistically significant factor towards firm performance at both 5% to 25% and 25% to 100% level of shareholdings concentration. They also found a negative relationship between equity ownership

and firm value at lower level of concentration but a positive relationship at higher level of concentration.

It is analyzed that ownership concentration has nonlinear and positive relationship with firm performance (Alberto, Pindado, & Chabela, 2004). Through concentrated ownership, shareholders can easily put their joint effort to monitor managers in handling company's matters in order to maximize shareholder's wealth (Wang, 2006). Similar study is conducted on largest companies of Europe which found nonlinear bell shaped relationship between ownership concentration and firm performance (Thomsen & Pedersen, 2000). Another study conducted on Spanish listed firms also found nonlinear S shaped relationship between ownership structure and firm performance (Alberto et al., 2004).

2.1.1.2. Concentrated/ Dispersed Ownership and Firm Performance

According to capitalistic point of view it is argued that rather focusing on firm's efficiency, owners concentrate on rate of profits but managers of diffused owned firms increase the output by a substantial amount in the favor of ultimate consumer on the cost of shareholder's return. So, it is analyzed that there exists statistically significant negative relation between diffused ownership structure and firm performance (Galbraith, 1967; Jensen & Meckling, 1976). These findings basically support the view that while having dispersed ownership, it has become difficult to supervise managers and align their interests with owners for the sake of reducing agency cost (Barzegar & Babu, 2008).

These results are further supported by Nickell, Nicolitsas, & Dryden (1997) who revealed that concentrated ownership enhances the performance of firms due to which shareholder's wealth increases. Although concentrated shareholdings result in improved firm performance but

it is also argued that controlling shareholders are more reluctant to risky projects due to under diversification as compared to the atomistic shareholders whose portfolios are fully diversified (Zhang, 1998). On the basis of financial concept that high risk is associated with high return (Van Horne & Wachowicz, 2004), it can be inferred that firms having controlling shareholders comparatively earn low rate of return over investments than atomistic shareholders.

Most of the studies (Kapopoulos & Lazaretou, 2007; Monsen et al., 1968) and found that concentrated shareholdings result in better firm performance because they bear comparatively less cost, associated with monitoring mechanisms, than the benefits they derive from ownership concentration. It is also defined that ownership concentration not only affects financial performance but also the market value of firm. Moreover, it is examined that ownership concentration increases investor's protection which ultimately enhances shareholder's wealth (Kirchmaier & Grant, 2005) .

While discussing the significance of owner's identity, a study (Thomsen & Pedersen, 2000) examines that identity of large owners-family, bank, institutional investor, government, and other companies has important implications for corporate strategy and performance. Moreover, it is found that financial investor ownership is associated with high shareholder's value and profitability as compared to other owner's identities. Similarly, it is found that concentrated shareholdings by institutions have more effect on firm's performance as compared to concentrated shares held by Government (Chen et al., 2005; Xu & Wang, 1997).

On the basis of controlling theory it can be argued that agency problems can be reduced due to concentrated shareholdings. But on the basis of expropriation theory concentrated shareholdings result in agency problem II which means that controlling shareholders have more

powers to seize the rights of minority shareholders. Another study, conducted on listed firms of Turkey, presented mixed results and found insignificant relationship of concentrated ownership with Return on Equity but significant positive relationship with Tobin's Q (Citak, 2007).

2.1.2. Rent Protection Theory

Agency problem II negatively affects economic performance of firms from which it can be inferred that concentrated ownership has negative relationship with firm's financial performance. It is also presented that the performance of firms in terms of profitability is good for firms having dispersed ownership because this kind of ownership doesn't give opportunities to shareholders for extracting their private benefits out of the firms. According to rent protection theory, private benefits can be derived by concentrated shareholders at the expense of shareholders having comparatively less stake in firms (Bebchuk, Kraakman, & Triantis, 2000).

On the basis of rent protection theory, the negative relationship of concentrated ownership and firm performance can be explained in a way that concentrated shareholders derive benefits from firms because of their opportunistic behaviors and have more powers to take over the rights of minority shareholders. In addition, a research conducted on Austrian firms also supports the view that concentrated shareholders have more opportunities to confiscate funds of firms in the form of undue compensations at the cost of minority shareholders (Gugler, 1998).

It is analyzed by (Berle & Means, 1932) that due to separation of ownership and control, the performance of firm is negatively affected by dispersed ownership. The work of Berle & Means (1932) is based on the study conducted by Thorstein (1934) who argued that diffused owned firms indicate better economic performance because of the reason that managers (technocrats) are more concerned for increasing the efficiency of firms. This argument is

supported by Lauterbach & Vaninsky (1999) who analyzed the data of 280 firms of Israel with the help of data envelopment technique and found that if managers of firms are also owners then efficiency of firms reduces because usually professional managers are non-owner and put their full efforts and expertise in business due to which customers ultimately benefited which results in increased sales and net income of firms. Furthermore, family owned firms managed by their owners comparatively have poor performance than the firms managed by non-owner managers.

Similarly, another study, conducted on Croatian listed firms over the period of 2003 to 2010 for investigating the relationship between concentrated ownership and Return on Assets, examined that domestically controlled firms perform worse than foreign controlled firms. With the help of panel data analysis, it also revealed that companies having dispersed ownership comparatively perform better than companies having concentrated ownership (Pervan, Pervan, & Todoric, 2012). Likewise, it is argued that there exists a negative correlation between ownership concentration and firm performance (Gomez, Nunez-Nickel, & Gutierrez, 2001).

While explaining the effects of ownership concentration La Porta, Lopez-de-Silanes, Shleifer, & Vishny (1998) argued that agency problem II exists in firms of countries in which investor's rights are not protected very well. It is because in these countries more opportunities are available for concentrated shareholders for seizing the rights of minority shareholders. Further highlighting the importance of agency problem II, which is an important concern for business having controlling shareholders as a part of their ownership structure, a study conducted on the basis of expropriation theory over a sample of 5 industries constituting 45 firms listed at Tehran stock exchange revealed a negative relationship between concentrated ownership and firm performance. It is also stated that the financial performance of firms decreases because of entrenchment behavior of concentrated owners (Foroughi & Fooladi, 2011).

Yen and Andre (2010) determine the effects of ownership structure, legal systems and governance mechanisms on long term operating performance of acquiring firms in emerging countries. The major findings of the study is that the acquiring firms which have controlling shareholders improve the post-acquisition operating performance over the time period of three years after transaction. On the other hand, it is stated that benefits gained by concentrated shareholdings can be reduced because relatively high cost of capital is associated with concentrated shareholders than dispersed ownership (Demsetz & Villalonga, 2001).

Pecking order theory (Myers & Majluf, 1984) underpins the results of the study Demsetz and Villalonga (2001) by stating that issuing shares are the most expensive source of financing as compared to debt and internal sources of financing. Similarly, agency theory supports the argument that controlling shareholders have more power as compared to minority shareholders that can be exercised in order to take decisions which would be beneficial for them and detrimental for minor shareholders as well as for firms (Jensen & Meckling, 1976).

Another study argued that stockholders, having concentration of shareholdings up to 10% or 35% of the total shares outstanding, have more powers to extract their benefits in the form of dividends (Chen et al., 2005). These results are supported by La Porta et al., (1998) and Velury & Jenkins (2006) who argued that concentrated shareholdings negatively affect performance of firms because they have more access to internal information that can be used for their private benefits.

The positive relationship between concentrated shareholdings and firm value is examined in literature (Nickell et al., 1997) but it is also analyzed that the profitability and performance of firm are not always enhanced as a result of ownership concentration because benefits are reduced

and operational risk increases due to lack of control over concentrated owners (Yajun & Yaping, 2004). Similarly, the argument presented by Demsetz and Villalonga (2001) is supportive for the view that agency problems are raised due to diffused ownership but this form of ownership also creates some advantages which compensate problems associated with ownership and control disparity. On the contrary, the performance of firm is also affected by competition but this effect become weaker if major portion of shares are held by few investors (Jiang, 2004).

The analysis of previous studies reveals on the basis of expropriation theory that concentrated ownership has negative relationship with firm performance, while on the basis of monitoring hypothesis concentrated ownership has positive effect on firm's financial and market performance. The reasons may be that concentrated shareholders have more powers to derive their benefits at the expense of minority shareholders but they also have more controlling powers which can be enforced to reduce agency problems (Gomez et al., 2001; Miller, Breton-Miller, Lester, & Cannella, 2007).

2.2. OWNERSHIP COMPOSITION

It is explained above that ownership composition is one of the important perspectives of ownership structure which represents that not only concentration of ownership but also identity of owners determine the performance of firms. Basically, owner's identity is one of the important areas focused by agency theory. Managerial ownership that represents owner's identity is an important dimension of ownership structure because objectives and strategies of firms are dependent upon the intentions and actions of managers. The description of managers' behavior in agency theory is underpinned by Damijan, Gregoric and Prasnikar (2004), they delineated that the firms which have been organized and supervised by insider owners perform well in the market as compared to firms managed by its agents.

2.2.1. Managerial Wealth Effect

The type of ownership structure not only determines the opportunities and incentives given to managers but also economic efficiency of firms because agency problems can be reduced through managerial and concentrated ownership (Jensen & Meckling, 1976). It is also examined that performance of firm is enhanced through shareholders concentration if shares are concentrated in the form of managerial shareholdings (Kaplan & Minton, 1994).

Similarly, another research examined the effect of insider ownership on the financial performance of publically traded tourist hotels in Taiwan. The results of panel data regression suggest that insider managerial shareholdings affect Return on Assets (ROA), Return on Equity (ROE) and Tobin's Q but not stock returns. It is also found that as compared to managerial shareholdings, directors' shareholdings have more significant effect on performance. Overall, it is significantly tested that both managerial and directors' shareholdings play a positive role in hotel performance (Chen et al., 2012).

On the basis of agency theory (Jensen & Meckling, 1976), it can be argued that decreased market value of firm is a consequence of managers' opportunism but agency problems can be reduced by managerial ownership because as a result of managerial shareholdings, interests of managers and shareholders become aligned due to which financial performance of firm increases. While examining the relationship between managerial shareholdings and firm efficiency, it is investigated that if the top management is having ownership in the form of shares then both accounting and market performance of firm is positively and significantly affected (Gao & Song, 2008). Similar study by Hermalin and Weisbach (1991) observed a statistical significant relationship between firm's value and managerial ownership.

While focusing on the importance of managers in the progress of firms, Hill and Snell (1988) investigated that firms which are run and managed by insider owners have greater profitability and market value as compared to firms managed by agents because shareholders have more stake in companies than managers who are just the agents and assumed to act in ways guided by shareholders. These researchers conducted another study by taking a sample of 500 firms for the year 1980. Results of regression and path analysis suggest that stock concentration in the form of managerial shareholdings has a positive significant relation with productivity and performance, whereas, related diversification has positive relationship and unrelated diversification has negative relation with productivity of firms.

The findings of Morck, Nakamura and Shivdasani (2000) are opposed by Collins et al. (2009) who determined that insider stock holdings have a non-linear relation with dividend payout but higher levels of insider holdings show a positive relation with the level of dividend payout. It is also examined that managerial structure presenting CEO duality has negative effect on firm performance which implies that if CEO and chairman are separate persons then performance of firms improves (Belkhir, 2004). The estimation of the relationship of board composition and managerial equity ownership with firm's profitability in terms of Return on Assets and Equity delineates that profitability of some European firms is not strongly related with proportion of inside directors on board and the return of others firms is improved as the level of managerial ownership increases (Krivogorsky & Diego, 2006). These findings are consistent with the study conducted by Hermalin and Weisbach (1991) who stated a positive relationship between managerial equity and firm performance.

Similarly, a study, conducted in Japan where the probability of takeover of firms is low because firms are monitored through banks, found a positive relationship between managerial

shareholdings at all the levels of management and firm performance (Morck et al., 2000). Similar studies (Chen et al., 2003; Hiraki, Inoue, Ito, Kuroki, & Masuda, 2003) also support agency theory because these studies examined that managers' interests are aligned to shareholders as the ownership of manager increases. In this way agents not only focus for getting more powers and resources by investing in different projects having even zero net present value but are also concerned for maximization of shareholders wealth. Moreover, it is investigated the conversion from mutual to stock ownership results in enhanced firm performance and due to this effect managerial ownership shows positive relationship with firm performance (Cole & Mehran, 1998).

2.2.2. Managerial Entrenchment Effect

Morck et al., (2000) investigated that firm performance is not always positively related with managerial shareholdings. A study found that companies in which managers got many shares through Employee Stock Option Programs face managerial dominance over the company's board of directors due to which they try to formulate business strategies in their own interests which ultimately affects firm performance in a negative manner (Fama, Eugene, & Jensen, 1983; Wahla et al., 2012). Likewise, another study interrogated the relationship between firm performance and ownership structure for some listed and OTC manufacturing firms in Taiwan and argued that managerial ownership has negative relationship with the market value of firm (Wang W. , 2003) but these results are opposed by McConnell and Servaes (1990) who found a direct relationship between CEO shareholdings and firm value.

The results of a study (Himmelberg, Hubbard, & Palia, 1999) are in line with the findings presented by Davies, Hillier, & McColgan, 2005; Demsetz & Villalonga (2001); Morck et al.,(1988) but contradictory to the views given by McConnell and Servaes (1990) by indicating

that the alignment of interests of shareholders and managers is not always a result of managerial shareholdings. Because managers have implicit control over the firms by having almost 50% equity holdings but still have divergence of objectives with shareholders. Moreover, they become so powerful to disregard any external monitoring mechanism. Another study conducted on 349 publically traded Australian firms from 1986 to 1989 found a weak relation between insider ownership and corporate performance (Craswell et al., 1997). Likewise, a study conducted on listed firms at Karachi Stock Exchange examined that managerial ownership has negative effect on ROA (Rehman & Shah, 2013).

A comparison is presented between countries of Anglo Saxon, Civil law and United States on the basis of the relationship between insider ownership, ownership concentration and firm performance. It is observed that countries of United States and Anglo Saxon apparently show high performance as compared to Civil Law countries. The study segregates insider ownership into managerial wealth effect and entrenchment effect. Results of regression analysis indicate that managerial entrenchment has statistically significant but negative relation with average and marginal Tobin's Q. On the other hand, managerial wealth effect has statistically significant and positive relation with market performance. It also shows that both marginal and average Tobin's Q is positively related with institutional share holdings (Gugler, Mueller, & Yurtoglu, 2008). While investigating the significance of ownership structure, after applying statistical panel data technique it is found that managerial investment weakens firm performance (Namazi & Kermani, 2013).

2.2.3. Different levels of Equity Managers and Firm Performance

On the basis of entrenchment and wealth effect which have already discussed, some studies (Fama & Jensen, 1983; Morck et al., 2000) examined that the effect of managerial

shareholdings over market and accounting performance of firms differs according to the level of management to which managers belong. These studies suggested that if managerial shareholdings are increased at high level of management then the value of firm decreases because opportunistic managers become more entrenched and well established. On the contrary, the interests of managers are aligned with shareholders if ownership is given to managers at the low level of management (Hermalin & Weisbach, 1991; Krivogorsky & Diego, 2006).

Chen et al.(2005) argued that if chairman and CEO of the company are the same persons and shares are issued to them then these kinds of managerial shareholdings result in poor firm performance because these managers are well established and have a lot of powers which they can exercise to reduce the effectiveness of controlling mechanisms for better corporate control.

The results presented by Hermalin and Weisbach (1991)are similar to Li et al. (2007) who employed multivariate analysis over a sample of 135 firms and showed that managerial ownership has a positive effect on firm performance. This study also concludes that the influence on firm performance becomes less significant at higher level of managerial ownership. Shahab-u-Din and Javid (2011) found same results by employing ordinarily least square regression on 60 nonfinancial companies listed at Karachi Stock Exchange Pakistan for the period of 2000 to 2007.

Some studies also argued that firm performance is improved if shares are issued to managers at higher management level (Gao & Song, 2008; Gordon & Schmid, 2000; Holderness & Sheehan, 1988). Furthermore, Alberto et al.(2004) examined that if shares are issued to low and high level of managers then firm performance can be enhanced. But if shares are issued to

managers belong to middle level management then there is more probability of bad firm performance reason might be opportunistic behavior of managers.

2.3. CONTRADICTION TOWARDS OWNERSHIP & CONTROL DISPARITY

Demsets (1983) explained that ownership and control are not as such separated as it is supposed by Berle & Means (1932) and Jensen & Meckling (1976). He supported his argument by delineating that raising of income of top level management and capital cannot be independent of stock value. Furthermore, managers are concerned about the value of their services offered in corporations in order to get progress in their carrier. In addition, no evidence is found for the relationship of profit and concentrated ownership because decisions of firms are highly influenced by shareholders profit maximizing interests regardless of concentrated or diffused ownership. He also described the endogeneity of ownership structure and argued that ownership structure not only reflects the proportion of shares held by different shareholders but also indicates the decisions of shareholders regarding buying or selling of shares.

While supporting the argument of Demsetz (1983) who was the first one to empirically reject the relationship between ownership structure and firm performance, many studies are conducted on firms of different countries like a comparative study is done in order to determine the relationship between ownership concentration and firm performance across UK, Czech Republic and Poland which found an insignificant relationship between ownership concentration and firm performance (Lskavyan & Spatareanu, 2006).

Some studies argued that agency problems can be reduced by the form of ownership structure adopted by firms due to which rate of return increases (Berle & Means, 1932; Jensen & Meckling, 1976; Shleifer & Vishny, 1994). These studies basically ignore the endogenous

adjustment of ownership structure. While considering the endogeneity of ownership structure, after using ordinary and second stage least square methods a study (Demsetz & Villalonga, 2001) concluded that no systematic variation is found in firm performance due to ownership structure because of the complexity of shareholders' interests.

The foundation of studies (Cho, 1998; Himmelberg et al., 1999) is built upon the arguments presented by Demsetz & Lehn (1985) and while considering unobservable characteristics in the analysis, these studies found no statistical significant effect of managerial ownership over the value of firm. After analyzing the sample of Chinese listed companies, in which percentage of managerial ownership is less due to which issuing shares to managers is not an effective corporate control mechanism for enhancing the value of firm, a study (Yixiang, 2011) argued that managerial ownership is not correlated with the performance of firm because of unobserved heterogeneity that would have an effect on the relationship. .

On the basis of work done by Demsetz and Lehn (1985), some studies (Demsetz & Villalonga, 2001; Holderness & Sheehan, 1988) examined that ownership structure and firm performance are not statistically significant factor towards each other and the relationship of ownership structure with both financial and market performance of firms is empirically rejected. Conversely, after employing piecewise regression analysis Morck et al.(1988) argued that firm's market performance measured by Tobin's Q varies if concentration of managerial shareholdings changes. It is further reported that firm performance is positively affected by ownership concentration between 0% and 5% or more than 25% but the market to book value of firm decreases if concentration of shares held by management lies between 5% and 25%.

While opposing the findings of Anderson & Reeb (2003) and Cho (1998) and supporting the studies of Demsetz and Lehn (1985), another study delineated that there exists no relationship between concentrated ownership and market value of firm. In addition, it is also argued that there exists specious relationship between ownership structure and firm's market performance. It may be because of the reason that the determinants of both ownership structure and firm value can overlap or some characteristics of firms are overlooked (Himmelberg et al., 1999).

It is determined in literature that ownership structure is the statistically significant factor affecting firm performance (Anderson & Reeb, 2003; Berle & Means, 1932; Kirchmaier & Grant, 2005), but it has also been analyzed that firm performance is not only affected by ownership structure but ownership structure also takes effect from firm value. So, a two-way relationship exists between large shareholdings and firm performance (Yixiang, 2011).

2.4. ADDITIONAL DIMENSIONS OF OWNERSHIP STRUCTURE

In addition to concentrated, diffused and managerial ownership, some other dimensions like family and institutional ownership are also analyzed which highlight the importance of agency theory in the relationship of ownership structure and firm performance. Moreover, the differential effect of family ownership, control and management over firm performance is found in previous studies (Anderson & Reeb, 2003; Claessens et al., 2002; Cronqvist & Nilsson, 2003; Villalonga & Amit, 2006). It is examined that in non-family firms, minority shareholders are worse off as explained by Berle & Means (1932) and Jensen & Meckling (1976) because of the conflict of interests between shareholders and managers. Furthermore, minority shareholders are badly affected in family owned firms especially if founder doesn't serve as CEO or chairman as compared to non-family owned firms (Villalonga & Amit, 2006). It is also shown that all family

owned firms have relatively better market performance as compared to non-family owned firms (King & Santor, 2008).

A study, similar to Demsetz and Lehn (1985), argued that the relationship of family ownership concentration with firm's financial and market performance is not positive in nature. It also delineated that firm doesn't earn high operating profits because of the influence of concentrated shareholders and the market to book value of firm is not associated with ownership concentration (Chen et al., 2005).

2.5. ROLE OF CONTROL VARIABLES IN DETERMINING FIRM PERFORMANCE

It is shown that size of the firms affects the relationship of ownership structure and dividend yield (Chen et al., 2005). A study conducted by Warrad et al.(2012) investigates the possible relationship between ownership structure and dividend payout policy in Jordanian industrial public shareholding companies. Its findings portray a significantly positive relationship of foreign ownership structure, company size and debt ratio with Return on Assets.

Another research is conducted that emphasizes the significance of the firm size in the determination of ownership structure. This study particularly pays attention to large business groups that have high debt dependence, established family control and diversified portfolios, and examined that the conglomerates which have higher leverage and larger proportion of non-manufacturing business tend to have a direct ownership. On the other hand, the conglomerates which have bigger size and larger proportion of non-voting share tend to have a pyramidal ownership. Moreover, conglomerates that have more listed firms and use more non-voting shares tend to have a lower family stake (Lim & Kim, 2005). Similarly, it is investigated that ownership

structure is more concentrated in large firms as compared to small sized firms (Foroughi & Fooladi, 2011).

In addition to firm size, varying characteristics of firms across industries also have effect over the relationship of ownership structure and firm performance. According to Bebchuk's theory (1999), distinct industrial characteristics are significant in determining the ownership structure. Moreover, legal rules and regulations for prohibiting the extraction of private benefits by shareholders would be different for different industries. The basis of this theory originates from rent protection theory of ownership structure which explains a relationship between private benefits and the form of ownership structure. It is argued that majority shareholders are more able to drive benefits for themselves as compared to minority shareholders due to which agency problem II exists in firms having concentrated shareholdings. On the basis of rent protection theory, it can also be stated that firms having dispersed ownership structure results in little power of shareholders to extract their rights at the expense of minority shareholders.

Likewise, a non-parametric data envelopment analysis method is employed on the sample of French manufacturing firms of low as well as high growth industries in order to investigate the relationship between equity ownership, capital structure and firm performance. The results show that dispersed ownership in computers, and research and development sectors bears high agency cost and results in low performance. On the contrary, in chemical industry a low agency cost and high performance is examined. They also argue that leverage choices are not affected by types of ownership (Margaritis & Psillaki, 2010).

In the light of rent protection and Bebchuk's theory, it is examined that shareholder's concentration varies in relation to specific characteristics of each industry (Elst, 2004). In

addition, the effect of ownership structure on firm profitability and value varies across different industries (Foroughi & Fooladi, 2011). Another study conducted by Mak and Li (2001) is like in spirit to the study (Demsetz & Lehn, 1985) and describes that distinctive industrial characteristics play an important role in the determination of ownership structure. Moreover, it is investigated that mechanisms for governing corporate; concentrated shareholdings, government ownership and managerial ownership, vary from firm to firm because every firm has different attributes which are related with the particular industry to which it belongs.

The relationship of ownership structure and firm performance not only varies across industries but also across economies. It is investigated that in developing economies, large sized companies show high level of ownership concentration as compared to small sized firms (Onder, 2003). Likewise, La Porta et al.(1998) argued that concentration of shareholdings is comparatively higher in developing economies than developed ones.

2.6. FOUNDATION OF THEORETICAL FRAMEWORK

The importance of ownership structure in determining firm performance is highlighted by different studies (Anderson &Reeb, 2003; Berle& Means, 1932; Jensen &Meckling, 1976; Villalonga & Amit, 2006). It is analyzed that there are basically two important perspectives; ownership concentration and composition, of ownership structure. Many studies (Berle& Means, 1932; Gursoy & Aydogan, 1998; Jiang, 2004; Nickell et al., 1997) focused on ownership concentration and defined its significance with the help of two models; concentrated and dispersed ownership, of corporate governance. Furthermore, ownership composition is defined in terms of managerial ownership (Cole & Mehran, 1998). It has also been analyzed that concentrated, dispersed and managerial ownership address agency problem I and II. Agency problem I represents the conflict of interests between shareholders and managers and agency

problem II represents the extraction of private benefits by concentrated shareholders at the expense of minority shareholders.

Literature also delineates the relationship of ownership structure and firm performance in the context of family owned firms. It is argued that the probability of expropriating minority shareholders by large shareholders is high in family owned firms which lead towards agency problem II. On the contrary, if the large shareholders are institutes then the power of extracting private benefits are diluted among number of large independent owners (Anderson & Reeb, 2003; Claessens et al., 2002; Cronqvist & Nilsson, 2003; Villalonga & Amit, 2006).

After reviewing literature, this study deems the effect of ownership structure on firm performance by incorporating both important perspectives of ownership concentration and composition. A strong theoretical foundation is found for this study and it is clear that monitoring power of shareholders increases due to concentrated shareholdings because they can put their combined efforts to align the objectives of firms with shareholders' concerns of wealth maximization. Conversely, literature also reveals that agency problem II incurs as a result of concentrated ownership. On the basis of rent protection theory, it can be further argued that controlling shareholders have more powers to derive their private benefits in this way they hurt the rights of minority shareholders. It can be concluded that on the basis of controlling theory, concentrated shareholdings have positive but on the basis of expropriation theory, concentrated shareholdings have negative effect over firm value. So, the focus of this study is to examine whether ownership concentration helps in reducing agency cost of nonfinancial listed firms at Karachi Stock Exchange Pakistan over the period of 2005 to 2012 or has negative effect on the performance of this sector.

The review of literature suggests that managerial ownership is the representation of one of the two important perspectives of ownership structure that is ownership composition. It implies that managerial ownership resolves agency problem I but there are also some studies which found that performance is not always positively affected by managerial ownership because if managers have more stock in companies then they would have more influence over the decisions regarding firms and in result the probability of getting private benefits by opportunistic managers' increases.

On the basis of reward argument, it can be stated that when managers are given ownership then they try to increase stock returns. In contrast, managerial entrenchment describes that due to managerial opportunism, managers have divergence of interests with shareholders even if they are equity owners. Furthermore, it is argued that stock value depicts manager's performance. While considering the importance of incentive mechanisms in which managerial ownership is important because it regulates the behavior of insider owners, this study made an effort to examine the relationship between managerial ownership and financial as well as market performance of nonfinancial sector of Pakistan for the period of eight years that is 2005-2012.

The analysis of empirical evidences reveal that percentage of shares owned by management and five largest shareholders are used to measure the two important dimensions of ownership structure; managerial ownership (Chen et al., 2012; Davies et al., 2005; Demsetz & Villalonga, 2001; Li et al., 2007; Shahab-ud-Din & Javed, 2011; Yixiang, 2011) and concentrated ownership (Demsetz & Villalonga, 2001; Iannotta et al., 2007; Mak & Li, 2001; Minguez-Vera & Martin-Ugedo, 2007; Thomsen & Pedersen, 2000). Likewise, in this study ownership concentration is measured through the percentage of shares owned by top five shareholders and

managerial ownership is operationalized through percentage of shares owned by Directors, Chief Executive Officers, and their spouse and minor children.

It is analyzed through literature that firm performance can be measured by considering financial and market perspectives. In previous studies, the market performance is measured through Tobin's Q that shows the market value of firm in relation to its book value (Chen et al., 2012; Craswell et al., 1997; Davies et al., 2005; Demsetz & Villalonga, 2001; Gugler et al., 2008) and Earnings per Share (Mousavi & Jari, 2012). The financial performance is measured through different operating margin and rate of return ratios. Some studies employed Return on Assets ratio (Chen et al., 2012; Pervan et al., 2012; Srivastava, 2011; Warrad et al., 2012) and other used Return on Equity ratio (Chen et al., 2012; Srivastava, 2011) to measure firm financial performance. Moreover, Operating Cash Flow and Income before Income Tax and Depreciation Amortization are also used as an indicator of firm financial performance (Yen & Andre, 2010).

This study examines both financial and market performance because the value of firm cannot be examined only by evaluating operating and financial performance but stocks returns also have to be examined in order to analyze the accurate picture of firm performance. Moreover, in addition to Return on Assets, this study also incorporates Return on Equity for measuring financial performance because ownership structure represents proportion of equity or shares held by shareholders that is basically the important concern of this study. Furthermore, this study employs Earnings per Share as well as Tobin's Q for the measurement of market performance.

Most of the studies (Craswell et al., 1997; Mak & Li, 2001) argued that ownership structure whether concentrated or diffused is the result of different market forces and it varies across firms because each firm shows differences in environment and circumstances in which

they operate and also has distinct features. Through extensive review of literature, it is analyzed that control variables like leverage (Davies et al., 2005), asset-liability ratio (Yixiang, 2011), firm size (Warrad et al., 2012) and type of industry (Mak & Li, 2001; Margaritis & Psillaki, 2010) effect the relationship between ownership structure and firm performance. So, this study empirically shows the effect of across industry differences and firm size over the relationship of ownership structure and firm performance. In literature, firm size is measured through replacement value of assets (Craswell et al., 1997), book value of assets (Demsetz & Villalonga, 2001) and the natural log of average sales (Foroughi & Fooladi, 2011). By having strong theoretical support, this study categorizes firms of nonfinancial sector of Pakistan into small, medium and large size on the basis of total assets acquired by them.

Government plays an important role in determining the ownership structure and its main focus is the achievement of economic and social objectives. While having ownership, it not only tries to enhance the growth of a company but also makes efforts for the development of all the sectors. Furthermore, government prefers active ownership because good owners find out novel ways to enhance firm performance. While highlighting the significance of government role, this study takes into consideration regime change in order to investigate the relationship between ownership structure and firm performance which would be a novel contribution towards literature.

2.7. SUMMARY

The analysis of literature reveals that ownership concentration and composition play a vital role in mitigating agency problems which incur as a result of conflict of interests between shareholders and managers. Moreover, it is analyzed that the probability of expropriation of minority rights increases due to concentrated shareholdings. By keeping in mind all these

important considerations and theories regarding ownership structure, this study made an attempt to investigate the importance of ownership concentration and composition in determining firm performance by considering type of industry, firm size and regime change.

CHAPTER 3: THEORETICAL FRAMEWORK

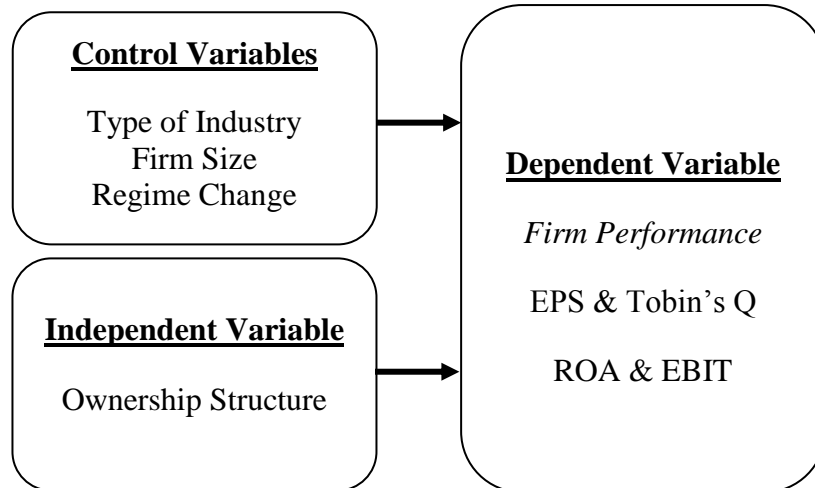
The previous studies have identified concentrated and managerial ownership as important controlling mechanisms which significantly affect firm performance. By discussing such a relationship enables financial analysts to understand as to the maximization of shareholder's wealth. On the other hand, managerial entrenchment and agency problem are also the results of concentrated and managerial ownership. In addition, it is identified that government policies, firm size and industrial differences play their role in the determination of ownership structure which in turn affect firm performance. The literature in financial perspective considers ownership structure as an important determinant of firm performance which provides a strong basis for theoretical framework of the present study.

This chapter is all about theoretical framework of the study in the light of singled out relationship of concentrated and managerial ownership with firm performance while considering the significance of control variables.

3.1. DESCRIPTION OF MODEL

The model is built around the main area of agency and rent protection theory and corporate governance. It basically represents both important perspectives; ownership concentration and composition, ownership structure with its role of an independent variable. The model represents concentrated and managerial ownership as dimensions of ownership structure. Firm performance, both in financial and market perspectives, is considered as dependent variable. As control variables, study considers various types of industries, firm size and regime change

playing their role in the relationship of ownership structure and firm performance. Theoretical framework of the study is presented for perusal:



The studies such as Berle & Means (1932); Cole & Mehran (1998); Collins, Dutta, & Wansley (2009); Fazlzadeh, Hendi, & Mahboubi (2011); Iannotta, Nocera & Sironi, (2007); King & Santor (2008); Li, Moshirian, Nguyen, & Tan (2007); Mak & Li (2001); Minguez-Vera & Martin-Ugedo (2007); Shahab-ud-Din & Javed (2011); Srivastava (2011); Warrad, Abed, Khriasat & Al-Sheikh (2012) are found in support of the this model. On the other hand, the studies such as Demsetz & Villalonga (2001); Yen & Andre (2010) have developed different views. The variables highlighted in the model have been described in the sections to follow.

3.2. DEFINITIONS OF VARIABLES

Independent, dependent and control variables of the study are introduced in the previous chapters. This section particularly provides theoretical background, important approaches and justification of all the variables involved in this study.

3.2.1. Dependent Variable

The dependent variable is firm performance which represents rate of return over investment, financial strength and standing of firms in the market on the basis of market value and returns on their stocks.

3.2.1.1. Firm Performance

The previous studies have treated firm performance in financial and market perspectives as dependent variable. The financial performance is measured through return on assets (Chen et al., 2012; Krivogorsky & Diego, 2006; Pervan et al., 2012; Srivastava, 2011; Warrad et al., 2012) and return on equity (Citak, 2007; Chen et al., 2012; Krivogorsky & Diego, 2006; Monsen et al., 1968; Srivastava, 2011); Operating Cash Flows (Moradi, Salehi, & Arianpoor, 2012); Return on Equity (Mousavi & Jari, 2012) and Income before Tax and Depreciation; Amortization (Yen & Andre, 2010). On the other hand, the market performance of firm is measured through Tobin's Q (Black, Kim, & Jang, 2006; Chen et al., 2012; Citak, 2007) and Earnings per Share (Mousavi & Jari, 2012) and KOSPI (Kim et al., 2007) which is a value-weighted market index comprising all the listed companies and is used by one of the studies conducted on firms listed at Korea Stock Exchange (KSE).

It is already discussed that firm performance is taken as dependent variable. This study analyzes firm performance on the basis of financial strength and market value of firms. Financial health is measured with the help of rate of return ratios which indicate the relationship between profit and investment (Prasana, 2000). Basically, this study focuses on ownership structure. Therefore, in addition to Return on Assets, Net Profit to Equity ratio are also incorporated because equity represents ownership side of the companies. Tobin's Q and Earnings per Share

(EPS) represents market performance based on book value of the business corporations (Brainard & Tobin, 1968). Investors decide either to make further investment in companies or to sell out assets on the basis of its value. EPS shows the amount of net profit gained on each share after distributing it to preferred stockholders.

3.2.2. Independent Variables (IVs)

Findings of the previous studies reveal ownership structure as one of the important factors which determine firm performance. Literature shows different dimensions of ownership structure like concentrated ownership (Gursoy & Aydogan, 1998; Jensen & Meckling, 1976; Kaplan & Minton, 1994; Kirchmaier & Grant, 2005; Monsen et al., 1968), dispersed ownership (Barzegar & Babu, 2008; Bebchuk et al., 2000; Berle & Means, 1932; Gursoy & Aydogan, 1998; Pervan et al., 2012), family ownership (Anderson & Reeb, 2003; Cheung et al., 2005; Cronqvist & Nilsson, 2003; Villalonga & Amit, 2006), institutional ownership (Claessens et al., 2002; Villalonga & Amit, 2006) and managerial ownership (Chen et al., 2012; Damijan et al., 2004; Gao & Song, 2008; Hermalin & Weisbach, 1991; Jensen & Meckling, 1976; Kaplan & Minton, 1994).

Both the concentration and composition ownership are essential viewpoints in describing ownership structure. While considering this significance, the present study incorporates concentrated and managerial ownership for operationalization of ownership structure. Managerial and concentrated ownership represents ownership composition and concentration respectively. Furthermore, the studies (Chen et al., 2012; Davies et al., 2005; Demsetz & Villalonga, 2001; Li et al., 2007; Shahab-ud-Din & Javed, 2011; Yixiang, 2011) reveal that percentage of shares owned by management is used to measure managerial ownership and

percentage of shares owned by five largest shareholders is employed to measure concentrated ownership (Demsetz & Villalonga, 2001; Iannotta et al., 2007; Mak & Li, 2001; Minguez-Vera & Martin-Ugedo, 2007; Thomsen & Pedersen, 2000). Managerial ownership is operationalized through percentage of shares owned by Directors, Chief Executive Officers, and their spouse and minors (children) whereas concentrated ownership is measured through the percentage of shares owned by top five shareholders.

3.2.3. Control Variables (CV)

There is an evidence of using control variables affecting the relationship between ownership structure and firm performance. These control variables include size of firm (Cheung et al., 2005; Foroughi & Fooladi, 2011; Lim & Kim, 2005), type of industry (Demsetz & Lehn, 1985; Elst, 2004; Mak & Li, 2001; Margaritis & Psillaki, 2010), nature of economy (La Porta et al., 1998; Onder, 2003), foreign ownership, company size and debt ratio (Warrad et al., 2012).

While highlighting the vital role of control variables in the determination of firm performance, this study contributes in literature by analyzing regime change effect on the relationship of ownership structure and firm performance. Moreover, it also incorporates firm size and nature of industries in the determination of performance of nonfinancial sector of Pakistan.

3.2.3.1. Type of Industry

Each industry has its own characteristics and on the basis of these characteristics and business mechanics in connection with their day to day activities and corporate governance. Bebchuk's theory (1999) based upon rent protection theory explains dynamics affecting

relationship of ownership structure and firm performance. Moreover, the probability of extracting private benefits by major shareholders varies from industry to industry. In the light of rent protection and Bebchuk's theory, this study examines the effect of type of industry on the relationship of ownership structure and firm performance using the industrial dummy variables. In addition, the performance of all the industries is compared with miscellaneous group of industries assuming this particular group as a benchmark. Assuming one of the industrial groups as the benchmark is econometric norm in order to avoid dummy variable trap. In case of 10 industrial groups, nine are considered on the right hand side of the regression equation where the 10th industrial group is represented by the intercept term.

3.2.3.2.Firm Size

Size of the industry or has been found in the literature playing significant role in the determination of relationship between ownership structure and firm performance. The characteristics of firm vary with respect to its size. For instance large businesses enjoy comparative advantages in terms of high debt dependence and diversified portfolios as compared to the small business enterprises. The pattern of ownership varies according to the size of the business units and it affects firm performance. The ownership structure is more concentrated in large firms as compared to their small counterparts (Foroughi & Fooladi, 2012). Moreover, a positive relationship of foreign ownership structure, company size and debt ratio with return on assets is observed (Warrad et al., 2012). Previous studies measured firm size through replacement value of assets (Craswell et al., 1997), book value of assets (Demsetz & Villalonga, 2001) and the natural log of average sales (Foroughi & Fooladi, 2012). This study also highlights the effect of firm size on the relationship of ownership structure and firm performance and operationalizes it on the basis of total assets acquired by firms. Firms from the nonfinancial

sector of Pakistan are categorized into small, medium and large size and dummy variables are employed for the three sizes.

3.2.3.3.Regime Change

This study incorporates regime change effect on the relationship of ownership structure and firm performance with the help of dummy variables. The data set employed in this study is extended over the period of 2005-2012. The year 2008 is the turning point in the economy of Pakistan in two ways. 2008 is the period of international financial crisis and this the period when government in Pakistan changed from the military led government to pure civilian government after general election. The sample period is divided into two parts. Zero represents regime after financial crisis (2009-2012) and 1 represents the regime before financial crisis (2005-2008). This is another contribution of the present study in measuring the relationship of ownership structure and firm performance through regime change effect. Each government is known for its policies and objectives. Therefore, the relationship between ownership structure and firm performance might be different in the two periods. The econometric models employing dummy variables are described in the standard books on econometrics. The present study follows (Gujarati & Sangeetha, 2007). Moreover, government prefers active ownership through which controlling mechanism is generated for mitigating agency cost. This agency cost is associated with ownership-control disparity and enhancement of the financial as well as market performance of the companies.

3.3. RELATIONSHIP BETWEEN INDEPENDENT, CONTROL AND DEPENDENT VARIABLES

As mentioned earlier, the focus of this study is to analyze the relationship between ownership structure (concentrated and managerial ownership) and firm performance. It is delineated in literature that concentrated and managerial ownership might have positive and negative effect on firm performance (Citak, 2007; Davies et al., 2005; Gao & Song, 2008; Mosen et al., 1968). In addition, it is also examined that the relationship of ownership structure and firm performance is affected by the industrial dynamics, regime change and firm size (Chen et al., 2005). Moreover, legal rules and regulations for prohibiting the extraction of private benefits by shareholders would be different for different industries. So, the distinctive characteristics of each industry establish ownership pattern that not only determines the probability of expropriating the rights of minor shareholders by concentrated shareholders but also affects firm performance (Bebchuk et al., 2000; Foroughi & Fooladi, 2011). Some of the studies emphasize the significance of firm size in the determination of ownership structure. It particularly pays attention to large business groups and concludes that conglomerates having higher leverage and larger proportion of non-manufacturing business tend to have direct relevance to the ownership. On the other hand, pyramidal ownership is found in conglomerates having bigger size and larger proportion of non-voting shares (Lim & Kim, 2005).

3.4. RELATIONSHIP BETWEEN INDEPENDENT AND DEPENDENT VARIABLES

This study focuses on both important perspectives of ownership structure that is concentration and composition of ownership. The ownership concentration is presented by concentrated ownership; percentage of shares held by top five shareholders and composition is presented by managerial ownership; percentage of shares held by management. Different types

of relationship of concentrated and managerial ownership with firm performance are observed in literature. According to agency theory (Jensen & Meckling, 1976), managers act as agents of shareholders that results in ownership-control disparity and managerial opportunism due to which firm performance is affected in a negative manner. Most of the studies reveal a positive relationship between concentrated ownership and firm performance because major shareholders adopt various monitoring mechanisms in order to align the distinctive interests of managers with shareholders (Alberto et al., 2004; Claessens et al., 1996; Kapopoulos & Lazaretou, 2007; Kirchmaier & Grant, 2005; Minguez-Vera & Martin-Ugedo, 2007; Monsen et al., 1968). Conversely, on the basis of rent protection theory it is argued that agency problem incurs due to concentrated ownership which means that shareholders having large stakes in firms can exploit the rights of minority shareholders for their benefits (Bebchuk et al., 2000; Foroughi & Fooladi, 2011; Gomez et al., 2001; Gugler, 1998; Pervan et al., 2012).

Similarly, both positive and negative effect of managerial ownership on firm performance is observed in literature. If incentives and opportunities are given to managers in the form of shares then interests of shareholders and managers can be aligned which extenuate agency problems and cost due to which firm performance increases (Chen et al., 2012; Gao & Song, 2008; Hermalin & Weisbach, 1991; Hill & Snell, 1988). On the other hand, managerial entrenchment effect describes that managerial ownership has a negative effect over firm performance because through ownership, all the managers, especially top level management become more established and starts utilizing their powers to reduce the effectiveness of controlling mechanisms adopted by concentrated shareholders (Fama & Jensen, 1983; Himmelberg et al., 1999; Morck et al., 2000; Wahla et al., 2012; Wang W. , 2003). For the

purpose of analyzing the relationship between ownership structure and performance of nonfinancial sector of Pakistan, the following hypothesis is formulated:

H₁: Ownership does have an effect on the firm performance.

3.5. RELATIONSHIP BETWEEN CONTROL AND DEPENDENT VARIABLES

While relying on Bebchuk's theory, one of the studies examines that shareholder's concentration depends upon the specific characteristics of firms related to various industries (Elst, 2004; Margaritis & Psillaki, 2010). Moreover, mechanisms for governing corporate vary from firm to firm because of varying dynamics across industries (Foroughi & Fooladi, 2011; Mak & Li, 2001). By considering the importance of different industrial dynamics, one of the objectives of this study is to analyze and compare the performance of various industries of nonfinancial sector of Pakistan. In addition, it also investigates the role of particular industry in determining the relationship of ownership structure and firm performance. The following hypothesis is deduced in order to highlight the importance of different characteristics of each industry in determining firm performance.

H₂: the relationship of ownership structure and firm performance is the same across industries.

It is identified in literature that firm size plays an important role in the determination of firm performance. While examining the relationship between ownership structure and dividend payout policy in Jordanian industrial public shareholding companies, it is found that company size is positively related with return on assets (Warrad et al., 2012). Furthermore, it is investigated that firm size in terms of replacement value of assets, natural log of average sales and book value of assets affect financial and market performance of firms (Craswell et al., 1997;

Demsetz & Villalonga, 2001; Foroughi & Fooladi, 2011). The hypothesized statement showing the relationship between firm size and performance of nonfinancial sector of Pakistan is given below:

H₃: the relationship of ownership structure and firm performance is the same across all sizes of industries.

Comparing the relationship of ownership structure and firm performance in the scenario of regime change is one of the contributions made by this study. Usually, government provides favorable infrastructure for the development of dynamic ownership, improvement of firm performance, growth of industries leading to development of economies. Recognizing the positive role of government, as stated earlier, the present study tests the following hypothesis;

H₄: the relationship of ownership structure and firm performance is the same across different regimes.

In sum, the present study tests the following four hypotheses:

H₁: Ownership structure does affect firm performance

H₂: the relationship of ownership structure and firm performance is the same across industries.

H₃: the relationship of ownership structure and firm performance is the same irrespective of size of the industries.

H₄: the relationship of ownership structure and firm performance is the same irrespective of regime change.

3.6. SUMMARY

The review of literature which is critically discussed in chapter 2 reveals that ownership structure has a significant role in the determination of firm performance. There are certain factors such as firm size, type of industry and nature of the government which play their role as control variables in the determination of relationship of ownership structure and firm performance. After the development of theoretical framework, the next chapter describes methodology to be employed for testing the theoretical framework.

CHAPTER 4: METHODOLOGY

This chapter provides detailed description of econometric methods employed in order to test theoretical framework which has been developed in the previous chapter. Unit of analysis, data sources and sampling techniques are also discussed in detail.

4.1. UNIT OF ANALYSIS

The unit of analysis of this study is nonfinancial sector of Pakistan and it consists of firms listed at Karachi Stock Exchange over the period of eight years from 2005 to 2012. These companies have been chosen from different industries; Automobile and Parts, Chemicals, Construction and Materials(Cement), Electricity & Power, Food Producers, General Industries, Oil and Gas, Personal Goods(Textile) and Pharmaceuticals & Biotech. In addition, the industries having less number of companies as compared to other industries are also included and combined in a miscellaneous group.

4.2. DATA AND SAMPLING

Sample of this study consists of nonfinancial firms listed at Karachi Stock Exchange (KSE) Pakistan over the period of 2005-2012. These companies show their true financial position in order to attract more investment and financing. These companies are also expected to present true picture of financial reports in terms of their performance accruing to the shareholder's wealth. Considering only listed companies in the sample increases the reliability of data its validity and significance of the findings. According to terms and conditions of Securities Exchange Commission of Pakistan (SECP), all listed companies have to publish their annual reports which facilitate progress of data collection.

In the initial phase of data collection, the expected sample size was almost 110 to 120 firms but it was reduced to only 100 companies because of the requirement of uniform data related to all the variables considered for this study. Despite rules and regulations of SECP, some companies do not publish their annual reports because of poor implementation of the laws and weak corporate judicial system of Pakistan. Some of the companies closed down before the year 2012 and at the same time some new companies were listed before 2012 and after 2005. Consequently this study is compelled to employ convenience sampling technique subject to the availability of financial reports for the period under consideration.

On these accounts the secondary data has been extracted from the annual financial reports of only listed companies at Karachi Stock Exchange Pakistan over the period of 2005 to 2012. This time period of the study is of great importance because during this period the economy of Pakistan has been run by two different governments. Hence, this study analyzes the effect of regime change over the relationship of ownership structure and firm performance that is an important contribution of the present study in the literature related to the corporate finance and strategic level of management.

4.3. DATA ANALYSIS METHODS

The data of 100 nonfinancial companies listed at Karachi Stock Exchange Pakistan is analyzed by employing advanced econometric methods which have not been employed by previous studies conducted in Pakistan. The results and discussion are presented in the next chapter.

4.3.1. Models Employed by Previous Studies

The analysis of literature reveals that most of the studies employed Ordinary Least Squares (OLS), Two Stage Least Square (TSLS) and multiple regression techniques in order to estimate the relationship between ownership structure and firm performance using linear functional relationship. Additionally, some of the studies also used fixed and random effect models and piecewise linear regression analysis. The table 4.1 presents summary of the statistical techniques used in the previous studies.

Table 4.1: Methodologies Employed in Literature

S.No	Methodology	Previous Studies	Common Area of Study
1	Ordinary Least Square (OLS)	(Demsetz & Villalonga, 2001); (King & Santor, 2008); (Cole & Mehran, 1998); (Iannotta, Nocera & Sironi, 2007); (Li, Moshirian, Nguyen & Tan, 2007); (Srivastava, 2011); (Berle & Means, 1932) and (Yen & Andre, 2010)	Ownership Structure and Firm Performance
2	Two Stage Least Square (2SLS)	(Demsetz & Villalonga, 2001); (Shahab-ud-Din & Javed, 2011); (Mak & Li, 2001); (Vera & Ugedo, 2005) and (Collins, Dutta & Wansley, 2009)	Manegeraila Ownership, Dividend Policy and Corporate Performance
3	Multiple Regression	(Warrad, Abed, Khriyat & Al-Sheikh, 2012); (Fazlzadeh and Hendi, 2011)	Ownership Structure and its Effects on Dividend Layout Policy and Firm Performance
4	Generalized Method of Moments (GMM)	(Kang & Kim, 2012)	Ownership Structure and Firm Performance
5	Fixed Effects Model	(Kang & Kim, 2012); Wahla, Shah & Hussain (2012)	Ownership Structure and Firm Performance
6	Quantile Regressions	(Demsetz & Villalonga, 2001)	Ownership Structure and Firm Performance
7	Piecewise Regression Analysis	(Gugler, Mueller & Yurtoglu, 2008); (Craswell, Stephen & Saywell, 1997); (Wang, 2003)	Ownership Structure, Ownership Concentration and Firm Performance
8	Seemingly Unrelated Regression Model (SUR)	(Lim & Kim, 2005)	Determinants of Ownership Structure
9	Multivariate regression analysis	(Li, Moshirian, Nguyen & Tan, 2007)	Managerial Ownership and Firm Performance
10	Granger Causality Test	(Wang, 2003)	Ownership Structure and Firm Performance
11	Auto Regressive Error Model	(Thomse & Pederse, 2000)	Ownership Structure and Economic Performance of Firms
12	Non-Parametric Data Envelopment Analysis Package (DEAP)	(Margaritis & Psillaki, 2010)	Capital Structure, Equity Ownership and Firm Performance
13	Random Effects Model	(King & Santor, 2008)	Effects of Changes in Ownership Structure on Firm Performance
14	Logit Model	(Ahmed, 2009)	Managerial Ownership and Agency Conflicts

4.3.2. Models Employed in the Present Study

An analysis of the previous studies paves the way to develop the methodology of the present study. This study estimates the relationship between ownership structure and firm performance by using dummy variables. There are basically three components of analysis and each part requires a comprehensive method for measurement of relationship. Control variables of

the study such as types of industries, size of the business, and two different regimes have been incorporated in the interactive format of the econometric equations for estimation. There is a separate equation for each control variable. The equations with interactive effects enable us to analyze structural change effect on the firm performance as an alternative to Chow test which reduces the degree of freedom. Further details and justification of these models are presented in the following sections.

4.3.2.1. Interactive Effects Using Dummy Variables Model

In the dummy variable model, two types of analysis can be done. First, simple dummy variable analysis enables us to compare performance measures across industries. Second, control variable analysis which investigates the effect of control variables on the relationship between independent and dependent variables (Gujarati & Sangeetha, 2007). In this study, the performance (ROA, EBIT, EPS and Tobin's Q) of all the industries considered in a sample is compared with the industries of miscellaneous group. As the characteristics of firms vary from industry to industry, so this study also examines the significance of ownership structure across different industries of nonfinancial sector of Pakistan. Therefore, for measuring the interactive effect, the following model is employed:

$$Y_{it} = \alpha_0 + \alpha_n D_{ni} + \beta_m X_{mit} + \gamma_n (D_{ni} X_{mit}) + \mu_{it}$$

Y_{it} = Dependent Variable

α_0 = Intercept

α_n = Differential Intercept

β_m = Slope Coefficient for Independent Variables

γ_n = Differential Slope Coefficient

D_{ni} = Industry Dummies

X_{mit} = Independent Variables

i = Number of Companies; i = 1,2,3,4,.....,100.

t = Time Period; t= 2005, 2006, 2007, 2008, 2009, 2010, 2011 & 2012.

μ_{it} = Stochastic Term

For measuring the interactive effect of concentrated and managerial ownership across diversified industries, the following equations are employed.

Managerial Ownership

$$Y_{it} = \alpha_1 D_{1i} + \alpha_2 D_{2i} + \alpha_3 D_{3i} + \alpha_4 D_{4i} + \alpha_5 D_{5i} + \alpha_6 D_{6i} + \alpha_7 D_{7i} + \alpha_8 D_{8i} + \alpha_9 D_{9i} \\ + \alpha_{10} D_{10i} + \beta_1 X_{1it} + \gamma_1 (D_{1i} X_{1it}) + \gamma_2 (D_{2i} X_{1it}) + \gamma_3 (D_{3i} X_{1it}) + \gamma_4 (D_{4i} X_{1it}) + \gamma_5 (D_{5i} X_{1it}) \\ + \gamma_6 (D_{6i} X_{1it}) + \gamma_7 (D_{7i} X_{1it}) + \gamma_8 (D_{8i} X_{1it}) + \gamma_9 (D_{9i} X_{1it}) + \gamma_{10} (D_{10i} X_{1it}) + \mu_{it}$$

Y_{it} = Firm Performance (ROA, EBIT, EPS and Tobin's Q) where

ROA = Return on Assets

EBIT = Earnings before Interest and Tax

EPS = Earnings per Share

α_0 = Intercept

α_{1-10} = Differential Intercept

β_1 = Slope Coefficient for Managerial Ownership

γ_{1-10} = Differential Slope Coefficient

D_{1i} =1 if Automobile and Parts, 0 otherwise.

D_{2i} =1 if Chemicals, 0 otherwise.

D_{3i} =1 if Construction and Materials (Cement), 0 otherwise.

D_{4i} =1 if Electricity, 0 otherwise.

D_{5i} =1 if Food Producers, 0 otherwise.

D_{6i} =1 if General Industries, 0 otherwise.

D_{7i} =1 if Oil and Gas, 0 otherwise.

D_{8i} =1 if Personal Goods (Textile), 0 otherwise.

D_{9i} =1 if Pharmaceuticals and Bio Tech, 0 otherwise.

D_{10i} =1 if Miscellaneous, 0 otherwise.

X_{lit} = Managerial Ownership

i = Number of Companies; $i = 1,2,3,4,\dots,100$.

t = Time Period; t = 2005, 2006, 2007, 2008, 2009, 2010, 2011 & 2012.

μ_{it} = Stochastic Term

Ownership Concentration

$$Y_{it} = \alpha_1 D_{1i} + \alpha_2 D_{2i} + \alpha_3 D_{3i} + \alpha_4 D_{4i} + \alpha_5 D_{5i} + \alpha_6 D_{6i} + \alpha_7 D_{7i} + \alpha_8 D_{8i} + \alpha_9 D_{9i} \\ + \alpha_{10} D_{10i} + \beta_2 X_{2it} + \gamma_1 (D_{1i} X_{2it}) + \gamma_2 (D_{2i} X_{2it}) + \gamma_3 (D_{3i} X_{2it}) + \gamma_4 (D_{4i} X_{2it}) + \gamma_5 (D_{5i} X_{2it}) \\ + \gamma_6 (D_{6i} X_{2it}) + \gamma_7 (D_{7i} X_{2it}) + \gamma_8 (D_{8i} X_{2it}) + \gamma_9 (D_{9i} X_{2it}) + \gamma_{10} (D_{10i} X_{2it}) + \mu_{it}$$

β_2 = Slope Coefficient for Ownership Concentration

X_{2it} = Ownership Concentration

4.3.2.2. Effect of Firm Size

It is already explained that simple and control variable analysis can be done with the help of dummy variables which not only facilitate in measuring performance across different sizes of firms but also helps in examining its effect on the relationship between independent and dependent variables. So, by employing dummy variables in the model, this study analyzes the effect of firm size on the relationship of ownership structure and firm performance. In addition, it also compares the performance (ROA, EBIT, EPS and Tobin's Q) of different sizes of firms.

Therefore, for measuring the effect of firm size, the following model is employed:

$$Y_t = \alpha_1 (sz_sml)_t + \alpha_2 (sz_md)_t + \alpha_3 (sz_lrg)_t + \beta_1 X_{1t} + \beta_2 X_{2t} \\ + \gamma_1 (sz_sml)_t * X_{1t} + \gamma_2 (sz_sml)_t * X_{2t} + \gamma_3 (sz_md)_t * X_{1t} + \gamma_4 (sz_md)_t * X_{2t} \\ + \gamma_5 (sz_lrg)_t * X_{1t} + \gamma_6 (sz_lrg)_t * X_{2t} + \mu_t$$

Y_{it} = Firm Performance (ROA, EBIT, EPS and Tobin's Q) where

‘ROA’ Return on Assets

‘EBIT’ Earnings before Interest and Tax

‘EPS’ Earnings per Share

α_0 Intercept

α_{1-3} Differential Intercept

β_1 Slope Coefficient for Concentrated Ownership

β_2 Slope Coefficient for Managerial Ownership

γ_{1-6} Differential Slope Coefficient

$(sz_sml)_t$ Dummy variable for Small Sized Firms

$(sz_md)_t$ Dummy variable for Medium Sized Firms

$(sz_lrg)_t$ Dummy variable for Large Sized Firms

X_{1t} Concentrated Ownership

X_{2t} Managerial Ownership

t = Time Period; t= 2005, 2006, 2007, 2008, 2009, 2010, 2011 & 2012.

μ_t = Stochastic Term

4.3.2.3. Structural Change Effect Using Dummy Variables in the Model

The change which alters the flow of information, capital, authority and responsibility within an organization is called structural change. One of the contributions of this study is to measure the interactive effect of regime change with ownership structure and to compare performance of nonfinancial sector of Pakistan during different regimes before and after financial crisis.

This study employs dummy variables in the model as an alternative to the Chow test, which causes loss of degree of freedom, for the period of 2005-2012) to determine the relationship of ownership structure and firm performance. Chow test does not explicitly explain as to which coefficient (intercept or slope) is changed. The dummy variable approach has a distinct advantage over Chow test because it not only tells if the slope or intercept are different but also pins down the sources of the difference that either it is due to the intercept or the slope or both. This approach also protects the degree of freedom which may improve the relative precision and efficiency of the estimated parameters. The general equation for measuring regime change effect is given as follows:

$$Y_t = \alpha_0 + \alpha_1 D_t + \beta_n X_{nt} + \gamma_n (D_t X_{nt}) + \mu_t$$

Y_t Dependent Variable

α_0 Intercept

α_1 Differential Intercept

β_n Slope Coefficient for Independent Variables

γ_n Differential Slope Coefficient for Independent Variables

$D = 1$ for the period of 2005-2008 (regime before financial crisis), 0 otherwise that is for observations from 2009-2012 (regime after financial crisis).

$X_{nt} =$ Independent Variables (Quantitative)

μ_t Stochastic Term

Following dummy variables model is used as an alternative to the chow test for measuring the structural change effect on the relationship of ownership structure; managerial and concentrated ownership, and firm performance:

$$Y_t = \alpha_0 + \alpha_1 D_t + \beta_1 X_{1t} + \beta_2 X_{2t} + \gamma_1 (D_t X_{1t}) + \gamma_2 (D_t X_{2t}) + \mu_t$$

Y_{it} Firm Performance (ROA, EBIT, EPS and Tobin's Q)

'ROA' Return on Assets

'EBIT' Earnings before Interest and Tax

'EPS' Earnings per Share

α_0 Intercept

α_1 Differential Intercept

β_1 Slope Coefficient for Concentrated Ownership

β_2 Slope Coefficient for Managerial Ownership

γ_1 Differential Slope Coefficient for Concentrated ownership

γ_2 Differential Slope Coefficient for Managerial Ownership

$D = 1$ for the period of 2005-2008 (regime before financial crisis), 0 otherwise that is for observations from 2009-2012 (regime after financial crisis).

X_{1t} Concentrated Ownership

X_{2t} Managerial Ownership

μ_t Stochastic Term

4.4. OPERATIONAL DEFINITIONS

According to the theoretical framework discussed in chapter 3, the independent variable of this study is ownership structure which is measured in two dimensions; concentrated and managerial ownership. The dependent variable is firm performance. The following section particularly embodies operational definitions of all the variables involved in this study.

4.4.1. Operational Definitions of Dependent Variable

The operational definitions of dependent variable are as follows;

4.4.1.1. Firm Performance

The performance of nonfinancial sector of Pakistan is analyzed on the basis of its financial position and market value.

4.4.1.1.1. Firm's Financial Performance

The financial position of firms is analyzed on the basis of profitability by employing return on assets ratio that indicates how efficiently assets are being used for generating earnings. The study also used earnings before interest and tax as an indicator of profitability. Formulae for measuring these indicators of profitability are given below:

$$\text{Return on Assets (ROA)} = \frac{\text{Net Income}}{\text{Total Assets}}$$

Earnings before Interest and Tax (EBIT) = Revenue - Expenses, excluding Interest and Tax

4.4.1.1.2. Firm's Market Performance

The market performance is measured on the basis of shareholder's wealth by evaluating the amount of earnings gained on each share after distributing profit to preferred stock holders. Furthermore, the market value of firms is also calculated with the help of Tobin's Q. The dimensions of market performance and their measurement are given below:

$$\text{Earnings per Share} = \frac{\text{Net Income} - \text{Dividend on Preferred Stock}}{\text{Average Outstanding Shares}}$$

$$\text{Tobin's } Q = \frac{\text{Total Market Value of Firm}}{\text{Book Value of Total Assets}}$$

4.4.2. Operational Definitions of Independent Variable

The independent variable of the study is ownership structure. Its dimensions include concentrated and managerial ownership which represent ownership concentration and composition respectively.

4.4.2.1. Concentrated Ownership

Concentrated Ownership represents the percentage of shares held by controlling shareholders. In this study, concentrated ownership is measured as:

$$\text{Concentrated Ownership} = \% \text{age of Shares held by Top five Shareholders}$$

4.4.2.2. Managerial Ownership

Managerial Ownership represents the viewpoint of ownership composition. It is operationalized as;

$$\text{Managerial Ownership} = \% \text{age of Shares held by Managers, CEOs, Directors}$$

4.4.3. Operational Definitions of Type of Industry, Firm Size and Regime Change

Type of industry, firm size and regime change are basically control variables of the study which are represented by dummy variables. A separate dummy variable is constructed for each industry and miscellaneous group of industries which comprises of comparatively less number of firms than other sectors. For measuring firm size, the data is categorized into small, medium and large sized firms on the basis of total assets acquired by firms and then separate dummy variables are constructed for each category. The regime change effect is incorporated in the study after dividing the overall sample into two periods such as 2005-2008 and 2009-2012 and then dummy variable is constructed representing 1 for regime before financial crisis (2005-2008) and 0 for regime after financial crisis (2009-2012).

The operational definitions of all the variables involved in this study are summarized in table 4.2.

Table 4.2: Operational Definitions of Variables

Independent Variables	Dimensions	Calculation	Math Format
Ownership Structure	Managerial ownership	No. of shares held by Managers, Directors and other Executives	Non-Linear
	Concentrated Ownership	No. of shares held by top 5 shareholders	Non-Linear
Dependent Variable	Dimensions	Calculation	Math Format
Firm Performance	Market Measures	Tobin's Q	Non-Linear
		Earnings per Share	Non-Linear
	Accounting Measures	Return on Assets	Non-Linear
		Earnings before Interest&Taxes	Non-Linear
Control Variables		Calculation	Math Format
	Firm Size	Total Assets Acquired by Firms	Dummy
	Type of Industry		Dummy
	Regime Change		Dummy

4.5. SUMMARY

This chapter describes all the variables which are essential for the estimation of models as prescribed in the theoretical framework. The sample size includes 100 firms representing 10 groups of industries from the nonfinancial sector of Pakistan for the period of 2005-2012. The dependents variable representing performance and the independent variables such ownership structure and ownership concentration have also been clearly defined and their operational definition is given to understand the nature of data related to these variables. Econometric methods have been explained which incorporate the control variables such as size, types of industries and regime change before and the financial crisis and the regime change in Pakistan. These models have been estimated and the results are presented in the chapter 5 to follow. The discussions of these findings build the structure of chapter 5.

CHAPTER 5: RESULTS AND DISCUSSION

Unit of analysis, sampling and advanced econometric models employed in this study are presented in chapter 4. Having measured the relationship between ownership structure and firm performance findings of the study are discussed in this chapter. Additionally findings related to the control variables such as types and size of the industries and change of the government have been discussed in detail along with results. The chapter is divided into four sections detail of which is given in the following paragraphs.

5.1. ROLE OF OWNERSHIP CONCENTRATION IN FIRM PERFORMANCE

ACROSS INDUSTRIES

This section particularly highlights the importance of one of the significant perspectives of ownership structure that is ownership concentration in the determination of firm's financial (ROA & EBIT) and market performance (Tobin's Q & EPS).

In the present study, the interactive effect of concentrated ownership with the type of industry is analyzed using the dummy variables for types of industries. These models are employed on each of the 10 industries using miscellaneous group as a benchmark. These industries include construction and materials, electricity, general industries, personal goods, automobile & parts, chemicals, food, oil & gas, pharmaceuticals & biotech and miscellaneous industries.

5.1.1. Role of Concentrated Ownership in Firm's Financial Performance

The results related to the role of concentrated ownership in determining firm's financial performance across industries are presented in tables 5.1 and 5.2.

Table 5.1: Concentrated Ownership & ROA across Industries

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.039634	0.011511	3.443165	0.0006
D_AUTO	0.121978	0.026440	4.613402	0.0000
D_CHEM	0.019073	0.031673	0.602183	0.5472
D_CON	-0.054779	0.021377	-2.562509	0.0106
D_ELE	-0.171924	0.045764	-3.756744	0.0002
D_FOD	-0.060445	0.021831	-2.768759	0.0058
D_GI	-0.015021	0.032260	-0.465625	0.6416
D_OIL	-0.007360	0.038278	-0.192276	0.8476
D_PG	-0.007362	0.030307	-0.242912	0.8081
D_PHRMA	0.129379	0.037705	3.431388	0.0006
CO	-1.10E-05	0.000155	-0.071125	0.9433
D_AUTO*CO	-0.001175	0.000348	-3.372340	0.0008
D_CHEM*CO	0.000582	0.000443	1.315413	0.1888
D_CON*CO	0.000284	0.000295	0.962607	0.3360
D_ELE*CO	0.002801	0.000646	4.334542	0.0000
D_FOD*CO	0.001681	0.000302	5.565119	0.0000
D_GI*CO	-8.31E-05	0.000447	-0.186008	0.8525
D_OIL*CO	0.001823	0.000533	3.417869	0.0007
D_PG*CO	-0.000358	0.000397	-0.902441	0.3671
D_PHRMA*CO	-0.000754	0.000470	-1.603544	0.1092
Weighted Statistics				
R-squared	0.459610	Mean dependent var	0.352628	
Adjusted R-squared	0.446430	S.D. dependent var	0.583366	
S.E. of regression	0.434038	Sum squared resid	146.7548	
F-statistic	34.87111	Durbin-Watson stat	0.906214	
Prob(F-statistic)	0.000000			

Note: ROA stands for Return on Assets and CO shows Concentrated Ownership, whereas D_AUTO, D_CHEM, D_CON, D_ELE, D_FOD, D_GI, D_OIL, D_PG, D_PHRMA represents automobiles, chemical, construction, electrical, food, general industries, oil & gas, personal goods and pharmaceuticals industries.

Findings in table 5.1 present the list of all the ten industries and reveal significance of concentrated ownership in the determination of financial performance of various types of

industries in terms of ROA. The overall significance of the model is measured by using F-statistic.

Table 5.1 shows the significantly large value of the F-statistic (34.87111) which rejects the hypothesis of all slope coefficients being equal to zero. In addition, it also indicates that types of industries coupled with concentrated ownership play a significant role in determining performance of nonfinancial sector of Pakistan.

It is indicated in table 5.1 that the role of concentrated ownership has found quite significant in the determination of performance (ROA) of Automobile & Parts, Electricity, Food and Oil & Gas only. The reasons may be that the dynamics of each industry is different from others. All the sectors, especially the performance of Chemicals and Pharmaceuticals & Biotech is generally dependent upon scientific methods, proficiency of chemical processes for productivity, competency of employees and innovations. Likewise, the performance of Construction & Materials is dependent upon project management that is efficient and effective utilization of different factors of production. In the same way, consumer's purchasing power, choice and availability of natural resources are more important for General Industries and Personal Goods. So, there exist a lot of factors other than concentrated ownership which are more significant for enhancing the financial value of different industries in terms of their profitability.

In table 5.1, the intercept term with t-statistic of 3.443165 indicates that it is statistically significant. On the basis of these results, the null hypothesis of identical management style is rejected. So it infers that different management styles are needed for administration and organization of different sectors.

It is also indicated in table 5.1 that the sign of coefficients changes when concentrated ownership interacts with Automobile & Parts, Construction & Materials, Electricity, Food, Oil & Gas and Pharmaceuticals & Biotech. These results reveal structural change effect of the concentrated ownership on the relationship of types of industries and the performance of the nonfinancial sector of Pakistan.

It can be concluded through the analysis of results presented in table 5.1 that management style in the nonfinancial sector is different. Moreover, depending upon varying factors like economic conditions, legal or political conditions, need of technology and investment, performance of all the ten industries is different.

Findings in table 5.2 present the list of all the ten industries and reveal significance of concentrated ownership in determining the performance of various types of industries in terms of EBIT. These results are the outcome of pooled data regression that is estimated employing 100 companies as cross-sectional units representing 10 different industries from nonfinancial sector of Pakistan.

Table 5.2: Concentrated Ownership & EBIT across Industries

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.67E+08	1.79E+08	1.494262	0.1355
D_AUTO	2.73E+08	2.14E+08	1.274278	0.2029
D_CHEM	2.51E+09	7.71E+08	3.260166	0.0012
D_CON	-3.37E+08	2.02E+08	-1.665344	0.0962
D_ELE	-8.78E+09	1.64E+09	-5.340520	0.0000
D_FOD	-5.78E+08	2.03E+08	-2.842742	0.0046
D_GI	8.08E+08	5.68E+08	1.423102	0.1551
D_OIL	-4.05E+09	5.29E+09	-0.765445	0.4442
D_PG	-1.08E+08	1.91E+08	-0.565961	0.5716
D_PHRMA	1.75E+09	6.24E+08	2.796966	0.0053
CO	-2278568.	3077681.	-0.740352	0.4593
D_AUTO*CO	661960.9	3725790.	0.177670	0.8590

D_CHEM*CO	-5899089.	10927990	-0.539815	0.5895
D_CON*CO	3698657.	3441080.	1.074853	0.2828
D_ELE*CO	1.99E+08	32702947	6.089772	0.0000
D_FOD*CO	13639469	4058969.	3.360329	0.0008
D_GI*CO	-7107908.	6984680.	-1.017643	0.3092
D_OIL*CO	2.22E+08	75658069	2.940481	0.0034
D_PG*CO	984238.0	3289953.	0.299165	0.7649
D_PHRMA*CO	-11406846	7861399.	-1.450994	0.1472
Weighted Statistics				
R-squared	0.193490	Mean dependent var	3.81E+09	
Adjusted R-squared	0.173819	S.D. dependent var	7.25E+09	
S.E. of regression	6.59E+09	Sum squared resid	3.39E+22	
F-statistic	9.836335	Durbin-Watson stat	0.693502	
Prob(F-statistic)	0.000000			

Note: *EBIT stands for Earnings before Interest & Tax and CO shows Concentrated Ownership.*

In table 5.2, it is shown that the probability of F-statistic (9.836335) is less than 5% and highly significant that rejects the hypothesis of all slope coefficients being equal to zero which indicates the overall significance of the model. It is also indicated that types of industries coupled with concentrated ownership play a significant role in the determination of performance (EBIT) of the nonfinancial sector of Pakistan.

Findings presented in table 5.2 are grouped into two categories. First category measures significance of industrial groups affecting the financial performance (EBIT) of nonfinancial sector. The second category measures interactive effect of concentrated ownership with each industrial variable. The purpose of presenting these results into two categories is to measure the role of concentrated ownership in the strength of relationship between the types of industries and performance (EBIT) of nonfinancial sector. The role of concentrated ownership has found quite significant in determining the performance (EBIT) of Electricity, Food and Oil & Gas only.

Due to different industry's dynamics and various other factors, concentrated ownership has not significant role in the performance of most of the industries. Like Pharmaceuticals & Biotech and Chemicals are generally technical in nature. So, different scientific methods, proficiency of chemical processes for productivity, competency of employees and innovations are most important factors than concentrated ownership in determining the performance of these sectors. Furthermore, project management, that is efficient and effective utilization of different factors of production, plays a very important role in the performance of Construction & Materials sector. Similarly, technological innovation is more important for Automobile & Parts. In addition, concentrated ownership also showed no significant role in the performance of Personal Goods and General Industries because customer's choice, demand and purchasing power have greater effect over the performance (EBIT) of these sectors. Apart from all these industry specific factors, the performance of several sectors is affected by various economic conditions and challenges like globalization.

In the pooled panel data model, intercept term tests the assumption of identical management style across the board for all the firms whose data have been pooled. The intercept term with t-statistic of 1.494262 and probability of greater than 5% indicate statistical insignificance. On the basis of these results, the null hypothesis of identical management style is accepted which shows that management style across different industrial groups seems identical.

Table 5.2 shows that the sign of coefficients changes when concentrated ownership interacts with Chemicals, Construction & Materials, Electricity, Food, General Industries, Oil & Gas, Personal Goods and Pharmaceuticals & Biotech. These results reveal structural change effect of the concentrated ownership on the relationship of types of industries and the performance of nonfinancial sector of Pakistan.

The results presented in table 5.2 can be concluded by arguing that the management style across nonfinancial sector of Pakistan seems identical. Moreover, the performance of all the ten industries is different because it depends upon the varying technical requirements of industries.

5.1.2. Role of Concentrated Ownership in Market Performance of Firms

It is analyzed that concentrated ownership not only plays an important role in the firm's financial performance but it is also significant for firm's market performance across industries. These results are presented in table 5.3 and 5.4.

Table 5.3: Concentrated Ownership & Tobin's Q across Industries

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.372652	0.058011	6.423818	0.0000
D_AUTO	1.103762	0.172602	6.394843	0.0000
D_CHEM	0.144489	0.214953	0.672187	0.5017
D_CON	0.277500	0.123714	2.243082	0.0252
D_ELE	-0.837469	0.125487	-6.673757	0.0000
D_FOD	-0.865298	0.130479	-6.631692	0.0000
D_GI	0.024492	0.139300	0.175823	0.8605
D_OIL	0.252676	0.355576	0.710610	0.4775
D_PG	-0.539287	0.221534	-2.434331	0.0151
D_PHRMA	-2.702839	1.228865	-2.199459	0.0281
CO	0.000361	0.000836	0.431662	0.6661
D_AUTO*CO	-0.011435	0.002343	-4.880402	0.0000
D_CHEM*CO	0.003507	0.002913	1.204032	0.2289
D_CON*CO	-0.004660	0.001751	-2.661068	0.0080
D_ELE*CO	0.012293	0.002192	5.607641	0.0000
D_FOD*CO	0.019072	0.003168	6.019913	0.0000
D_GI*CO	0.000414	0.002235	0.185103	0.8532
D_OIL*CO	0.013157	0.004997	2.633021	0.0086
D_PG*CO	0.013125	0.004131	3.177242	0.0015
D_PHRMA*CO	0.038168	0.013984	2.729309	0.0065
Weighted Statistics				
R-squared	0.422086	Mean dependent var	6.598903	
Adjusted R-squared	0.407732	S.D. dependent var	6.140282	
S.E. of regression	4.725496	Sum squared resid	17082.69	

F-statistic	29.40660	Durbin-Watson stat	0.652293
Prob(F-statistic)	0.000000		

Note: *Tobin's Q* represents market to book value of firm and *CO* stands for Concentrated Ownership.

Findings in table 5.3 present the list of all the ten industries and reveal significance of concentrated ownership in determining the market performance of various types of industries in terms of Tobin's Q. These results are the outcome of pooled data regression that is estimated employing 100 companies as cross-sectional units representing 10 different industries from nonfinancial sector of Pakistan. The overall significance of the model is measured by using F-statistic. The significantly large value of F-statistic (29.40660) rejects the hypothesis of all slope coefficients being equal to zero. It is shown that the types of industries coupled with concentrated ownership play significant role in the determination of market performance of nonfinancial sector of Pakistan.

Findings presented in table 5.3 are grouped into two categories. First category measures significance of industrial groups affecting the performance (Tobin's Q) of nonfinancial sector. The second category measures interactive effect of concentrated ownership with each industrial variable. The purpose of presenting these results into two categories is to measure the role of concentrated ownership in the strength of relationship between the types of industries and performance (Tobin's) of nonfinancial sector.

The role of concentrated ownership has found quite significant in determining the performance (Tobin's Q) of all the industries except the two representing Chemicals and General Industries. It may be because of the reason that the dynamics of each industry is different. Oil &

Gas and Personal Goods are different from other industries. The performance of Chemical sector is generally dependent upon scientific methods, proficiency of chemical processes for productivity, competency of employees and innovations. So, technical innovations along with efficiency are more important than concentrated ownership in the determination of performance of this sector. Furthermore, consumers' choices, preferences, income level, purchasing power and their buying behavior play more significant role than concentrated ownership in determining the performance (Tobin's Q) of General Industries.

The intercept with t-statistic of 6.423818 indicates very high level of statistical significance. In the pooled panel data model, intercept term tests the assumption of identical management style across the board for all the firms whose data have been pooled. Statistical significance of the intercept term of model rejects null hypothesis of identical management style. So, the industrial groups considered for this study is heterogeneous not only in terms of their business activities but also in their managerial decision making.

Table 5.3 indicates that the sign of coefficients changes when concentrated ownership interacts with Automobile & Parts, Construction & Materials, Electricity, Food, Personal Goods and Pharmaceuticals & Biotech. These results reveal structural change effect of concentrated ownership on the relationship of types of industries and the performance of nonfinancial sector of Pakistan. Statistical theory supports these findings therefore results can be generalized.

Results presented in table 5.3 conclude that management style in the nonfinancial sector is not same that is different industries have different management styles and requirements. Moreover, depending upon varying requirements of technical and managerial skills the

performance of all the ten industries is different. So, it is managerial ownership, besides types of industries that makes difference in the performance.

The results presented in table 5.4 are categorized into two groups. These groups measure the significance of each industrial group in the market performance (EPS) and interactive effect of concentrated ownership with each industrial variable respectively. These results are the outcome of pooled data regression that is estimated employing 100 companies as cross-sectional units representing 10 different industries from nonfinancial sector of Pakistan. These industries include Construction and Materials, Electricity, General Industries, Personal Goods, Automobile Parts, Chemicals, Food, Oil & Gas, Pharmaceuticals & Biotech and Miscellaneous Industries.

Table 5.4: Concentrated Ownership & EPS across Industries

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.650119	0.939722	2.820110	0.0049
D_AUTO	5.966745	3.132395	1.904851	0.0572
D_CHEM	11.76799	5.587609	2.106087	0.0355
D_CON	-3.786486	1.707103	-2.218077	0.0268
D_ELE	-3.588267	2.148976	-1.669757	0.0954
D_FOD	-17.72893	4.235928	-4.185371	0.0000
D_GI	-3.651830	19.92521	-0.183277	0.8546
D_OIL	20.73066	7.183857	2.885728	0.0040
D_PG	1.423695	2.350318	0.605746	0.5449
D_PHRMA	3.811685	9.232441	0.412858	0.6798
CO	0.026282	0.013127	2.002152	0.0456
D_AUTO*CO	0.019283	0.052160	0.369689	0.7117
D_CHEM*CO	-0.102083	0.077631	-1.314981	0.1889
D_CON*CO	-0.002143	0.025091	-0.085411	0.9320
D_ELE*CO	0.060781	0.028403	2.139927	0.0327
D_FOD*CO	0.696811	0.115357	6.040484	0.0000
D_GI*CO	0.178645	0.311150	0.574144	0.5660
D_OIL*CO	-0.103646	0.081961	-1.264574	0.2064
D_PG*CO	0.008610	0.038748	0.222205	0.8242
D_PHRMA*CO	0.144134	0.134932	1.068196	0.2858
Weighted Statistics				

R-squared	0.296929	Mean dependent var	23.05307
Adjusted R-squared	0.279781	S.D. dependent var	33.77781
S.E. of regression	28.66579	Sum squared resid	640125.5
F-statistic	17.31557	Durbin-Watson stat	0.842269
Prob(F-statistic)	0.000000		

Note: *EPS stands for Earnings per Share & Tax and CO stands for Concentrated Ownership.*

The results in table 5.4 show that concentrated ownership plays a significant role in determining the performance (EPS) of Food sector only. It may be because of the reason that all the sectors especially Automobile & Parts, Chemicals, Pharmaceuticals & Biotech and Construction & Materials are generally technical in nature. Different scientific methods, proficiency of chemical processes for productivity, efficient project management, competency of employees and innovations are more important than concentrated ownership in the determination of performance (EPS) of these sectors. Likewise, the performance of Oil & Gas sector depends upon factors of production and technological advancement. In addition, the performance of Personal Goods and General Industries is basically dependent upon the availability of resources and buying behavior of consumers, their choices as well as affordability. Furthermore, in Pakistan, Electricity sector is government owned so government policies have greater effect over performance as compared to simple company's policies based upon the pattern of ownership.

The sign of coefficients changes when concentrated ownership interacts with Chemicals, Electricity, Food, General Industries and Oil & Gas sector. These results reveal structural change effect of concentrated ownership on the relationship of types of industries and the market performance (EPS) of nonfinancial sector of Pakistan.

In the pooled panel data model, intercept term tests the assumption of identical management style across the board for all the firms whose data have been pooled. In table 5.4,

the intercept term with t-statistic of 2.820110 indicates that it is statistically significant. On the basis of these results, the null hypothesis of identical management style is rejected which shows that different industries have different characteristics and dynamics which require different management styles.

The results presented in table 5.4 conclude that management style in the nonfinancial sector of Pakistan is different. Furthermore, concentrated ownership has not significant role in the market performance of all the industries which delineates that there are other factors like economic efficiency, globalization and technology which determine the performance of nonfinancial sector of Pakistan.

The overall significance of the model is measured by using F-statistic. In table 5.4 the significantly large value of the F-statistic (17.31557) having probability less than 5% rejects the hypothesis of all slope coefficients being equal to zero and shows that the model is overall significant.

5.2. ROLE OF OWNERSHIP COMPOSITION IN FIRM PERFORMANCE ACROSS INDUSTRIES

This section focuses on another important perspective of ownership structure that is ownership composition. It delineates the role of one of the dimensions of ownership composition that is managerial ownership in determining the financial (ROA & EBIT) and market performance (Tobin's Q & EPS) of firms.

5.2.1. Role of Managerial Ownership in Firm's Financial Performance

The findings regarding the role of managerial ownership in the determination of financial performance of different industries are illustrated in table 5.5 and 5.6.

Table 5.5: Managerial Ownership & ROA across Industries

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.026744	0.003089	8.657690	0.0000
D_AUTO	0.053457	0.005876	9.097791	0.0000
D_CHEM	0.076405	0.008993	8.496506	0.0000
D_CON	-0.012524	0.006555	-1.910739	0.0564
D_ELE	0.030708	0.009448	3.250126	0.0012
D_FOD	0.088166	0.009694	9.094717	0.0000
D_GI	0.015430	0.014161	1.089622	0.2762
D_OIL	0.103235	0.019090	5.407783	0.0000
D_PG	-0.019233	0.016049	-1.198378	0.2311
D_PHRMA	0.102256	0.011793	8.670946	0.0000
MO	0.000977	0.000364	2.686674	0.0074
D_AUTO*MO	-0.001216	0.000419	-2.902502	0.0038
D_CHEM*MO	-0.001289	0.000507	-2.542270	0.0112
D_CON*MO	-0.001548	0.000464	-3.333189	0.0009
D_ELE*MO	-0.004206	0.000575	-7.311574	0.0000
D_FOD*MO	-0.002085	0.000522	-3.995284	0.0001
D_GI*MO	-0.002176	0.000587	-3.705640	0.0002
D_OIL*MO	0.004329	0.002400	1.803816	0.0717
D_PG*MO	-0.000697	0.000488	-1.428188	0.1536
D_PHRMA*MO	-8.650954	2.832093	-3.054615	0.0023
Weighted Statistics				
R-squared	0.540887	Mean dependent var	0.370526	
Adjusted R-squared	0.529454	S.D. dependent var	0.640903	
S.E. of regression	0.439636	Sum squared resid	147.4725	
F-statistic	47.31046	Durbin-Watson stat	0.914687	
Prob(F-statistic)	0.000000			

Note: *ROA stands for Return on Assets and MO stands for Managerial Ownership.*

Findings in table 5.5 present the list of all the ten industries and reveal significance of managerial ownership in determining financial performance of various types of industries in terms of ROA. These results are the outcome of pooled data regression that is estimated employing 100 companies as cross-sectional units representing 10 different industries from nonfinancial sector of Pakistan. The overall significance of the model is measured by using F-statistic. The significantly large value of the F-statistic (47.31046) rejects hypothesis of all slope

coefficients being equal to zero. It is shown that the type of industries coupled with managerial ownership play significant role in the determination of performance of nonfinancial sector of Pakistan.

Findings presented in table 5.5 are grouped into two categories. First category measures significance of industrial groups affecting the performance (ROA) of nonfinancial sector. The second category measures interactive effect of managerial ownership with each industrial variable. The purpose of presenting these results into two categories is to measure the role of managerial ownership in the strength of relationship between types of industries and performance (ROA) of nonfinancial sector. The role of managerial ownership has found quite significant in the determination of performance (ROA) of all the industries except one representing Personal Goods. Moreover, managerial ownership plays a significant role on the margin in determining the performance (ROA) of Oil & Gas sector of Pakistan. It may be because of the reason that the dynamics of Oil & Gas and Personal Goods are different from other industries. The Oil & Gas business is generally technical in nature. Technical innovations and efficiency are more important than managerial ownership in the determination of performance of this sector. Furthermore, consumers' choices, preferences and their buying behavior play more significant role than managerial ownership in the determination of performance (ROA) of Personal Goods.

The intercept with t-statistic of 8.657690 indicates very high level of statistical significance. In the pooled panel data model intercept term tests the assumption of identical management style across the board for all the firms whose data have been pooled. Statistical significance of intercept term of the model rejects null hypothesis of identical management style.

So, the industrial groups considered for this study is heterogeneous not only in terms of their business activities but their managerial decision making is also dissimilar.

Table 5.5 indicates that the sign of coefficients changes when managerial ownership interacts with Automobile & Parts, Chemicals, Electricity, Food, General Industries and Pharmaceuticals. These results reveal structural change effect of managerial ownership on the relationship of types of industries and the performance of nonfinancial sector of Pakistan. Statistical theory supports these findings therefore results can be generalized.

Results presented in table 5.5 conclude that management style in the nonfinancial sector is not same and different industries have different management styles and requirements. Depending upon varying requirements of technical and managerial skills, the performance of all ten industries is different. So, it is managerial ownership, besides types of industries that makes difference in the performance.

The results presented in table 5.6 reveal the significance of managerial ownership in determining the financial performance of all 10 industries, measured in terms of EBIT. These results are the outcome of pooled data regression that is estimated employing 100 companies as cross-sectional units representing 10 different industries from nonfinancial sector of Pakistan. The overall significance of model is measured by using F-statistic. The significantly large value of the F-statistic (8.063194) rejects hypothesis of all slope coefficients being equal to zero. It is presented in table 5.6 that types of industries coupled with managerial ownership play a significant role in the determination of performance (EBIT) of nonfinancial sector of Pakistan.

Table 5.6: Managerial Ownership & EBIT across Industries

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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C	1.64E+08	99572561	1.651766	0.0990
D_AUTO	4.01E+08	1.19E+08	3.373928	0.0008
D_CHEM	2.20E+09	2.93E+08	7.518231	0.0000
D_CON	-29276509	1.11E+08	-0.264389	0.7916
D_ELE	3.79E+09	5.01E+08	7.549047	0.0000
D_FOD	1.42E+08	1.59E+08	0.887885	0.3749
D_GI	7.93E+08	2.29E+08	3.468234	0.0006
D_OIL	1.17E+10	2.35E+09	4.966524	0.0000
D_PG	-1.35E+08	1.03E+08	-1.313542	0.1894
D_PHRMA	1.13E+09	1.97E+08	5.736475	0.0000
MO	-142640.2	2165743.	-0.065862	0.9475
D_AUTO*MO	-7632693.	2712760.	-2.813626	0.0050
D_CHEM*MO	-30878125	8306943.	-3.717147	0.0002
D_CON*MO	-5323785.	2779201.	-1.915581	0.0558
D_ELE*MO	-1.07E+08	13794363	-7.737035	0.0000
D_FOD*MO	-3162657.	5015263.	-0.630606	0.5285
D_GI*MO	-21949951	5627131.	-3.900736	0.0001
D_OIL*MO	-9.58E+08	3.03E+08	-3.163160	0.0016
D_PG*MO	1266958.	2249472.	0.563225	0.5734
D_PHRMA*MO	-1.16E+11	3.77E+10	-3.080539	0.0021
Weighted Statistics				
R-squared	0.167213	Mean dependent var	4.17E+09	
Adjusted R-squared	0.146475	S.D. dependent var	7.75E+09	
S.E. of regression	7.16E+09	Sum squared resid	3.91E+22	
F-statistic	8.063194	Durbin-Watson stat	0.704994	
Prob(F-statistic)	0.000000			

Note: *EBIT stands for Earnings before Interest & Tax and MO stands for Managerial Ownership.*

The findings presented in table 5.6 grouped into two categories. First category measures the significance of industrial groups affecting the performance (EBIT) of nonfinancial sector. The second category measures interactive effect of managerial ownership with each industrial variable on the performance of nonfinancial sector of Pakistan. The purpose of presenting these results into two categories is to measure the role of managerial ownership in the strength of relationship between types of industries and performance (EBIT) of nonfinancial sector. The role

of managerial ownership is found quite significant in determining the performance (EBIT) of all industries except Food and Personal Goods. Moreover, managerial ownership plays a significant role on the margin in the determination of performance (EBIT) of Construction & Materials. Each industry has its own dynamics, therefore managerial ownership can be a significant factor in the determination of performance (EBIT) of some sectors. Moreover, in Pakistan most of the businesses are family owned due to which family ownership plays more significant role in the determination of performance (EBIT) of nonfinancial sector of Pakistan than managerial ownership. Food and Personal Goods are affected by the choice of customers which basically depends upon their income level and other economic conditions. Furthermore, Construction & Materials is technical in nature that requires technical efficiency and efficient project management more than managerial ownership for enhancing performance.

In the pooled panel data model, intercept term tests the assumption of identical management style across the board for all the firms whose data have been pooled. The intercept term with t-statistic of 1.651766 indicates that it is not statistically significant. On the basis of these results, null hypothesis of identical management style is accepted which implies that management style across different industrial groups seems identical.

The sign of coefficients changes when managerial ownership interacts with Electricity, General Industries, Personal Goods, Automobile & Parts, Chemicals, Food, Oil & Gas and Pharmaceuticals & Biotech. These results reveal structural change of managerial ownership on the relationship of different industries and firm's financial performance.

Through the analysis of results presented in table 5.6, it can be concluded that management style in the nonfinancial sector seems identical. Furthermore, depending upon

varying factors like economic conditions, need of technology and investment the performance of all ten industries is different.

5.2.2. Role of Managerial Ownership in Firm's Market Performance

It is analyzed that managerial ownership not only plays a significant role in determining the financial performance of firms but it is also important for market performance of different industries. These results are presented in table 5.7 and 5.8.

Table 5.7: Managerial Ownership & Tobin's Q across Industries

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.329118	0.030657	10.73541	0.0000
D_AUTO	0.447985	0.048212	9.291886	0.0000
D_CHEM	0.526231	0.045444	11.57976	0.0000
D_CON	0.167394	0.048389	3.459304	0.0006
D_ELE	0.035875	0.053097	0.675650	0.4995
D_FOD	0.354310	0.155701	2.275577	0.0232
D_GI	0.192123	0.067713	2.837331	0.0047
D_OIL	1.034914	0.168170	6.153972	0.0000
D_PG	-0.043668	0.112796	-0.387139	0.6988
D_PHRMA	0.904342	0.119600	7.561384	0.0000
MO	0.004584	0.001095	4.188294	0.0000
D_AUTO*MO	-0.007472	0.001623	-4.602174	0.0000
D_CHEM*MO	-0.009567	0.001472	-6.501002	0.0000
D_CON*MO	-0.007570	0.001648	-4.594012	0.0000
D_ELE*MO	-0.011575	0.001575	-7.347668	0.0000
D_FOD*MO	-0.008660	0.006773	-1.278600	0.2014
D_GI*MO	-0.010350	0.002756	-3.755954	0.0002
D_OIL*MO	0.014290	0.028865	0.495066	0.6207
D_PG*MO	-0.001398	0.003283	-0.425738	0.6704
D_PHRMA*MO	-38.85058	18.95143	-2.050008	0.0407
Weighted Statistics				
R-squared	0.506704	Mean dependent var	6.842858	
Adjusted R-squared	0.494191	S.D. dependent var	6.738503	
S.E. of regression	4.792440	Sum squared resid	17202.65	
F-statistic	40.49261	Durbin-Watson stat	0.664033	
Prob(F-statistic)	0.000000			

Note: *Tobin's Q shows market to book value and MO stands for Managerial Ownership. The values presented in parenthesis are t-statistics.*

The results presented in table 5.7 measures significance of industrial groups affecting the market performance, in terms of Tobin's Q, of nonfinancial sector and interactive effect of managerial ownership with each industrial variable. The interactive effect of managerial ownership basically measures the role of managerial ownership in the strength of relationship between types of industries and performance (Tobin's Q) of nonfinancial sector.

The results in table 5.7 show that managerial ownership has quite significant role in the performance of Automobiles & Parts, Chemicals, Construction & Materials, Electricity, General Industries and Pharmaceuticals & Biotech. Managerial ownership is important because it aligns the interests of managers with stockholders due to which profitability of firm increases that ultimately enhances the market value of firms and encourages more investment in companies.

On the other hand, managerial ownership doesn't play statistically significant role in determining the performance (Tobin's Q) of Food, Oil & Gas and Personal Goods. It may be because of the reason that the dynamics of each industry is different than other. Among these sectors, Oil & Gas is technical in nature and different scientific methods, competency of employees and innovations are more important than managerial ownership in the determination of performance of this sector. Moreover, consumer's choice, preference, demand, income level and purchasing power have greater effect on the sales of Food and Personal Goods which in return affect performance (Tobin's Q).

The results of t-statistic (10.73541) of intercept term in pooled panel data model delineated that the management style across industries is different. It may be because of the

cross-industrial differences which mean that each industry has its own dynamics due to which it requires different management styles.

The structural change effect of managerial ownership on the relationship of types of industries and performance of nonfinancial sector of Pakistan is found. It is noted in table 5.7 that the sign of coefficients changes when managerial ownership interacts with all kinds of industries except Personal Goods.

Through analyzing the results presented in table 5.7, which are the outcome of pooled data regression that is estimated employing 100 companies as cross-sectional units representing 10 different industries from nonfinancial sector of Pakistan, it can be concluded that managerial ownership has significant role in the performance (Tobin's Q) of some industries because performance of an industry is not only dependent upon industry specific variables but also affected by some varying factors like economic conditions, globalization, need of technology and investment.

The overall significance of the model is measured by using F-statistic. The significantly large value of the F-statistic (40.49261) rejects hypothesis of all slope coefficients being equal to zero. Furthermore, it is indicated that the types of industries coupled with managerial ownership play significant role in the determination of performance (Tobin's Q) of nonfinancial sector of Pakistan.

The results presented in table 5.8 are categorized into two groups. These groups measure the significance of each industrial group in the market performance (EPS) and interactive effect of managerial ownership with each industrial variable respectively. These results are the outcome of pooled data regression that is estimated employing 100 companies as cross-sectional

units representing 10 different industries from nonfinancial sector of Pakistan. These industries include Construction & Materials, Electricity, General Industries, Personal Goods, Automobile & Parts, Chemicals, Food, Oil & Gas, Pharmaceuticals & Biotech and Miscellaneous Industries.

Table 5.8: Managerial Ownership & EPS across Industries

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.039204	0.402023	12.53461	0.0000
D_AUTO	8.263469	0.937565	8.813757	0.0000
D_CHEM	4.422375	1.044717	4.233083	0.0000
D_CON	-3.414714	0.654452	-5.217667	0.0000
D_ELE	-0.115287	0.611509	-0.188529	0.8505
D_FOD	38.03362	7.709110	4.933594	0.0000
D_GI	21.33003	10.75932	1.982469	0.0478
D_OIL	10.00430	1.361101	7.350152	0.0000
D_PG	-0.502735	1.447609	-0.347287	0.7285
D_PHRMA	13.50058	4.206713	3.209294	0.0014
MO	-0.016698	0.023346	-0.715232	0.4747
D_AUTO*MO	-0.095273	0.047563	-2.003074	0.0455
D_CHEM*MO	0.217597	0.045400	4.792933	0.0000
D_CON*MO	-0.037187	0.028066	-1.324965	0.1856
D_ELE*MO	-0.195095	0.033823	-5.768090	0.0000
D_FOD*MO	-0.952637	0.286491	-3.325188	0.0009
D_GI*MO	-0.601306	0.269301	-2.232838	0.0258
D_OIL*MO	2.554651	0.866966	2.946655	0.0033
D_PG*MO	0.051434	0.040497	1.270067	0.2044
D_PHRMA*MO	5297.288	4859.912	1.089997	0.2761
Weighted Statistics				
R-squared	0.409291	Mean dependent var	24.69976	
Adjusted R-squared	0.394582	S.D. dependent var	37.41575	
S.E. of regression	29.11268	Sum squared resid	646679.4	
F-statistic	27.82469	Durbin-Watson stat	0.858721	
Prob(F-statistic)	0.000000			

Note: *EPS stands for Earnings per Share and MO stands for Managerial Ownership.*

The results in table 5.8 show that managerial ownership plays a significant role in the determination of performance (EPS) of Automobile & Parts, Chemicals, Electricity, Food,

General Industries and Oil & Gas only. It may be because of the reason that the dynamics of each industry is different than other. All the sectors especially Pharmaceuticals & Biotech and Construction & Materials are generally technical in nature. Different scientific methods, proficiency of chemical processes for productivity, efficient project management, competency of employees and innovations are more important than managerial ownership in determining the performance (EPS) of these sectors. Furthermore, the performance of Personal Goods is basically dependent upon the availability of resources, buying behavior of consumers and their choice as well as affordability.

The sign of coefficients changes when managerial ownership interacts with Automobile & Parts, Food, General Industries and Personal Goods. These results reveal structural change effect of managerial ownership on the relationship of types of industries and the market performance (EPS) of nonfinancial sector of Pakistan.

In the pooled panel data model, intercept term tests the assumption of identical management style across the board for all the firms whose data have been pooled. In table 5.8, the intercept term with t-statistic of 12.53461 indicates statistical significance. On the basis of these results, null hypothesis of identical management style is rejected which shows that different industries have different characteristics and dynamics which require different management styles.

The results presented in table 5.8 conclude that management style in the nonfinancial sector of Pakistan is different. Furthermore, managerial ownership has not significant role in the market performance of all industries which delineates that there are other factors having important role in the performance of nonfinancial sector of Pakistan.

The overall significance of the model is measured by using F-statistic. In table 5.8, the significantly large value of the F-statistic (27.82469) rejects hypothesis of all slope coefficients being equal to zero and shows overall significance of the model.

On the basis of results presented in the above two sections it can be concluded that firm performance varies across different industries and type of industry has effect over the relationship of ownership structure and firm performance. The next section analyzes and explains the role of firm size and regime change in the determination of performance.

5.3. EFFECT OF FIRM SIZE

It is reviewed in literature that performance varies across firms having different size in terms of sales and replacement value of assets. Due to strong theoretical underpinning, this study analyzed and compared financial (ROA & EBIT) and market performance (EPS & Tobin's Q) of different sizes of firms. In addition, it also investigated the role of interactive effect of firms (having different size) with ownership structure in determining the performance of nonfinancial sector of Pakistan. These results are reported in table 5.9 to 5.12.

5.3.1. Effect of Firm Size on Financial Performance of Firms

This section provides details about the results regarding effect of firm size on the relationship of ownership structure and firm's financial performance. These results are presented as follows:

Table 5.9: Ownership Structure & ROA (Firm Size)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.026110	0.017589	1.484506	0.1381
SZ_SML	-0.019674	0.022112	-0.889729	0.3739

SZ_MD	-0.034646	0.020920	-1.656081	0.0981
CO	0.000611	0.000235	2.604122	0.0094
MO	-0.000811	0.000262	-3.098460	0.0020
SZ_SML*CO	0.000328	0.000298	1.100863	0.2713
SZ_MD*CO	0.000321	0.000280	1.145442	0.2524
SZ_SML*MO	0.000162	0.000839	0.192892	0.8471
SZ_MD*MO	0.000686	0.000311	2.208051	0.0275
Weighted Statistics				
R-squared	0.287730	Mean dependent var	0.320523	
Adjusted R-squared	0.280368	S.D. dependent var	0.517313	
S.E. of regression	0.438843	Sum squared resid	149.0590	
F-statistic	39.08336	Durbin-Watson stat	0.889471	
Prob(F-statistic)	0.000000			

Note: *ROA stands for Return on Assets, SZ_SML for small sized firms, SZ_MD for medium sized firms.*

With the help of dummy variable analysis, it is investigated that large sized firms are gaining more return on assets as compared to small and medium sized companies. It may be because of the reason that normally large firms adopt diversification strategies due to which probability of risk decreases and return increases which ultimately enhance firm performance. It is also indicated in table 5.9 that there exists direct relationship between concentrated ownership and firm performance (ROA). The reason may be concentrated shareholders exert their powers in order to align managers' interests with shareholders, so that shareholders can get maximum return out of their investment. On the other hand, a negative relationship exists between managerial ownership and firm performance. Agency theory (Jensen & Meckling, 1976) supports the findings related to concentrated ownership but the relationship of managerial ownership with firm performance is not supported by agency theory. Moreover, the relation of managerial ownership with firm performance can be justified by the concept of managerial entrenchment because it explains that established managers reduce the effectiveness of controlling mechanisms. These results are also supported the statistical theory because probability of

concentrated and managerial ownership is less than 5%. So, the analysis reveals the significance of managerial and concentrated ownership in the determination of performance (ROA) of nonfinancial sector of Pakistan. These results are in line with (Cheung et al., 2005; Warrad et al., 2012).

The sign of coefficients of concentrated ownership remains same even when it is interacted with firm size which indicates that regardless of the firm size, performance in terms of ROA is positively affected by concentrated ownership. But when managerial ownership is interacted with firm size, its' relationship becomes inverted which means that the relationship of managerial ownership and firm performance is affected by the firm size in terms of total assets.

The model presented in table 5.9 is overall significant because probability of F-statistic is less than 5%. Moreover, 28.77% change is observed in firm performance (ROA) as a result of concentrated and managerial ownership which shows that although ownership structure plays an important role in the determination of firm performance but there are also other determinants like capital structure, organizational factors, intensity of competition and economic conditions which affect firm performance.

Table 5.10: Ownership Structure & EBIT (Firm Size)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3433916.	13816986	0.248529	0.8038
SZ_SML	9.53E+08	6.60E+08	1.443809	0.1492
SZ_MD	-1419901.	38437993	-0.036940	0.9705
CO	1281051.	258098.5	4.963417	0.0000
MO	-825445.0	164660.9	-5.012998	0.0000
SZ_SML*CO	45184565	10746598	4.204546	0.0000
SZ_MD*CO	3993025.	728406.1	5.481867	0.0000
SZ_SML*MO	-61345308	17504742	-3.504497	0.0005
SZ_MD*MO	-1758483.	725101.0	-2.425156	0.0155

Weighted Statistics			
R-squared	0.153885	Mean dependent var	5.47E+09
Adjusted R-squared	0.145139	S.D. dependent var	8.62E+09
S.E. of regression	7.97E+09	Sum squared resid	4.92E+22
F-statistic	17.59611	Durbin-Watson stat	0.802099
Prob(F-statistic)	0.000000		

Note: *EBIT stands for earnings before interest and taxes.*

The results presented in table 5.10 depict that small sized firms are performing well as compared to medium and large sized firms in terms of Earnings before Interest & Tax. It is also found that concentrated ownership has positive but managerial ownership has negative effect over firm performance. The statistical theory is significantly supporting these results as the probabilities of both managerial and concentrated ownership is less than 5%.

The sign of both concentrated and managerial ownership remain same when interacted with small and medium sized firms showing that Earnings before Interest & Tax is not affected by managerial and concentrated ownership under the influence of firm size as a control variable. In short, firm size doesn't affect the relationship between ownership structure and firm performance. These results are significantly supported by statistical theory because probability is less than 5%. The studies conducted by Foroughi & Fooladi (2011) and Lim & Kim, (2005) contradict the results of present study.

As the probability of F-statistics is less than 5%, it shows that the model chosen for this analysis is significant. Moreover, only a small change in firm performance is observed due to ownership structure because the value of R-squared is only 15.38%. It means that there are other factors which affect firm performance. Like a study conducted by Hansen & Wernerfelt (1989) explains two basic determinants which emphasize on external market forces and organizational factors and have effect over firm value and performance.

5.3.2. Effect of Firm Size on Market Performance of Firms

After employing advanced econometric methods, it is investigated that in addition to financial performance, firm size also plays an important role in determining market performance.

These results are presented as follows:

Table 5.11: Ownership Structure & Tobin's Q (Firm Size)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.801416	0.161258	4.969775	0.0000
SZ_SML	-0.328613	0.205574	-1.598513	0.1103
SZ_MD	-0.708194	0.167877	-4.218520	0.0000
CO	-0.001863	0.002184	-0.853048	0.3939
MO	0.013830	0.002785	4.965973	0.0000
SZ_SML*CO	0.005398	0.002778	1.943150	0.0524
SZ_MD*CO	0.008870	0.002294	3.867320	0.0001
SZ_SML*MO	-0.025914	0.006203	-4.177581	0.0000
SZ_MD*MO	-0.017120	0.002841	-6.025284	0.0000
Weighted Statistics				
R-squared	0.367783	Mean dependent var	5.604209	
Adjusted R-squared	0.361128	S.D. dependent var	5.804215	
S.E. of regression	4.639278	Sum squared resid	16357.40	
F-statistic	55.26487	Durbin-Watson stat	0.590441	
Prob(F-statistic)	0.000000			

Note: *Tobin's Q shows market to book value of firm.*

Results presented in table 5.11 depict that the market performance of larger firms in terms of Tobin's Q is better than the performance of both small and medium sized firms. The reasons may be that the large firms would have high leverage due to which they have more direct ownership hence results in reduced agency problems which ultimately increases firm performance in terms of profitability and market value. Moreover, it is presented in table 5.11 that concentrated ownership affects firm performance in a negative manner whereas managerial ownership affects firm performance positively. The negative effect of concentrated ownership on

firm performance is also observed by studies (Demsetz & Villalonga, 2001; Foroughi & Fooladi, 2011; La Porta et al., 1998) which delineate that concentrated shareholders expropriate the rights of minority shareholders in the form of undue compensations that ultimately decreases firm performance. Furthermore, the positive relationship of managerial ownership with firm performance can be justified on the basis of the concept of managerial wealth effect which explains that with the help of insider's ownership, the interests of managers can be aligned with shareholders as a result managers consider those decisions which maximize shareholders wealth. The results regarding managerial ownership are statistically significant but the statistical theory does not support results about concentrated ownership as the probability is not less than 5%.

The sign of concentrated ownership changes from negative to positive when it interacts with small and medium sized firms. This shows that the relationship of concentrated ownership and firm performance (Tobin's Q) is not independent of firm size. Likewise, the sign of managerial ownership is also changed from positive to negative after its interaction with firm size. In short, firm size affects the relationship between ownership structure and firm performance. Statistical theory also supports these findings because the probability of all coefficients is less than 5% except the probability of the interactive effect of concentrated ownership with small sized firms which is significant at margin of 5.24%. As the probability of F-statistic is less than 5% which shows that the model chosen for this analysis is overall significant. Moreover, the value of R^2 shows that the change in firm performance due to ownership structure is 36.77% only because there are other factors like capital structure, type of industry, economic conditions and intensity of competition which affect firm performance.

Table 5.12: Ownership Structure & EPS (Firm Size)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.368771	1.873852	2.865098	0.0043
SZ_SML	-5.664902	2.902957	-1.951425	0.0514
SZ_MD	-0.614485	2.264118	-0.271402	0.7862
CO	0.079301	0.035462	2.236237	0.0256
MO	-0.101467	0.026394	-3.844386	0.0001
SZ_SML*CO	0.098974	0.045682	2.166599	0.0306
SZ_MD*CO	0.024414	0.040826	0.598007	0.5500
SZ_SML*MO	0.042389	0.110239	0.384517	0.7007
SZ_MD*MO	0.060180	0.035944	1.674257	0.0945
Weighted Statistics				
R-squared	0.383348	Mean dependent var	25.48071	
Adjusted R-squared	0.376974	S.D. dependent var	38.61779	
S.E. of regression	30.48180	Sum squared resid	719154.3	
F-statistic	60.14550	Durbin-Watson stat	0.691749	
Prob(F-statistic)	0.000000			

Note: *EPS stands for Earnings per Share.*

The results in table 5.12 illustrate that large sized firms have better performance as compared to small and medium sized companies in terms of Earnings per Share. The reasons might be rules and regulations followed by firms which prohibit their major shareholders to derive private benefits at the expense of minor shareholders or the diversification strategies adopted by firms having large value of total assets. In addition, it is shown that there exists a positive relationship between concentrated ownership and firm performance whereas a negative relationship between managerial ownership and firm performance. The statistical theory is also supporting these results as the probabilities of both managerial and concentrated ownership is less than 5%.

The signs of concentrated ownership remain same when interacted with small and medium sized firms which clearly show that there is no effect of firm size as a control variable on the relationship of ownership structure and firm performance (EPS). But the sign of

managerial ownership changes from negative to positive which means that the relationship of managerial ownership with firm performance is influenced by firm size. As the probability of F-statistics is less than 5% which shows that the model chosen for this analysis is statistically significant. Moreover, only 38.33% change in firm performance (EPS) is observed due to ownership structure which depicts that there are also other determinants of firm performance. As in literature, on the basis of behavioral, sociological and economic paradigm some determinants of firm performance; organizational and external environment, are identified (Hansen & Wernerfelt, 1989).

5.4. REGIME CHANGE EFFECT

It is already introduced in previous chapters especially in chapter 1 that one of the innovative contributions of this study is to find out the effect of regime change on the relationship of ownership structure and firm performance. This section of chapter 5 highlights the importance of regime change in determining the performance of nonfinancial sector of Pakistan. At first, the performance of nonfinancial sector during regime before financial crisis is compared with the performance during regime after financial crisis and then interactive effect of regime change with the ownership structure is analyzed. These results are reported in table 5.13 to 5.16.

5.4.1. Regime Change Effect on Financial Performance of Firms

It is analyzed that regime change plays an important role in the determination of financial performance (ROA & EBIT) of nonfinancial sector of Pakistan. These results are as follows:

Table 5.13: Ownership Structure & ROA across Regime

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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C	-0.004008	0.012522	-0.320043	0.7490
MO	-0.000932	0.000181	-5.162671	0.0000
CO	0.000874	0.000166	5.250503	0.0000
REG_CNG	0.034836	0.016637	2.093872	0.0366
REG_CNG*MO	0.000105	0.000249	0.422709	0.6726
REG_CNG*CO	-0.000172	0.000224	-0.769997	0.4415
Weighted Statistics				
R-squared	0.328870	Mean dependent var	0.308417	
Adjusted R-squared	0.324551	S.D. dependent var	0.520816	
S.E. of regression	0.428037	Sum squared resid	142.3583	
F-statistic	76.14963	Durbin-Watson stat	0.826328	
Prob(F-statistic)	0.000000			

Note: ROA stands for Return on Assets. The intercept term represents regime after financial crisis.

It is indicated in table 5.13 that managerial ownership has negative and concentrated ownership has positive effect over firm performance (ROA). Due to 1 unit increase in concentrated ownership firm performance increases by .0008 units and on the other hand, due to 1 unit increase in managerial ownership firm performance decreases by .0009 units. Agency theory (Jensen & Meckling, 1976) supports the findings related to concentrated ownership because shareholders' concentration gives strong monitoring mechanisms for managers that result in better performance of businesses. On the other hand, the relationship between managerial ownership and firm performance is not supported by agency theory. It may be due to the fact that when ownership is given to managers then sometimes they become so strong which mitigates the effects of controlling mechanisms adopted by concentrated shareholders. These results are consistent with studies (Davies et al., 2005; Demsetz & Villalonga, 2001; Fama & Jensen, 1983; Himmelberg et al., 1999; Morck et al., 2000; Wahla et al., 2012) but opposed by McConnell & Servaes (1990); Miller et al. (2007) and Gomez et al. (2001).

Moreover, the results reveal that managerial and concentrated ownership are highly significant factors in determining the performance (ROA). Statistical theory strongly supports the causal relationship of managerial ownership with ROA ($p=0.0000$) and concentrated ownership with ROA ($p=0.0000$).

The performance (ROA) of nonfinancial sector of Pakistan looks better in government before financial crisis as compared to government after financial crisis. The reasons might be stability in exchange rate, improved exports, foreign direct investment and better economic conditions during regime before financial crisis. When sign of coefficients of managerial ownership and its interactive effect of regime change are compared, a change in the sign of managerial ownership from negative to positive is found. In addition, it is shown that concentrated ownership has positive relation with firm performance but this relationship becomes negative when it interacts with regime change which clearly depicts structural change effect. Since, statistical theory based on probability of type 1 error doesn't support these findings therefore results are reported with a grain of salt.

Only 32.88% change in firm performance in terms of Return on Assets is incurred as a result of managerial and concentrated ownership which indicates that there are other variables which affect firm performance. For instance, economic conditions and different dynamics of industries play role in the determination of firm performance. The probability of F-statistic is less than 5% which represents the overall significance of the model.

In table 5.14, it is shown that managerial ownership has negative and concentrated ownership has positive relationship with firm performance in terms of EBIT which means that with 1 unit increase in concentrated ownership firm performance increases by 29932230 units

and on the other hand, due to 1 unit increase in managerial ownership firm performance decreases by 22790321 units.

Table 5.14: Ownership structure & EBIT across Regime

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.83E+08	1.12E+08	-3.422216	0.0007
MO	-22790321	2172520.	-10.49027	0.0000
CO	29932230	2374954.	12.60329	0.0000
REG_CNG	3.32E+08	1.61E+08	2.058246	0.0399
REG_CNG*MO	6210410.	3095400.	2.006335	0.0452
REG_CNG*CO	-12098985	3372551.	-3.587488	0.0004
Weighted Statistics				
R-squared	0.163376	Mean dependent var	3.83E+09	
Adjusted R-squared	0.157993	S.D. dependent var	8.11E+09	
S.E. of regression	7.44E+09	Sum squared resid	4.31E+22	
F-statistic	30.34658	Durbin-Watson stat	0.612159	
Prob(F-statistic)	0.000000			

Note: *EBIT stands for Earnings before Interest & Tax. The intercept term represents regime after financial crisis.*

The positive relationship of concentrated ownership is justifiable on the basis of agency theory because it explains that shareholders and managers have distinct interests which can be aligned by the strategies of controlling mechanisms formulated by shareholders. Moreover, on the basis of managerial entrenchment effect, a negative relationship between managerial ownership and firm performance can be explained in a way that if insider's ownership increases then the implicit control of managers over the firms increases due to which they can disregard external control mechanisms. The relationship of concentrated ownership with EBIT (p-0.0000) and managerial ownership with EBIT (p-0.0000) is strongly supported by statistical theory. These findings are in line with the studies (Alberto et al., 2004; Barzegar & Babu, 2008;

Galbraith, 1967; Jensen & Meckling, 1976; Nickell et al., 1997) but contradict with (Craswell et al., 1997; Fama & Jensen, 1983; McConnell & Servaes, 1990; Morck et al., 2000; Wang W. , 2003).

Moreover, the results in table 5.14 shows that the performance in terms of EBIT of nonfinancial sector of Pakistan is apparently better in government before financial crisis as compared to government after financial crisis. The reasons can be that in government before financial crisis, economic indicators like interest rate, GDP (Gross Domestic Product) and rate of inflation were comparatively better than in government after financial crisis. Moreover, the policies of regime before financial crisis were in favor of investors which positively contributed in the economy. The results also indicate that there exists structural change effect because a change in the sign (from negative to positive) of coefficient of managerial ownership is found when it interacts with regime change. In addition, when the sign of coefficients of concentrated ownership and its interactive effect with regime change is compared a change in the sign (positive to negative) is also found.

The value of R-squared shows that only 16.3% change in firm performance (ROA) is incurred as a result of ownership structure which indicates that there are other variables which determine firm performance. These determinants can be the type of industry, intensity of competition and economic factors. The probability of F-statistic is less than 5% that represents the overall significance of the model.

5.4.2. Regime Change Effect on Market Performance of Firms

It is investigated that regime change not only affects financial performance but market performance (Tobin's Q & EPS) is also affected by the change in government. These results are presented as follows:

Table 5.15: Ownership Structure & Tobin's Q across Industries

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.052573	0.073848	0.711913	0.4767
MO	-0.000453	0.001721	-0.263380	0.7923
CO	0.006687	0.000942	7.102741	0.0000
REG_CNG	0.650136	0.096920	6.707962	0.0000
REG_CNG*MO	-0.007086	0.002167	-3.269684	0.0011
REG_CNG*CO	-0.003042	0.001288	-2.362003	0.0184
Weighted Statistics				
R-squared	0.668345	Mean dependent var	6.025594	
Adjusted R-squared	0.666172	S.D. dependent var	7.631677	
S.E. of regression	4.409421	Sum squared resid	14835.01	
F-statistic	307.5167	Durbin-Watson stat	0.642423	
Prob(F-statistic)	0.000000			

Note: *Tobin's Q shows market to book value. The intercept term represents regime after financial crisis.*

The results presented in table 5.15 indicates that managerial ownership has negative and concentrated ownership has positive relationship with the firm's market performance in terms of Tobin's Q which means that due to 1 unit increase in concentrated ownership firm performance increases by 0.006 units and on the other hand, with 1 unit increase in managerial ownership firm performance decreases by 0.0004 units. It is explained by agency theory that shareholders have opportunistic behavior due to which it becomes difficult to align their interests with shareholders even if ownership is given to them. In addition, insider's ownership results in more power of

managers due to which they can mitigate the effect of monitoring mechanisms devised by concentrated shareholders. The positive relationship between concentrated ownership and firm performance can be justified through controlling theory. These results are supported by Alberto et al. (2004); Kapopoulos & Lazaretou (2007); Kirchmaier & Grant (2005); Monsen et al. (1968) and (Stulz, 1988). The results of present study contradict expropriation theory which states that concentrated shareholdings result in agency problem II that ultimately reduces firm performance (Bebchuk et al., 2000). Furthermore, statistical theory supports the relationship of concentrated ownership with Tobin's Q ($p=0.0000$) and doesn't support the relationship of managerial ownership with Tobin's Q ($p=0.7923$).

The results presented in table 5.15 shows that the performance in terms of Tobin's Q of nonfinancial sector of Pakistan is relatively better in government before financial crisis as compared to government after financial crisis. Although, Pakistan is democratic country but has been facing political instability for many years especially during regime after financial crisis due to which potential investors avoid investments which in return affect firm performance in a negative manner. The results indicate a change in the sign of coefficient of ownership concentration from negative to positive when it interacts with regime change which clearly depicts that there exists structural change. But no change in sign is observed in the coefficient of managerial ownership hence no structural change is found. These results are also proved by the statistical theory as the probabilities of both managerial ownership and ownership concentration is lower than 5%.

The value of R-squared shows that only 66.8% change in firm performance in terms of Return on Assets is incurred as a result of ownership structure which indicates that there are

other variables which affects firm performance. The probability of F-statistic is less than 5% that represents the overall significance of the model.

On the basis of results presented in table 5.16, negative effects of managerial and positive effects of concentrated ownership on firm performance in terms of EPS is observed which means that due 1 unit increase in concentrated ownership firm performance increases by 0.1028 units and on the other hand, due to 1 unit increase in managerial ownership firm performance decreases by 0.0747 units.

Table 5.16: Ownership Structure & EPS across Industries

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.039128	1.390541	3.623862	0.0003
MO	-0.074713	0.020107	-3.715843	0.0002
CO	0.102852	0.020702	4.968306	0.0000
REG_CNG	-0.329680	1.911041	-0.172513	0.8631
REG_CNG*MO	-0.030223	0.028246	-1.070013	0.2849
REG_CNG*CO	0.002543	0.029204	0.087076	0.9306
Weighted Statistics				
R-squared	0.267656	Mean dependent var	24.41602	
Adjusted R-squared	0.262943	S.D. dependent var	35.16862	
S.E. of regression	30.19297	Sum squared resid	708325.3	
F-statistic	56.79522	Durbin-Watson stat	0.691757	
Prob(F-statistic)	0.000000			

Note: *EPS stands for Earnings per Share. The intercept term represents regime after financial crisis.*

The results of concentrated ownership are supported by agency theory which explains that manager's decision making on the basis of opportunism can be monitored by concentrated shareholders in order to maximize shareholders' wealth. In addition, the findings related to

managerial ownership contradict managerial wealth effect but can be justified on the basis of managerial entrenchment effect. These results are in line with the studies (Alberto et al., 2004; Kim et al., 2007; Minguez-Vera & Martin-Ugedo, 2007) and opposed by (Bebchuk et al., 2000; Chen et al., 2012). Furthermore, the relationship of managerial ownership with EPS ($p=0.0002$) and concentrated ownership with EPS ($p=0.0000$) is strongly supported by statistical theory.

Furthermore, the performance in terms of EPS of nonfinancial sector of Pakistan looks better in government after financial crisis as compared to government before financial crisis. It is observed that during regime after financial crisis most of the businesses faced decreasing trend in performance because of expensive factors of production and other determinants like electricity and gas load shedding. But some projects of this regime like Pakistan Iran gas pipeline significantly contributed into the economy and it can be argued that positive economic indicators would be helpful for businesses to grow and perform in a better way. The results indicate no change in the signs of coefficients of both concentrated and managerial ownership when they interact with regime change. Hence, no structural change effect is found. These results are also proved by the statistical theory as the probabilities of both managerial and concentrated ownership is higher than 5%.

The value of R-squared shows that only 26.76% change in firm performance (EPS) is incurred as a result of ownership structure which indicates that there are also other variables which determine firm performance. Other determinants of firm performance can be technological advancement, economic conditions, different characteristics of industries and globalization. The probability of F-statistic is less than 5% that represents the overall significance of the model.

The findings regarding regime change effect conclude that performance of firms in government before financial crisis seems better as compared to government after financial crisis. Moreover, a structural change effect is observed.

5.5. SUMMARY

After employing advanced econometric methods on the sample of 100 companies of nonfinancial sector of Pakistan, it is analyzed that ownership structure plays a significant role in the determination of firm performance. Moreover, it is also examined that the relationship of ownership structure and firm performance is affected by type of industry, regime change and firm size. While relying on the findings presented in this chapter, the next chapter presents all the key findings and explains the tested relationships in the light of literature.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

This chapter provides overview of the key findings of this study and also discusses its comparison with previous studies. In addition, practical and academic implications of the study are also discussed. Furthermore, limitations and recommendations for future research are reported.

6.1. COMMENTS ON KEY FINDINGS

The main purpose of this study is to investigate the relationship between ownership structure and firm performance. Additionally, it also makes an attempt to find out the effect of regime change and firm size on the relationship of ownership structure and firm performance. Furthermore, while considering types of industries, it compares performance of different

industries of nonfinancial sector of Pakistan and also analyzes the interactive effect of ownership structure with the type of industry.

While analyzing the relationship between ownership structure; concentrated and managerial ownership, and firm performance, this study examines that concentrated ownership has positive and managerial ownership has negative effect on firm's financial (ROA & EBIT) and market performance (Tobin's Q & EPS). These findings contradict expropriation but support controlling hypotheses of concentrated ownership presented in literature. Results of the current study suggest that high level of concentration facilitates owners in adopting controlling mechanisms to align the interests of managers with shareholders. Due to which managers are forced to work in the favor of businesses which is ultimately beneficial for owners. Barzegar & Babu (2008); Berle & Means (1932); Kapopoulos & Lazaretou (2007); Kirchmaier & Grant (2005) and Mosen et al. (1968) support the results of the present study but some studies (Bebchuk et al., 2000; Foroughi & Fooladi, 2011; Lauterbach & Vaninsky, 1999) are not in line with these findings.

The findings related to the relationship of managerial ownership and firm performance support the concept of managerial entrenchment (Himmelberg et al., 1999; Morck et al., 2000) but contradict with managerial wealth effect (Belkhir, 2009; Jensen & Meckling, 1976; Krivogorsky & Diego, 2006; Gao & Song, 2008). Managerial entrenchment concept describes that managers have divergence of objectives with shareholders because they are opportunistic in nature. So, when they get ownership through different schemes of organizations, like Employees Stock Option Programs (ESOP), their power increases due to which they devise strategies in their own interests which in return affect shareholder's wealth and firm performance in a negative manner. Conversely, managerial wealth effect explains that if managers become owners

then firm's value increases because their interests become aligned with shareholders.

Furthermore, it is found that ownership structure is a statistically significant factor towards all performance measures except Tobin's Q. The reason might be that it is comparatively more appropriate tool for measuring performance of money market.

It is found that economic situation plays a significant role in the determination of firm performance. According to the analysis of the study, performance (ROA, EBIT & Tobin's Q) of nonfinancial sector of Pakistan seems better in regime before financial crisis as compared to regime after financial crisis. It may be because of the reasons that the government before financial crisis formulated and implemented policies to promote investment by boosting the confidence of investors through political and economic stability. These investment seeking policies, low level of corruption, strong technocratic management having high level of commitments to their objectives, no subsequent raise in inflation and stable economic indicators contributed towards the better performance of nonfinancial sector of Pakistan. The results also indicated a structural change effect because the relationship of ownership structure and firm performance become inverted when concentrated and managerial ownership interacts with regime change.

This study finds out that the performance, in terms of ROA, Tobin's Q and EPS, of large sized firms are comparatively better than small and medium sized firms of nonfinancial sector of Pakistan. This may be because of the fact that normally capital structure of large sized firms comprises of high level of debts due to which in these firms the concentration of direct ownership is high that ultimately results in enhanced performance. In addition, large sized firms rely on diversification strategies for their growth due to which they could be able to support their low profit businesses with the stars' strategic business units. Furthermore, ownership structure is

more concentrated in large firms and while adopting controlling mechanisms, concentrated shareholders try to reduce agency problems which in turn enhance firm's profitability and performance. According to rent protection theory, concentrated shareholders derive benefits for themselves at the cost of other shareholders especially minor shareholders but normally in large firms strict rules and regulations are followed which prohibit them to extract private benefits due to which firms could have high growth in terms of profitability and market value. These results are in line with the findings presented by Foroughi & Fooladi (2011) and Warrad et al. (2012).

The results of the study also delineate that the relationship of managerial and concentrated ownership with firm's financial as well as market performance is affected by firm size. These findings are consistent with most the studies (Cheung et al. 2005; Lim & Kim, 2005) regarding ownership structure.

The interactive effect of ownership structure with the type of industry reveals that concentrated ownership plays a statistically significant role in determining the performance, in terms of ROA, EBIT and Tobin's Q, of Automobile & Parts, Electricity and Food only. In addition, it also plays a statistically significant role in the determination of Earnings per Share of Food sector only. Similarly, managerial ownership doesn't show a statistically significant relationship with the performance of all the industries. It is also concluded that managerial ownership plays a statistically significant role in determining the financial and market performance of Automobile & Parts, Chemicals, Electricity and General Industries only.

So, these findings show that ownership structure doesn't play a statistically significant role in determining the performance of all the industries related to nonfinancial sector of Pakistan. The reason can be different characteristics of each industry and other factors, like

economic conditions, technological advancement, globalization, project management, efficient use of resources, creativity and innovation, consumer's decision making process, cost of factors of production and government policies, which are comparatively more important for firm performance than ownership structure. Furthermore, it is found that different characteristics of each industry require dissimilar management styles to administer the organizations. The results of present study are consistent with these studies (Elst, 2004; Foroughi & Fooladi, 2011; Mak & Li, 2001; Margaritis & Psillaki, 2010). These results are also supported by rent protection and Bebchuk's theory (1999) which state that shareholder's concentration and firm performance vary in relation to specific characteristics of different industries. As, in this study, it is analyzed that some industries comparatively perform better than other industries of miscellaneous group.

6.2. PRACTICAL IMPLICATIONS

The decisive objective of any firm or business organization is its development, growth, value maximization and higher returns to its stakeholders. Corporate governance system is considered amongst the most important elements in achieving that decisive objective because it provides mechanism, process and structure which enable the shareholder protection in such a way that ensures maximization of equity market worth along with collective interests of all stakeholders. Strong corporate governance principles are the foundation in creating the confidence among the general public and the stakeholders. Therefore, corporate governance system leads to the strengthening and development of capital markets. Literature over the years makes it apparent that there are various factors that significantly affect the corporate performance such as ownership structure. So, this study will be helpful for decision making authorities for enhancing firm's financial and market performance because its main focus is on ownership structure.

Findings of the study provide guidelines and empirical evidence to regulators of nonfinancial sector of Pakistan for devising optimal ownership structure. In addition, it helps in developing some recommendations to the industry and business analysts that may lead to better firm performance in the long run through good governance.

Basically, agents of firms are usually risk averse and try to increase the probability of survival of organizations and assume that they can get more private benefits through product or market differentiation. In order to control agent's actions, this study recommends shareholders concentration because concentrated shareholders counteract corporate diversification strategies preferred by managers due to which firm performance increases.

The focus of this study is also to examine the nature of relationship between managerial ownership and firm performance. It is the important area of concern for businesses because firms could suffer huge loss which would be incurred from mismanagement of organizational resources but managerial ownership plays a considerable role in reducing potential economic loss. It is also explained in previous chapters that although managers are opportunistic in nature but managerial ownership results in the alignment of interests between managers and owners that puts constraints on the managerial discretion of using firm's resources in an inefficient way. But results of the present study show that there exists a negative relationship between managerial ownership and firm performance. So, this study suggest that both of important perspectives; managerial wealth and entrenchment effect, related to managerial ownership should be considered while making policies of firms for better performance.

With respect to the timeframe of the sample, total assets acquired by firms and different industrial dynamics, this study also examines the effect of regime change, firm size and different industrial characteristics on the relationship of ownership structure and firm performance. So,

this study highlights the importance of government in determining ownership structure and firm's financial as well as market performance. Additionally, it gives direction to policy makers and decision making authorities to consider various characteristics of each industry for formulating strategies. Moreover, this study would also assist investors for making an optimal decisions regarding investment in companies.

6.3. ACADEMIC IMPLICATIONS

In the broader field of corporate governance, the relationship between ownership structure and firm performance has been a significant area of study. The current study made an attempt to analyze the relationship between ownership structure and firm performance in equity market of Pakistan, where there are family owned organizations with high concentration of ownership in hands of few shareholders. In addition, it categorizes sample on the basis of total assets acquired by firms and then compares the performance of different sizes of firms. Moreover, it considers across industry dynamics while analyzing the relationship between ownership structure and firm performance. So, it highly contributes in the empirical knowledge regarding ownership structure and firm performance.

This study would be of great significance because it considers both expropriation and controlling concepts to explain concentrated ownership. Moreover, it deems both managerial and entrenchment effect while explaining managerial ownership. So, the current study would serve as strong empirical evidence because it also incorporates financial as well as market measures to calculate firm performance which increase reliability and validity of the findings.

The consideration of the study covers one of the novel areas in the research of ownership structure through examining the effect of structural change; change of government during the

period of study, on the relationship of ownership structure and firm performance in Pakistani context. The regime change effect on the relationship of ownership structure and firm performance draws attention towards the changes in the structures of ownership pattern of nonfinancial sector of Pakistan as a result of government policies.

The findings of the study are quite unique in terms of literature as it expands the body of knowledge in area of ownership structure. Advanced econometric methods are employed to analyze extensive time series panel data which increase the reliability of the results. So, the findings of current study are not only important for analysts and policy makers but would also be noteworthy for academician and researchers.

6.4. LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

- The study recommends repeated survey based research methodology for the analysis of nonfinancial sector of Pakistan on account of very frequent changes occurring in different industries in the wake of global changing scenario.
- The study can be extended to the comparison of the financial and nonfinancial sector of the economy of Pakistan provided that international sources of the data such as DataStream International and other sources are accessible.
- In the event of provision of the widespread access to the data sources, random sample methods can be used which is preferred statistical method.
- The study can also be extended by including more dimensions such as institutional ownership, foreign ownership, ownership structure (family ownership) and many other dimensions.
- Moreover, indicators of economic performance and more measures like Price to Earnings ratio representing firm's market performance can be incorporated for further research.

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APPENDIX

Definitions of Key Terms

The key terms of this study are presented in this section;

Ownership Structure

It is defined as the distribution of equity not only with regard to votes and capital but also by the identity of equity owners.

Managerial Ownership

Number of shares held by the managers, CEOs and directors is known as managerial ownership.

Concentrated Ownership

It presents the percentage of shares held by a controlling shareholder.

Agency Theory

Agency theory is concerned with resolving problems that can exist in agency relationships between principals (shareholders) and agents of the principals (company executives).

Agency Problem I

Agency problem I symbolizes the conflict of interests between shareholders and managers.

Agency Problem II

On the basis of expropriation theory, agency problem II represents the extraction of private benefits by concentrated shareholders at the expense of minority shareholders.

Agency Cost

The cost incurred and sacrificed in resolving agency issues.

Return on Assets

Return on Assets is an indicator of profitability of a company in relation to its total assets. It gives an idea that how efficient management is in using assets to generate earnings.

Tobin's Q

It is a ratio of the market value of a firm's existing shares (share capital) to the book value of firm's total assets.

Net Profit before Interest and Tax

It is an indicator of company's profitability, calculated as revenue minus expenses, excluding tax and interest.

Earnings per Share

The part of a company's profit allocated to each outstanding share of common stock. Earnings per share serve as an indicator of a company's profitability.